



RURAL UTILITIES SERVICE (RUS)

Listed Products

Founded in 1984, AFL is an international manufacturer providing end-to-end solutions to the energy, service provider, enterprise, hyperscale and industrial markets as well as several emerging markets.

AFL's products are in use in over 130 countries and include fiber optic cable and hardware, transmission and substation accessories, outside plant equipment, connectivity, test and inspection equipment, fusion splicing systems and training.

AFL also offers a wide variety of services supporting data center, enterprise, wireless and outside plant applications.

AFL is dedicated to bringing our customers a quality product as well as delivering superior value.





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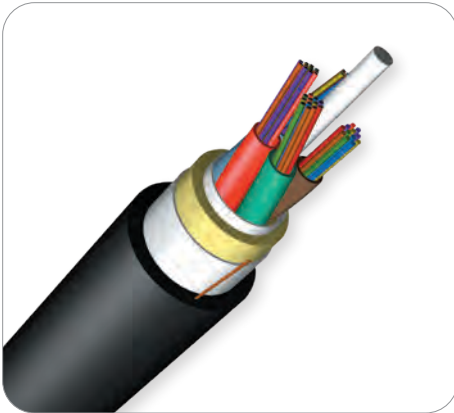
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Mini-Span® ADSS Cable

AFL Mini-Span All-Dielectric Self-Supporting (ADSS) cable is designed for aerial distribution power lines. As its name indicates, there are no metallic components and the cable does not require a support or messenger wire. Mini-Span ADSS cables are a single jacket design intended for the shorter pole-to-pole span lengths in a distribution environment. The Mini-Span product families streamline aerial fiber optic hardware selection with various fiber counts in standardized diameters.

Features

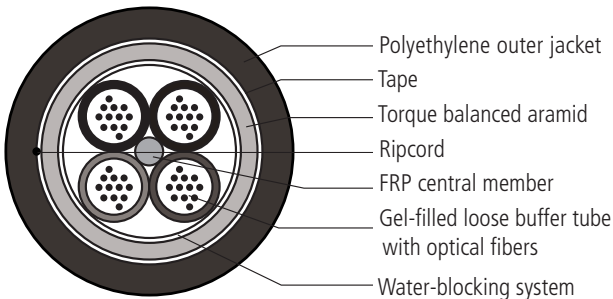
- Gel-filled tubes are reverse-oscillated to allow slack for mid-span access
- Up to 144 fibers in cable
- Pole-to-pole span lengths range from 50 feet to over 1000 feet
- Single jacket design decreases the diameter and weight when compared to double jacket ADSS cable
- No separation requirement of ADSS from conductors per National Electric Safety Code (NESC) section 235

Applications

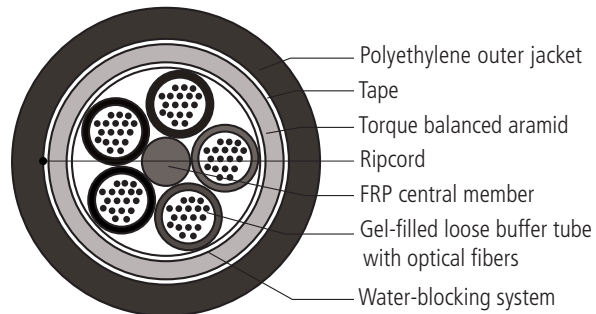
- Electric utility distribution power lines
 - Framed-in supply or communications space
- Underground duct
- Enterprise OSP networks
- Fiber-to-the-X networks

Typical Cable Components

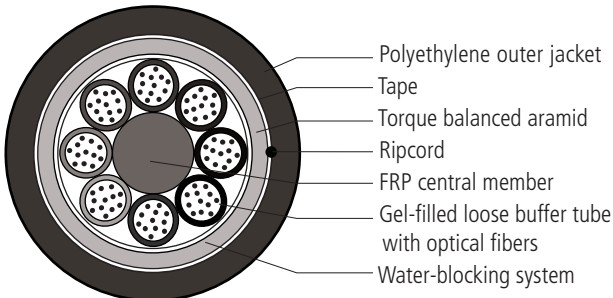
4 Position 383



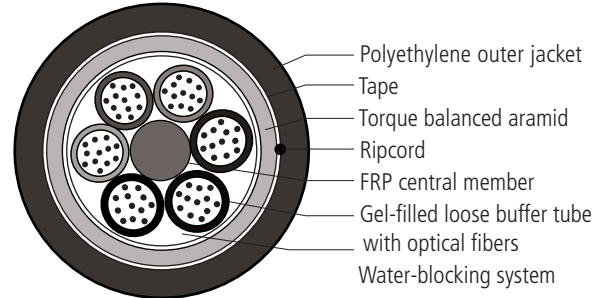
5 Position 424



8 Position 535



6 Position 535



Installation Information

CABLE	NESC SPANS (@ 1.5% INITIAL SAG) FEET (METERS)			MAX. SAGGING TENSION		MAX. LOADING OPERATING TENSION		MIN. BENDING RADIUS (DYNAMIC)		MIN. BENDING RADIUS (STATIC)	
	LIGHT	MEDIUM	HEAVY	lbs	N	lbs	N	inches	cm	inches	cm
Mini-Span 383	450 (137)	300 (91)	180 (55)	183	814	402	1,785	8	20	6	15
Mini-Span 424	600 (183)	440 (134)	275 (84)	424	1886	707	3145	9	22	6.5	16.5
Mini-Span 535	1050 (320)	850 (259)	575 (175)	1,306	5,809	1,783	7,936	13	27	8	20.5

continued →

Mini-Span® ADSS Cable

Optical Information

CABLE	MAXIMUM ATTENUATION (db/km)			BANDWIDTH (MHz•km)		
	SINGLE-MODE (1310 nm/1550 nm)	MULTIMODE *62.5/125 µm (850 nm/1300 nm)	MULTIMODE 50/125 µm (850 nm/1300 nm)	SINGLE-MODE (1310 nm/1550 nm)	MULTIMODE *62.5/125 µm (850 nm/1300 nm)	MULTIMODE 50/125 µm (850 nm/1300 nm)
Mini-Span 383	0.35/0.25	3.5/1.2	2.9/0.9	n/a	200/600	500/500
Mini-Span 424						
Mini-Span 535						

* All 62.5/125 µm multimode ADSS cable transmission performances meet or exceed FDDI requirements. Premium transmission performance fibers available on request.

Mechanical Data

CABLE	FIBER COUNT	NOMINAL DIAMETER		NOMINAL WEIGHT		MAXIMUM LENGTHS*			
		inches	mm	lbs/1000' ft	kg/km	SINGLE-MODE		MULTIMODE	
						feet	meters	feet	meters
Mini-Span 383	2-48	0.383	9.7	49	72	32,800	10,000	26,250	8,000
Mini-Span 424	2-60	0.424	10.8	57	84	32,800	10,000	26,250	8,000
Mini-Span 535	2-144	0.535	13.6	100	148	32,800	10,000	26,250	8,000

* Longer lengths may be available upon request.

Recommended Products for ADSS Fiber Optic Cable

DESCRIPTION	AFL NO.
Fiber Optic Cable Accessories	
ADSS Mini Deadends	Refer to the ADSS Mini Deadends spec sheet for specific AFL No.
ADSS Formed Wire Deadends	Refer to the ADSS Formed Wire Deadends spec sheet for specific AFL No.
ADSS Suspension Unit	Refer to the ADSS Suspension Unit spec sheet for specific AFL No.
ADSS Trunnion Assemblies	Refer to the ADSS Trunnion Assemblies spec sheet for specific AFL No.
ADSS Temporary Grip	Refer to the ADSS Temporary Grip spec sheet for specific AFL No.
AGC Downlead Clamp for ADSS	Refer to the AGC Downlead Clamp for ADSS spec sheet for specific AFL No.
AVD Series Spiral Vibration Dampers	Refer to the AVD Series Spiral Vibration Dampers spec sheet for specific AFL No.
Coil Brackets	Refer to the Coil Brackets spec sheet for specific AFL No.

Temperature Specifications

TEMPERATURE RANGE	
Operation	-40°C to +70°C
Storage	-50°C to +70°C
Installation	-30°C to +70°C

Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
IEEE	1222	Cable
TIA	598-D	Fiber

Contact AFL for your customized ADSS solution.

continued
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Mini-Span® ADSS Cable

Ordering Information

CABLE	FIBER COUNT	FIBERS PER TUBE	NUMBER OF TUBES / FIBERS	AFL NO.		
				SINGLE-MODE	MULTIMODE 62.5/125	MULTIMODE 50/125
Mini-Span 383	6	6	1 w/6 (3 fillers)	AE0069C420AA0	AE0066C420AA0	AE0065C420AA0
	12	12	1 w/12 (3 fillers)	AE0129C420AA0	AE0126C420AA0	AE0125C420AA0
	18	12	1 w/12, 1 w/6 (2 fillers)	AE0189C420AA0	AE0186C420AA0	AE0185C420AA0
	24	12	2 w/12 (2 fillers)	AE0249C420AA0	AE0246C420AA0	AE0245C420AA0
	30	12	2 w/12, 1 w/6 (1 filler)	AE0309C420AA0	AE0306C420AA0	AE0305C420AA0
	36	12	3 w/12 (1 filler)	AE0369C420AA0	AE0366C420AA0	AE0365C420AA0
	48	12	4 w/12	AE0489C420AA0	AE0486C420AA0	AE0485C420AA0
Mini-Span 424	6	6	1 w/6 (4 fillers)	AE0069C520AA4	AE0066C520AA4	AE0065C520AA4
	12	12	1 w/12 (4 fillers)	AE0129C520AA4	AE0126C520AA4	AE0125C520AA4
	18	12	1 w/12, 1 w/6 (3 fillers)	AE0189C520AA4	AE0186C520AA4	AE0185C520AA4
	24	12	2 w/12 (3 fillers)	AE0249C520AA4	AE0246C520AA4	AE0245C520AA4
	30	12	2 w/12, 1 w/6 (2 fillers)	AE0309C520AA4	AE0306C520AA4	AE0305C520AA4
	36	12	3 w/12 (2 fillers)	AE0369C520AA4	AE0366C520AA4	AE0365C520AA4
	48	12	4 w/12 (1 filler)	AE0489C520AA4	AE0486C520AA4	AE0485C520AA4
Mini-Span 535	6	6	1 w/6 (7 fillers)	AE0069C820EA7	AE0066C820EA7	AE0065C820EA7
	12	12	1 w/12 (7 fillers)	AE0129C820EA7	AE0126C820EA7	AE0125C820EA7
	18	12	1 w/12, 1 w/6 (6 fillers)	AE0189C820EA7	AE0186C820EA7	AE0185C820EA7
	24	12	2 w/12 (6 fillers)	AE0249C820EA7	AE0246C820EA7	AE0245C820EA7
	30	12	2 w/12, 1 w/6 (5 fillers)	AE0309C820EA7	AE0306C820EA7	AE0305C820EA7
	36	12	3 w/12 (5 fillers)	AE0369C820EA7	AE0366C820EA7	AE0365C820EA7
	48	12	4 w/12 (4 fillers)	AE0489C820EA7	AE0486C820EA7	AE0485C820EA7
	60	12	5 w/12 (3 fillers)	AE0609C820EA7	AE0606C820EA7	AE0605C820EA7
	72	12	6 w/12 (2 fillers)	AE0729C820EA7	AE0726C820EA7	AE0725C820EA7
	84	12	7 w/12 (1 filler)	AE0849C820EA7	AE0846C820EA7	AE0845C820EA7
	96	12	8 w/12 (no fillers)	AE0969C820EA7	AE0966C820EA7	AE0965C820EA7
144	24	6 w/24 (no fillers)	AE1449O620EB0	AE1446O620EB0	AE1445O620EB0	

Contact customer service for price and availability. Non-zero dispersion-shifted fibers are also available.

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Mini-Span® ADSS Cable

Sag and Tension Information

CABLE	SPAN		INITIAL	INITIAL		NESC LIGHT LOADING			NESC MEDIUM LOADING			NESC HEAVY LOADING		
	feet	meters	SAG	TENSION		SAG	TENSION		SAG	TENSION		SAG	TENSION	
			%	lbs	N		%	lbs		N	%		lbs	N
MINI-SPAN 383	50	15	1.5	20	89	0.5	76	337	2.2	108	482	3.2	161	717
	75	23	1.5	30	133	0.5	103	457	2.4	146	648	3.6	215	956
	100	30	1.5	41	182	0.6	128	568	2.6	179	798	4.0	263	1,171
	125	38	1.5	51	227	0.6	151	671	2.8	211	938	4.2	308	1,370
	150	46	1.5	61	271	0.6	173	768	2.9	240	1,070	4.5	350	1,558
	175	53	1.5	71	316	0.6	194	862	3.0	269	1,196	4.7	390	1,736
	200	61	1.5	81	360	0.7	214	952	3.2	296	1,317	—	—	—
	225	69	1.5	91	405	0.7	234	1,040	3.3	322	1,434	—	—	—
	250	76	1.5	101	449	0.7	253	1,125	3.4	348	1,547	—	—	—
	275	84	1.5	112	498	0.7	272	1,209	3.5	372	1,657	—	—	—
	300	91	1.5	122	543	0.7	290	1,290	3.5	397	1,765	—	—	—
	325	99	1.5	132	587	0.8	308	1,370	—	—	—	—	—	—
	350	107	1.5	142	632	0.8	325	1,448	—	—	—	—	—	—
	375	114	1.5	152	676	0.8	343	1,525	—	—	—	—	—	—
	400	122	1.5	162	721	0.8	360	1,601	—	—	—	—	—	—
	425	130	1.5	172	765	0.8	377	1,676	—	—	—	—	—	—
450	137	1.5	183	814	0.8	393	1,750	—	—	—	—	—	—	
MINI-SPAN 424	50	15	1.0	35	156	0.4	104	463	1.7	142	632	2.6	207	921
	75	23	1.0	53	236	0.4	142	632	1.9	191	850	3.0	275	1,223
	100	30	1.0	71	316	0.5	176	783	2.1	235	1,095	3.2	337	1,499
	125	38	1.0	88	391	0.5	208	925	2.2	276	1,228	3.4	395	1,757
	150	46	1.0	106	472	0.5	238	1,059	2.4	315	1,401	3.6	449	1,997
	175	53	1.0	124	552	0.5	268	1,192	2.5	353	1,570	3.8	501	2,229
	200	61	1.0	141	627	0.6	296	1,317	2.6	389	1,730	4.0	50	2,447
	225	69	1.0	159	707	0.6	324	1,441	2.7	424	1,886	4.1	598	2,660
	250	76	1.0	177	787	0.6	351	1,561	2.7	458	2,037	4.2	645	2,869
	275	84	1.0	194	863	0.6	378	1,681	2.8	491	2,184	4.3	690	3,069
	300	91	1.0	212	943	0.6	404	1,737	2.8	524	2,331	—	—	—
	325	99	1.0	230	1,023	0.6	429	1,908	2.9	556	2,473	—	—	—
	350	107	1.0	247	1,099	0.6	455	2,024	3.0	587	2,611	—	—	—
	375	114	1.0	265	1,179	0.6	479	2,131	3.0	618	2,749	—	—	—
	400	122	1.0	283	1,259	0.6	504	2,242	3.1	648	2,882	—	—	—
	425	130	1.0	300	1,334	0.7	528	2,349	3.1	678	3,016	—	—	—
	450	137	1.0	318	1,415	0.7	552	2,455	3.2	703	3,145	—	—	—
	475	145	1.0	336	1,495	0.7	576	2,562	—	—	—	—	—	—
	500	152	1.0	353	1,570	0.7	600	2,669	—	—	—	—	—	—
525	160	1.0	371	1,650	0.7	623	2,771	—	—	—	—	—	—	
550	168	1.0	389	1,730	0.7	646	2,874	—	—	—	—	—	—	
575	175	1.0	406	1,806	0.7	669	2,976	—	—	—	—	—	—	
600	183	1.0	424	1,886	0.7	692	3,078	—	—	—	—	—	—	

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Fiber Optic Cable



Mini-Span® ADSS Cable

Sag and Tension Information

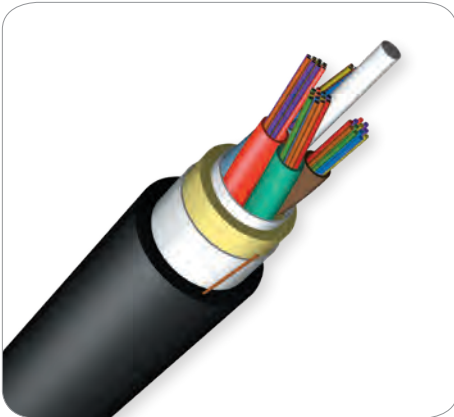
CABLE	SPAN		INITIAL SAG	INITIAL TENSION*		NESC LIGHT LOADING			NESC MEDIUM LOADING			NESC HEAVY LOADING		
	feet	meters	%	lbs	N	SAG %	TENSION* lbs	TENSION* N	SAG %	TENSION* lbs	TENSION* N	SAG %	TENSION* lbs	TENSION* N
MINI-SPAN 535	50	15	1	62	276	0.4	160	713	1.5	206	918	2.1	297	1,319
	100	30	1	124	552	0.5	274	1,220	1.7	347	1,542	2.5	489	2,176
	150	46	1	187	832	0.6	375	1,670	1.9	469	2,087	2.8	655	2,915
	200	61	1	249	1,108	0.6	469	2,088	2.1	582	2,590	3.1	807	3,588
	250	76	1	311	1,383	0.6	559	2,486	2.2	689	3,063	3.3	948	4,217
	300	91	1	373	1,659	0.6	645	2,868	2.3	790	3,515	3.4	1,082	4,813
	350	107	1	435	1,935	0.7	728	3,239	2.4	888	3,951	3.6	1,210	5,384
	400	122	1	497	2,211	0.7	810	3,601	2.5	983	4,374	3.7	1,334	5,935
	450	137	1	560	2,491	0.7	889	3,956	2.5	1,076	4,785	3.8	1,454	6,469
	500	152	1	622	2,767	0.7	968	4,304	2.6	1,166	5,188	3.9	1,571	6,988
	550	168	1	684	3,043	0.7	1,045	4,647	2.7	1,255	5,583	4.0	1,685	7,495
	575	175	1	715	3,180	0.7	1,083	4,817	2.7	1,299	5,778	4.1	1,741	7,745
	600	183	1	746	3,318	0.7	1,121	4,985	2.7	1,342	5,971	—	—	—
	650	198	1	808	3,594	0.8	1,196	5,320	2.8	1,428	6,353	—	—	—
	700	213	1	870	3,870	0.8	1,270	5,650	2.8	1,513	6,730	—	—	—
	750	229	1	933	4,150	0.8	1,344	5,978	2.8	1,597	7,102	—	—	—
	800	244	1	995	4,426	0.8	1,417	6,303	2.9	1,679	7,469	—	—	—
	850	259	1	1,057	4,702	0.8	1,489	6,625	2.9	1,761	7,833	—	—	—
900	274	1	1,119	4,978	0.8	1,561	6,945	—	—	—	—	—	—	
950	290	1	1,181	5,253	0.8	1,633	7,263	—	—	—	—	—	—	
1,000	305	1	1,243	5,529	0.8	1,704	7,579	—	—	—	—	—	—	
1,050	320	1	1,306	5,809	0.8	1,775	7,894	—	—	—	—	—	—	

* Tensions based on 8 position core used in 96 and fewer fiber designs.

Reel Information

REEL SPECS	REEL A		REEL B		REEL C		REEL D		REEL E	
ITEM	inches	cm	inches	cm	inches	cm	inches	cm	inches	cm
Reel Height	42	106.7	58	147.3	66	167.6	72	182.8	84	213.4
Reel Width Outside	36	91.4	38	96.5	42	106.7	42	106.7	40	101.6
Reel Width Inside	32	81.6	32	81.3	36	91.4	36	91.4	34	86.4
Drum Diameter	23	58.7	28	71.1	36	91.4	36	91.4	35	88.9
Arbor Hole Diameter	3	7.9	3	7.9	3	7.9	3	7.9	3	7.9
Reel Weight with Lagging	180 lbs	82 kg	420 lbs	191 kg	685 lbs	311 kg	710 lbs	320 kg	950 lbs	431 kg
Maximum Cable Length (feet/meters)										
Mini-Span 383	10,827 ft	3,300 m	25,202 ft	7,700 m	32,800 ft	10,000 m	—	—	—	—
Mini-Span 424	8,850 ft	2,700 m	20,250 ft	6,200 m	26,250 ft	8,000 m	32,800 ft	10,000 m	—	—
Mini-Span 535	5,500 ft	1,675 m	12,800 ft	3,900 m	17,225 ft	5,250 m	26,000 ft	6,920 m	32,800 ft	10,000 m

AFL provides ADSS cable on several standard sizes of non-returnable wooden reels. Non-standard reel sizes are available on request.



Flex-Span® ADSS Fiber Optic Cable

AFL Flex-Span All-Dielectric Self-Supporting (ADSS) cable is designed for aerial distribution power lines, as well as underground duct applications. As its name indicates, there are no metallic components and the cable does not require a support or messenger wire. Flex-Span ADSS cables are a single jacket design intended for the shorter pole-to-pole span lengths in a distribution environment. A broad combination of fiber counts and spans lengths in this product family provide network designers with flexibility in their cable selection.

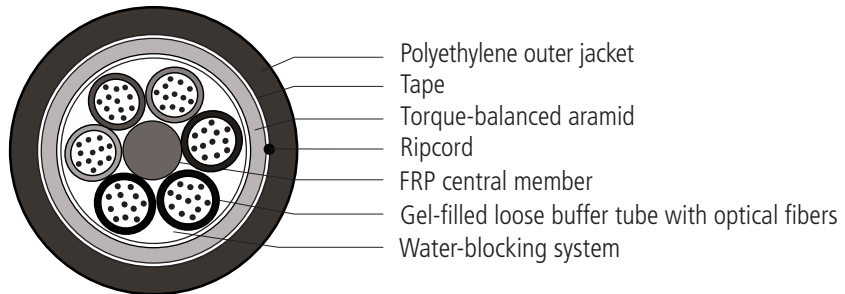
Features

- Gel-filled tubes are reverse-oscillated to allow slack for mid-span access
- Up to 144 fibers in cable
- Pole-to-pole span lengths up to 1100 feet
- Single jacket design decreases the diameter and weight when compared to double jacket ADSS cable
- No separation requirement of ADSS from conductors per National Electric Safety Code (NESC) section 235

Applications

- Electric utility distribution power lines
 - Framed in supply or communications space
- Underground duct
- Enterprise OSP networks
- Fiber-to-the-X networks

Cable Components (Representative)



Optical Information

FIBER TYPE	MAXIMUM ATTENUATION (dB/km)				OVERFILL LAUNCH MIN. BANDWIDTH (MHz•km)		GIGABIT ETHERNET MINIMUM LINK DISTANCE (meters)	
	850 nm	1300 nm	1310 nm	1550 nm	850 nm	1300 nm	850 nm	1300 nm
(6) 62.5/125 GIGA-Link™ 300	3.5	1.2	N/A	N/A	200	600	300	550
(8) 62.5/125 GIGA-Link™ 1000	3.5	1.2	N/A	N/A	350	600	500	1000
(5) 50/125 GIGA-Link™ 600	2.9	0.9	N/A	N/A	500	500	600	600
(7) 50/125 GIGA-Link™ 2000	2.9	0.9	N/A	N/A	500	800	750	2000
(L) 50 Laser-Link™ 300	2.9	0.9	N/A	N/A	1500	500	900	550
(9) Single-mode	N/A	N/A	0.35	0.25	N/A	N/A	N/A	5000
(Q) Non-zero Dispersion-shifted Single-mode	N/A	N/A	N/A	0.25	N/A	N/A	N/A	N/A
(K) SM Futureguide SR-15e Bend Insensitive	N/A	N/A	0.35	0.25	N/A	N/A	N/A	5000

Gigabit Ethernet Minimum Link Distances are based on "bandwidth"/modal dispersion constraints. Actual link distances may be constrained by attenuation, depending on specific loss budget.

continued
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Flex-Span® ADSS Fiber Optic Cable

Reel Information

ITEM	REEL A		REEL B		REEL C		REEL D		REEL E	
	INCHES	CM	INCHES	CM	INCHES	CM	INCHES	CM	INCHES	CM
Reel Height	42	106.7	58	147.3	66	167.6	72	167.6	84	213.4
Reel Width Outside	36	91.4	38	96.5	42	106.7	42	106.7	40	101.6
Reel Width Inside	32	81.6	32	81.3	36	91.4	36	91.4	34	86.4
Drum Diameter	23	58.7	28	71.1	36	91.4	36	91.4	35	88.9
Arbor Hole Diameter	3	7.9	3	7.9	3	7.9	3	7.9	3	7.9
Reel Weight with Lagging	180 lbs	82 kg	420 lbs	191 kg	685 lbs	311 kg	710 lbs	311 kg	950 lbs	431 kg

AFL provides ADSS cable on several standard sizes of non-returnable wooden reels. Non-standard reel sizes are available upon request.

Typical Maximum Lengths

CABLE DIAMETER	REEL CAPACITY	
	FEET	METERS
< 0.85" (21.6 mm)	23,000	7,000

NOTE: Longer lengths may be available upon request.

Recommended Products for ADSS Fiber Optic Cable

DESCRIPTION	AFL NO.
Fiber Optic Cable Accessories	
ADSS Formed Wire Deadends	Refer to the ADSS Formed Wire Deadends spec sheet for specific AFL No.
ADSS Suspension Unit	Refer to the ADSS Suspension Unit spec sheet for specific AFL No.
ADSS Trunnion Assemblies	Refer to the ADSS Trunnion Assemblies spec sheet for specific AFL No.
ADSS Temporary Grip	Refer to the ADSS Temporary Grip spec sheet for specific AFL No.
AGC Downlead Clamp for ADSS	Refer to the AGC Downlead Clamp for ADSS spec sheet for specific AFL No.
AVD Series Spiral Vibration Dampers	Refer to the AVD Series Spiral Vibration Dampers spec sheet for specific AFL No.
Coil Brackets	Refer to the Coil Brackets spec sheet for specific AFL No.

Temperature Specifications

TEMPERATURE RANGE	
Operation	-40°C to +70°C
Storage	-50°C to +70°C
Installation	-30°C to +70°C

Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
IEEE	1222	Cable
TIA	598-D	Fiber

Contact AFL for your customized ADSS solution.

continued
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Flex-Span® ADSS Fiber Optic Cable

Fiber Optic Cable

NESC LIGHT @ 1.5% INSTALLATION SAG														
SPAN FEET METERS		AFL NO.	FIBERS PER TUBE	WEIGHT		DIAMETER		MRCL		INITIAL TENSION ¹				
				LBS/FT	KG/KM	IN.	MM	LBS	N	UNLOADED		LOADED		
										LBS	N	SAG %	LBS	N
12 FIBERS														
525	160	AE012★C520A08	12	0.057	84	0.425	10.8	539	2398	248	1104	0.8	521	2318
600	183	AE012★C520AA0	12	0.057	84	0.425	10.8	598	2661	284	1264	0.8	592	2634
700	213	AE012★C520AA5	12	0.057	84	0.425	10.8	746	3320	333	1482	0.8	702	3124
800	244	AE012★C520E08	12	0.059	88	0.433	11	809	3600	395	1758	0.8	807	3591
925	282	AE012★C520EA1	12	0.059	88	0.433	11	999	4445	457	2034	0.8	947	4214
1050	320	AE012★C520EA2	12	0.059	88	0.433	11	1062	4726	519	2309	0.8	1059	4712
1100	335	AE012★C520EA4	12	0.059	88	0.433	11	1189	5291	544	2421	0.8	1127	5015
24 FIBERS														
525	160	AE024★C520A08	12	0.058	86	0.425	10.8	539	2398	252	1121	0.8	523	2327
600	183	AE024★C520AA0	12	0.058	86	0.425	10.8	598	2661	289	1286	0.8	594	2643
700	213	AE024★C520AA5	12	0.058	86	0.425	10.8	746	3320	338	1504	0.8	705	3137
800	244	AE024★C520EA0	12	0.06	90	0.433	11	936	4165	402	1789	0.8	838	3729
925	282	AE024★C520EA1	12	0.06	90	0.433	11	999	4445	464	2065	0.8	951	4232
1010	308	AE024★C520EA2	12	0.06	90	0.433	11	1062	4726	507	2256	0.8	1032	4592
1100	335	AE024★C520EA4	12	0.06	90	0.433	11	1189	5291	553	2461	0.8	1131	5033
48 FIBERS														
525	160	AE048★C520A08	12	0.06	89	0.425	10.8	539	2398	261	1161	0.9	528	2350
600	183	AE048★C520AA1	12	0.06	89	0.425	10.8	628	2794	298	1326	0.9	606	2697
700	213	AE048★C520AA5	12	0.06	89	0.425	10.8	746	3320	349	1553	0.8	711	3164
800	244	AE048★C520EA0	12	0.062	93	0.433	11	936	4165	414	1842	0.8	845	3760
925	282	AE048★C520EA1	12	0.062	93	0.433	11	999	4445	479	2131	0.9	958	4263
1030	314	AE048★C520EA2	12	0.062	93	0.433	11	1062	4726	534	2376	0.9	1056	4699
1100	335	AE048★C520EA4	12	0.062	93	0.433	11	1189	5291	570	2536	0.9	1140	5073
72 FIBERS														
725	221	AE072★C620A08	12	0.075	112	0.465	11.8	854	3800	454	2020	0.9	832	3702
800	244	AE072★C620AA0	12	0.075	112	0.465	11.8	913	4063	501	2229	0.9	911	4054
875	267	AE072★C620AA3	12	0.075	112	0.465	11.8	1002	4459	548	2438	0.9	998	4441
975	297	AE072★C620AA7	12	0.075	112	0.465	11.8	1120	4984	611	2719	0.9	1113	4953
1075	328	AE072★C620EA0	12	0.075	112	0.465	11.8	1250	5562	674	2999	0.9	1230	5473
96 FIBERS														
400	122	AE096★O520A08	24	0.069	103	0.457	11.6	524	2332	230	1024	0.8	475	2114
500	152	AE096★O520AA1	24	0.069	103	0.457	11.6	598	2661	287	1277	0.8	581	2585
600	183	AE096★O520AA6	24	0.07	104	0.461	11.7	722	3213	351	1562	0.9	705	3137
700	213	AE096★O520EA0	24	0.07	104	0.461	11.7	856	3809	410	1825	0.8	825	3671
800	244	AE096★O520EA2	24	0.071	106	0.465	11.8	963	4285	476	2118	0.9	947	4214
900	274	AE096★O520EA4	24	0.072	107	0.465	11.8	1069	4757	537	2390	0.9	1063	4730
925	282	AE096★C820A08	12	0.1	148	0.528	13.4	1296	5767	769	3422	1	1270	5651
1000	305	AE096★O520EA7	24	0.073	108	0.469	11.9	1228	5465	607	2701	0.9	1200	5340
1000	305	AE096★C820AA1	12	0.1	149	0.528	13.4	1384	6159	832	3702	1	1370	6096
1100	335	AE096★O520EB0	24	0.074	110	0.472	12	1388	6177	679	3022	0.9	1339	5959
144 FIBERS														
725	221	AE144★O620A08	24	0.085	126	0.484	12.3	913	4061	512	2278	1.0	906	4031
850	259	AE144★O620AA4	24	0.086	128	0.488	12.4	1077	4787	609	2709	1.0	1072	4770
1050	320	AE144★O620EA1	24	0.087	130	0.492	12.5	1338	5954	764	3399	1.0	1337	5948

¹ Initial tension indicates tension before 10 year creep.

★ Fiber Types – Replace asterisk (★) in AFL number with number corresponding to desired fiber type below.

Note: Diameter and weight subject to change without notice.

- 5 = 50/125 µm multimode GIGA-Link™ 600
- 7 = 50/125 µm multimode GIGA-Link™ 2000
- 6 = 62.5/125 µm multimode GIGA-Link™ 300
- 8 = 62.5/125 µm multimode GIGA-Link™ 1000

- L = 50/125 µm multimode Laser-Link™ 300
- 9 = Single-mode
- K = SM Futureguide SR-15e Bend Insensitive
- Q = Non-zero dispersion-shifted single-mode

continued



Flex-Span® ADSS Fiber Optic Cable

M E D I U M NESC MEDIUM @ 1.5% INSTALLATION SAG														
SPAN		AFL NO.	FIBERS PER TUBE	WEIGHT		DIAMETER		MRCL		INITIAL TENSION ¹				
FEET	METERS			LBS/FT	KG/KM	IN.	MM	LBS	N	UNLOADED		LOADED		
										LBS	N	SAG %	LBS	N
12 FIBERS														
375	114	AE012★C520A08	12	0.057	84	0.425	10.8	539	2398	178	792	3.5	532	2367
400	122	AE012★C520AA0	12	0.057	84	0.425	10.8	598	2661	189	841	3.5	573	2550
500	152	AE012★C520AA5	12	0.057	84	0.425	10.8	746	3320	238	1059	3.5	717	3191
550	168	AE012★C520E08	12	0.059	88	0.433	11	809	3600	272	1210	3.5	793	3529
650	198	AE012★C520EA1	12	0.059	88	0.433	11	999	4445	321	1428	3.4	949	4223
700	213	AE012★C520EA2	12	0.059	88	0.433	11	1062	4726	346	1540	3.5	1018	4530
800	244	AE012★C520EA4	12	0.059	88	0.433	11	1189	5291	396	1762	3.5	1157	5148
24 FIBERS														
375	114	AE024★C520A08	12	0.058	86	0.425	10.8	539	2398	181	805	3.5	533	2372
400	122	AE024★C520AA0	12	0.058	86	0.425	10.8	598	2661	192	854	3.5	575	2559
500	152	AE024★C520AA5	12	0.058	86	0.425	10.8	746	3320	242	1077	3.5	719	3199
625	190	AE024★C520EA0	12	0.06	90	0.433	11	936	4165	314	1397	3.5	908	4040
650	198	AE024★C520EA1	12	0.06	90	0.433	11	999	4445	326	1451	3.4	951	4232
700	213	AE024★C520EA2	12	0.06	90	0.433	11	1062	4726	352	1566	3.5	1021	4543
800	244	AE024★C520EA4	12	0.06	90	0.433	11	1189	5291	402	1789	3.5	1160	5162
48 FIBERS														
375	114	AE048★C520A08	12	0.06	89	0.425	10.8	539	2398	187	832	3.5	536	2385
425	130	AE048★C520AA1	12	0.06	89	0.425	10.8	628	2794	211	939	3.5	612	2723
500	152	AE048★C520AA5	12	0.06	89	0.425	10.8	746	3320	250	1112	3.5	723	3217
625	190	AE048★C520EA0	12	0.062	93	0.433	11	936	4165	324	1442	3.5	913	4063
650	198	AE048★C520EA1	12	0.062	93	0.433	11	999	4445	337	1500	3.4	957	4258
700	213	AE048★C520EA2	12	0.062	93	0.433	11	1062	4726	363	1615	3.5	1027	4570
800	244	AE048★C520EA4	12	0.062	93	0.433	11	1189	5291	415	1847	3.5	1167	5193
72 FIBERS														
525	160	AE072★C620A08	12	0.075	112	0.465	11.8	854	3800	328	1460	3.4	825	3671
575	175	AE072★C620AA0	12	0.075	112	0.465	11.8	913	4063	360	1602	3.4	899	4000
625	190	AE072★C620AA3	12	0.075	112	0.465	11.8	1002	4459	391	1740	3.4	979	4356
710	216	AE072★C620AA7	12	0.075	112	0.465	11.8	1120	4984	445	1980	3.5	1108	4930
800	244	AE072★C620EA0	12	0.075	112	0.465	11.8	1250	5562	501	2229	3.5	1245	5540
96 FIBERS														
300	91	AE096★O520A08	24	0.069	103	0.457	11.6	524	2332	172	765	3.2	493	2194
400	122	AE096★O520AA3	24	0.07	104	0.461	11.7	648	2884	234	1041	3.3	648	2884
500	152	AE096★O520EA0	24	0.07	104	0.461	11.7	856	3809	293	1304	3.2	822	3658
600	183	AE096★O520EA4	24	0.072	107	0.465	11.8	1069	4757	358	1593	3.2	1002	4459
700	213	AE096★O520EA7	24	0.073	108	0.469	11.9	1228	5465	425	1891	3.2	1170	5207
725	221	AE096★C820A08	12	0.1	148	0.528	13.4	1296	5767	603	2683	3.4	1282	5705
775	236	AE096★C820AA1	24	0.1	149	0.528	13.4	1384	6159	645	2870	3.4	1370	6096
800	244	AE096★O520EB0	12	0.074	110	0.472	12	1388	6177	494	2198	3.2	1340	5963
144 FIBERS														
525	160	AE144★O620A08	24	0.085	126	0.484	12.3	913	4061	370	1646	3.3	887	3947
625	190	AE144★O620AA4	24	0.086	128	0.488	12.4	1077	4787	448	1993	3.3	1059	4711
775	236	AE144★O620EA1	24	0.087	130	0.492	12.5	1338	5954	564	2509	3.3	1321	5878

¹ Initial tension indicates tension before 10 year creep.

Note: Diameter and weight subject to change without notice.

★ Fiber Types – Replace asterisk (★) in AFL number with number corresponding to desired fiber type below.

- 5 = 50/125 μm multimode GIGA-Link™ 600
- 7 = 50/125 μm multimode GIGA-Link™ 2000
- 6 = 62.5/125 μm multimode GIGA-Link™ 300
- 8 = 62.5/125 μm multimode GIGA-Link™ 1000

- L = 50/125 μm multimode Laser-Link™ 300
- 9 = Single-mode
- K = SM Futureguide SR-15e Bend Insensitive
- Q = Non-zero dispersion-shifted single-mode

continued



Flex-Span® ADSS Fiber Optic Cable

Fiber Optic Cable

NESC HEAVY @ 1.5% INSTALLATION SAG														
SPAN FEET METERS		AFL NO.	FIBERS PER TUBE	WEIGHT		DIAMETER		MRCL		INITIAL TENSION ¹				
				LBS/FT	KG/KM	IN.	MM	LBS	N	UNLOADED		LOADED		
										LBS	N	SAG %	LBS	N
12 FIBERS														
200	61	AE012★C520A08	12	0.057	84	0.425	10.8	539	2398	95	423	4.5	485	2158
250	76	AE012★C520AA0	12	0.057	84	0.425	10.8	598	2661	118	525	4.6	585	2603
300	91	AE012★C520AA5	12	0.057	84	0.425	10.8	746	3320	143	636	4.6	710	3159
325	99	AE012★C520E08	12	0.059	88	0.433	11	809	3600	160	712	4.6	775	3449
400	122	AE012★C520EA1	12	0.059	88	0.433	11	999	4445	198	881	4.6	955	4250
450	137	AE012★C520EA2	12	0.059	88	0.433	11	1062	4726	222	988	4.7	1057	4703
500	152	AE012★C520EA4	12	0.059	88	0.433	11	1189	5291	247	1099	4.7	1177	5237
24 FIBERS														
200	61	AE024★C520A08	12	0.058	86	0.425	10.8	539	2398	96	427	4.5	485	2158
250	76	AE024★C520AA0	12	0.058	86	0.425	10.8	598	2661	120	534	4.6	586	2608
300	91	AE024★C520AA5	12	0.058	86	0.425	10.8	746	3320	145	645	4.6	712	3168
375	114	AE024★C520EA0	12	0.06	90	0.433	11	936	4165	188	837	4.6	897	3991
400	122	AE024★C520EA1	12	0.06	90	0.433	11	999	4445	201	894	4.6	957	4258
450	137	AE024★C520EA2	12	0.06	90	0.433	11	1062	4726	219	975	4.7	1054	4690
500	152	AE024★C520EA4	12	0.06	90	0.433	11	1189	5291	251	1117	4.7	1179	5246
48 FIBERS														
200	61	AE048★C520A08	12	0.06	89	0.425	10.8	539	2398	99	441	4.5	487	2167
250	76	AE048★C520AA1	12	0.06	89	0.425	10.8	628	2794	124	552	4.6	596	2652
300	91	AE048★C520AA5	12	0.06	89	0.425	10.8	746	3320	150	667	4.6	714	3177
375	114	AE048★C520EA0	12	0.062	93	0.433	11	936	4165	194	863	4.6	900	4005
400	122	AE048★C520EA1	12	0.062	93	0.433	11	999	4445	207	921	4.6	960	4272
450	137	AE048★C520EA2	12	0.062	93	0.433	11	1062	4726	233	1037	4.7	1062	4726
500	152	AE048★C520EA4	12	0.062	93	0.433	11	1189	5291	259	1153	4.7	1183	5264
72 FIBERS														
300	91	AE072★C620A08	12	0.075	112	0.465	11.8	854	3800	188	837	4.4	774	3444
350	107	AE072★C620AA0	12	0.075	112	0.465	11.8	913	4063	219	975	4.6	880	3916
400	122	AE072★C620AA3	12	0.075	112	0.465	11.8	1002	4459	250	1112	4.6	995	4428
450	137	AE072★C620AA7	12	0.075	112	0.465	11.8	1120	4984	282	1255	4.6	1117	4970
500	152	AE072★C620EA0	12	0.075	112	0.465	11.8	1250	5562	313	1393	4.6	1243	5531
96 FIBERS														
200	61	AE096★O520A08	24	0.069	103	0.457	11.6	524	2332	115	512	4.3	523	2327
300	91	AE096★O520EA0	24	0.07	104	0.461	11.7	856	3809	176	783	4.2	807	3591
400	122	AE096★O520EA4	24	0.072	107	0.465	11.8	1069	4757	239	1064	4.3	1060	4717
400	122	AE096★C820A08	12	0.1	148	0.528	13.4	1296	5767	333	1482	4.3	1140	5073
500	152	AE096★O520E00	24	0.074	110	0.472	12	1388	6177	309	1375	4.3	1349	6003
500	152	AE096★C820AA1	12	0.1	149	0.528	13.4	1384	6159	416	1851	4.5	1364	6070
144 FIBERS														
300	91	AE144★O620A08	24	0.085	126	0.484	12.3	913	4061	212	943	4.3	826	3675
400	122	AE144★O620AA4	24	0.086	128	0.488	12.4	1077	4787	287	1277	4.4	1067	4748
500	152	AE144★O620EA1	24	0.087	130	0.492	12.5	1338	5954	364	1619	4.4	1336	5944

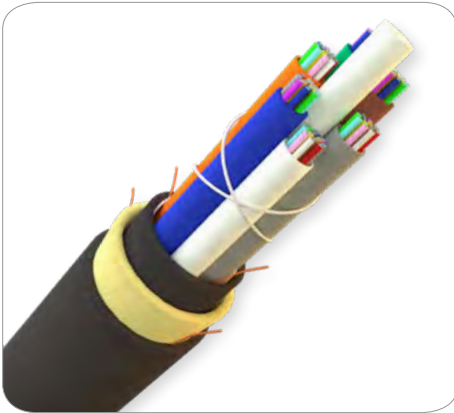
¹ Initial tension indicates tension before 10 year creep.

★ Fiber Types – Replace asterisk (★) in AFL number with number corresponding to desired fiber type below.

Note: Diameter and weight subject to change without notice.

- 5 = 50/125 µm multimode GIGA-Link™ 600
- 7 = 50/125 µm multimode GIGA-Link™ 2000
- 6 = 62.5/125 µm multimode GIGA-Link™ 300
- 8 = 62.5/125 µm multimode GIGA-Link™ 1000

- L = 50/125 µm multimode Laser-Link™ 300
- 9 = Single-mode
- K = SM Futureguide SR-15e Bend Insensitive
- Q = Non-zero dispersion-shifted single-mode



All-Dielectric Self-Supporting (AFL-ADSS®) Fiber Optic Cable

AFL-ADSS® (All-Dielectric Self-Supporting) fiber optic cable is designed for outside plant aerial transmission and distribution environments. As its name indicates, there are no metallic components and the cable does not require a support or messenger wire. These attributes allow the cable to be installed live-line and in the power space of distribution lines.

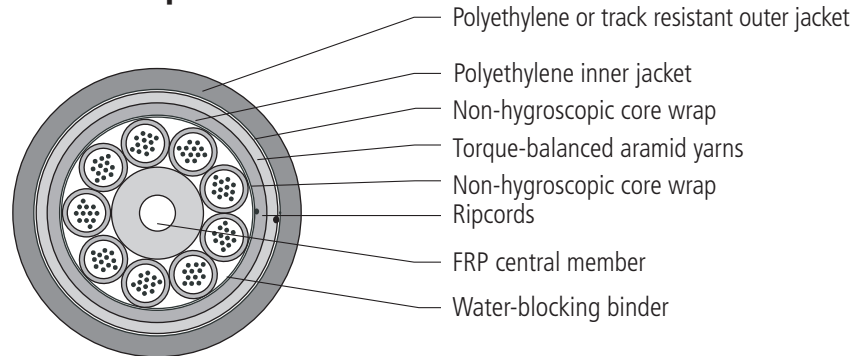
Features

- Up to 432 fibers in cable
- Designs listed below for span lengths up to 1500 ft (457 m), custom designs available for longer span lengths
- Double jacket designs provide additional protection to the fibers for longer span lengths and higher strength requirements
- Track-resistant outer jacket available for high voltage transmission lines for space potential values up to 25 kV
- Gel-filled tubes are reverse-oscillated (SZ stranded) to allow slack for mid-span access

Applications

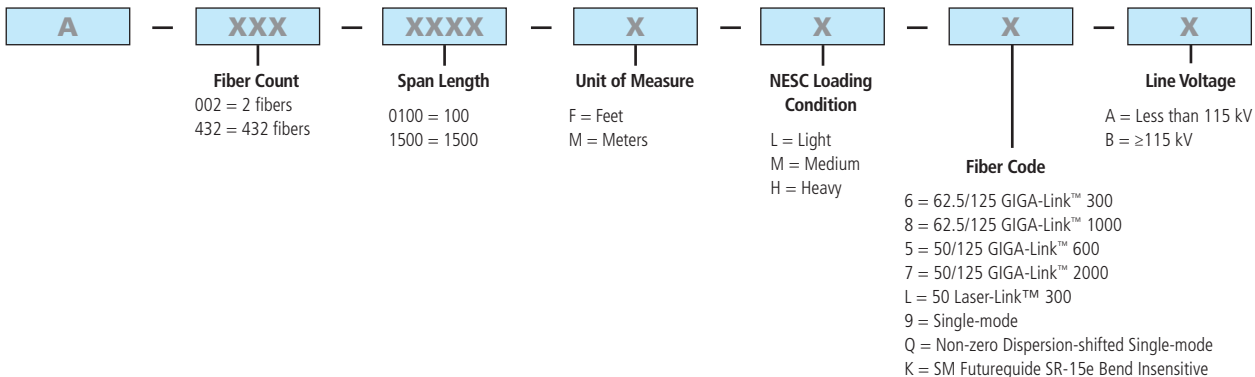
- Electric utility transmission and distribution power lines
 - Typically framed under conductors
- Underground duct
- Enterprise OSP networks
- Fiber-to-the-X networks

Cable Components



Quote Request Information

NOTE: The designs listed are only a sampling of the options available from AFL. Contact customer service for a cable designed to your exact specifications.



continued
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All-Dielectric Self-Supporting (AFL-ADSS®) Fiber Optic Cable

Optical Information

FIBER TYPE	MAXIMUM ATTENUATION (dB/km)				OVERFILL LAUNCH MIN. BANDWIDTH (MHz•km)		GIGABIT ETHERNET MINIMUM LINK DISTANCE (meters)	
	850 nm	1300 nm	1310 nm	1550 nm	850 nm	1300 nm	850 nm	1300 nm
(6) 62.5/125 GIGA-Link™ 300	3.5	1.2	N/A	N/A	200	600	300	550
(8) 62.5/125 GIGA-Link™ 1000	3.5	1.2	N/A	N/A	350	600	500	1000
(5) 50/125 GIGA-Link™ 600	2.9	0.9	N/A	N/A	500	500	600	600
(7) 50/125 GIGA-Link™ 2000	2.9	0.9	N/A	N/A	500	800	750	2000
(L) 50 Laser-Link™ 300	3.5	1.2	N/A	N/A	1500	500	900	550
(9) Single-mode	N/A	N/A	0.35	0.25	N/A	N/A	N/A	5000
(Q) Non-zero Dispersion-shifted Single-mode	N/A	N/A	N/A	0.25	N/A	N/A	N/A	N/A
(K) SM Futureguide SR-15e Bend Insensitive	N/A	N/A	0.35	0.25	N/A	N/A	N/A	5000

Gigabit Ethernet Minimum Link Distances are based on "bandwidth"/modal dispersion constraints. Actual link distances may be constrained by attenuation, depending on specific loss budget.

Reel Information

ITEM	REEL A		REEL B		REEL C		REEL D		REEL E	
	INCHES	CM	INCHES	CM	INCHES	CM	INCHES	CM	INCHES	CM
Reel Height	42	106.7	58	147.3	66	167.6	72	167.6	84	213.4
Reel Width Outside	36	91.4	38	96.5	42	106.7	42	106.7	40	101.6
Reel Width Inside	32	81.6	32	81.3	36	91.4	36	91.4	34	86.4
Drum Diameter	23	58.7	28	71.1	36	91.4	36	91.4	35	88.9
Arbor Hole Diameter	3	7.9	3	7.9	3	7.9	3	7.9	3	7.9
Reel Weight with Lagging	180 lbs	82 kg	420 lbs	191 kg	685 lbs	311 kg	710 lbs	311 kg	950 lbs	431 kg

AFL provides ADSS cable on several standard sizes of non-returnable wooden reels. Non-standard reel sizes are available upon request.

Recommended Products for ADSS Fiber Optic Cable

DESCRIPTION	AFL NO.
Fiber Optic Cable Accessories	
ADSS Wedge Deadend	Refer to the ADSS Wedge Deadend spec sheet for specific AFL No.
ADSS Suspension Unit	Refer to the ADSS Suspension Unit spec sheet for specific AFL No.
ADSS Trunnion Assemblies	Refer to the ADSS Trunnion Assemblies spec sheet for specific AFL No.
ADSS Temporary Grip	Refer to the ADSS Temporary Grip spec sheet for specific AFL No.
AGC Downlead Clamp for ADSS	Refer to the AGC Downlead Clamp for ADSS spec sheet for specific AFL No.
AVD Series Spiral Vibration Dampers	Refer to the AVD Series Spiral Vibration Dampers spec sheet for specific AFL No.
Coil Brackets	Refer to the Coil Brackets spec sheet for specific AFL No.
Standoff Bracket for ADSS Hardware Clamps	Refer to the Standoff Bracket for ADSS Hardware Clamps spec sheet for specific AFL No.

Temperature Specifications

TEMPERATURE RANGE	
Operation	-40°C to +70°C
Storage	-50°C to +70°C
Installation	-30°C to +70°C

Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
IEEE	1222	Cable
TIA	598-D	Fiber

Contact AFL for your customized ADSS solution.

continued
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All-Dielectric Self-Supporting (AFL-ADSS®) Fiber Optic Cable

NEC LIGHT LOADING @ 1% INSTALLATION SAG												
SPAN		WEIGHT		DIAMETER		MRCL		INITIAL TENSION				
FEET	METERS	LBS/FT	KG/KM	INCHES	MM	LBS	N	UNLOADED		LOADED		
								LBS	N	SAG %	LBS	N
12 FIBERS												
100	30	0.080	119	0.500	12.7	539	2398	100	446	0.6	194	862
200	61	0.080	119	0.500	12.7	539	2398	201	892	0.7	333	1479
300	91	0.080	119	0.500	12.7	539	2398	301	1338	0.7	459	2043
400	122	0.080	119	0.500	12.7	628	2793	401	1785	0.8	597	2654
500	152	0.080	119	0.500	12.7	746	3320	502	2232	0.8	739	3286
600	183	0.080	119	0.500	12.7	936	4162	602	2679	0.8	894	3976
700	213	0.084	125	0.512	13.0	1126	5008	737	3280	0.8	1079	4800
800	244	0.084	125	0.512	13.0	1253	5572	843	3750	0.8	1227	5459
900	274	0.084	126	0.512	13.0	1569	6981	949	4221	0.8	1409	6269
1000	305	0.084	126	0.512	13.0	1569	6981	1054	4690	0.8	1535	6829
1100	335	0.085	126	0.512	13.0	1823	8108	1162	5171	0.8	1708	7595
1200	366	0.090	134	0.528	13.4	1950	8672	1350	6005	0.8	1926	8569
1300	396	0.090	134	0.528	13.4	2203	9799	1463	6508	0.8	2103	9356
1400	427	0.090	134	0.528	13.4	2330	10363	1576	7010	0.8	2258	10044
1500	457	0.090	134	0.528	13.4	2456	10927	1689	7512	0.8	2412	10731
24 FIBERS												
100	30	0.081	121	0.500	12.7	539	2398	102	452	0.6	194	865
200	61	0.081	121	0.500	12.7	539	2398	203	904	0.7	334	1486
300	91	0.081	121	0.500	12.7	539	2398	305	1356	0.7	462	2053
400	122	0.081	121	0.500	12.7	628	2793	407	1808	0.8	600	2668
500	152	0.081	121	0.500	12.7	746	3320	508	2261	0.8	743	3304
600	183	0.081	121	0.500	12.7	936	4162	610	2714	0.8	899	3998
700	213	0.085	127	0.512	13.0	1126	5008	747	3322	0.8	1085	4826
800	244	0.085	127	0.512	13.0	1253	5572	854	3797	0.8	1234	5489
900	274	0.085	127	0.512	13.0	1569	6981	961	4274	0.8	1416	6301
1000	305	0.085	127	0.512	13.0	1696	7545	1068	4750	0.8	1566	6965
1100	335	0.086	127	0.512	13.0	1823	8108	1177	5236	0.8	1717	7635
1200	366	0.091	135	0.528	13.4	1950	8672	1366	6075	0.8	1937	8614
1300	396	0.091	136	0.528	13.4	2203	9799	1480	6584	0.8	2114	9405
1400	427	0.091	136	0.528	13.4	2456	10927	1595	7094	0.8	2292	10194
1500	457	0.091	136	0.528	13.4	2583	11490	1709	7602	0.8	2447	10886
36 FIBERS												
100	30	0.082	123	0.500	12.7	539	2398	103	458	0.6	195	867
200	61	0.082	123	0.500	12.7	598	2661	206	916	0.7	343	1526
300	91	0.082	123	0.500	12.7	598	2661	309	1375	0.8	464	2064
400	122	0.082	123	0.500	12.7	598	2661	412	1833	0.8	598	2660
500	152	0.082	123	0.500	12.7	776	3452	515	2291	0.8	752	3345
600	183	0.082	123	0.500	12.7	999	4444	618	2749	0.8	915	4070
700	213	0.086	129	0.512	13.0	1189	5290	756	3363	0.8	1102	4902
800	244	0.086	129	0.512	13.0	1253	5572	864	3843	0.8	1241	5520
900	274	0.086	129	0.512	13.0	1569	6981	973	4328	0.8	1424	6334
1000	305	0.086	129	0.512	13.0	1569	6981	1081	4809	0.8	1552	6904
1100	335	0.087	129	0.512	13.0	1823	8108	1192	5302	0.8	1726	7678
1200	366	0.092	137	0.528	13.4	2076	9236	1382	6147	0.8	1969	8759
1300	396	0.092	137	0.528	13.4	2203	9799	1497	6659	0.8	2125	9452
1400	427	0.092	137	0.528	13.4	2330	10363	1613	7175	0.8	2281	10146
1500	457	0.092	137	0.528	13.4	2456	10927	1728	7687	0.8	2438	10845

* Initial tension indicates tension before 10 year creep.

continued
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All-Dielectric Self-Supporting (AFL-ADSS®) Fiber Optic Cable

Fiber Optic Cable

NEC LIGHT LOADING @ 1% INSTALLATION SAG												
SPAN		WEIGHT		DIAMETER		MRCL		INITIAL TENSION				
FEET	METERS	LBS/FT	KG/KM	INCHES	MM	LBS	N	UNLOADED		LOADED		
								LBS	N	SAG %	LBS	N
48 FIBERS												
100	30	0.083	124	0.500	12.7	539	2398	104	463	0.6	196	872
200	61	0.083	124	0.500	12.7	598	2661	209	930	0.7	344	1530
300	91	0.083	124	0.500	12.7	598	2661	313	1392	0.7	476	2117
400	122	0.083	124	0.500	12.7	628	2793	417	1855	0.8	606	2696
500	152	0.083	124	0.500	12.7	776	3452	522	2322	0.8	756	3363
600	183	0.083	124	0.500	12.7	999	4444	626	2785	0.8	920	4092
700	213	0.087	130	0.512	13.0	1189	5290	765	3403	0.8	1108	4929
800	244	0.087	130	0.512	13.0	1253	5572	875	3892	0.8	1247	5547
900	274	0.088	130	0.512	13.0	1569	6981	985	4381	0.8	1431	6365
1000	305	0.088	130	0.512	13.0	1569	6981	1094	4866	0.8	1560	6939
1100	335	0.088	131	0.512	13.0	1823	8108	1206	5365	0.8	1735	7718
1200	366	0.093	139	0.528	13.4	2076	9236	1398	6219	0.8	1979	8803
1300	396	0.093	139	0.528	13.4	2330	10363	1515	6739	0.8	2158	9599
1400	427	0.093	139	0.528	13.4	2456	10927	1632	7259	0.8	2315	10298
1500	457	0.093	139	0.528	13.4	2456	10927	1748	7775	0.8	2450	10898
60 FIBERS												
100	30	0.084	126	0.500	12.7	539	2398	106	472	0.6	197	876
200	61	0.084	126	0.500	12.7	539	2398	211	939	0.7	339	1508
300	91	0.084	126	0.500	12.7	539	2398	317	1410	0.8	469	2086
400	122	0.084	126	0.500	12.7	628	2793	422	1877	0.8	610	2713
500	152	0.085	126	0.500	12.7	809	3599	528	2349	0.8	766	3407
600	183	0.085	126	0.500	12.7	936	4162	634	2820	0.8	914	4066
700	213	0.089	132	0.512	13.0	1126	5008	775	3447	0.8	1102	4902
800	244	0.089	132	0.512	13.0	1316	5854	885	3937	0.8	1265	5627
900	274	0.089	132	0.512	13.0	1569	6981	997	4435	0.8	1439	6401
1000	305	0.089	132	0.512	13.0	1569	6981	1107	4924	0.8	1568	6975
1100	335	0.089	132	0.512	13.0	1823	8108	1221	5431	0.8	1744	7758
1200	366	0.094	140	0.528	13.4	2076	9236	1414	6290	0.8	1989	8848
1300	396	0.094	140	0.528	13.4	2330	10363	1532	6815	0.8	2169	9648
1400	427	0.094	140	0.528	13.4	2330	10363	1650	7340	0.8	2305	10253
1500	457	0.094	140	0.528	13.4	2710	12054	1769	7869	0.8	2507	11152
72 FIBERS												
100	30	0.100	148	0.535	13.6	854	3797	125	556	0.6	235	1045
200	61	0.100	148	0.535	13.6	854	3797	249	1108	0.7	405	1802
300	91	0.100	148	0.535	13.6	854	3797	374	1664	0.7	561	2495
400	122	0.100	148	0.535	13.6	854	3797	499	2220	0.8	709	3154
500	152	0.100	148	0.535	13.6	854	3797	623	2771	0.8	853	3794
600	183	0.100	149	0.535	13.6	1031	4587	748	3327	0.8	1025	4559
700	213	0.108	161	0.559	14.2	1314	5843	949	4221	0.8	1280	5694
800	244	0.108	161	0.559	14.2	1504	6689	1084	4822	0.8	1464	6512
900	274	0.108	161	0.559	14.2	1884	8380	1221	5431	0.8	1677	7460
1000	305	0.108	161	0.559	14.2	1884	8380	1356	6032	0.8	1831	8145
1100	335	0.109	161	0.559	14.2	2011	8943	1492	6637	0.8	2004	8914
1200	366	0.109	162	0.559	14.2	2264	10071	1628	7242	0.8	2198	9777
1300	396	0.109	162	0.559	14.2	2391	10634	1767	7860	0.8	2374	10560
1400	427	0.109	162	0.559	14.2	2644	11762	1903	8465	0.8	2568	11423
1500	457	0.109	162	0.559	14.2	2771	12326	2040	9074	0.8	2741	12193

* Initial tension indicates tension before 10 year creep.

continued
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All-Dielectric Self-Supporting (AFL-ADSS®) Fiber Optic Cable

NEC LIGHT LOADING @ 1% INSTALLATION SAG												
SPAN		WEIGHT		DIAMETER		MRCL		INITIAL TENSION				
FEET	METERS	LBS/FT	KG/KM	INCHES	MM	LBS	N	UNLOADED		LOADED		
								LBS	N	SAG %	LBS	N
84 FIBERS												
100	30	0.131	195	0.610	15.5	1296	5763	164	730	0.6	295	1312
200	61	0.131	195	0.610	15.5	1296	5763	328	1459	0.7	512	2277
300	91	0.131	195	0.610	15.5	1296	5763	492	2189	0.8	712	3167
400	122	0.131	195	0.610	15.5	1296	5763	656	2918	0.8	903	4017
500	152	0.131	195	0.610	15.5	1296	5763	820	3648	0.8	1089	4844
600	183	0.131	195	0.610	15.5	1296	5763	984	4377	0.9	1270	5649
700	213	0.131	195	0.610	15.5	1503	6685	1148	5107	0.9	1481	6588
800	244	0.131	195	0.610	15.5	1692	7528	1313	5841	0.9	1689	7513
900	274	0.131	195	0.610	15.5	1946	8655	1477	6570	0.9	1907	8483
1000	305	0.138	205	0.626	15.9	2326	10346	1725	7673	0.9	2216	9857
1100	335	0.138	205	0.626	15.9	2453	10910	1898	8443	0.9	2422	10774
1200	366	0.138	205	0.626	15.9	2706	12037	2071	9212	0.9	2647	11774
1300	396	0.138	206	0.626	15.9	2960	13165	2244	9982	0.9	2872	12775
1400	427	0.138	206	0.626	15.9	3086	13728	2417	10751	0.9	3079	13696
1500	457	0.138	206	0.626	15.9	3340	14856	2590	11521	0.9	3304	14697
96 FIBERS												
100	30	0.132	197	0.610	15.5	1296	5763	165	734	0.6	296	1317
200	61	0.132	197	0.610	15.5	1296	5763	331	1472	0.7	514	2286
300	91	0.132	197	0.610	15.5	1296	5763	496	2206	0.8	715	3180
400	122	0.132	197	0.610	15.5	1296	5763	661	2940	0.8	907	4035
500	152	0.132	197	0.610	15.5	1296	5763	827	3679	0.8	1093	4862
600	183	0.132	197	0.610	15.5	1296	5763	992	4413	0.9	1276	5676
700	213	0.132	197	0.610	15.5	1503	6685	1158	5151	0.9	1488	6619
800	244	0.132	197	0.610	15.5	1756	7810	1324	5889	0.9	1706	7589
900	274	0.132	197	0.610	15.5	1946	8655	1489	6623	0.9	1915	8518
1000	305	0.139	207	0.626	15.9	2326	10346	1738	7731	0.9	2225	9897
1100	335	0.139	207	0.626	15.9	2453	10910	1912	8505	0.9	2433	10823
1200	366	0.139	207	0.626	15.9	2706	12037	2087	9283	0.9	2659	11828
1300	396	0.139	207	0.626	15.9	2960	13165	2261	10057	0.9	2885	12833
1400	427	0.139	207	0.626	15.9	3213	14292	2436	10836	0.9	3111	13838
1500	457	0.139	207	0.626	15.9	3340	14856	2610	11610	0.9	3319	14764
108 FIBERS												
100	30	0.170	254	0.685	17.4	2070	9207	213	947	0.6	371	1650
200	61	0.170	254	0.685	17.4	2070	9207	426	1895	0.7	648	2882
300	91	0.170	254	0.685	17.4	2070	9207	639	2842	0.8	904	4021
400	122	0.170	254	0.685	17.4	2070	9207	852	3790	0.8	1149	5111
500	152	0.170	254	0.685	17.4	2070	9207	1065	4737	0.8	1387	6170
600	183	0.170	254	0.685	17.4	2070	9207	1278	5685	0.9	1621	7211
700	213	0.170	254	0.685	17.4	2070	9207	1491	6632	0.9	1851	8234
800	244	0.170	254	0.685	17.4	2129	9470	1704	7580	0.9	2087	9283
900	274	0.178	264	0.701	17.8	2467	10972	1999	8892	0.9	2430	10809
1000	305	0.178	265	0.701	17.8	2720	12099	2222	9884	0.9	2698	12001
1100	335	0.178	265	0.701	17.8	3100	13790	2447	10885	0.9	2984	13273
1200	366	0.178	265	0.701	17.8	3354	14918	2670	11877	0.9	3252	14466
1300	396	0.178	265	0.701	17.8	3607	16045	2893	12869	0.9	3520	15658
1400	427	0.178	265	0.701	17.8	3860	17172	3117	13865	0.9	3789	16854
1500	457	0.178	265	0.701	17.8	4114	18300	3340	14857	0.9	4057	18046

* Initial tension indicates tension before 10 year creep.

continued
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All-Dielectric Self-Supporting (AFL-ADSS®) Fiber Optic Cable

NEC LIGHT LOADING @ 1% INSTALLATION SAG

SPAN		WEIGHT		DIAMETER		MRCL		INITIAL TENSION				
FEET	METERS	LBS/FT	KG/KM	INCHES	MM	LBS	N	UNLOADED		LOADED		
								LBS	N	SAG %	LBS	N
120 FIBERS												
100	30	0.171	255	0.685	17.4	2070	9207	214	952	0.6	371	1650
200	61	0.171	255	0.685	17.4	2070	9207	429	1908	0.7	650	2891
300	91	0.171	255	0.685	17.4	2070	9207	643	2860	0.8	906	4030
400	122	0.171	255	0.685	17.4	2070	9207	857	3812	0.8	1152	5124
500	152	0.171	255	0.685	17.4	2070	9207	1072	4768	0.8	1392	6192
600	183	0.171	255	0.685	17.4	2070	9207	1286	5720	0.9	1627	7237
700	213	0.171	255	0.685	17.4	2070	9207	1501	6677	0.9	1858	8265
800	244	0.172	255	0.685	17.4	2129	9470	1715	7629	0.9	2095	9319
900	274	0.179	266	0.701	17.8	2467	10972	2011	8945	0.9	2440	10854
1000	305	0.179	266	0.701	17.8	2720	12099	2235	9942	0.9	2709	12050
1100	335	0.179	266	0.701	17.8	3100	13790	2462	10952	0.9	2995	13322
1200	366	0.179	267	0.701	17.8	3354	14918	2686	11948	0.9	3264	14519
1300	396	0.179	267	0.701	17.8	3607	16045	2911	12949	0.9	3533	15716
1400	427	0.179	267	0.701	17.8	3860	17172	3136	13950	0.9	3803	16917
1500	457	0.179	267	0.701	17.8	4114	18300	3360	14946	0.9	4072	18113
132 FIBERS												
100	30	0.208	310	0.764	19.4	2070	9207	260	1157	0.7	415	1846
200	61	0.208	310	0.764	19.4	2070	9207	520	2313	0.8	734	3265
300	91	0.208	310	0.764	19.4	2070	9207	780	3470	0.8	1031	4586
400	122	0.208	310	0.764	19.4	2070	9207	1040	4626	0.9	1318	5863
500	152	0.208	310	0.764	19.4	2070	9207	1300	5783	0.9	1599	7113
600	183	0.208	310	0.764	19.4	2070	9207	1560	6939	0.9	1875	8340
700	213	0.208	310	0.764	19.4	2188	9734	1821	8100	0.9	2163	9622
800	244	0.208	310	0.764	19.4	2530	11253	2081	9257	0.9	2476	11014
900	274	0.208	310	0.764	19.4	2783	12381	2342	10418	0.9	2778	12357
1000	305	0.216	322	0.780	19.8	3227	14354	2704	12028	0.9	3194	14208
1100	335	0.216	322	0.780	19.8	3607	16045	2975	13233	0.9	3521	15662
1200	366	0.217	322	0.780	19.8	3860	17172	3248	14448	0.9	3835	17059
1300	396	0.217	322	0.780	19.8	4241	18863	3520	15658	0.9	4162	18513
1400	427	0.217	322	0.780	19.8	4494	19991	3792	16868	0.9	4475	19906
1500	457	0.217	323	0.780	19.8	4874	21682	4064	18078	0.9	4802	21360
144 FIBERS												
100	30	0.209	311	0.764	19.4	2070	9207	261	1161	0.7	416	1850
200	61	0.209	311	0.764	19.4	2070	9207	523	2326	0.8	736	3274
300	91	0.209	311	0.764	19.4	2070	9207	784	3487	0.8	1034	4599
400	122	0.209	311	0.764	19.4	2070	9207	1046	4653	0.9	1322	5881
500	152	0.209	311	0.764	19.4	2070	9207	1307	5814	0.9	1604	7135
600	183	0.209	311	0.764	19.4	2070	9207	1568	6975	0.9	1882	8372
700	213	0.209	311	0.764	19.4	2188	9734	1830	8140	0.9	2170	9653
800	244	0.209	311	0.764	19.4	2530	11253	2092	9306	0.9	2484	11049
900	274	0.209	311	0.764	19.4	2847	12663	2354	10471	0.9	2795	12433
1000	305	0.217	324	0.780	19.8	3227	14354	2717	12086	0.9	3205	14257
1100	335	0.217	324	0.780	19.8	3607	16045	2990	13300	0.9	3533	15716
1200	366	0.218	324	0.780	19.8	3860	17172	3265	14523	0.9	3848	17117
1300	396	0.218	324	0.780	19.8	4241	18863	3538	15738	0.9	4176	18576
1400	427	0.218	324	0.780	19.8	4494	19991	3811	16952	0.9	4489	19968
1500	457	0.218	324	0.780	19.8	4874	21682	4084	18167	0.9	4818	21432

* Initial tension indicates tension before 10 year creep.

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Fiber Optic Cable

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All-Dielectric Self-Supporting (AFL-ADSS®) Fiber Optic Cable

NEC LIGHT LOADING @ 1% INSTALLATION SAG												
SPAN		WEIGHT		DIAMETER		MRCL		INITIAL TENSION				
FEET	METERS	LBS/FT	KG/KM	INCHES	MM	LBS	N	UNLOADED		LOADED		
								LBS	N	SAG %	LBS	N
216 FIBERS												
100	30	0.202	301	0.780	19.8	854	3797	253	1125	0.8	353	1570
200	61	0.202	301	0.780	19.8	854	3797	505	2246	0.9	635	2825
300	91	0.202	301	0.780	19.8	913	4060	758	3372	0.9	911	4052
400	122	0.202	301	0.780	19.8	1250	5561	1011	4497	0.9	1219	5422
500	152	0.202	301	0.780	19.8	1630	7252	1264	5623	0.9	1533	6819
600	183	0.202	301	0.780	19.8	1884	8380	1517	6748	0.9	1831	8145
700	213	0.211	313	0.795	20.2	2264	10071	1843	8198	0.9	2208	9822
800	244	0.211	313	0.795	20.2	2517	11198	2106	9368	0.9	2516	11192
900	274	0.211	314	0.795	20.2	2898	12889	2371	10547	0.9	2839	12629
1000	305	0.211	314	0.795	20.2	3151	14017	2634	11717	0.9	3147	13999
1100	335	0.211	314	0.795	20.2	3531	15708	2899	12895	0.9	3470	15435
1200	366	0.211	314	0.795	20.2	3785	16835	3163	14070	0.9	3778	16805
1300	396	0.219	326	0.811	20.6	4292	19090	3564	15853	0.9	4238	18852
1400	427	0.220	327	0.811	20.6	4689	20857	3845	17103	0.9	4577	20360
1500	457	0.220	327	0.811	20.6	5069	22548	4121	18331	0.9	4909	21836
288 FIBERS												
100	30	0.259	385	0.890	22.6	1296	5763	323	1439	0.8	444	1975
200	61	0.259	385	0.890	22.6	1296	5763	647	2878	0.9	802	3569
300	91	0.259	385	0.890	22.6	1296	5763	970	4317	0.9	1146	5096
400	122	0.259	385	0.890	22.6	1566	6964	1294	5757	0.9	1511	6723
500	152	0.259	385	0.890	22.6	2072	9219	1618	7198	0.9	1901	8457
600	183	0.259	385	0.890	22.6	2326	10346	1942	8639	0.9	2265	10077
700	213	0.259	385	0.890	22.6	2706	12037	2267	10082	0.9	2643	11755
800	244	0.259	386	0.890	22.6	3086	13728	2591	11525	0.9	3020	13434
900	274	0.269	400	0.906	23.0	3593	15983	3023	13447	0.9	3507	15602
1000	305	0.269	400	0.906	23.0	3973	17674	3360	14945	0.9	3896	17330
1100	335	0.269	400	0.906	23.0	4354	19365	3697	16444	0.9	4284	19058
1200	366	0.269	400	0.906	23.0	4734	21056	4034	17943	0.9	4673	20787
1300	396	0.268	399	0.921	23.4	5069	22548	4354	19368	0.9	5062	22516
1400	427	0.268	399	0.921	23.4	5576	24803	4691	20865	0.9	5464	24307
1500	457	0.268	399	0.921	23.4	5956	26494	5027	22361	0.9	5854	26039
432 FIBERS												
100	30	0.298	444	0.953	24.2	1296	5763	373	1658	0.8	487	2168
200	61	0.298	444	0.953	24.2	1296	5763	745	3316	0.9	890	3959
300	91	0.298	444	0.953	24.2	1296	5763	1118	4974	0.9	1279	5689
400	122	0.298	444	0.953	24.2	1756	7810	1491	6634	0.9	1708	7598
500	152	0.298	444	0.953	24.2	2326	10346	1865	8295	0.9	2148	9554
600	183	0.298	444	0.953	24.2	2579	11474	2238	9956	0.9	2558	11379
700	213	0.299	444	0.953	24.2	3086	13728	2612	11619	0.9	2992	13310
800	244	0.299	444	0.953	24.2	3466	15419	2986	13281	0.9	3415	15189
900	274	0.309	459	0.969	24.6	3973	17674	3473	15448	0.9	3952	17580
1000	305	0.309	460	0.969	24.6	4480	19929	3860	17170	0.9	4398	19564
1100	335	0.309	460	0.969	24.6	4860	21620	4247	18891	0.9	4832	21496
1200	366	0.320	476	0.984	25.0	5449	24239	4796	21333	0.9	5433	24168
1300	396	0.320	476	0.984	25.0	5956	26494	5197	23118	0.9	5892	26208
1400	427	0.319	474	0.984	25.0	6336	28185	5576	24804	0.9	6321	28118
1500	457	0.319	474	0.984	25.0	6970	31003	5977	26585	0.9	6791	30207

* Initial tension indicates tension before 10 year creep.

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All-Dielectric Self-Supporting (AFL-ADSS®) Fiber Optic Cable

Fiber Optic Cable

M E D I U M												
NESC MEDIUM LOADING @ 1% INSTALLATION SAG												
SPAN		WEIGHT		DIAMETER		MRCL		INITIAL TENSION				
FEET	METERS	LBS/FT	KG/KM	INCHES	MM	LBS	N	UNLOADED		LOADED		
								LBS	N	SAG %	LBS	N
12 FIBERS												
100	30	0.08	119	0.5	12.7	539	2398	100	446	2.3	242	1074
200	61	0.08	119	0.5	12.7	539	2398	201	892	2.8	406	1807
300	91	0.08	119	0.5	12.7	598	2661	301	1339	3.0	518	2304
400	122	0.08	119	0.5	12.7	746	3320	401	1785	3.0	744	3311
500	152	0.08	120	0.5	12.7	999	4444	502	2232	3.0	946	4206
600	183	0.084	125	0.512	13	1189	5290	632	2812	2.9	1055	4694
700	213	0.084	126	0.512	13	1569	6981	738	3283	2.9	1387	6168
800	244	0.084	126	0.512	13	1569	6981	844	3752	3.0	1536	6834
900	274	0.085	126	0.512	13	1823	8108	951	4231	3.0	1742	7751
1000	305	0.09	134	0.528	13.4	2076	9236	1125	5005	2.9	1825	8118
1100	335	0.09	134	0.528	13.4	2203	9799	1238	5506	3.0	2180	9698
1200	366	0.09	134	0.528	13.4	2456	10927	1351	6010	2.9	2391	10634
1300	396	0.09	134	0.528	13.4	2583	11490	1464	6512	3.0	2573	11444
1400	427	0.09	134	0.528	13.4	2837	12618	1577	7016	3.0	2783	12380
1500	457	0.09	134	0.528	13.4	3090	13745	1691	7520	2.9	2994	13316
24 FIBERS												
100	30	0.081	121	0.5	12.7	539	2398	102	452	2.3	242	1078
200	61	0.081	121	0.5	12.7	539	2398	203	904	2.8	408	1813
300	91	0.081	121	0.5	12.7	598	2661	305	1356	3.0	520	2314
400	122	0.081	121	0.5	12.7	776	3452	407	1809	3.0	754	3355
500	152	0.081	121	0.5	12.7	999	4444	508	2262	3.0	950	4224
600	183	0.085	127	0.512	13	1189	5290	640	2847	3.0	1060	4717
700	213	0.085	127	0.512	13	1569	6981	747	3324	2.9	1392	6192
800	244	0.085	127	0.512	13	1696	7545	854	3800	2.9	1571	6986
900	274	0.086	127	0.512	13	1823	8108	963	4284	3.0	1750	7782
1000	305	0.091	136	0.528	13.4	2076	9236	1138	5064	2.9	1833	8152
1100	335	0.091	136	0.528	13.4	2203	9799	1252	5571	3.0	2189	9737
1200	366	0.091	136	0.528	13.4	2456	10927	1367	6080	2.9	2400	10676
1300	396	0.091	136	0.528	13.4	2583	11490	1481	6588	3.0	2583	11490
1400	427	0.091	136	0.528	13.4	2837	12618	1596	7098	2.9	2794	12490
1500	457	0.091	136	0.528	13.4	3090	13745	1710	7608	2.9	3006	13369
36 FIBERS												
100	30	0.082	123	0.500	12.7	539	2398	103	458	2.3	243	1081
200	61	0.082	123	0.500	12.7	598	2661	206	916	2.7	420	1868
300	91	0.082	123	0.500	12.7	598	2661	309	1375	3.0	572	2544
400	122	0.082	123	0.500	12.7	776	3452	412	1833	3.0	757	3367
500	152	0.082	123	0.500	12.7	999	4444	515	2291	3.0	953	4239
600	183	0.086	129	0.512	13.0	1189	5290	648	2882	3.0	1164	5178
700	213	0.086	129	0.512	13.0	1506	6699	756	3363	2.9	1384	6156
800	244	0.087	129	0.512	13.0	1823	8108	867	3857	2.9	1604	7135
900	274	0.087	129	0.512	13.0	1823	8108	975	4337	2.9	1757	7816
1000	305	0.092	137	0.528	13.4	2076	9236	1152	5124	2.9	2014	8959
1100	335	0.092	137	0.528	13.4	2456	10927	1268	5640	2.9	2252	10017
1200	366	0.092	137	0.528	13.4	2456	10927	1383	6152	2.9	2410	10720
1300	396	0.092	137	0.528	13.4	2710	12054	1499	6668	2.9	2621	11659
1400	427	0.092	137	0.528	13.4	2837	12618	1614	7179	2.9	2806	12482
1500	457	0.092	137	0.528	13.4	3090	13745	1730	7695	2.9	3017	13420

* Initial tension indicates tension before 10 year creep.

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All-Dielectric Self-Supporting (AFL-ADSS®) Fiber Optic Cable

M E D I U M												
NESG MEDIUM LOADING @ 1% INSTALLATION SAG												
SPAN		WEIGHT		DIAMETER		MRCL		INITIAL TENSION				
FEET	METERS	LBS/FT	KG/KM	INCHES	MM	LBS	N	UNLOADED		LOADED		
								LBS	N	SAG %	LBS	N
48 FIBERS												
100	30	0.083	124	0.5	12.7	539	2398	104	463	2.3	244	1085
200	61	0.083	124	0.5	12.7	598	2661	209	930	2.7	421	1873
300	91	0.083	124	0.5	12.7	598	2661	313	1392	3.0	574	2553
400	122	0.083	124	0.5	12.7	776	3452	417	1855	3.0	761	3385
500	152	0.083	124	0.5	12.7	999	4444	522	2322	3.0	957	4257
600	183	0.087	130	0.512	13.0	1189	5290	656	2918	3.0	1169	5200
700	213	0.088	130	0.512	13.0	1506	6699	766	3407	2.9	1390	6183
800	244	0.088	131	0.512	13.0	1823	8108	877	3901	2.9	1610	7162
900	274	0.088	131	0.512	13.0	1823	8108	987	4390	2.9	1764	7847
1000	305	0.093	139	0.528	13.4	2076	9236	1165	5182	2.9	2018	8220
1100	335	0.093	139	0.528	13.4	2456	10927	1282	5703	2.9	2261	10057
1200	366	0.093	139	0.528	13.4	2456	10927	1399	6223	2.9	2419	10760
1300	396	0.093	139	0.528	13.4	2710	12054	1516	6744	2.9	2632	11708
1400	427	0.093	139	0.528	13.4	2963	13182	1633	7264	2.9	2844	12651
1500	457	0.093	139	0.528	13.4	3090	13745	1750	7784	2.9	3029	13474
60 FIBERS												
100	30	0.084	126	0.500	12.7	539	2398	106	472	2.3	244	1085
200	61	0.084	126	0.500	12.7	539	2398	211	939	2.8	412	1833
300	91	0.084	126	0.500	12.7	598	2661	317	1410	3.0	576	2562
400	122	0.085	126	0.500	12.7	776	3452	423	1882	3.0	764	3398
500	152	0.085	126	0.500	12.7	999	4444	528	2349	3.0	961	4275
600	183	0.089	132	0.512	13.0	1189	5290	664	2954	3.0	1174	5222
700	213	0.089	132	0.512	13.0	1379	6135	775	3447	3.0	1368	6085
800	244	0.089	132	0.512	13.0	1569	6981	886	3941	3.0	1562	6948
900	274	0.089	132	0.512	13.0	1823	8108	999	4444	2.9	1771	7878
1000	305	0.094	140	0.528	13.4	2076	9236	1178	5240	2.9	2030	9030
1100	335	0.094	140	0.528	13.4	2330	10363	1296	5765	2.9	2243	9977
1200	366	0.094	140	0.528	13.4	2456	10927	1414	6290	2.9	2429	10805
1300	396	0.094	140	0.528	13.4	2710	12054	1533	6819	2.9	2642	11752
1400	427	0.094	140	0.528	13.4	2963	13182	1652	7348	2.9	2856	12704
1500	457	0.094	140	0.528	13.4	3090	13745	1770	7873	2.9	3042	13531
72 FIBERS												
100	30	0.100	148	0.535	13.6	854	3797	125	556	2.1	290	1290
200	61	0.100	148	0.535	13.6	854	3797	249	1108	2.5	489	2175
300	91	0.100	148	0.535	13.6	854	3797	374	1664	2.7	668	2971
400	122	0.100	148	0.535	13.6	854	3797	499	2220	2.9	836	3719
500	152	0.100	149	0.535	13.6	1061	4719	624	2776	2.9	1044	4644
600	183	0.108	161	0.559	14.2	1314	5843	813	3616	2.9	1310	5827
700	213	0.108	161	0.559	14.2	1567	6970	949	4221	2.9	1536	6832
800	244	0.108	161	0.559	14.2	1884	8380	1085	4826	2.8	1775	7896
900	274	0.109	161	0.559	14.2	2011	8943	1221	5431	2.9	1975	8785
1000	305	0.109	162	0.559	14.2	2264	10071	1357	6036	2.8	2201	9791
1100	335	0.109	162	0.559	14.2	2517	11198	1495	6650	2.8	2428	10800
1200	366	0.109	162	0.559	14.2	2644	11762	1631	7255	2.9	2628	11690
1300	396	0.109	162	0.559	14.2	2898	12889	1768	7864	2.9	2854	12695
1400	427	0.109	162	0.559	14.2	3151	14017	1905	8474	2.8	3080	13701
1500	457	0.115	171	0.575	14.6	3405	15144	2153	9577	2.8	3392	15088

* Initial tension indicates tension before 10 year creep.

continued
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All-Dielectric Self-Supporting (AFL-ADSS®) Fiber Optic Cable

Fiber Optic Cable

M E D I U M												
NESC MEDIUM LOADING @ 1% INSTALLATION SAG												
SPAN		WEIGHT		DIAMETER		MRCL		INITIAL TENSION				
FEET	METERS	LBS/FT	KG/KM	INCHES	MM	LBS	N	UNLOADED		LOADED		
								LBS	N	SAG %	LBS	N
84 FIBERS												
100	30	0.131	195	0.610	15.5	1296	5763	164	730	1.9	354	1575
200	61	0.131	195	0.610	15.5	1296	5763	328	1459	2.3	602	2678
300	91	0.131	195	0.610	15.5	1296	5763	492	2189	2.5	826	3674
400	122	0.131	195	0.610	15.5	1296	5763	656	2918	2.6	1037	4613
500	152	0.131	195	0.610	15.5	1296	5763	820	3648	2.7	1240	5516
600	183	0.131	195	0.610	15.5	1473	6554	984	4377	2.8	1473	6552
700	213	0.131	195	0.610	15.5	1756	7810	1149	5111	2.8	1726	7678
800	244	0.131	195	0.610	15.5	2009	8937	1313	5841	2.8	1973	8776
900	274	0.138	205	0.626	15.9	2326	10346	1552	6904	2.7	2291	10191
1000	305	0.138	205	0.626	15.9	2579	11474	1725	7673	2.7	2545	11321
1100	335	0.138	205	0.626	15.9	2833	12601	1898	8443	2.7	2799	12451
1200	366	0.138	206	0.626	15.9	3086	13728	2072	9217	2.7	3053	13580
1300	396	0.138	206	0.626	15.9	3340	14856	2245	9986	2.7	3307	14710
1400	427	0.138	206	0.626	15.9	3593	15983	2418	10756	2.7	3562	15845
1500	457	0.145	216	0.642	16.3	3973	17674	2716	12081	2.7	3938	17517
96 FIBERS												
100	30	0.132	197	0.610	15.5	1296	5763	165	734	1.9	354	1575
200	61	0.132	197	0.610	15.5	1296	5763	331	1472	2.3	604	2687
300	91	0.132	197	0.610	15.5	1296	5763	496	2206	2.5	829	3688
400	122	0.132	197	0.610	15.5	1296	5763	661	2940	2.6	1041	4631
500	152	0.132	197	0.610	15.5	1296	5763	827	3679	2.7	1245	5538
600	183	0.132	197	0.610	15.5	1503	6685	992	4413	2.8	1484	6601
700	213	0.132	197	0.610	15.5	1756	7810	1158	5151	2.8	1732	7704
800	244	0.132	197	0.610	15.5	2009	8937	1324	5889	2.8	1980	8807
900	274	0.139	207	0.626	15.9	2326	10346	1564	6957	2.7	2299	10226
1000	305	0.139	207	0.626	15.9	2706	12037	1739	7735	2.7	2577	11463
1100	335	0.139	207	0.626	15.9	2833	12601	1913	8509	2.7	2809	12495
1200	366	0.139	207	0.626	15.9	3086	13728	2088	9288	2.7	3064	13629
1300	396	0.139	207	0.626	15.9	3340	14856	2262	10062	2.7	3319	14764
1400	427	0.139	207	0.626	15.9	3593	15983	2437	10840	2.7	3574	15898
1500	457	0.146	217	0.642	16.3	3973	17674	2737	12175	2.7	3952	17579
108 FIBERS												
100	30	0.170	254	0.685	17.4	2070	9207	213	947	1.8	436	1939
200	61	0.170	254	0.685	17.4	2070	9207	426	1895	2.0	748	3327
300	91	0.170	254	0.685	17.4	2070	9207	639	2842	2.2	1030	4582
400	122	0.170	254	0.685	17.4	2070	9207	852	3790	2.4	1297	5769
500	152	0.170	254	0.685	17.4	2070	9207	1065	4737	2.5	1554	6913
600	183	0.170	254	0.685	17.4	2070	9207	1278	5685	2.5	1805	8029
700	213	0.170	254	0.685	17.4	2070	9207	1491	6632	2.6	2050	9119
800	244	0.170	254	0.685	17.4	2340	10408	1704	7580	2.6	2339	10404
900	274	0.178	265	0.701	17.8	2720	12099	2000	8896	2.6	2713	12068
1000	305	0.178	265	0.701	17.8	3100	13790	2225	9897	2.6	3029	13474
1100	335	0.178	265	0.701	17.8	3354	14918	2448	10889	2.6	3323	14781
1200	366	0.178	265	0.701	17.8	3734	16609	2671	11881	2.6	3638	16183
1300	396	0.178	265	0.701	17.8	3987	17736	2894	12873	2.6	3933	17495
1400	427	0.186	276	0.717	18.2	4367	19427	3248	14448	2.6	4355	19372
1500	457	0.186	276	0.717	18.2	4748	21118	3481	15484	2.6	4678	20809

* Initial tension indicates tension before 10 year creep.

continued
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All-Dielectric Self-Supporting (AFL-ADSS®) Fiber Optic Cable

M E D I U M												
NESC MEDIUM LOADING @ 1% INSTALLATION SAG												
SPAN		WEIGHT		DIAMETER		MRCL		INITIAL TENSION				
FEET	METERS	LBS/FT	KG/KM	INCHES	MM	LBS	N	UNLOADED		LOADED		
								LBS	N	SAG %	LBS	N
120 FIBERS												
100	30	0.171	255	0.685	17.4	2070	9207	214	952	1.8	437	1944
200	61	0.171	255	0.685	17.4	2070	9207	429	1908	2.0	749	3332
300	91	0.171	255	0.685	17.4	2070	9207	643	2860	2.2	1033	4595
400	122	0.171	255	0.685	17.4	2070	9207	857	3812	2.4	1301	5787
500	152	0.171	255	0.685	17.4	2070	9207	1072	4768	2.5	1559	6935
600	183	0.171	255	0.685	17.4	2070	9207	1286	5720	2.5	1810	8051
700	213	0.171	255	0.685	17.4	2070	9207	1501	6677	2.6	2057	9150
800	244	0.179	266	0.701	17.8	2467	10972	1788	7953	2.6	2427	10796
900	274	0.179	266	0.701	17.8	2783	12381	2012	8950	2.6	2732	12153
1000	305	0.179	266	0.701	17.8	3100	13790	2238	9955	2.6	3039	13518
1100	335	0.179	267	0.701	17.8	3354	14918	2463	10956	2.6	3334	14830
1200	366	0.179	267	0.701	17.8	3734	16609	2687	11952	2.6	3650	16236
1300	396	0.179	267	0.701	17.8	4114	18300	2912	12953	2.6	3966	17642
1400	427	0.187	278	0.717	18.2	4621	20554	3267	14532	2.5	4409	19612
1500	457	0.187	278	0.717	18.2	4748	21118	3501	15573	2.6	4693	20876
132 FIBERS												
100	30	0.208	310	0.764	19.4	2070	9207	260	1157	1.8	476	2117
200	61	0.208	310	0.764	19.4	2070	9207	520	2313	2.1	826	3674
300	91	0.208	310	0.764	19.4	2070	9207	780	3470	2.2	1146	5098
400	122	0.208	310	0.764	19.4	2070	9207	1040	4626	2.3	1451	6454
500	152	0.208	310	0.764	19.4	2070	9207	1300	5783	2.4	1748	7775
600	183	0.208	310	0.764	19.4	2070	9207	1560	6939	2.5	2038	9065
700	213	0.208	310	0.764	19.4	2467	10972	1821	8100	2.5	2386	10613
800	244	0.208	310	0.764	19.4	2720	12099	2081	9257	2.5	2712	12064
900	274	0.216	322	0.780	19.8	3227	14354	2433	10823	2.5	3153	14025
1000	305	0.216	322	0.780	19.8	3607	16045	2704	12028	2.5	3507	15600
1100	335	0.217	322	0.780	19.8	3860	17172	2978	13247	2.5	3844	17099
1200	366	0.217	322	0.780	19.8	4241	18863	3249	14452	2.5	4198	18674
1300	396	0.217	322	0.780	19.8	4621	20554	3521	15662	2.5	4553	20253
1400	427	0.217	323	0.780	19.8	5001	22246	3793	16872	2.5	4908	21832
1500	457	0.225	335	0.795	20.2	5508	24500	4220	18771	2.4	5411	24069
144 FIBERS												
100	30	0.209	311	0.764	19.4	2070	9207	261	1161	1.8	477	2122
200	61	0.209	311	0.764	19.4	2070	9207	523	2326	2.1	827	3679
300	91	0.209	311	0.764	19.4	2070	9207	784	3487	2.2	1149	5111
400	122	0.209	311	0.764	19.4	2070	9207	1046	4653	2.3	1455	6472
500	152	0.209	311	0.764	19.4	2070	9207	1307	5814	2.4	1753	7798
600	183	0.209	311	0.764	19.4	2070	9207	1568	6975	2.5	2044	9092
700	213	0.209	311	0.764	19.4	2467	10972	1830	8140	2.5	2393	10645
800	244	0.209	311	0.764	19.4	2783	12381	2093	9310	2.5	2730	12144
900	274	0.217	324	0.780	19.8	3227	14354	2446	10880	2.5	3162	14065
1000	305	0.217	324	0.780	19.8	3607	16045	2718	12090	2.5	3517	15644
1100	335	0.218	324	0.780	19.8	3860	17172	2993	13314	2.5	3855	17148
1200	366	0.218	324	0.780	19.8	4241	18863	3266	14528	2.5	4211	18731
1300	396	0.218	324	0.780	19.8	4621	20554	3539	15742	2.5	4566	20311
1400	427	0.218	324	0.780	19.8	5001	22246	3812	16957	2.5	4922	21894
1500	457	0.226	337	0.795	20.2	5508	24500	4241	18865	2.4	5427	24140

* Initial tension indicates tension before 10 year creep.

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All-Dielectric Self-Supporting (AFL-ADSS®) Fiber Optic Cable

Fiber Optic Cable

M E D I U M												
NESC MEDIUM LOADING @ 1% INSTALLATION SAG												
SPAN		WEIGHT		DIAMETER		MRCL		INITIAL TENSION				
FEET	METERS	LBS/FT	KG/KM	INCHES	MM	LBS	N	UNLOADED		LOADED		
								LBS	N	SAG %	LBS	N
216 FIBERS												
100	30	0.202	301	0.780	19.8	854	3797	253	1125	2.1	394	1753
200	61	0.202	301	0.780	19.8	854	3797	505	2246	2.4	694	3087
300	91	0.202	301	0.780	19.8	1002	4455	758	3372	2.5	1000	4448
400	122	0.202	301	0.780	19.8	1377	6125	1011	4497	2.5	1341	5965
500	152	0.202	301	0.780	19.8	1884	8380	1264	5623	2.5	1701	7566
600	183	0.202	301	0.780	19.8	2011	8943	1518	6752	2.5	2003	8910
700	213	0.211	313	0.795	20.2	2517	11198	1843	8198	2.5	2423	10778
800	244	0.211	314	0.795	20.2	2771	12326	2107	9372	2.5	2754	12250
900	274	0.211	314	0.795	20.2	3151	14017	2371	10547	2.5	3104	13807
1000	305	0.211	314	0.795	20.2	3658	16271	2636	11726	2.5	3473	15449
1100	335	0.211	314	0.795	20.2	3785	16835	2899	12895	2.5	3784	16832
1200	366	0.219	326	0.811	20.6	4292	19090	3290	14635	2.5	4259	18945
1300	396	0.220	327	0.811	20.6	4689	20857	3570	15880	2.5	4624	20569
1400	427	0.220	327	0.811	20.6	5069	22548	3846	17108	2.5	4984	22170
1500	457	0.220	327	0.811	20.6	5576	24803	4125	18349	2.5	5364	23860
288 FIBERS												
100	30	0.259	385	0.890	22.6	1296	5763	323	1439	2.0	488	2172
200	61	0.259	385	0.890	22.6	1296	5763	647	2878	2.2	866	3851
300	91	0.259	385	0.890	22.6	1296	5763	970	4317	2.4	1222	5437
400	122	0.259	385	0.890	22.6	1692	7528	1294	5757	2.4	1625	7229
500	152	0.259	385	0.890	22.6	2072	9219	1618	7198	2.4	2026	9013
600	183	0.259	385	0.890	22.6	2579	11474	1943	8641	2.4	2444	10872
700	213	0.259	386	0.890	22.6	2833	12601	2267	10083	2.4	2828	12580
800	244	0.259	386	0.890	22.6	3340	14856	2593	11534	2.4	3248	14447
900	274	0.269	400	0.906	23.0	3847	17111	3024	13450	2.4	3757	16710
1000	305	0.269	400	0.906	23.0	4227	18802	3360	14948	2.4	4168	18542
1100	335	0.269	400	0.906	23.0	4734	21056	3698	16448	2.4	4597	20450
1200	366	0.268	399	0.921	23.4	5069	22548	4019	17879	2.4	5002	22252
1300	396	0.268	399	0.921	23.4	5449	24239	4355	19373	2.4	5415	24085
1400	427	0.268	399	0.921	23.4	5829	25930	4692	20869	2.4	5827	25918
1500	457	0.267	397	0.921	23.4	6336	28185	5005	22265	2.4	6239	27750
432 FIBERS												
100	30	0.298	444	0.953	24.2	1296	5763	373	1658	2.0	529	2355
200	61	0.298	444	0.953	24.2	1296	5763	745	3316	2.2	949	4221
300	91	0.298	444	0.953	24.2	1384	6158	1118	4974	2.3	1360	6050
400	122	0.298	444	0.953	24.2	1819	8091	1491	6634	2.3	1811	8054
500	152	0.298	444	0.953	24.2	2326	10346	1865	8295	2.3	2270	10098
600	183	0.298	444	0.953	24.2	2833	12601	2238	9957	2.3	2730	12143
700	213	0.299	444	0.953	24.2	3340	14856	2612	11620	2.3	3190	14188
800	244	0.309	459	0.969	24.6	3973	17674	3087	13732	2.3	3752	16689
900	274	0.309	459	0.969	24.6	4227	18802	3473	15451	2.3	4192	18648
1000	305	0.309	460	0.969	24.6	4734	21056	3861	17172	2.3	4663	20744
1100	335	0.320	476	0.984	25.0	5322	23675	4396	19554	2.3	5273	23456
1200	366	0.320	476	0.984	25.0	5829	25930	4797	21338	2.3	5756	25605
1300	396	0.319	474	0.984	25.0	6336	28185	5178	23032	2.3	6223	27683
1400	427	0.319	474	0.984	25.0	6716	29876	5577	24809	2.3	6690	29760
1500	457	0.319	474	0.984	25.0	7223	32131	5977	26589	2.3	7173	31906

* Initial tension indicates tension before 10 year creep.

continued
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All-Dielectric Self-Supporting (AFL-ADSS®) Fiber Optic Cable

NESG HEAVY LOADING @ 1% INSTALLATION SAG												
SPAN		WEIGHT		DIAMETER		MRCL		INITIAL TENSION				
FEET	METERS	LBS/FT	KG/KM	INCHES	MM	LBS	N	UNLOADED		LOADED		
								LBS	N	SAG %	LBS	N
12 FIBERS												
100	30	0.080	119	0.500	12.7	539	2398	100	446	3.5	335	1492
200	61	0.080	119	0.500	12.7	598	2661	201	892	4.1	569	2533
300	91	0.080	119	0.500	12.7	936	4162	301	1339	4.1	864	3844
400	122	0.084	125	0.512	13.0	1189	5290	421	1875	4.2	1152	5125
500	152	0.084	126	0.512	13.0	1506	6699	527	2345	4.1	1445	6429
600	183	0.085	126	0.512	13.0	1823	8108	634	2821	4.1	1739	7737
700	213	0.090	134	0.528	13.4	2076	9236	788	3503	4.1	2052	9127
800	244	0.090	134	0.528	13.4	2456	10927	901	4006	4.1	2367	10530
900	274	0.090	134	0.528	13.4	2710	12054	1014	4509	4.1	2649	11785
1000	305	0.090	134	0.528	13.4	2963	13182	1127	5012	4.1	2931	13040
1100	335	0.093	138	0.535	13.6	3344	14873	1278	5687	4.1	3276	14572
1200	366	0.093	138	0.535	13.6	3597	16000	1395	6207	4.1	3561	15839
1300	396	0.102	151	0.559	14.2	4104	18255	1652	7349	4.1	4017	17869
1400	427	0.102	152	0.559	14.2	4309	19166	1783	7933	4.1	4300	19125
1500	457	0.102	152	0.559	14.2	4689	20857	1915	8517	4.1	4628	20585
24 FIBERS												
100	30	0.081	121	0.500	12.7	539	2398	102	452	3.5	336	1495
200	61	0.081	121	0.500	12.7	598	2661	203	904	4.1	571	2539
300	91	0.081	121	0.500	12.7	936	4162	305	1357	4.1	866	3853
400	122	0.085	127	0.512	13.0	1189	5290	427	1898	4.1	1155	5137
500	152	0.085	127	0.512	13.0	1506	6699	534	2374	4.1	1449	6445
600	183	0.086	127	0.512	13.0	1823	8108	642	2856	4.1	1743	7755
700	213	0.091	136	0.528	13.4	2076	9236	797	3545	4.1	2057	9149
800	244	0.091	136	0.528	13.4	2456	10927	911	4054	4.1	2373	10555
900	274	0.091	136	0.528	13.4	2837	12618	1026	4563	4.1	2689	11960
1000	305	0.091	136	0.528	13.4	2963	13182	1140	5071	4.1	2938	13071
1100	335	0.094	140	0.535	13.6	3344	14873	1293	5752	4.1	3284	14606
1200	366	0.094	140	0.535	13.6	3724	16564	1411	6278	4.1	3602	16025
1300	396	0.103	153	0.559	14.2	4231	18819	1670	7427	4.0	4059	18055
1400	427	0.103	153	0.559	14.2	4435	19729	1802	8017	4.1	4343	19317
1500	457	0.103	154	0.559	14.2	4689	20857	1935	8605	4.1	4638	20633
36 FIBERS												
100	30	0.082	123	0.500	12.7	539	2398	103	458	3.5	337	1499
200	61	0.082	123	0.500	12.7	598	2661	206	916	4.1	572	2544
300	91	0.082	123	0.500	12.7	936	4162	309	1375	4.1	868	3861
400	122	0.086	129	0.512	13.0	1189	5290	432	1922	4.1	1158	5151
500	152	0.086	129	0.512	13.0	1506	6699	540	2402	4.1	1452	6459
600	183	0.087	129	0.512	13.0	1823	8108	650	2891	4.1	1748	7775
700	213	0.092	137	0.528	13.4	2076	9236	806	3585	4.1	2062	9172
800	244	0.092	137	0.528	13.4	2456	10927	922	4101	4.1	2379	10582
900	274	0.092	137	0.528	13.4	2710	12054	1038	4617	4.1	2662	11841
1000	305	0.092	137	0.528	13.4	3090	13745	1154	5133	4.1	2979	13251
1100	335	0.095	142	0.535	13.6	3470	15436	1308	5818	4.1	3324	14786
1200	366	0.095	142	0.535	13.6	3597	16000	1427	6348	4.1	3578	15916
1300	396	0.104	154	0.559	14.2	4104	18255	1687	7504	4.1	4036	17953
1400	427	0.104	155	0.559	14.2	4435	19729	1821	8100	4.1	4353	19363
1500	457	0.104	155	0.559	14.2	4689	20857	1954	8692	4.1	4649	20680

* Initial tension indicates tension before 10 year creep.

continued
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All-Dielectric Self-Supporting (AFL-ADSS®) Fiber Optic Cable

NEC HEAVY LOADING @ 1% INSTALLATION SAG

SPAN		WEIGHT		DIAMETER		MRCL		INITIAL TENSION				
FEET	METERS	LBS/FT	KG/KM	INCHES	MM	LBS	N	UNLOADED		LOADED		
								LBS	N	SAG %	LBS	N
48 FIBERS												
100	30	0.083	124	0.500	12.7	539	2398	104	463	3.5	338	1503
200	61	0.083	124	0.500	12.7	598	2661	209	930	4.1	574	2553
300	91	0.083	124	0.500	12.7	936	4162	313	1392	4.1	870	3870
400	122	0.087	130	0.512	13.0	1189	5290	437	1944	4.1	1160	5160
500	152	0.088	130	0.512	13.0	1506	6699	547	2433	4.1	1456	6477
600	183	0.088	131	0.512	13.0	1823	8108	658	2927	4.1	1752	7793
700	213	0.093	139	0.528	13.4	2076	9236	815	3625	4.1	2067	9194
800	244	0.093	139	0.528	13.4	2456	10927	932	4146	4.1	2384	10605
900	274	0.093	139	0.528	13.4	2710	12054	1049	4666	4.1	2668	11868
1000	305	0.093	139	0.528	13.4	3090	13745	1167	5191	4.1	2986	13282
1100	335	0.096	143	0.535	13.6	3470	15436	1322	5881	4.1	3332	14821
1200	366	0.096	143	0.535	13.6	3724	16564	1443	6419	4.1	3620	16103
1300	396	0.105	156	0.559	14.2	4104	18255	1704	7580	4.1	4045	17993
1400	427	0.105	156	0.559	14.2	4435	19729	1839	8180	4.1	4363	19408
1500	457	0.105	157	0.559	14.2	4689	20857	1974	8781	4.1	4660	20729
60 FIBERS												
100	30	0.084	126	0.500	12.7	539	2398	106	472	3.5	338	1503
200	61	0.084	126	0.500	12.7	598	2661	211	939	4.1	575	2558
300	91	0.085	126	0.500	12.7	936	4162	317	1410	4.1	872	3879
400	122	0.089	132	0.512	13.0	1189	5290	443	1971	4.1	1163	5173
500	152	0.089	132	0.512	13.0	1569	6981	554	2464	4.1	1476	6566
600	183	0.089	132	0.512	13.0	1823	8108	666	2963	4.1	1756	7811
700	213	0.094	140	0.528	13.4	2076	9236	825	3670	4.1	2072	9217
800	244	0.094	140	0.528	13.4	2456	10927	943	4195	4.1	2390	10631
900	274	0.094	140	0.528	13.4	2710	12054	1061	4720	4.1	2675	11899
1000	305	0.094	140	0.528	13.4	2963	13182	1180	5249	4.1	2960	13167
1100	335	0.097	145	0.535	13.6	3344	14873	1337	5947	4.1	3307	14710
1200	366	0.097	145	0.535	13.6	3597	16000	1459	6490	4.1	3595	15991
1300	396	0.106	158	0.559	14.2	4104	18255	1721	7655	4.1	4055	18038
1400	427	0.106	158	0.559	14.2	4435	19729	1858	8265	4.0	4373	19452
1500	457	0.106	158	0.559	14.2	4689	20857	1994	8870	4.1	4671	20778
72 FIBERS												
100	30	0.100	148	0.535	13.6	854	3797	125	556	3.1	400	1779
200	61	0.100	148	0.535	13.6	854	3797	249	1108	3.7	662	2945
300	91	0.100	148	0.535	13.6	913	4060	374	1664	4.1	907	4035
400	122	0.108	161	0.559	14.2	1314	5843	542	2411	4.0	1267	5636
500	152	0.108	161	0.559	14.2	1567	6970	678	3016	4.0	1565	6961
600	183	0.108	161	0.559	14.2	1884	8380	814	3621	4.0	1879	8358
700	213	0.109	162	0.559	14.2	2264	10071	950	4226	4.0	2210	9831
800	244	0.109	162	0.559	14.2	2644	11762	1088	4840	4.0	2541	11303
900	274	0.109	162	0.559	14.2	2898	12889	1224	5445	4.0	2839	12629
1000	305	0.109	162	0.559	14.2	3151	14017	1361	6054	4.0	3138	13959
1100	335	0.115	171	0.575	14.6	3531	15708	1579	7024	4.0	3531	15707
1200	366	0.115	171	0.575	14.6	3911	17399	1723	7664	4.0	3867	17201
1300	396	0.115	171	0.575	14.6	4292	19090	1870	8318	4.0	4205	18705
1400	427	0.115	171	0.575	14.6	4545	20217	2015	8963	4.0	4509	20057
1500	457	0.123	183	0.594	15.1	5069	22548	2308	10266	3.9	4994	22214

* Initial tension indicates tension before 10 year creep.

continued
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Fiber Optic Cable

HEAVY



All-Dielectric Self-Supporting (AFL-ADSS®) Fiber Optic Cable

NESG HEAVY LOADING @ 1% INSTALLATION SAG												
SPAN		WEIGHT		DIAMETER		MRCL		INITIAL TENSION				
FEET	METERS	LBS/FT	KG/KM	INCHES	MM	LBS	N	UNLOADED		LOADED		
								LBS	N	SAG %	LBS	N
84 FIBERS												
100	30	0.131	195	0.610	15.5	1296	5763	164	730	2.8	483	2148
200	61	0.131	195	0.610	15.5	1296	5763	328	1459	3.3	803	3572
300	91	0.131	195	0.610	15.5	1296	5763	492	2189	3.7	1085	4826
400	122	0.131	195	0.610	15.5	1384	6158	656	2918	3.9	1369	6090
500	152	0.131	195	0.610	15.5	1756	7810	821	3652	3.9	1718	7642
600	183	0.131	195	0.610	15.5	2072	9219	985	4381	3.9	2053	9132
700	213	0.138	205	0.626	15.9	2453	10910	1208	5373	3.9	2448	10889
800	244	0.138	205	0.626	15.9	2833	12601	1381	6143	3.9	2806	12482
900	274	0.138	206	0.626	15.9	3213	14292	1554	6913	3.9	3163	14070
1000	305	0.138	206	0.626	15.9	3593	15983	1727	7682	3.9	3521	15662
1100	335	0.145	216	0.642	16.3	3973	17674	1992	8861	3.9	3948	17562
1200	366	0.145	216	0.642	16.3	4354	19365	2174	9670	3.8	4312	19181
1300	396	0.145	216	0.642	16.3	4734	21056	2356	10480	3.8	4676	20800
1400	427	0.148	220	0.661	16.8	5196	23112	2587	11508	3.8	5115	22753
1500	457	0.148	220	0.661	16.8	5576	24803	2773	12335	3.8	5483	24390
96 FIBERS												
100	30	0.132	197	0.610	15.5	1296	5763	165	734	2.8	483	2148
200	61	0.132	197	0.610	15.5	1296	5763	331	1472	3.3	805	3581
300	91	0.132	197	0.610	15.5	1296	5763	496	2206	3.7	1088	4840
400	122	0.132	197	0.610	15.5	1384	6158	662	2945	3.9	1372	6103
500	152	0.132	197	0.610	15.5	1756	7810	827	3679	3.9	1722	7660
600	183	0.132	197	0.610	15.5	2072	9219	993	4417	3.9	2058	9154
700	213	0.139	207	0.626	15.9	2579	11474	1217	5413	3.8	2484	11049
800	244	0.139	207	0.626	15.9	2833	12601	1391	6187	3.9	2812	12508
900	274	0.139	207	0.626	15.9	3213	14292	1566	6966	3.9	3170	14101
1000	305	0.139	207	0.626	15.9	3593	15983	1741	7744	3.9	3528	15693
1100	335	0.146	217	0.642	16.3	3973	17674	2007	8928	3.8	3957	17602
1200	366	0.146	217	0.642	16.3	4480	19929	2191	9746	3.8	4352	19359
1300	396	0.146	217	0.642	16.3	4734	21056	2374	10560	3.8	4686	20844
1400	427	0.149	222	0.661	16.8	5196	23112	2606	11592	3.8	5126	22802
1500	457	0.149	222	0.661	16.8	5576	24803	2793	12424	3.8	5495	24443
108 FIBERS												
100	30	0.170	254	0.685	17.4	2070	9207	213	947	2.5	589	2620
200	61	0.170	254	0.685	17.4	2070	9207	426	1895	2.9	986	4386
300	91	0.170	254	0.685	17.4	2070	9207	639	2842	3.3	1337	5947
400	122	0.170	254	0.685	17.4	2070	9207	852	3790	3.5	1662	7393
500	152	0.170	254	0.685	17.4	2070	9207	1065	4737	3.7	1972	8772
600	183	0.170	254	0.685	17.4	2340	10408	1278	5685	3.7	2334	10382
700	213	0.178	265	0.701	17.8	2847	12663	1556	6921	3.7	2799	12451
800	244	0.178	265	0.701	17.8	3227	14354	1780	7918	3.7	3195	14212
900	274	0.178	265	0.701	17.8	3607	16045	2003	8910	3.7	3589	15965
1000	305	0.178	265	0.701	17.8	3987	17736	2226	9902	3.7	3984	17722
1100	335	0.186	276	0.717	18.2	4494	19991	2552	11352	3.7	4487	19959
1200	366	0.186	276	0.717	18.2	5001	22246	2785	12388	3.7	4917	21872
1300	396	0.186	276	0.717	18.2	5381	23937	3019	13429	3.7	5320	23665
1400	427	0.186	277	0.717	18.2	5761	25628	3252	14466	3.7	5722	25453
1500	457	0.188	279	0.748	19.0	6336	28185	3518	15649	3.7	6235	27735

* Initial tension indicates tension before 10 year creep.

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All-Dielectric Self-Supporting (AFL-ADSS®) Fiber Optic Cable

Fiber Optic Cable

NESCA HEAVY LOADING @ 1% INSTALLATION SAG												
SPAN		WEIGHT		DIAMETER		MRCL		INITIAL TENSION				
FEET	METERS	LBS/FT	KG/KM	INCHES	MM	LBS	N	UNLOADED		LOADED		
								LBS	N	SAG %	LBS	N
120 FIBERS												
100	30	0.171	255	0.685	17.4	2070	9207	214	952	2.5	590	2624
200	61	0.171	255	0.685	17.4	2070	9207	429	1908	2.9	988	4395
300	91	0.171	255	0.685	17.4	2070	9207	643	2860	3.3	1339	5956
400	122	0.171	255	0.685	17.4	2070	9207	857	3812	3.5	1666	7411
500	152	0.171	255	0.685	17.4	2070	9207	1072	4768	3.7	1976	8790
600	183	0.172	255	0.685	17.4	2340	10408	1287	5725	3.7	2339	10404
700	213	0.179	266	0.701	17.8	2847	12663	1565	6961	3.7	2805	12477
800	244	0.179	266	0.701	17.8	3227	14354	1791	7967	3.7	3201	14239
900	274	0.179	267	0.701	17.8	3607	16045	2015	8963	3.7	3597	16000
1000	305	0.179	267	0.701	17.8	4114	18300	2240	9964	3.7	4021	17886
1100	335	0.187	278	0.717	18.2	4621	20554	2567	11419	3.6	4524	20124
1200	366	0.187	278	0.717	18.2	5001	22246	2802	12464	3.6	4928	21921
1300	396	0.187	278	0.717	18.2	5381	23937	3036	13505	3.7	5331	23713
1400	427	0.187	278	0.717	18.2	5761	25628	3271	14550	3.7	5734	25506
1500	457	0.189	281	0.748	19.0	6336	28185	3539	15742	3.7	6247	27788
132 FIBERS												
100	30	0.208	310	0.764	19.4	2070	9207	260	1157	2.5	631	2807
200	61	0.208	310	0.764	19.4	2070	9207	520	2313	2.9	1064	4733
300	91	0.208	310	0.764	19.4	2070	9207	780	3470	3.2	1450	6450
400	122	0.208	310	0.764	19.4	2070	9207	1040	4626	3.5	1811	8056
500	152	0.208	310	0.764	19.4	2188	9734	1300	5783	3.6	2183	9710
600	183	0.208	310	0.764	19.4	2657	11817	1561	6944	3.6	2626	11681
700	213	0.216	322	0.780	19.8	3227	14354	1893	8420	3.5	3147	13999
800	244	0.216	322	0.780	19.8	3607	16045	2164	9626	3.5	3580	15925
900	274	0.217	322	0.780	19.8	4114	18300	2437	10840	3.5	4041	17975
1000	305	0.217	322	0.780	19.8	4494	19991	2708	12046	3.5	4474	19901
1100	335	0.217	323	0.780	19.8	5001	22246	2980	13256	3.5	4935	21952
1200	366	0.225	335	0.795	20.2	5508	24500	3376	15017	3.5	5493	24434
1300	396	0.221	328	0.811	20.6	5956	26494	3584	15942	3.5	5921	26338
1400	427	0.220	327	0.811	20.6	6463	28749	3844	17099	3.5	6377	28366
1500	457	0.220	327	0.811	20.6	6843	30440	4120	18327	3.6	6816	30319
144 FIBERS												
100	30	0.209	311	0.764	19.4	2070	9207	261	1161	2.5	632	2811
200	61	0.209	311	0.764	19.4	2070	9207	523	2326	2.9	1065	4737
300	91	0.209	311	0.764	19.4	2070	9207	784	3487	3.2	1452	6459
400	122	0.209	311	0.764	19.4	2070	9207	1046	4653	3.4	1815	8074
500	152	0.209	311	0.764	19.4	2188	9734	1307	5814	3.6	2187	9728
600	183	0.209	311	0.764	19.4	2657	11817	1569	6979	3.6	2631	11703
700	213	0.217	324	0.780	19.8	3227	14354	1902	8461	3.5	3153	14025
800	244	0.217	324	0.780	19.8	3607	16045	2175	9675	3.5	3587	15956
900	274	0.218	324	0.780	19.8	4114	18300	2449	10894	3.5	4049	18011
1000	305	0.218	324	0.780	19.8	4494	19991	2722	12108	3.5	4483	19941
1100	335	0.218	324	0.780	19.8	5001	22246	2995	13322	3.5	4944	21992
1200	366	0.226	337	0.795	20.2	5508	24500	3392	15088	3.5	5504	24483
1300	396	0.222	330	0.811	20.6	6083	27057	3602	16022	3.5	5960	26511
1400	427	0.221	329	0.811	20.6	6463	28749	3863	17183	3.5	6389	28420
1500	457	0.221	329	0.811	20.6	6843	30440	4141	18420	3.6	6829	30377

* Initial tension indicates tension before 10 year creep.

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All-Dielectric Self-Supporting (AFL-ADSS®) Fiber Optic Cable

NESG HEAVY LOADING @ 1% INSTALLATION SAG												
SPAN		WEIGHT		DIAMETER		MRCL		INITIAL TENSION				
FEET	METERS	LBS/FT	KG/KM	INCHES	MM	LBS	N	UNLOADED		LOADED		
								LBS	N	SAG %	LBS	N
216 FIBERS												
100	30	0.202	301	0.780	19.8	854	3797	253	1125	3.1	505	2246
200	61	0.202	301	0.780	19.8	913	4060	505	2246	3.6	875	3892
300	91	0.202	301	0.780	19.8	1314	5843	758	3372	3.6	1300	5783
400	122	0.202	301	0.780	19.8	1884	8380	1012	4502	3.6	1762	7838
500	152	0.211	313	0.795	20.2	2264	10071	1316	5854	3.6	2224	9893
600	183	0.211	314	0.795	20.2	2771	12326	1580	7028	3.6	2681	11926
700	213	0.211	314	0.795	20.2	3151	14017	1844	8203	3.6	3111	13838
800	244	0.211	314	0.795	20.2	3658	16271	2108	9377	3.6	3568	15871
900	274	0.211	314	0.795	20.2	4038	17963	2373	10556	3.6	3998	17784
1000	305	0.219	326	0.811	20.6	4545	20217	2742	12197	3.6	4538	20186
1100	335	0.220	327	0.811	20.6	5069	22548	3022	13443	3.5	5010	22286
1200	366	0.220	327	0.811	20.6	5576	24803	3300	14679	3.5	5477	24363
1300	396	0.229	340	0.827	21.0	6083	27057	3716	16530	3.5	6053	26925
1400	427	0.228	339	0.827	21.0	6590	29312	3983	17717	3.5	6515	28980
1500	457	0.228	339	0.827	21.0	6970	31003	4269	18989	3.5	6962	30969
288 FIBERS												
100	30	0.259	385	0.890	22.6	1296	5763	323	1439	2.8	619	2753
200	61	0.259	385	0.890	22.6	1296	5763	647	2878	3.3	1061	4720
300	91	0.259	385	0.890	22.6	1566	6964	971	4317	3.4	1522	6771
400	122	0.259	385	0.890	22.6	2072	9219	1295	5759	3.4	2027	9016
500	152	0.259	385	0.890	22.6	2579	11474	1619	7201	3.4	2532	11262
600	183	0.259	386	0.890	22.6	3086	13728	1943	8644	3.4	3037	13509
700	213	0.269	400	0.906	23.0	3720	16547	2351	10460	3.4	3633	16163
800	244	0.269	400	0.906	23.0	4227	18802	2688	11958	3.4	4148	18453
900	274	0.269	400	0.906	23.0	4734	21056	3025	13457	3.4	4663	20744
1000	305	0.268	399	0.921	23.4	5196	23112	3350	14900	3.4	5176	23026
1100	335	0.268	399	0.921	23.4	5703	25366	3686	16396	3.4	5692	25321
1200	366	0.268	399	0.921	23.4	6209	27621	4022	17892	3.4	6208	27616
1300	396	0.267	397	0.921	23.4	6716	29876	4339	19301	3.4	6711	29854
1400	427	0.277	412	0.937	23.8	7477	33258	4845	21552	3.4	7412	32972
1500	457	0.277	412	0.937	23.8	7984	35513	5193	23098	3.4	7938	35308
432 FIBERS												
100	30	0.298	444	0.953	24.2	1296	5763	373	1658	2.8	659	2931
200	61	0.298	444	0.953	24.2	1296	5763	745	3316	3.2	1140	5070
300	91	0.298	444	0.953	24.2	1692	7528	1118	4975	3.3	1665	7405
400	122	0.298	444	0.953	24.2	2326	10346	1492	6636	3.3	2233	9932
500	152	0.298	444	0.953	24.2	2833	12601	1865	8298	3.3	2778	12356
600	183	0.299	444	0.953	24.2	3340	14856	2239	9960	3.3	3322	14779
700	213	0.309	459	0.969	24.6	3973	17674	2701	12015	3.3	3962	17625
800	244	0.309	460	0.969	24.6	4607	20493	3088	13737	3.3	4541	20202
900	274	0.320	476	0.984	25.0	5322	23675	3597	15999	3.2	5233	23279
1000	305	0.320	476	0.984	25.0	5829	25930	3997	17781	3.2	5800	25800
1100	335	0.319	474	0.984	25.0	6463	28749	4382	19490	3.2	6379	28374
1200	366	0.319	474	0.984	25.0	6970	31003	4781	21268	3.3	6945	30891
1300	396	0.329	490	1.000	25.4	7730	34385	5350	23799	3.2	7695	34229
1400	427	0.329	490	1.000	25.4	8364	37204	5764	25639	3.2	8295	36899
1500	457	0.329	490	1.000	25.4	8997	40022	6178	27479	3.2	8896	39570

* Initial tension indicates tension before 10 year creep.



ADESDFW2-256 and 307



ADELD2E-323T and 383T



ADELD2E-424005TE
* shown with optional thimble eye

Mini-Dead Ends

The Mini-Dead Ends are designed for fast and easy installation of your ADSS Mini-Span® cable. The Mini-Dead End is ideal in crowded distribution environments where its shorter length allows for efficient installation. This unique low-cost product is used in typical spans with 1%-2% installation sag.

Features

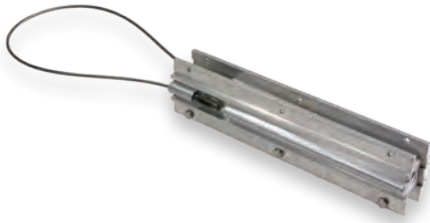
- Easy and quick installation
- No special tools or hardware required for installation
- Small, requiring less storage space

Ordering Information

APPLICATION & DESCRIPTION	AFL NO.
Aerial Drop 256 150 ft NESC heavy, 275 ft NESC medium, 550 ft NESC light	ADESDFW2-256
Aerial Drop 307—Short Span (250 lb max. tension) 65 ft NESC heavy, 115 ft NESC medium, 210 ft NESC light	ADESDFW2-307
Aerial Drop 307—Long Span 220 ft NESC heavy, 400 ft NESC medium, 675 ft NESC light	ADELD2E-013TE
ADSS Mini-Span 323 175 ft NESC heavy, 300 ft NESC medium, 500 ft NESC light	ADELD2E-323T
ADSS Mini-Span 383 180 ft NESC heavy, 300 ft NESC medium, 450 ft NESC light	ADELD2E-383T
ADSS Mini-Span 424 275 ft NESC heavy, 450 ft NESC medium, 600 ft NESC light	ADELD2E-424005

NOTE: Part numbers ADEW10J1-AL535, and ADEW16J1-AL693 attach to structure via common pole hardware sold separately such as thimble eye, ram's head, guy hooks, etc.

For spans greater than the span lengths above, contact Customer Service.



ADEW10J1-AL535



ADEW16J1-AL693

Wedge Dead End

(to be used only on Standard ADSS Cable up to 0.890" diameter, 144 fibers)

AFL offers wedge dead ends that ease and speed ADSS cable installation. The ADSS Wedge Dead End is ideal in crowded distribution environments because its shorter length allows for safer and efficient installation. The Wedge Dead End comes with all parts assembled. The side plates are properly aligned with spacers and self-locking hex bolts, as well as retainers. Lubricated wedges are pre-installed inside the body of the dead end.

Caution: The load ratings shown here are based on performance results of certain cable configurations and may not be representative of all manufacturers' ADSS cable designs. AFL strongly recommends that before using this product, you contact AFL to obtain the recommended load rating and to verify that the wedge dead end has been qualified for use with the proposed cable. AFL will perform a qualification test at no charge.

Specifications

PARAMETER	VALUE
Wedge Length	10" or 16" depending on cable characteristics
Cable O.D.	0.512" to 0.890" (13 mm to 22.6 mm)
Hold Strength	100% of Maximum Rated Cable Load (MRCL)
Maximum Attenuation Change	0.05 dB at 100% MRCL

Benefits

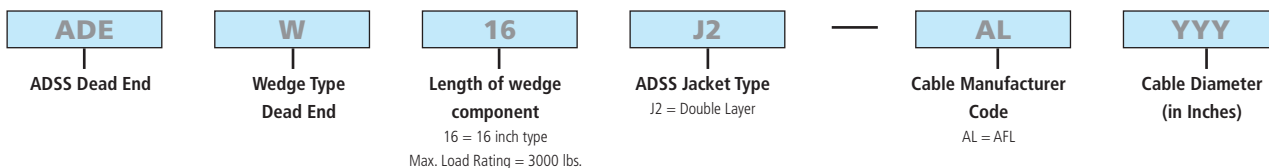
- Wedge-type design is safer than spiral wrap style dead ends
- Fewer parts, smaller and easier to store
- Attaches to structure via common pole hardware sold separately (thimble eye, ram's head, etc.)

Features

- Easier and faster installation
- Lower total system costs
- No special tools or hardware required for installation

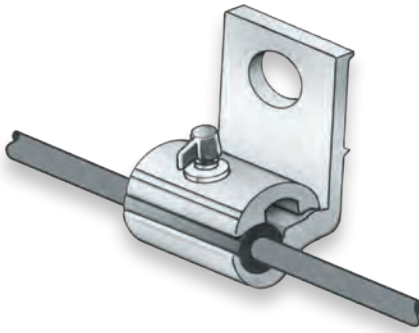
APPLICATION & DESCRIPTION	AFL NO.
ADSS Mini-Span® 535 500 ft NESC heavy, 700 ft NESC medium, 875 ft NESC light Maximum loading capability is 1500 lbs.	ADEW10J1-AL535
ADSS Mini-Span 693 500 ft NESC heavy, 600 ft NESC medium, 750 ft NESC light Maximum loading capability is 1500 lbs.	ADEW16J1-AL693

Ordering Information for Double Jacket Cables



Application Notes:

1. For use with ADSS cables with polyethylene jackets in low voltage environments only. Not for use in high voltage environments where tracking resistant cables are required.
2. AFL fiber optic cable and related hardware are designed to work as a system. Dead ends may not be available for cable from other manufacturers.



Mini-Bracket

Mini-Bracket

Mini Brackets are used for short and medium spans of ADSS fiber optic cable as well as Aerial Drop cables. Mini Brackets are sized to fit specific ADSS diameters. Standard Mini Brackets are employed with fitted bushings to provide a good support/groove fit and to prevent the support from damaging the cable. The bolted supports are supplied with aluminum captive bolts to simplify installation with no loose parts.

Features

- Maximum one side angle: 8.5 degrees
- Estimated weight: 2.9 lbs. (1.3 Kg)
- Maximum rated strength: 3,000 lbs.
- Hand tighten bolt to 25 in. lbs. (2.8 N-m)
- Slip load at 4 to 6% of RBS

Ordering Information

DESCRIPTION	AFL NO.
Aerial Drop 256 maximum line angle = 17° (150 ft NESC heavy, 275 ft NESC medium, 550 ft NESC light)	AMBB256
Aerial Drop 307 maximum line angle = 17° (220 ft NESC heavy, 400 ft NESC medium, 675 ft NESC light)	AMBB307
ADSS Mini-Span 424 maximum line angle = 17° (275 ft NESC heavy, 450 ft NESC medium, 600 ft NESC light)	AMBB424
ADSS Mini-Span 484 maximum line angle = 17° (275 ft NESC heavy, 400 ft NESC medium, 525 ft NESC light)	AMBB484-535
ADSS Mini-Span 535 maximum line angle = 17° (350 ft NESC heavy, 550 ft NESC medium, 675 ft NESC light)	AMBB484-535



ATS 321/330
ATS 371/383

Mini Formed Wire Tangent Support (FTS)

Formed Wire Tangent Supports (FTS) are used with ADSS Mini-Span® 323 and Mini-Span® 383 for short span applications. Tangent supports provide a method of attaching AFL's smallest ADSS Mini-Span designs with excellent unbalanced load capability and bend relief support. This product is designed to connect directly to J-hooks on wood poles for an economical solution.

Ordering Information

DESCRIPTION	AFL NO.
ADSS Mini-Span 323 maximum line angle = 20°(175 ft NESC heavy, 300 ft NESC medium, 500 ft NESC light)	ATS321/330
ADSS Mini-Span 383 maximum line angle = 20°(180 ft NESC heavy, 300 ft NESC medium, 450 ft NESC light)	ATS371/383



Download Clamp shown with Adapter B

Download Clamp for ADSS (with or without Unequal Diameters)

AFL Download Clamps are used to guide ADSS wire from the top of the structure to the splice box. Our clamps install easily and provide proper spacing and hold strength without damage to the cable. From poles to towers, we offer a full line of ADSS Download Clamps to meet the needs of any application.

Features

- Slip strength: >100 lbs.
- Lattice adapters provided with break-away bolts for precise torque during installation
- Steel tower guide clamps available with adapters to eliminate the need for drilling
- Banding adapters available

Ordering Information – Download Clamp and Adapter

BUSHING DESIGNATION	DIAMETER (INCHES)	COLOR CODE
B4	0.350 - 0.500	red
B5	0.501 - 0.600	green
B6	0.601 - 0.700	yellow
B7	0.701 - 0.800	blue
B8	0.801 - 0.900	white
B9	0.901 - 1.000	black
B10	1.001 - 1.100	orange

FD	OA	XX	YY	Z	M
Fiber Download	OPGW and ADSS	Bushing Designation (Smaller Dia.)	Bushing Designation (Larger Dia.)	Indicates Adapters A = Banding Adapter B = Lattice Adapter for web thickness 0.25" - 0.72" C = Lattice Adapter for web thickness 0.72" - 1.25" D = 3/8" diameter x 4" lag bolt E = Lattice Adapter for web thickness 0.25" - 1.25" Omit = No adapter desired	M for Metric Hardware

Ordering Example

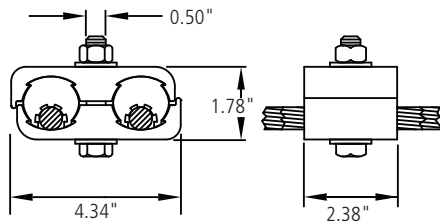
For 0.528" dia. OPGW and 0.484 ADSS with pole banding (Type A), the part number is FDOA-B4B5A.

- NOTES:**
1. If metric hardware is desired, add a "M" suffix to the end.
 2. See next page for optional download clamp adapters.

Download Clamp and Optional Download Clamp Adapters

Dimensions

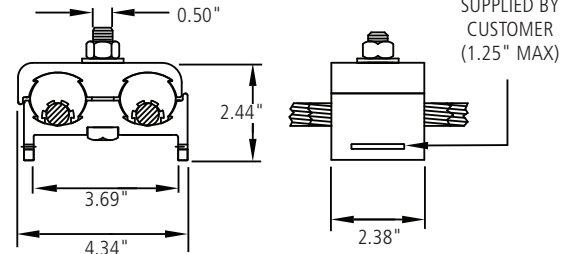
FIG. 1



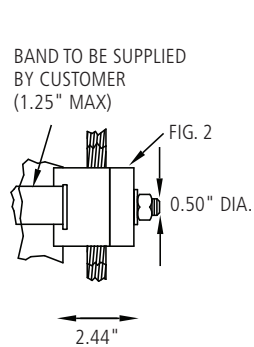
FDOA XXYX

NO ADAPTER

FIG. 2

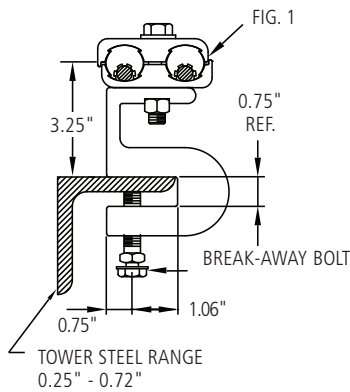


Download Clamp Adapters



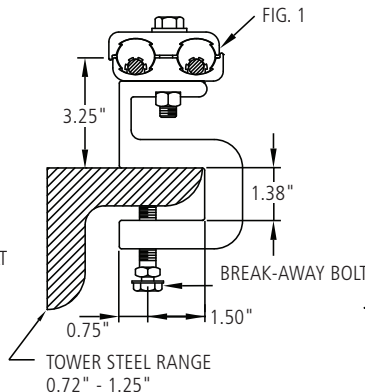
FDOA XXYA

TYPE A ADAPTER WITH FIG. 2 BANDING CONFIGURATION EST. WEIGHT: 0.96 LBS.



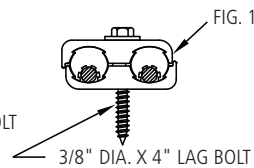
FDOA XXYB

TYPE B ADAPTER WITH FIG. 1 LATTICE CONFIGURATION EST. WEIGHT: 1.98 LBS.



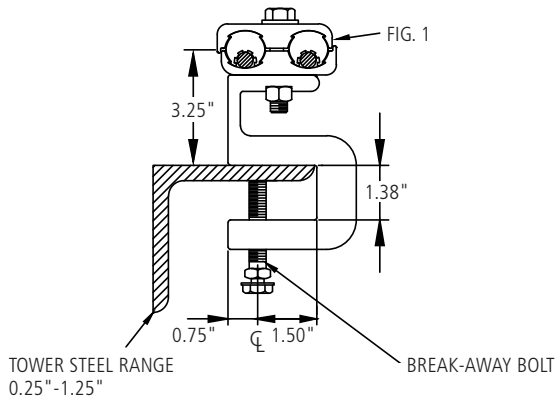
FDOA XXYC

TYPE C ADAPTER WITH FIG. 1 LATTICE CONFIGURATION EST. WEIGHT: 2.20 LBS.



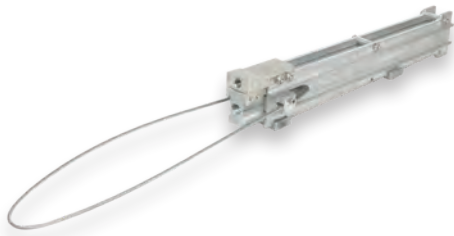
FDOA XXYD

TYPE D ADAPTER WITH FIG. 1 LATTICE CONFIGURATION EST. WEIGHT: 0.96 LBS.



FDOA XXYE

TYPE E ADAPTER WITH FIG. 1 LATTICE CONFIGURATION EST. WEIGHT: 2.20 LBS.



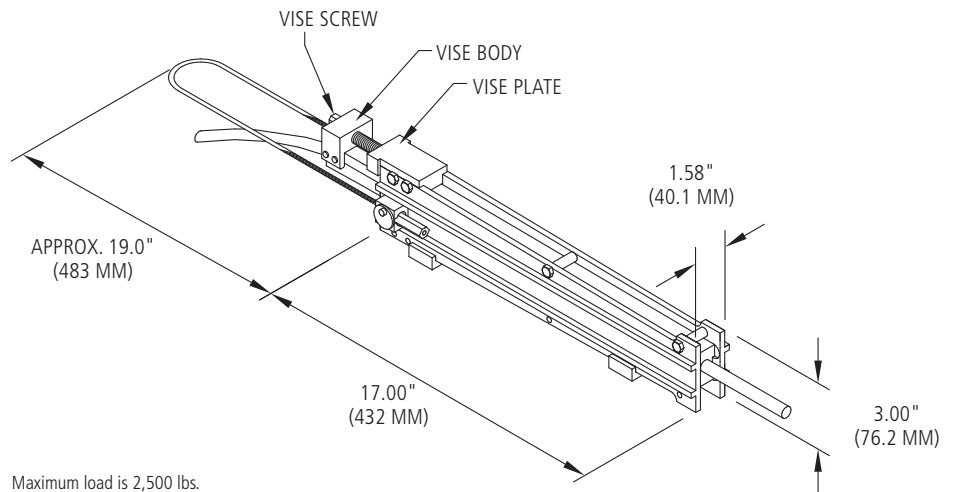
Temporary Grip

Temporary Grips are used in stringing the ADSS during sagging and where it is necessary to make short term catch on the ADSS.

The Temporary grip for ADSS is a high strength aluminum body designed to hold 2,500 pounds or 50% of MRCL of the cable.

Application Notes:

1. Mechanical Grip for Use with Polyethylene Outer Jackets Only



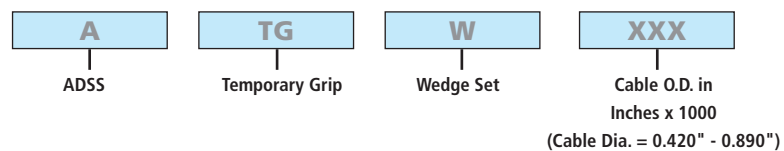
Maximum load is 2,500 lbs.

Thimble Clevis is included to attach temporary grip bail to chain hoist.

Ordering Information



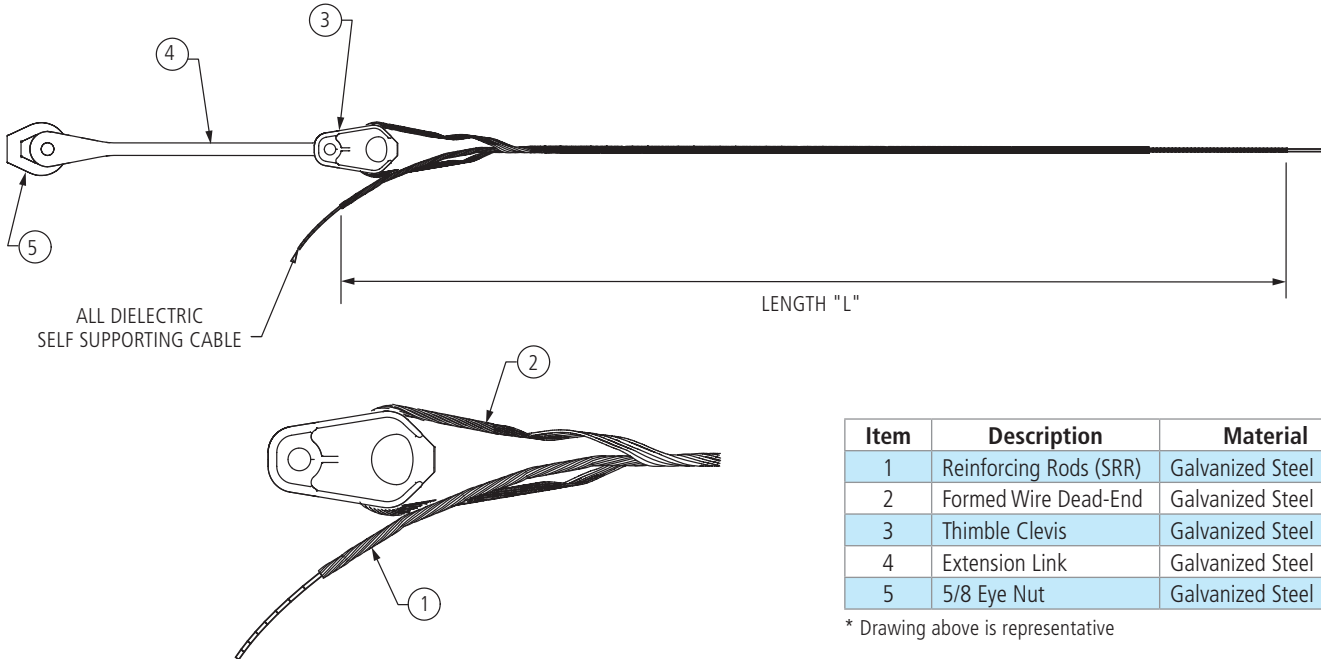
Ordering Information for Additional Wedges



CAUTION:

1. The Temporary Grip is only to be used for AFL's ADSS fiber optic cables with standard polyethylene jackets with the O.D. ranging from 0.420" - 0.890" .
2. For cables with an O.D. outside of this range, please contact AFL.

Limited Tension Formed Wire Dead End for ADSS Cable



Item	Description	Material
1	Reinforcing Rods (SRR)	Galvanized Steel
2	Formed Wire Dead-End	Galvanized Steel
3	Thimble Clevis	Galvanized Steel
4	Extension Link	Galvanized Steel
5	5/8 Eye Nut	Galvanized Steel

* Drawing above is representative

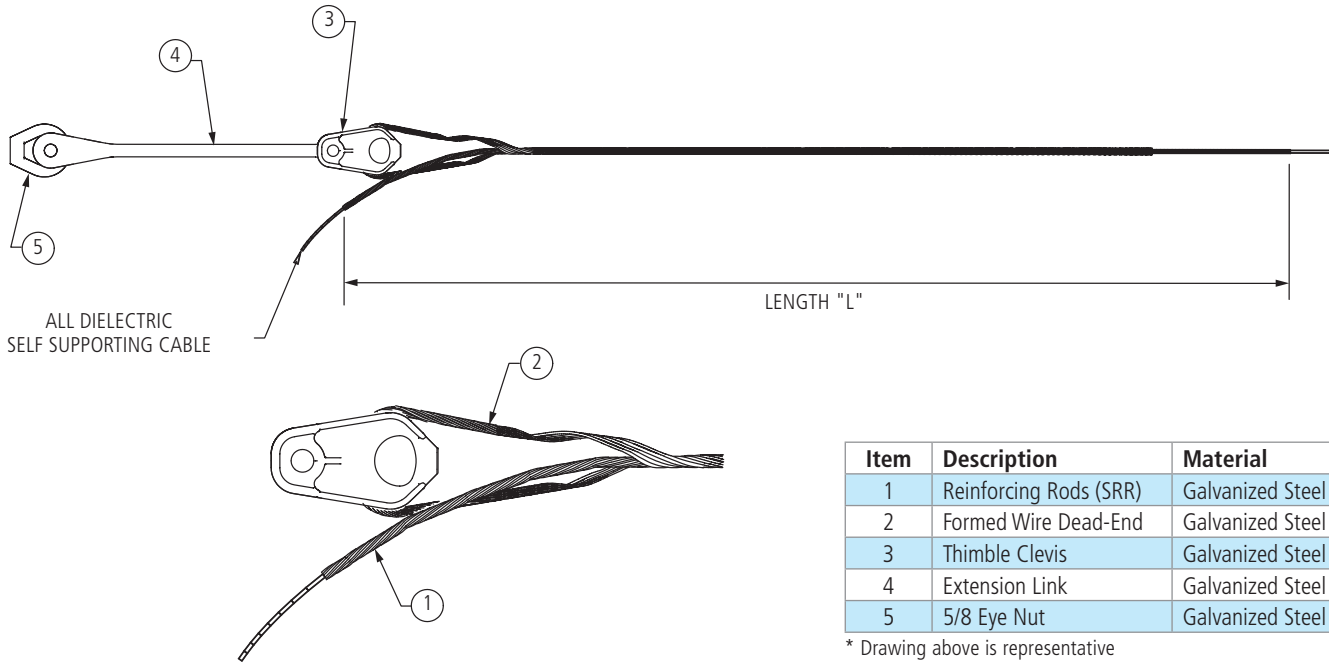
Features

- Components strength—6,500 lbs.
- Maximum initial tension—up to 1,000 lbs.
- Maximum loaded tension—up to 2,500 lbs.
- Dead end component may be reused once during initial installation
- Contact AFL for track-resistant ADSS application

Ordering Information

AFL NO.	CABLE OD (IN)	LENGTH "L" (IN)	COLOR CODE
ADESE400/424C	.400-.424	48	Black
ADESE425/451C	.425-.451	48	Yellow
ADESE452/481C	.452-.481	48	Green
ADESE482/510C	.482-.510	48	Orange
ADESE511/542C	.511-.542	48	Blue
ADESE543/577C	.543-.577	48	White
ADESE578/613C	.578-.613	48	Red
ADESE614/651C	.614-.651	48	Black
ADESE652/692C	.652-.692	48	Yellow
ADESE693/737C	.693-.737	48	Green
ADESE738/784C	.738-.784	48	Orange
ADESE785/834C	.785-.834	48	Blue
ADESE835/889C	.835-.889	48	White
ADESE890/945C	.890-.945	48	Red
ADESE946/1007C	.946-1.007	48	Black
ADESE1008/1073C	1.008-1.073	60	Yellow
ADESE1074/1140C	1.074-1.140	60	Green
ADESE1141/1212C	1.141-1.212	60	Orange
ADESE1213/1288C	1.213-1.288	60	Blue

Medium Tension Dead End for ADSS Cable



ALL DIELECTRIC
SELF SUPPORTING CABLE

LENGTH "L"

Item	Description	Material
1	Reinforcing Rods (SRR)	Galvanized Steel
2	Formed Wire Dead-End	Galvanized Steel
3	Thimble Clevis	Galvanized Steel
4	Extension Link	Galvanized Steel
5	5/8 Eye Nut	Galvanized Steel

* Drawing above is representative

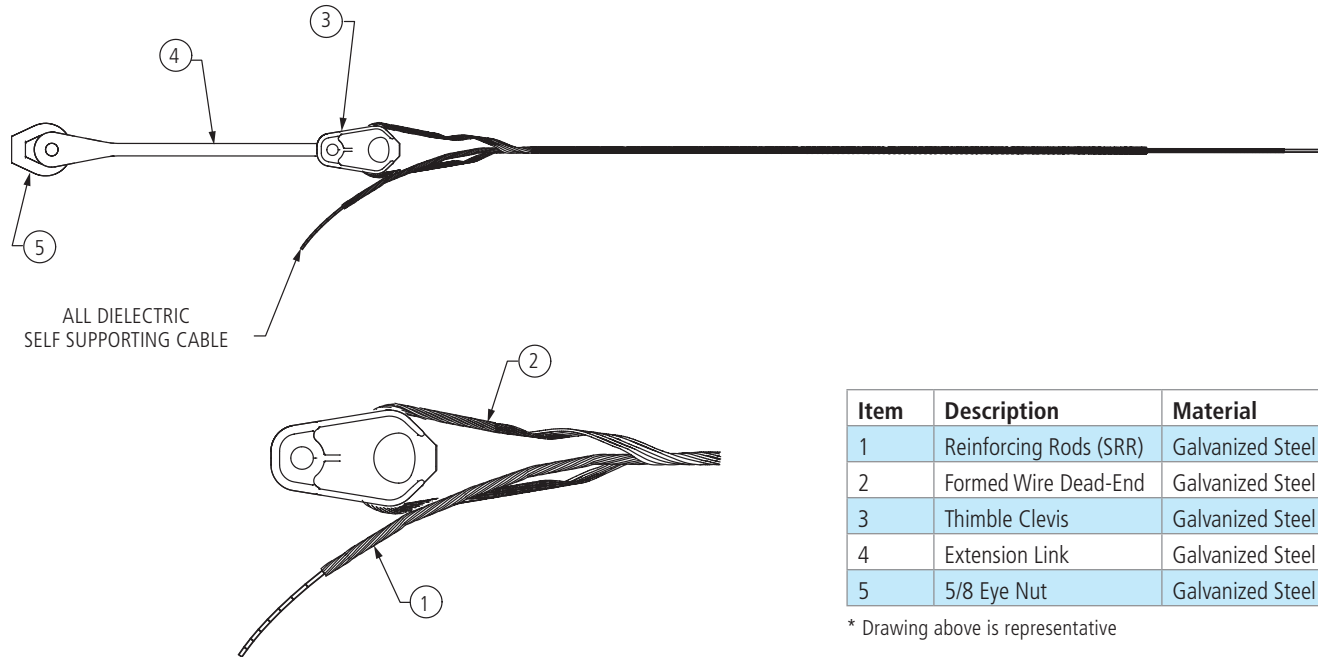
Features

- Component strength—6,500 lbs.
- Maximum initial tension—up to 2,000 lbs.
- Maximum loaded tension—up to 4,000 lbs.
- Dead end component may be reused once during initial installation
- Contact AFL for track-resistant ADSS application

Ordering Information

AFL NO.	CABLE OD (IN)	LENGTH "L" (IN)	COLOR CODE
ADEME482/510C	.482-.510	72	Orange
ADEME511/542C	.511-.542	73	Blue
ADEME543/577C	.543-.577	74	White
ADEME578/613C	.578-.613	78	Red
ADEME614/651C	.614-.651	80	Black
ADEME652/692C	.652-.692	80	Yellow
ADEME693/737C	.693-.737	82	Green
ADEME738/784C	.738-.784	88	Orange
ADEME785/834C	.785-.834	92	Blue
ADEME835/889C	.835-.889	94	White
ADEME890/945C	.890-.945	96	Red
ADEME946/1007C	.946-1.007	98	Black
ADEME1008/1073C	1.008-1.073	102	Purple
ADEME1074/1140C	1.074-1.140	102	Pink
ADEME1141/1212C	1.141-1.212	104	Brown
ADEME1213/1288C	1.213-1.288	107	Orange

Semi-High Tension Dead End for ADSS Cable



Item	Description	Material
1	Reinforcing Rods (SRR)	Galvanized Steel
2	Formed Wire Dead-End	Galvanized Steel
3	Thimble Clevis	Galvanized Steel
4	Extension Link	Galvanized Steel
5	5/8 Eye Nut	Galvanized Steel

* Drawing above is representative

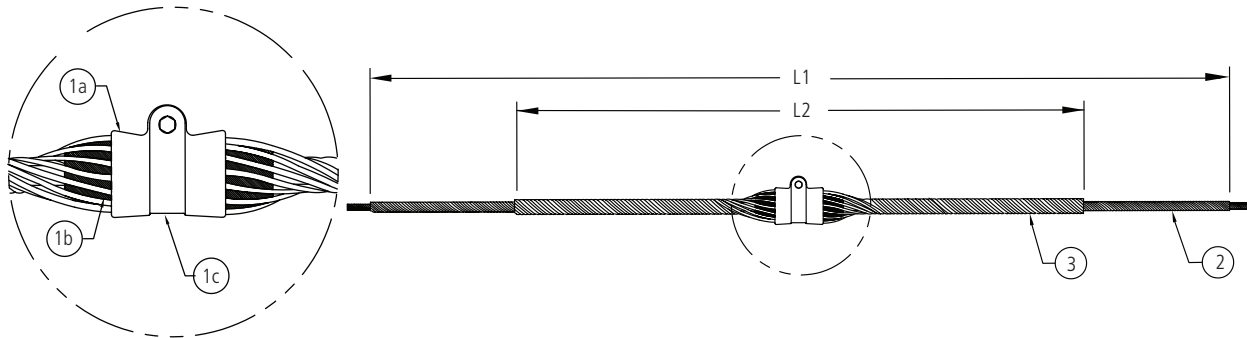
Features

- Components strength—15,000 lbs.
- Maximum initial tension—up to 4,000 lbs.
- Maximum loaded tension—up to 7,500 lbs.
- Dead end component may be reused once during initial installation
- Contact AFL for Length Information and track-resistant ADSS application
- Lengths range from 100" to 134"

Ordering Information

AFL NO.	CABLE OD (in.)	LENGTH "L" (in.)	COLOR CODE
ADELE482/510C	.482-.510	98	Orange
ADELE511/542C	.511-.542	988	Blue
ADELE543/577C	.543-.577	1008	White
ADELE578/613C	.578-.613	104	Red
ADELE614/651C	.614-.651	106	Black
ADELE652/692C	.652-.692	106	Yellow
ADELE693/737C	.693-.737	108	Green
ADELE738/784C	.738-.784	113	Orange
ADELE785/834C	.785-.834	118	Blue
ADELE835/889C	.835-.889	119	White
ADELE890/945C	.890-.945	121	Red
ADELE946/1007C	.946-1.007	123	Black
ADELE1008/1073C	1.008-1.073	126	Purple
ADELE1074/1140C	1.074-1.140	127	Pink
ADELE1141/1212C	1.141-1.212	129	Brown
ADELE1213/1288C	1.213-1.288	133	Orange

Formed Wire Suspension for ADSS Cable



Features

- For line or elevation angle changes less than 30°
- Max vertical load—20,000 lbs.

Item	Description	Material
1a,c	Suspension Housing	Aluminum Alloy
1b	Insert (2 Halves)	Elastomer
2	Reinforcing Rods (SRR)	Aluminum Alloy
3	Outer Support Rods	Aluminum Alloy

Ordering Information

CABLE O.D. RANGE	STRUCTURAL REINFORCEMENT RODS				OUTER RODS				AFL NO.
	LENGTH "L1" (INCHES)	ROD DIA. (INCHES)	RODS PER SET	COLOR CODE	LENGTH "L2" (INCHES)	ROD DIA. (INCHES)	RODS PER SET	COLOR CODE	
0.399" - 0.418"	80	.146	10	Yellow	42	.204	11	Yellow	ASU399/418
0.419" - 0.439"	80	.146	10	Black	42	.204	11	Black	ASU419/439
0.440" - 0.458"	81	.146	11	White	43	.204	11	White	ASU440/458
0.459" - 0.461"	84	.167	10	Purple	46	.250	10	Orange	ASU459/461
0.462" - 0.476"	84	.167	10	Purple	46	.250	10	Purple	ASU462/476
0.477" - 0.503"	84	.146	12	Orange	46	.250	10	Orange	ASU477/503
0.504" - 0.511"	84	.146	12	Red	46	.250	10	Purple	ASU504/511
0.512" - 0.536"	87	.167	11	Blue	49	.250	11	Blue	ASU512/536
0.537" - 0.559"	87	.167	11	Green	49	.250	11	Green	ASU537/559
0.560" - 0.565"	87	.167	11	Green	49	.250	11	Green	ASU560/565
0.566" - 0.573"	92	.182	11	Black	54	.250	12	Black	ASU566/573
0.574" - 0.598"	92	.182	11	Black	54	.250	12	White	ASU574/598
0.599" - 0.625"	92	.182	12	Brown	54	.310	12	Brown	ASU599/625
0.626" - 0.632"	102	.204	11	Red	63	.310	11	Red	ASU626/632
0.633" - 0.666"	102	.204	11	Red	63	.310	11	Blue	ASU633/666
0.667" - 0.682"	102	.204	12	Yellow	63	.310	11	Green	ASU667/682
0.683" - 0.710"	102	.204	12	Yellow	63	.310	11	Yellow	ASU683/710
0.711" - 0.728"	102	.204	12	White	63	.310	12	Black	ASU711/728
0.729" - 0.744"	102	.204	12	White	63	.310	12	White	ASU729/744
0.745" - 0.750"	102	.204	12	White	63	.310	12	White	ASU745/750
0.751" - 0.786"	102	.204	13	White	63	.310	12	Brown	ASU751/786
0.787" - 0.814"	111	.250	11	Green	72	.365	11	Green	ASU787/814
0.815" - 0.845"	111	.250	12	Yellow	72	.365	11	Yellow	ASU815/845
0.846" - 0.855"	111	.250	12	Green	72	.365	12	Blue	ASU846/855
0.856" - 0.894"	119	.250	12	Black	80	.365	12	Black	ASU856/894
0.895" - 0.907"	119	.250	12	White	80	.365	12	White	ASU895/907
0.908" - 0.916"	119	.250	13	Purple	80	.365	12	Purple	ASU908/916
0.917" - 0.929"	119	.250	13	Brown	80	.365	12	Brown	ASU917/929
0.930" - 0.942"	119	.250	13	Red	80	.365	12	Red	ASU930/942
0.943" - 0.977"	119	.250	13	Orange	80	.365	13	Orange	ASU943/977



Single Trunnion Cable Support



Double Trunnion Cable Support (closed)



Double Trunnion Cable Support (open)

Trunnion Assemblies— Single and Double Cables

AFL offers trunnions with various mounting capabilities: bolted, banded or standoff. Trunnions reduce installation costs by functioning as a pull-through during installation (maximum line angle for stringing is 15° total, 7.5° per side, number of structures not to exceed 30). No block or pulley is needed provided these conditions are met.

Features

- May be used as a pull-through by removing the bushing inserts
- Double cable supports option
- High-strength aluminum
- Smaller and more compact design
- Facilitates faster installation
- Color-coded range taking inserts for easy identification
- Versatile mounting styles to fit different structure types: bolted, banded or standoff
- Banding and pole hardware supplied by customer
- Lowers the total cost of installation
- Span Length: 600 ft.—NESC Heavy
1,200 ft.—NESC Light

Ordering Information—Single Cable Support

AFL NO.	CABLE O.D. RANGE		ESTIMATED WEIGHT		BUSHING COLOR CODE
	INCHES	MILLIMETERS	LBS	KG	
ATGN325/375	0.325" - 0.375"	8.26 - 9.53	2.06	.934	Green + White
ATGN376/419	0.376" - 0.419"	9.55 - 10.64	2.06	.934	Orange + White
ATGN420/474	0.420" - 0.474"	10.67 - 12.05	2.05	.930	Purple + White
ATGN475/525	0.475" - 0.525"	12.07 - 13.34	2.05	.930	Blue
ATGN526/575	0.526" - 0.575"	13.36 - 14.61	2.05	.930	Orange
ATGN576/625	0.576" - 0.625"	14.63 - 15.88	2.04	.925	Brown
ATGN626/675	0.626" - 0.675"	15.90 - 17.15	2.04	.925	Green
ATGN676/725	0.676" - 0.725"	17.17 - 18.42	2.03	.921	White
ATGN726/775	0.726" - 0.775"	18.44 - 19.69	2.03	.921	Red
ATGN776/825	0.776" - 0.825"	19.71 - 20.96	2.02	.916	Purple
ATGN826/875	0.826" - 0.875"	20.98 - 22.23	2.02	.916	Yellow
ATGN876/925	0.876" - 0.925"	22.25 - 23.50	2.02	.916	Pink
ATGN926/959	0.926" - 0.959"	23.52 - 24.36	2.02	.916	Blue + White
ATGN960/1045	0.960" - 1.045"	24.38 - 26.54	2.02	.916	Gray

Application Notes:

1. For use with ADSS cables with polyethylene jackets in low voltage environments only. Not for use in high voltage environments where tracking resistant cables are required.
2. As a stringing block:
Maximum line angle = 15° (7.5° per side)
Maximum number of structures = 30
3. For final installation:
Maximum line angle = 22° (11° per side)

continued
→

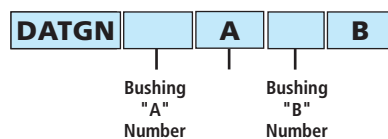
Trunnion Assemblies (cont.)

Ordering Information—Double Tangent Support

BUSHING NUMBER		CABLE O.D. RANGE		BUSHING COLOR CODE	MAXIMUM SPAN CAPABILITIES USING NESC LOADS IN FEET/METERS	ESTIMATED WEIGHT	
"A"	"B"	INCHES	MM			HEAVY	LBS
325	325	.325-.375	8.26-9.53	Green + White	600/182.9	4.00	1.814
376	376	.376-.419	9.55-10.64	Orange + White	600/182.9	4.00	1.814
420	420	.420-.474	10.67-12.04	Purple + White	600/182.9	3.99	1.810
475	475	.475-.525	12.07-13.34	Blue	600/182.9	3.99	1.810
526	526	.526-.575	13.36-14.61	Orange	600/182.9	3.99	1.810
576	576	.576-.625	14.63-15.88	Brown	600/182.9	3.98	1.805
626	626	.626-.675	15.90-17.15	Green	600/182.9	3.98	1.805
676	676	.676-.725	17.17-18.42	White	600/182.9	3.97	1.801
726	726	.726-.775	18.44-19.69	Red	600/182.9	3.97	1.801
776	776	.776-.825	19.71-20.96	Purple	600/182.9	3.96	1.796
826	826	.826-.875	20.98-22.23	Yellow	600/182.9	3.96	1.796
876	876	.876-.925	22.25-23.50	Pink	500/152.4	3.96	1.796
926	926	.926-.959	23.52-24.36	Blue + White	CONTACT AFL	3.96	1.796
960	960	.960-1.045	24.38-26.54	Gray	CONTACT AFL	3.96	1.796

How to Order

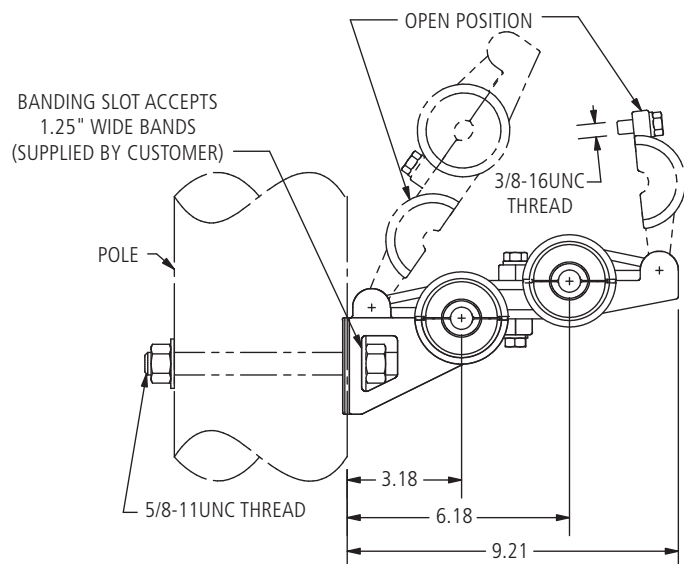
Order by assembling part number as shown:



- Reference table above. See Note 1 below.
- Example:
 - First cable 0.500" OD → Bushing "A" number = 475
 - Second cable 0.750" OD → Bushing "B" number = 726
 - Order by part number: DATGN475A726B

Notes:

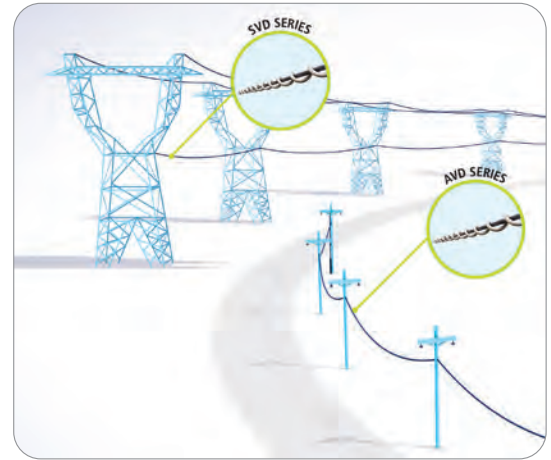
1. Bushing "A" and "B" may be the same or different.
2. Attachment hardware or stainless steel banding to be supplied by customer.



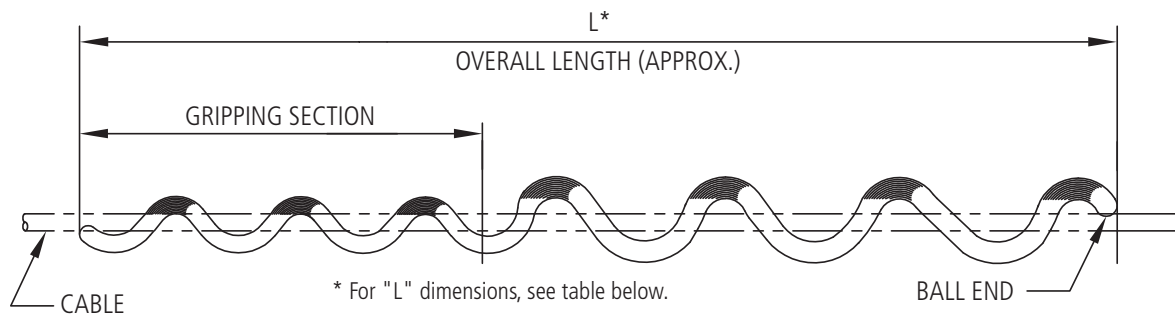
SVD Series Spiral Vibration Dampers

AFL's SVD Series Spiral Vibration Dampers are designed to eliminate the damage caused by Aeolian vibration and reduce overall vibration on bare cables. Made of weather-resistant, non-corrosive plastic, these dampers have a large, helically-formed damping section sized for the cable. A smaller gripping section gently grips the cable. Each damper is marked with the conductor range and color coded to indicate the cable diameter size range.

Line design, temperature, tension, wind flow exposure and history of vibration on similar construction in the location are factors to consider when determining the amount of protection required. Installation can be on both sides of the support location—at least one hand-width from the ends of Armor Rods or cable hardware. Depending on the customer's specific conditions, AFL recommends the SVD Spiral Vibration Damper in accordance with the recommended application chart for the following:



- Conductors between 0.250 inches and 0.500 inches O.D. (used with tietop insulators and rural construction)
- Optical Ground Wires (OPGW) and Overhead Ground Wires (OHGW) in accordance with the recommended application chart



Ordering Information

Select catalog number based on cable diameter. Example: for 0.512" diameter, order SVD462/563

Conductor Diameter Cross Reference

AFL NO.	PLP NO.	CONDUCTOR DIAMETER RANGE INCHES (MM)	"L" ROD LENGTH INCHES (MM)	WEIGHT LBS (KG)	COLOR CODE	STANDARD PACK
SVD250/326	5050103	0.250-0.326 (6.35-8.29)	49 (1244)	29 (13.154)	Light Blue	50
SVD327/461	5050104	0.327-0.461 (8.30-11.72)	51 (1295)	31 (14.061)	Black	50
SVD462/563	5050105	0.462-0.563 (1.73-14.32)	53 (1346)	34 (15.422)	Yellow	50
SVD564/770	5050106	0.564-0.770 (14.33-19.30)	64 (1625)	50 (22.679)	Green	25

High Mass Cross Reference

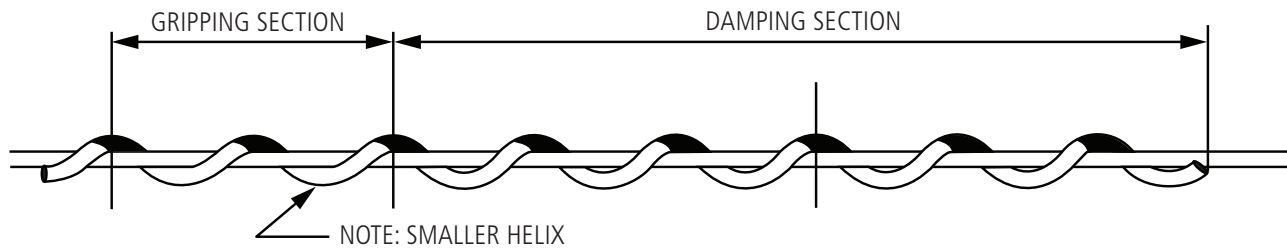
AFL NO.	PLP NO.	CONDUCTOR DIAMETER RANGE INCHES (MM)	"L" ROD LENGTH INCHES (MM)	WEIGHT LBS (KG)	COLOR CODE	STANDARD PACK
SVD250/326HM	5050200	0.250-0.326 (6.35-8.29)	87 (2209)	55 (24.948)	Light Blue	50
SVD327/461HM	5050201	0.327-0.461 (8.30-11.72)	91 (2311)	60 (27.216)	Black	50
SVD462/563HM	5050202	0.462-0.563 (1.73-14.32)	94 (2387)	65 (29.483)	Yellow	50
SVD564/770HM	5050203	0.564-0.770 (14.33-19.30)	96 (2438)	55 (24.948)	Green	25

continued
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SVD Series Spiral Vibration Dampers (cont.)

Damper Recommendations for Placement

Damper Recommendation applies for specified AFL dampers only. If alternative type or different manufacturer dampers are applied instead, it is possible that damage will occur on the conductor and/or the accessories.



SPAN LENGTH	INITIAL TENSION PERCENTAGE OF CABLE RATED BREAKING STRENGTH AT NOMINAL TEMPERATURE 60°F							
	0-10%		11-15%		16-20%		>20%	
	STANDARD	HIGH MASS	STANDARD	HIGH MASS	STANDARD	HIGH MASS	STANDARD	HIGH MASS
< 800 ft.	2/s	1/s	2/s	1/s	4/s	2/s	4/s	2/s
801-1400 ft.	4/s	2/s	4/s	2/s	6/s	4/s	6/s	4/s
1401-2400 ft.	6/s	4/s	6/s	4/s	8/s	4/s	8/s	4/s
2401-3000 ft.	8/s	4/s	8/s	4/s	10/s	6/s	10/s	6/s
3001-3500 ft.	10/s	6/s	10/s	6/s	12/s	6/s	12/s	6/s
3501-4000 ft.	12/s	6/s	12/s	6/s	16/s	8/s	16/s	8/s
4001-4500 ft.	16/s	8/s	16/s	8/s	18/s	10/s	18/s	10/s
4501-5000 ft.	18/s	10/s	18/s	10/s	20/s	10/s	20/s	10/s

Symbol Designation

- 2/s = 2 dampers per span, 1 on each end of the span
- 4/s = 2 dampers in tandem on each end of the span
- 6/s = 3 dampers in tandem on each end of the span
- 8/s = 3 dampers in tandem + 1 damper on each end of the span
- 10/s = 3 dampers in tandem + 2 dampers in tandem on each end of the span
- 12/s = 3 dampers in tandem + 3 dampers in tandem on each end of the span
- 16/s = 3 dampers in tandem + 3 dampers in tandem + 2 dampers in tandem on each end of the span
- 18/s = 3 dampers in tandem + 3 dampers in tandem + 3 dampers in tandem on each end of the span
- 20/s = 3 dampers in tandem + 3 dampers in tandem + 3 dampers in tandem + 1 damper on each end of the span

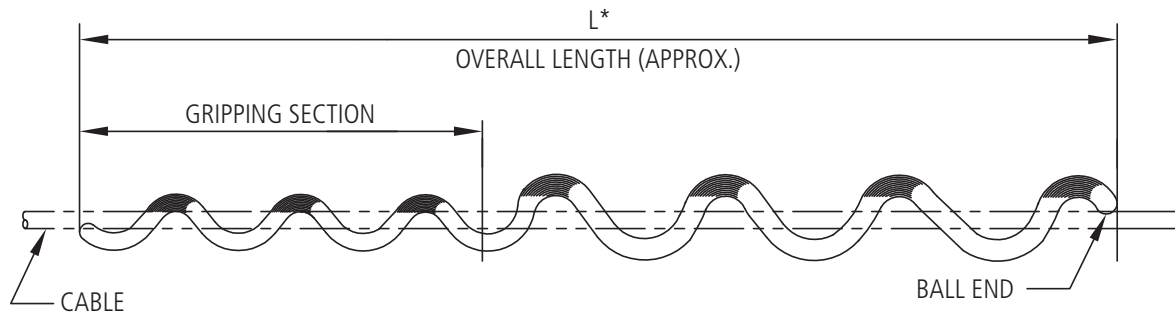
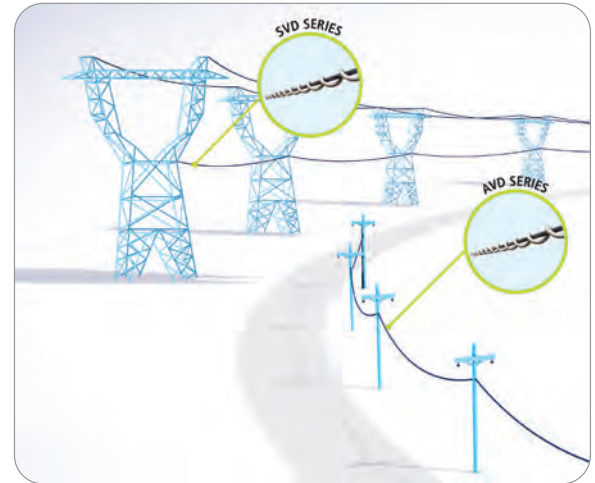
Placement and Spacing

1. SVD shall be placed approximately 5 inches away from any line hardware (suspension, deadend, armor rods, other SVDs, etc.).
2. SVDs can be nestled in tandem for up to three units to prevent the units from interfering with each other.
3. SVDs shall be applied to bare cable only to ensure proper performance.

AVD Series Spiral Vibration Dampers

AFL's AVD Series Spiral Vibration Dampers are designed to eliminate the damage caused by Aeolian vibration and reduce overall vibration on bare All-Dielectric Self-Supporting (ADSS) cables. Made of weather-resistant, non-corrosive plastic, these dampers have a large, helically-formed damping section sized for the ADSS cable. A smaller gripping section gently grips the ADSS cable. Each damper is marked with the conductor range and color coded to indicate the cable diameter size range.

Line design, temperature, tension, wind flow exposure and history of vibration on similar construction in the location are factors to consider when determining the amount of protection required. Installation can be on both sides of the support location—at least one hand-width from the ends of Armor Rods or cable hardware. Depending on the customer's specific conditions, AFL recommends the AVD Spiral Vibration Damper for ADSS cable in accordance with the recommended application chart.



* For "L" dimensions, see table below.

Ordering Information

Select catalog number based on cable diameter. Example: for 0.512" diameter, order AVD462/563

Conductor Diameter Cross Reference

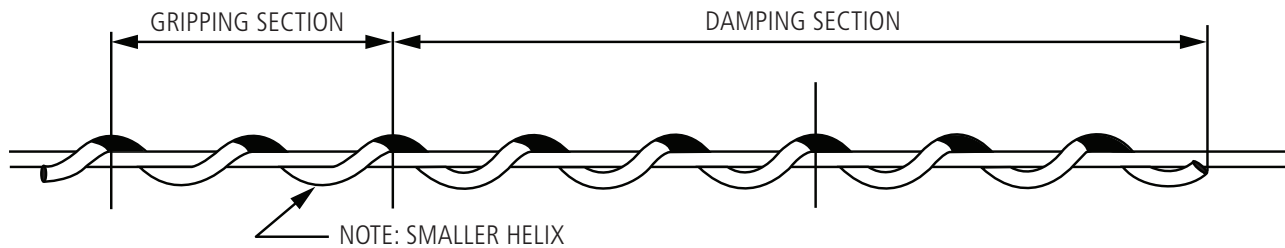
AFL NO.	PLP NO.	CONDUCTOR DIAMETER RANGE inches (mm)	"L" ROD LENGTH inches (mm)	WEIGHT lbs (KG)	STANDARD PACK
AVD250/326	50502393	0.250-0.326 (6.35-8.29)	49 (1244)	27 (12.247)	50
AVD327/461	50502272	0.327-0.461 (8.30-11.72)	51 (1295)	30 (12.701)	50
AVD462/563	50502274	0.462-0.563 (1.73-14.32)	53 (1346)	30 (13.608)	50
AVD564/770	50509862	0.564-0.770 (14.33-19.30)	64 (1625)	47 (21.319)	25
AVD771/876	50503057	0.771-0.876 (19.58-22.25)	71 (1803)	29 (13.154)	25
AVD877/1000	50503576	0.877-1.000 (22.26-25.40)	75 (1905)	36 (16.329)	25
AVD1001/1250	50503909	1.001-1.250 (25.41-31.75)	90 (2286)	41 (18.597)	25

continued
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AVD Series Spiral Vibration Dampers (cont.)

Damper Recommendations for Placement

Damper Recommendation applies for specified AFL dampers only. If alternative type or different manufacturer dampers are applied instead, it is possible that damage will occur on the conductor and/or the accessories.



SPAN LENGTH	INITIAL TENSION PERCENTAGE OF CABLE RATED BREAKING STRENGTH (RBS) AT NOMINAL TEMPERATURE 60°F				
	0-10%	11-15%	16-20%	21-25%	>25%
< 250 ft.	0	2/s	2/s	2/s	2/s
251-500	2/s	2/s	2/s	2/s	4/s
501-800	2/s	2/s	2/s	4/s	4/s
801-1600	4/s	4/s	4/s	6/s	6/s
1601-2400	6/s	6/s	6/s	8/s	8/s
2401-3000	8/s	8/s	8/s	10/s	10/s
3001-3500	10/s	10/s	10/s	12/s	12/s
3501-4000	12/s	12/s	12/s	16/s	16/s
4001-4500	16/s	16/s	16/s	16/s	18/s
4501-5000	18/s	18/s	18/s	18/s	20/s

Symbol Designation

- 2/s = 2 dampers per span, 1 on each end of the span
- 4/s = 2 dampers in tandem on each end of the span
- 6/s = 3 dampers in tandem on each end of the span
- 8/s = 3 dampers in tandem + 1 damper on each end of the span
- 10/s = 3 dampers in tandem + 2 dampers in tandem on each end of the span
- 12/s = 3 dampers in tandem + 3 dampers in tandem on each end of the span
- 16/s = 3 dampers in tandem + 3 dampers in tandem + 2 dampers in tandem on each end of the span
- 18/s = 3 dampers in tandem + 3 dampers in tandem + 3 dampers in tandem on each end of the span
- 20/s = 4 dampers in tandem + 3 dampers in tandem + 3 dampers in tandem on each end of the span

Placement and Spacing

1. AVD shall be placed approximately 5 inches away from any line hardware (suspension, deadend, armor rods, other SVDs, etc.).
2. AVDs can be nested in tandem for up to three units to prevent the units from interfering with each other.
3. AVDs shall be applied to bare cable only to ensure proper performance.



Fiber Storage Units for ADSS Fiber Optic Cable

AFL Fiber Storage Units (FSU) are used to conveniently store an extra length of cable along the ADSS cable run for later use. Furnished as pairs (kit contains two Fiber Storage Units and two sets of hanger brackets), these FSUs are constructed from UV stabilized PPE thermoplastic. All basic hardware for attachment to the ADSS cable is provided. ADSS cable mount support brackets meet Telcordia® specifications. Epoxy coated clamping devices meet ASTM specifications A153 and B695.

Features

- Small profile and side facing channel minimizes ice and leaf loading
- Constructed from UV stabilized PPE thermoplastic
- Basic hanging hardware (bolts, nuts, washers) and strand clamps all included
- Tie-wrap slots for securing cable
- Epoxy-coated strand clamps

The mounting bracket features an angled, tent-profile, epoxy-coated bracket for standard ADSS cable mounting.

Specifications

PARAMETER	FOSP-ADSS-12	FOSP-ADSS-17
Nominal Channel Width - in. (cm)	0.625	1.00
Minimum Bend Diameter - in. (cm)	12	17.5

Ordering Information

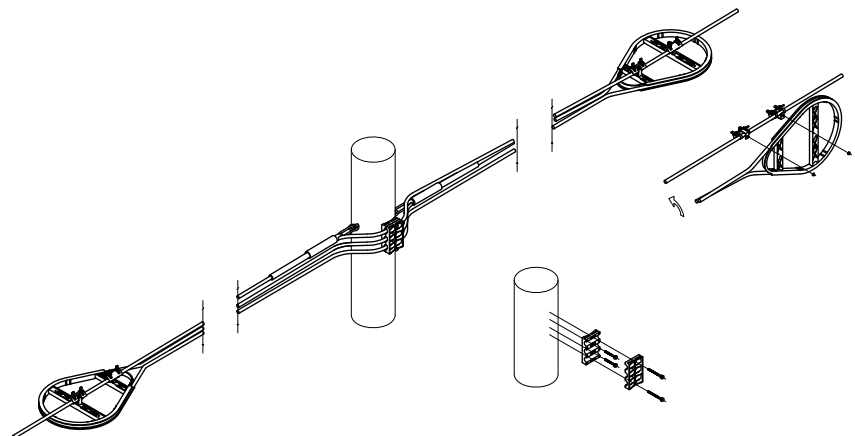
DESCRIPTION	FOSP-ADSS-12	FOSP-ADSS-17
FOS ADSS Kit	FA000049	FA000050

Kits contain one pair of FOSP and two sets of hanger brackets.

Qualifications

GOVERNING BODY	STANDARD CODE
ASTM	ASTM A153, ASTM B695

Typical Installation Diagram





Alumoweld® Wire and Strand

Alumoweld wire consists of a thick cladding of pure aluminum over a high-strength steel core. Alumoweld wire offers the advantages of each metal. It is ideal for overhead ground wire, neutral messengers, line wire and guy strand. Alumoweld wire and strand is used by power utilities, as well as formed wire and optical ground wire manufacturers. Alumoweld outlasts other options by as much as 200% in corrosive environments, significantly lowering maintenance and replacement costs. When compared to solid aluminum wire, Alumoweld offers tremendous savings.

How is Alumoweld made?

The Alumoweld process consists of a continuous application of a pure atomized aluminum powder to a high strength steel rod. Proper control of heat and pressure refines the cladding and develops a controlled atomic weld. The resulting bimetallic rod is then cold drawn into finished wire sizes without changing original proportions of aluminum and steel.

Applications

- Utility Market
- Telecommunications Market
- Military
- General Industry Applications

Features

Thick Aluminum Covering

Alumoweld wire is produced with the concentric aluminum covering comprising 25% of the cross-sectional area, with the aluminum thickness 10% minimum of the wire radius. The high proportion of aluminum offers an excellent degree of electrical conductivity and permanently protects the high strength steel core.

High Conductivity

Compared to solid aluminum wire of the same diameter, Alumoweld wire has a direct current conductance of 33%. It has about three times the conductivity of galvanized steel wire. For high frequency currents where "skin effect" is a factor, the conductivity of Alumoweld wire approaches 100% of solid aluminum. When Alumoweld wires are combined with aluminum wires in composite conductors, a wide range of strength and conductivity characteristics is possible.

Corrosion Resistance

The thick aluminum cladding of Alumoweld wire provides a high degree of corrosion resistance, resulting in longer service life and reduced maintenance. Accelerated laboratory tests exposing Alumoweld wire to various types of corrosive conditions have proven that Alumoweld wires have corrosion resistance comparable to EC grade aluminum. The conditions simulated in the test included industrial, marine and tropical.

Combines High Strength with Low Weight

Alumoweld wire has a higher strength-to-weight ratio than any other wire commonly used on overhead lines. Size for size, it has about the same tensile strength as extra high strength steel wire, but weighs less. It has eight times the strength of solid aluminum wire of the same diameter and only a little more than twice the weight. This high strength-to-weight ratio provides a maximum margin of safety for long-span construction. The strength of Alumoweld's steel core is protected by the thick aluminum covering.



Alumoweld® Overhead Ground Wire

Alumoweld wire and strand are used by power utilities, as well as formed wire and optical ground wire manufacturers. Alumoweld is suitable in corrosive environments, lowering maintenance and replacement costs.

Features

Corrosion Resistance

Alumoweld overhead ground wire has excellent corrosion resistance. Its strength and conductivity remain unchanged in any atmosphere where aluminum is satisfactory, especially those known to be corrosive from industrial or atmospheric conditions.

This assurance against corrosion is obtained through the application of a thick covering of pure aluminum, which provides a substantial barrier of protective metal. The minimum cladding thickness of Alumoweld is 10% of the radius of the wire. The cladding has a continuous, strong metallic bond to the steel core that will not crack or flake.

Strength Comparable to Steel

Alumoweld also provides strength greater than or comparable to other overhead ground wires. For commonly used wire sizes, the tensile strength of the individual wire can approach 200,000 pounds per square inch. When used in a strand for overhead ground wire, this high strength permits greater span lengths, less sag, and heavier loads under storm loading conditions.

Lightweight

Directly related to strength and sag performance is the lighter weight of Alumoweld. This lighter weight, combined with high strength, permits Alumoweld to be installed to the same sags as steel with correspondingly lower tensions and lower stresses on the towers or supporting structures.

Applications

- Overhead ground wire
- Shield wire protecting transmission lines against lightning damage

Alumoweld Strand ASTM B-416

NUMBER & SIZE OF WIRES	NOMINAL WIRE DIAMETER		NOMINAL STRAND DIAMETER		BREAKING LOAD		WEIGHT		RESISTANCE		CROSS SECTION	
	AWG	IN	MM	IN	MM	LB	KG	LB/1000 FT	KG/KM	OHMS/1000 FT@68°F	OHMS/KM@20°C	SQ IN
37 No. 6	0.1620	4.115	1.130	28.80	120,200	54,500	2222.00	3307.0	0.05356	0.1757	0.76264	492.20
37 No. 7	0.1443	3.665	1.010	25.70	100,700	45,690	1762.00	2623.0	0.06754	0.2216	0.60509	390.30
37 No. 8	0.1285	3.264	0.899	22.90	84,200	38,190	1398.00	2080.0	0.08516	0.2794	0.47984	309.50
37 No. 9	0.1144	2.906	0.801	20.30	66,770	30,290	1108.00	1649.0	0.10740	0.3523	0.38032	245.50
37 No.10	0.1019	2.588	0.713	17.90	52,950	24,020	879.00	1308.0	0.13540	0.4443	0.30174	194.70
19 No. 5	0.1819	4.620	0.910	23.10	73,350	33,270	1430.00	2129.0	0.08224	0.2698	0.49438	318.70
19 No. 6	0.1620	4.115	0.810	20.60	61,700	27,990	1134.00	1688.0	0.10370	0.3402	0.39163	252.70
19 No. 7	0.1443	3.665	0.721	18.30	51,730	23,460	899.50	1339.0	0.13080	0.4290	0.31073	200.40

continued
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Alumoweld® Overhead Ground Wire

Alumoweld Strand ASTM B-416 (cont.)

NUMBER & SIZE OF WIRES	NOMINAL WIRE DIAMETER		NOMINAL STRAND DIAMETER		BREAKING LOAD		WEIGHT		RESISTANCE		CROSS SECTION	
	AWG	IN	MM	IN	MM	LB	KG	LB/1000 FT	KG/KM	OHMS/1000 FT@68°F	OHMS/KM@20°C	SQ IN
19 No. 8	0.1285	3.264	0.642	16.30	43,240	19,610	713.50	1062.0	0.16490	0.5409	0.24641	158.90
19 No. 9	0.1144	2.906	0.572	14.50	34,290	15,550	565.80	842.0	0.20790	0.6821	0.19530	126.10
19 No.10	0.1019	2.588	0.509	12.90	27,190	12,330	448.70	667.7	0.26220	0.8601	0.15495	99.96
7 No. 5	0.1819	4.620	0.546	13.90	27,030	12,260	524.90	781.1	0.22640	0.7426	0.18193	117.40
7 No. 6	0.1620	4.115	0.486	12.40	22,730	10,310	416.30	619.5	0.28030	0.9198	0.14435	93.10
7 No. 7	0.1443	3.665	0.433	11.00	19,060	8,645	330.00	491.1	0.35350	1.1600	0.11448	73.87
7 No. 8	0.1285	3.264	0.385	9.78	15,930	7,226	261.80	389.6	0.44580	1.4630	0.09077	58.56
7 No. 9	0.1144	2.906	0.343	8.71	12,630	5,729	207.60	308.9	0.56210	1.8440	0.07198	46.44
7 No.10	0.1019	2.588	0.306	7.76	10,020	4,545	164.70	245.1	0.70880	2.3250	0.05708	36.83
7 No.11	0.0907	2.304	0.272	6.91	7,945	3,604	130.60	194.4	0.89380	2.9320	0.04527	29.21
7 No.12	0.0808	2.052	0.242	6.16	6,301	2,858	103.60	154.2	1.12700	3.6970	0.03590	23.16
3 No. 5	0.1819	4.620	0.392	9.96	12,230	5,547	224.50	334.1	0.51770	1.6990	0.07796	50.32
3 No. 6	0.1620	4.115	0.349	8.87	10,280	4,663	178.10	265.0	0.65280	2.1420	0.06185	39.90
3 No. 7	0.1443	3.665	0.311	7.90	8,621	3,910	141.20	210.1	0.82320	2.7010	0.04905	31.65
3 No. 8	0.1285	3.264	0.277	7.03	7,206	3,269	112.00	166.7	1.03800	3.4060	0.03890	25.10
3 No. 9	0.1144	2.906	0.247	6.26	5,715	2,592	88.81	132.2	1.30900	4.2940	0.03085	19.90
3 No.10	0.1019	2.588	0.220	5.58	4,532	2,056	70.43	104.8	1.65100	5.4150	0.02446	15.78

Alumoweld Strand ASTM B-415

NUMBER & SIZE OF WIRES	NOMINAL WIRE DIAMETER		NOMINAL STRAND DIAMETER		BREAKING LOAD		WEIGHT		RESISTANCE		CROSS SECTION	
	AWG	IN	MM	IN	MM	LB	KG	LB/1000 FT	KG/KM	OHMS/1000 FT@68°F	OHMS/KM@20°C	SQ IN
No. 4	0.2043	5.189	115	109.0	5,081	2,305	93.63	139.3	1.222	4.009	0.03278	21.15
No. 5	0.1819	4.620	165	116.0	4,290	1,946	74.25	110.5	1.541	5.056	0.02599	16.77
No. 6	0.1620	4.115	175	123.0	3,608	1,637	58.88	87.6	1.943	6.375	0.02062	13.30
No. 7	0.1443	3.665	185	130.1	3,025	1,372	46.69	69.5	2.450	8.038	0.01635	10.55
No. 8	0.1285	3.264	195	137.1	2,529	1,147	37.03	55.1	3.089	10.130	0.01297	8.37
No. 9	0.1144	2.906	195	137.1	2,005	909	29.37	43.7	3.896	12.780	0.01028	6.63
No.10	0.1019	2.588	195	137.1	1,590	721	23.29	34.7	4.912	16.120	0.00816	5.26
No.11	0.0907	2.304	195	137.1	1,261	572	18.47	27.5	6.194	20.320	0.00647	4.17
No.12	0.0808	2.052	195	137.1	1,000	454	14.65	21.8	7.811	25.630	0.00513	3.31

Modulus of Elasticity: Strand 23,000,000; Solid Wire 23,500,000. Coefficient of Linear Expansion: 0.000,007,2 per degree F.
 Modulus of Elasticity: Strand 16,200 kg/mm²; Solid Wire 16,500 kg/mm². Coefficient of Linear Expansion: 0.000,013 per degree C.

Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
ASTM	B415	Alumium Clad Steel Wire (ACS wire)

Contact AFL for your Alumoweld solution.



Alumoweld® Type M Guy Strand

Alumoweld Type M Guy Strand is an economical, corrosion resistant guying material for use on overhead line structures. The thick cladding of aluminum on each wire protects the high-strength steel core from rusting and subsequent loss of strength. Costly maintenance is eliminated, and the original safety factor of the guy is maintained throughout the life of the line.

Features

Thick Aluminum Cladding

The Alumoweld wire used to make Type M guy strand is unique in that the aluminum cladding thickness is guaranteed to be no less than 10% minimum of the wire radius. This, a thick corrosion barrier, that is pure aluminum not zinc or an iron-aluminum alloy, protects the steel core.

Another important feature of any coated or clad wire is the bond between the coating material and the base metal. In the case of Alumoweld wire, the aluminum cladding and steel core are joined by a continuous ductile weld. This assures against cracking or separation of the protective aluminum from the steel core.

Lightweight and Convenient

Directly related to strength and sag performance is the lighter weight of Alumoweld Type M Guy Strand. This lighter weight, combined with high strength, permits Alumoweld to be installed to the same sags as steel with correspondingly lower tensions and lower stresses on the towers or supporting structures.

Applications

- Power lines
- Telephone lines
- Railway signals
- Communication lines
- Towers Masts

continued
→

Alumoweld® Type M Guy Strand (cont.)

Physical Characteristics

STRAND DESIGNATION	NOMINAL DIAMETER OF STRAND		NUMBER OF INDIVIDUAL WIRES	DIAMETER OF INDIVIDUAL WIRES		BREAKING LOAD		WEIGHT		APPROXIMATE RESISTANCE ²	
	IN	MM		IN	MM	LBS	KG	LBS/1000 FT	KG/KM	OHMS/1000 FT	OHMS/KM
2.8M3	0.174	4.42	3	0.081	2.06	2,800	1,270	44	65.47	2.62	8.60
4M3	0.220	5.59	3	0.102	2.59	4,000	1,814	70	104.16	1.65	5.44
5M3	0.247	6.27	3	0.114	2.90	5,700	2,585	89	132.43	1.31	4.30
6M	0.242	6.15	7	0.081	2.06	6,000	2,721	104	154.75	1.13	3.71
7M3	0.277	7.04	3	0.128	3.25	7,200	3,265	112	166.66	1.04	3.41
8M	0.272	6.91	7	0.091	2.31	8,000	3,628	131	194.93	0.89	2.92
10M	0.306	7.77	7	0.102	2.59	10,000	4,535	165	245.52	0.71	2.33
12.5M	0.343	8.71	7	0.114	2.90	12,500	5,670	208	309.50	0.56	1.84
14M	0.363	9.22	7	0.121	3.07	14,000	6,350	232	345.22	0.50	1.64
16M	0.386	9.80	7	0.128	3.25	16,000	7,257	262	389.86	0.45	1.48
18M	0.417	10.59	7	0.139	3.53	18,000	8,164	306	455.33	0.38	1.25
19M ³	0.433	11.00	7	0.144	3.67	19,000	8,618	330	491.10	0.35	1.16
20M	0.444	11.28	7	0.148	3.76	20,000	9,072	347	516.34	0.34	1.12
25M	0.519	13.18	7	0.173	4.39	25,000	11,340	475	706.80	0.25	0.82

1. Unless otherwise noted, the above guy strands are manufactured per Alumoweld Specification ER-3008.

2. For information only, not for calculation purposes.

3. Per ASTM B-416.

Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
ASTM	B415	Alumium Clad Steel Wire (ACS wire)

Contact AFL for your Alumoweld solution.



Armor Rods

Armor rods are designed to protect the conductor by reducing bending, compression, and abrasion at the support point. Protection against flashover damage is also provided. Armor rods are recommended as protection for spans greater than 300 ft. (91 m). Manufactured from either aluminum alloy, Alumoweld®, or galvanized steel, they are designed for use with ACSR, AAC, AAAC, ACSS, SSAC, TW Types and ACAR conductors as well as Alumoweld® and steel ground wire. All rod sets are manufactured with right-hand lay as standard for aluminum-based material and left hand lay for Alumoweld and steel ground wire.

Features

Color Coded and Center Marked

For ease of identification to conductor size, the armor rods are color coded in the center of the rod. This feature also assists in alignment of the rods during installation.

Repair Damage

When no more than 50% of the outside strands on an ACSR or aluminum conductor have been damaged outside the support point, armor rods may be used to restore 100% of the rated conductance and strength of the line.

Vibration Protection

Installing armor rods improves the conductor's ability to withstand the fatigue forces associated with aeolian type vibration. They do not function as vibration control devices. For assistance in determining the proper vibration protection, contact the AFL Technical Support Team or visit our website at www.Vibrec.com.

Tap Over

Armor rods may be tapped over on ACSR and aluminum conductor, but not on Alumoweld, or steel ground wire. Where tapping is used, it is strongly recommended that the conductor is thoroughly wire brushed and an oxide inhibitor be applied.

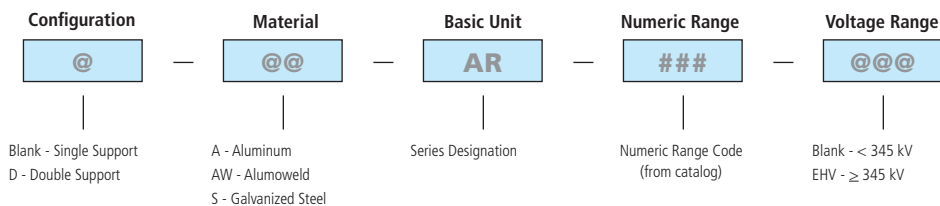
Extra High Voltage Applications

For 345 kV and above, the armor rod ends are modified to eliminate Corona effects and include a suffix of 'EHV' at the end of the AFL part number.

Customized Armor Rods

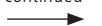
For armor rods with special requirements, such as longer lengths or non-standard lay direction contact the AFL Technical Support Team at 1-800-866-7385.

Ordering Information



Example: For single 795 26/7, Aluminum conductor diameter of 1.099 to 1.139 inches and Extra High Voltage, the complete catalog number is: AAR279EHV

continued





Ordering Information - Armor Rods

AFL NO.	CONDUCTOR DIAMETER RANGE		NOMINAL CABLE SIZE	ROD DIA. (INCHES)	QUANTITY IN SET	COLOR CODE	ROD LENGTH (INCHES)	PACKAGING PER BOX	
	MIN. (INCHES)	MAX. (INCHES)						UNITS	WEIGHT (LBS)
ALUMINUM (RIGHT HAND LAY)									
AAR062	0.244	0.259	#4, 6/1, 7/1	0.146	7	Orange	40 (S) 52 (D)	50	25 (S) 32 (D)
AAR066	0.260	0.273	#3, 7W All Aluminum	0.146	7	Green	42 (S) 54 (D)	50	26 (S) 34 (D)
AAR069	0.274	0.289	#3, 7W Aluminum Alloy	0.146	8	Yellow	42 (S) 54 (D)	50	30 (S) 38 (D)
AAR073	0.290	0.308	#2, 7W All Aluminum	0.146	8	Purple	42 (S) 54 (D)	50	30 (S) 38 (D)
AAR078	0.309	0.326	#2, 6/1, 7/1	0.136	9	Red	44 (S) 56 (D)	50	32 (S) 40 (D)
AAR083	0.327	0.346	#1, 7W All Aluminum	0.146	9	Blue	46 (S) 58 (D)	50	38 (S) 46 (D)
AAR088	0.347	0.366	#1, 6/1	0.146	9	Green	48 (S) 60 (D)	50	40 (S) 49 (D)
AAR093	0.367	0.389	1/0, 7W All Aluminum	0.146	10	Black	50 (S) 62 (D)	50	45 (S) 55 (D)
AAR099	0.390	0.413	1/0, 6/1	0.167	9	Yellow	52 (S) 64 (D)	50	55 (S) 67 (D)
AAR105	0.414	0.436	3/0, 7W Comp.	0.146	10	Brown	52 (S) 64 (D)	50	48 (S) 58 (D)
AAR111	0.437	0.463	2/0, 6/1	0.167	10	Blue	54 (S) 66 (D)	50	64 (S) 76 (D)
AAR118	0.464	0.490	3/0, 7W-19W All Aluminum	0.167	10	Green	54 (S) 66 (D)	50	64 (S) 76 (D)
AAR124	0.491	0.521	3/0, 6/1	0.167	11	Orange	56 (S) 68 (D)	25	37 (S) 46 (D)
AAR132	0.522	0.551	4/0, 7W-19W All Aluminum	0.167	11	Black	58 (S) 70 (D)	25	38 (S) 46 (D)
AAR140	0.552	0.585	4/0, 6/1	0.182	11	Red	60 (S) 72 (D)	25	46 (S) 55 (D)
AAR149	0.586	0.606	266.8, 19W	0.182	12	Black	62 (S) 74 (D)	25	52 (S) 61 (D)
AAR154	0.607	0.630	266.8, 18/1	0.182	12	Purple	64 (S) 76 (D)	25	54 (S) 63 (D)
AAR160	0.631	0.655	266.8, 26/7	0.182	12	Yellow	64 (S) 76 (D)	25	54 (S) 63 (D)
AAR166	0.656	0.679	336.4, 19W	0.182	13	Brown	66 (S) 78 (D)	18	43 (S) 51 (D)
AAR172	0.680	0.703	300, 26/7	0.204	12	Blue	68 (S) 80 (D)	18	52 (S) 60 (D)
AAR179	0.704	0.740	336.4, 26/7	0.204	12	Green	72 (S) 84 (D)	18	54 (S) 64 (D)
AAR188	0.741	0.782	397.5 18/1	0.204	13	Orange	72	18	50
AAR199	0.783	0.814	397.5 26/7	0.250	11	Purple	76	15	66
AAR207	0.815	0.845	636 19W	0.250	11	Red	76	15	66
AAR215	0.846	0.907	477 26/7	0.250	12	Blue	78	15	74
AAR230	0.908	0.929	636 37W	0.250	13	Green	80	12	55
AAR236	0.930	0.976	605 26/7	0.250	13	White	88	12	60
AAR248	0.977	1.016	636 26/7	0.310	11	Yellow	92	6	55
AAR258	1.017	1.035	795 37W-61W	0.310	12	Brown	94	6	45
AAR263	1.036	1.064	715.5 26/7	0.310	12	Blue	96	6	46
AAR270	1.065	1.098	795 24/7	0.310	12	Green	96	6	46
AAR279	1.099	1.139	795 26/7	0.310	12	Orange	100	6	51
AAR289	1.140	1.161	954 36/1	0.310	13	Purple	100	6	52
AAR295	1.162	1.208	1003.5 37W-61W	0.310	13	Red	100	6	57
AAR307	1.209	1.269	1113 45/7	0.365	12	Black	100	6	67

Formed Wire

continued

Ordering Information - Armor Rods (cont.)

AFL NO.	CONDUCTOR DIAMETER RANGE		NOMINAL CABLE SIZE	ROD DIA. (INCHES)	QUANTITY IN SET	COLOR CODE	ROD LENGTH (INCHES)	PACKAGING PER BOX	
	MIN. (INCHES)	MAX. (INCHES)						UNITS	WEIGHT (LBS)
ALUMINUM (CONT.) (RIGHT HAND LAY)									
AAR322	1.270	1.327	1192.5 45/7	0.365	12	White	100	6	67
AAR337	1.328	1.390	1272 45/7	0.365	13	Yellow	100	3	45
AAR353	1.391	1.440	1431 45/7	0.436	11	Brown	100	3	54
AAR366	1.441	1.508	1590 45/7	0.436	12	Blue	100	3	58
AAR383	1.509	1.578	1590 54/19	0.436	12	Green	100	3	58
AAR401	1.579	1.651	1780 84/19	0.436	13	Orange	100	3	60
AAR419	1.652	1.728	—	0.436	13	Purple	100	3	60
AAR439	1.729	1.809	2156 84/19	0.436	14	Red	100	3	64
AAR459	1.810	1.898	2500 91W	0.436	14	Black	100	3	64
AAR482	1.899	1.991	—	0.436	15	White	100	3	74
AAR506	1.992	2.090	—	0.436	15	Yellow	100	3	74
AAR531	2.091	2.193	—	0.436	15	Brown	100	3	82
GALVANIZED STEEL (LEFT HAND LAY)									
SAR058	0.229	0.243	1/4, 7 WIRE	0.086	10	Black	40	50	38
SAR062	0.244	0.259	1/4, 3 WIRE	0.086	10	Yellow	40	50	38
SAR078	0.309	0.326	5/16, 3 OR 7 WIRE	0.100	11	Black	44	50	60
SAR088	0.347	0.373	3/8, 3 OR 7 WIRE	0.100	12	Orange	48	50	70
SAR105	0.414	0.436	7/16, 3 OR 7 WIRE	0.119	12	Green	52	20	54
SAR124	0.491	0.521	1/2, 7 OR 19 WIRE	0.138	12	Blue	56	20	64
ALUMOWELD® (LEFT HAND LAY)									
AWAR043	0.169	0.178	3 #12 AW	0.102	7	Orange	40 (S) 52 (D)	50	31 (S) 40 (D)
AWAR050	0.196	0.207	3 # 11 AW	0.102	7	Black	40 (S) 52 (D)	50	31 (S) 40 (D)
AWAR055	0.218	0.225	3 # 10 AW, 4M AW	0.102	8	Green	40 (S) 52 (D)	50	35 (S) 46 (D)
AWAR060	0.237	0.249	7 # 12 AW, 1/4", 6M AW, 3 # 9 AW	0.102	9	Yellow	40 (S) 52 (D)	50	39 (S) 51 (D)
AWAR067	0.264	0.277	7 # 11 AW, 9/32", 8M AW, 3 # 8 AW	0.114	9	Blue	42 (S) 54 (D)	25	27 (S) 35 (D)
AWAR075	0.296	0.314	7 # 10 AW, 5/16", 10M AW, 3 # 7 AW	0.114	9	Black	46 (S) 58 (D)	25	29 (S) 37 (D)
AWAR085	0.334	0.352	7 # 9 AW, 11/31", 12.5M AW, 3 # 6 AW	0.114	10	Yellow	50 (S) 62 (D)	25	33 (S) 44 (D)
AWAR095	0.373	0.392	7 # 8 AW, 3/8", 3 # 5 AW	0.128	10	Orange	50 (S) 62 (D)	25	44 (S) 54 (D)
AWAR104	0.409	0.425	18M AW	0.128	11	Black	54 (S) 66 (D)	25	52 (S) 62 (D)
AWAR108	0.426	0.450	7 # 7 AW, 7/16", 20M AW	0.128	12	Green	56 (S) 68 (D)	25	59 (S) 70 (D)
AWAR121	0.477	0.504	7 # 6 AW, 1/2"	0.144	11	Blue	56 (S) 68 (D)	20	52 (S) 65 (D)
AWAR136	0.535	0.565	7 # 5 AW, 9/16"	0.162	12	Yellow	60 (S) 72 (D)	10	39 (S) 48 (D)
AWAR150	0.593	0.625	7 # 4 AW, 5/8"	0.183	11	Black	60 (S) 72 (D)	10	59 (S) 56 (D)

End Finish of Rods:

1. Chamfered ends - standard on diameters up to 0.250"
2. Ball ends - standard on diameters greater than 0.250"
3. Tapered ends for EHV - designated by suffix 'EHV'
4. For double armor rods, contact the AFL Technical Support Team

continued

Formed Wire

Armor Rods Cross Reference

SINGLE ALUMINUM		
AFL NO.	DULMISON®	PLP®*
AAR062	AAR 0620	AR-0110
AAR066	AAR 0660	AR-0111
AAR069	AAR 0695	AR-0112
AAR073	AAR 0735	AR-0113
AAR078	AAR 0785	AR-0114
AAR083	AAR 0830	AR-0115
AAR088	AAR 0880	AR-0116
AAR093	AAR 0930	AR-0117
AAR099	AAR 0990	AR-0118
AAR105	AAR 1050	AR-0119
AAR111	AAR 1110	AR-0120
AAR118	AAR 1180	AR-0121
AAR124	AAR 1245	AR-0122
AAR132	AAR 1325	AR-0123
AAR140	AAR 1400	AR-0124
AAR149	AAR 1490	AR-0125
AAR154	AAR 1540	AR-0126
AAR160	AAR 1605	AR-0127
AAR166	AAR 1665	AR-0128
AAR172	AAR 1725	AR-0129
AAR179	AAR 1790	AR-0130
AAR188	AAR 1880	AR-0131
AAR199	AAR 1990	AR-0132
AAR207	AAR 2070	AR-0133
AAR215	AAR 2150	AR-0134
AAR230	AAR 2305	AR-0135
AAR236	AAR 2360	AR-0136
AAR248	AAR 2480	AR-0137
AAR258	AAR 2585	AR-0138
AAR263	AAR 2630	AR-0139
AAR270	AAR 2705	AR-0140
AAR279	AAR 2790	AR-0141
AAR289	AAR 2895	AR-0142
AAR295	AAR 2950	AR-0143
AAR307	AAR 3070	AR-0144
AAR322	AAR 3225	AR-0145
AAR337	AAR 3375	AR-0146
AAR353	AAR 3535	AR-0147
AAR366	AAR 3660	AR-0163
AAR383	AAR 3835	AR-0164
AAR401	AAR 4010	AR-0165
AAR419	AAR 4195	AR-0166
AAR439	AAR 4390	AR-0167
AAR459	AAR 4595	AR-0168
AAR482	AAR 4825	AR-0169
AAR506	AAR 5060	AR-0170
AAR531	AAR 5310	AR-0171

SINGLE ALUMINUM (CONT.)		
AFL NO.	DULMISON®	PLP®*
AAR248EHV	—	AR-0500
AAR258EHV	—	AR-0501
AAR263EHV	—	AR-0502
AAR270EHV	—	AR-0503
AAR279EHV	—	AR-0504
AAR289EHV	—	AR-0505
AAR295EHV	—	AR-0506
AAR307EHV	—	AR-0507
AAR322EHV	—	AR-0508
AAR337EHV	—	AR-0509
AAR353EHV	—	AR-0510
AAR366EHV	—	AR-0511
AAR383EHV	—	AR-0512
AAR401EHV	—	AR-0513
AAR419EHV	—	AR-0514
AAR439EHV	—	AR-0516
AAR459EHV	—	AR-0517
AAR482EHV	—	AR-0518
AAR506EHV	—	AR-0519
AAR531EHV	—	AR-0520
GALVANIZED STEEL		
SAR058	SAR 0580	AR-1123
SAR062	SAR 0620	AR-1124
SAR078	SAR 0785	AR-1128
SAR088	SAR 0880	AR-1130
SAR105	SAR 1050	AR-1133
SAR124	SAR 1245	AR-1136
ALUMOWELD®		
AWAR043	AWAR 0430	AR-2113
AWAR050	AWAR 0500	AR-2116
AWAR055	AWAR 0555	AR-2118
AWAR060	AWAR 0600	AR-2120
AWAR067	AWAR 0670	AR-2122
AWAR075	AWAR 0750	AR-2124
AWAR085	AWAR 0850	AR-2126
AWAR095	AWAR 0950	AR-2128
AWAR104	AWAR 1040	AR-2130
AWAR108	AWAR 1080	AR-2131
AWAR121	AWAR 1210	AR-2133
AWAR136	AWAR 1360	AR-2135
AWAR150	AWAR 1505	AR-2137

DOUBLE ALUMINUM		
AFL NO.	DULMISON®	PLP®*
DAAR062	DAAR 0620	AR-0310
DAAR066	DAAR 0660	AR-0311
DAAR069	DAAR 0695	AR-0312
DAAR073	DAAR 0735	AR-0313
DAAR078	DAAR 0785	AR-0314
DAAR083	DAAR 0830	AR-0315
DAAR088	DAAR 0880	AR-0316
DAAR093	DAAR 0930	AR-0317
DAAR099	DAAR 0990	AR-0318
DAAR105	DAAR 1050	AR-0319
DAAR111	DAAR 1110	AR-0320
DAAR118	DAAR 1180	AR-0321
DAAR124	DAAR 1245	AR-0322
DAAR132	DAAR 1325	AR-0323
DAAR140	DAAR 1400	AR-0324
DAAR149	DAAR 1490	AR-0325
DAAR154	DAAR 1540	AR-0326
DAAR160	DAAR 1605	AR-0327
DAAR166	DAAR 1665	AR-0328
DAAR172	DAAR 1725	AR-0329
DAAR179	DAAR 1790	AR-0342
ALUMOWELD®		
DAWAR043D	DAWAR 0430	AR-2313
DAWAR050D	DAWAR 0500	AR-2316
DAWAR055D	DAWAR 0555	AR-2318
DAWAR060D	DAWAR 0600	AR-2320
DAWAR067D	DAWAR 0670	AR-2322
DAWAR075D	DAWAR 0750	AR-2324
DAWAR085D	DAWAR 0850	AR-2326
DAWAR095D	DAWAR 0950	AR-2328
DAWAR104D	DAWAR 1040	AR-2330
DAWAR108D	DAWAR 1080	AR-2331
DAWAR121D	DAWAR 1210	AR-2333
DAWAR136D	DAWAR 1360	AR-2335
DAWAR150D	DAWAR 1505	AR-2337

*PLP is a trademark of Preformed Line Products.



Line Guards

Line guards are designed to protect the conductor by reducing bending, compression, and abrasion at the support point, particularly where hand-ties are used. Line guards are recommended as protection for spans of less than 300 ft. (91 m). Manufactured from aluminum alloy, they are designed for use with ACSR, AAC, AAAC, ACSS, SSAC, TW Types and ACAR conductors. All guard sets are manufactured with right-hand lay as standard.

Features

Color Coded and Center Marked

For ease of identification to conductor size, the line guards are color coded in the center of the rod. This feature also assists in alignment of the rods during installation.

Repair Damage

When no more than 25% of the outside strands on an ACSR or aluminum conductor have been damaged outside the support area, line guards may be used to restore 100% of the rated conductance and strength of the line. Do not use line guards for repair at the support point.

Tap Over

Line guards may be tapped over on ACSR and aluminum conductor. Where tapping is used, it is strongly recommended that the conductor be thoroughly wire brushed and an oxide inhibitor be applied.

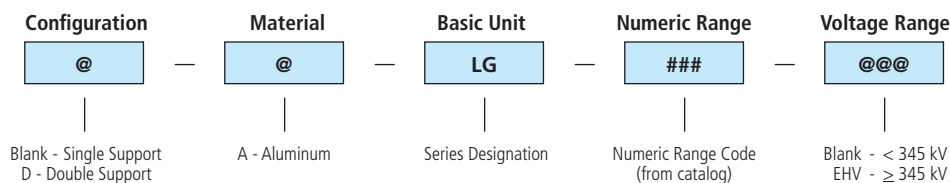
Extra High Voltage Applications

For 345 kV and above, the line guards ends are modified to eliminate Corona effects and include a suffix of 'EHV' at the end of the product number.

Customized Line Guards

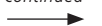
For line guards with special requirements, such as longer lengths or non-standard lay direction contact the AFL Technical Support Team at 1.800.866.7385.

Ordering Information



Example: For single 795 26/7, Aluminum conductor diameter of 1.099 to 1.139 inches and Extra High Voltage, the complete catalog number is: **ALG279EHV**

continued



Ordering Information—Line Guards

AFL NO.	CONDUCTOR DIAMETER RANGE		NOMINAL CABLE SIZE	ROD DIAMETER (INCHES)	QTY OF SET	COLOR CODE	ROD LENGTH (INCHES)	PACKAGING PER BOX	
	MIN. (INCHES)	MAX. (INCHES)						UNITS	WEIGHT (LBS)
ALG046	0.182	0.193	#6, 7W All Aluminum	0.102	7	Purple	17 (S) 29 (D)	100	12 (S) 19 (D)
ALG049	0.194	0.207	#6, 7W Aluminum Alloy	0.102	7	Blue	17 (S) 29 (D)	100	12 (S) 19 (D)
ALG056	0.220	0.228	#5, 6/1	0.121	7	White	17 (S) 29 (D)	100	16 (S) 26 (D)
ALG058	0.229	0.243	#4, 7W All Aluminum	0.121	8	Brown	19 (S) 31 (D)	100	20 (S) 32 (D)
ALG062	0.244	0.259	#4, 6/1, 7/1	0.121	8	Orange	19 (S) 31 (D)	100	20 (S) 32 (D)
ALG066	0.260	0.273	#3, 7W All Aluminum	0.121	8	Green	19 (S) 31 (D)	100	20 (S) 32 (D)
ALG069	0.274	0.289	#3, 7W Aluminum Alloy	0.121	9	Yellow	21 (S) 33 (D)	100	25 (S) 38 (D)
ALG073	0.290	0.308	#2, 7W All Aluminum	0.121	9	Purple	21 (S) 33 (D)	100	25 (S) 38 (D)
ALG078	0.309	0.326	#2, 6/1, 7/1	0.121	9	Red	21 (S) 33 (D)	100	25 (S) 38 (D)
ALG083	0.327	0.346	#1, 7W All Aluminum	0.121	10	Blue	21 (S) 33 (D)	100	28 (S) 42 (D)
ALG088	0.347	0.366	#1, 6/1	0.121	10	Green	23 (S) 35 (D)	100	30 (S) 44 (D)
ALG093	0.367	0.389	1/0, 7W All Aluminum	0.121	11	Black	23 (S) 35 (D)	100	32 (S) 46 (D)
ALG099	0.390	0.413	1/0, 6/1	0.121	11	Yellow	25 (S) 37 (D)	100	35 (S) 50 (D)
ALG105	0.414	0.436	3/0, 7W-19W Comp.	0.121	12	Brown	25 (S) 37 (D)	50	20 (S) 29 (D)
ALG111	0.437	0.463	2/0, 6/1, 7/1	0.121	13	Blue	27 (S) 39 (D)	50	23 (S) 32 (D)
ALG118	0.464	0.490	3/0, 7W-19W	0.121	13	Green	27 (S) 39 (D)	50	24 (S) 32 (D)
ALG124	0.491	0.521	3/0, 6/1	0.121	14	Orange	29 (S) 41 (D)	50	26 (S) 36 (D)
ALG132	0.522	0.551	4/0, 7W-19W	0.121	14	Black	29 (S) 41 (D)	50	26 (S) 36 (D)
ALG140	0.552	0.585	4/0 6/1	0.121	15	Red	31 (S) 43 (D)	50	30 (S) 40 (D)
ALG149	0.586	0.606	266.8 19W	0.146	14	Black	31 (S) 43 (D)	50	40 (S) 54 (D)
ALG154	0.607	0.630	266.8 18/1	0.146	14	White	33 (S) 45 (D)	50	42 (S) 57 (D)
ALG160	0.631	0.655	266.8 26/7	0.146	14	Yellow	33 (S) 45 (D)	50	42 (S) 57 (D)

continued



Ordering Information—Line Guards (cont.)

AFL NO.	CONDUCTOR DIAMETER RANGE		NOMINAL CABLE SIZE	ROD DIAMETER (INCHES)	QTY OF SET	COLOR CODE	ROD LENGTH (INCHES)	PACKAGING PER BOX	
	MIN. (INCHES)	MAX. (INCHES)						UNITS	WEIGHT (LBS)
ALG166	0.656	0.679	336.4 19W	0.146	15	Brown	35 (S) 47 (D)	50	48 (S) 62 (D)
ALG172	0.680	0.703	303.714	0.146	15	Blue	35 (S) 47 (D)	50	48 (S) 62 (D)
ALG179	0.704	0.740	336.4 26/7	0.146	16	Green	37 (S) 49 (D)	25	54 (S) 70 (D)
ALG188	0.741	0.792	397.5 18/1, 26/7, 24/7	0.146	17	Orange	39 (S) 51 (D)	25	60 (S) 77 (D)
ALG201	0.793	0.840	477 18/1, 19W, 37W	0.146	18	Purple	39 (S) 51 (D)	25	64 (S) 82 (D)
ALG213	0.841	0.898	477 24/7, 26/7, 30/7	0.146	19	Blue	41 (S) 53 (D)	25	36 (S) 45 (D)
ALG228	0.899	0.954	556.5 24/7, 26/7, 30/7, 19W, 37W	0.167	18	Green	43 (S) 55 (D)	25	46 (S) 58 (D)
ALG242	0.955	0.986	605 26/7, 636	0.182	17	White	45 (S) 57 (D)	25	54 (S) 68 (D)
ALG250	0.987	1.016	636 26/7, 666.6 24/7	0.182	18	Yellow	45 (S) 57 (D)	25	58 (S) 72 (D)
ALG258	1.017	1.064	715.5 26/7, 24/7, 795 37W, 61W	0.182	18	Brown	47 (S) 59 (D)	25	60 (S) 74 (D)
ALG270	1.065	1.098	874.5 37W, 61W	0.204	17	Green	49 (S) 61 (D)	15	44 (S) 25 (D)
ALG279	1.099	1.153	795 26/7, 30/19	0.250	15	Orange	49 (S) 61 (D)	15	58 (S) 72 (D)
ALG293	1.154	1.208	954 45/7, 54/7	0.250	15	Purple	51 (S) 63 (D)	15	62 (S) 75 (D)
ALG307	1.209	1.268	1192.5 61W	0.250	16	Black	53 (S) 65 (D)	15	68 (S) 82 (D)
ALG322	1.269	1.327	1192.5 45/7	0.250	17	White	53 (S) 65 (D)	10	48 (S) 58 (D)
ALG337	1.328	1.390	1351.5 61W, 1272 45/7, 54/19	0.250	17	Yellow	55 (S) 67 (D)	10	50 (S) 60 (D)
ALG353	1.391	1.440	1431 45/7	0.310	15	Brown	57 (S) 69 (D)	5	36 (S) 44 (D)
ALG366	1.441	1.508	1431 54/19	0.310	16	Blue	59 (S) 71 (D)	5	40 (S) 48 (D)
ALG383	1.509	1.578	1590 54/19, 1750 61W	0.310	16	Green	61 (S) 73 (D)	5	42 (S) 49 (D)
ALG401	1.579	1.651	1780 84/19	0.310	17	Orange	63 (S) 75 (D)	5	43 (S) 53 (D)
ALG419	1.652	1.728	2034 72/7	0.365	15	Purple	65 (S) 77 (D)	5	54 (S) 66 (D)
ALG439	1.729	1.890	2156 84/19	0.365	16	Red	67 (S) 79 (D)	5 (S) 3 (D)	55 (S) 45 (D)

End Finish of Rods:

1. Chamfered ends - standard on diameters up to 0.250".
2. Ball ends - standard on diameters greater than 0.250".
3. Tapered ends for EHV - designated by suffix 'EHV'.

continued



Line Guards Cross Reference

SINGLE ALUMINUM		
AFL NO.	DULMISON®	PLP®*
ALG046	ALG0460	MG-0122
ALG049	ALG0490	MG-0123
ALG056	ALG0560	MG-0125
ALG058	ALG0580	MG-00126
ALG062	ALG0620	MG-0127
ALG066	ALG0660	MG-0128
ALG069	ALG0690	MG-0129
ALG073	ALG0730	MG-0130
ALG078	ALG0780	MG-0131
ALG083	ALG0830	MG-0132
ALG088	ALG0880	MG-0133
ALG093	ALG0930	MG-0134
ALG099	ALG0990	MG-0135
ALG105	ALG1050	MG-0136
ALG111	ALG1110	MG-0137
ALG118	ALG1180	MG-0138
ALG124	ALG1240	MG-0139
ALG132	ALG1320	MG-0143
ALG140	ALG 1400	MG-0141
ALG149	ALG 1490	MG-0142
ALG154	ALG 1540	MG-0143
ALG160	ALG 1605	MG-0144
ALG166	ALG 1665	MG-0145
ALG172	ALG 1725	MG-0146
ALG179	ALG 1790	MG-0147
ALG188	ALG 1880	MG-0148
ALG201	ALG 2015	MG-0149
ALG213	ALG 2135	MG-0150
ALG228	ALG 2285	MG-0151
ALG242	ALG 2425	MG-0152
ALG250	ALG 2505	MG-0153
ALG258	ALG 2585	MG-0154
ALG270	ALG 2705	MG-0155
ALG279	ALG 2790	MG-0156
ALG293	ALG 2930	MG-0157

SINGLE ALUMINUM		
AFL NO.	DULMISON®	PLP®*
ALG307	ALG 3070	MG-0158
ALG322	ALG 3225	MG-0159
ALG337	ALG 3375	MG-0160
ALG353	ALG 3535	MG-0161
ALG366	ALG 3660	MG-0162
ALG383	ALG 3835	—
ALG401	ALG 4010	—
ALG419	ALG4195	—
ALG439	ALG 4390	—
DOUBLE ALUMINUM		
AFL NO.	DULMISON®	PLP®*
DALG046	DALG0460	MG-0305
DALG049	DALG0490	MG-0306
DALG056	DALG0560	MG-0308
DALG058	DALG0580	MG-0309
DALG062	DALG0620	MG-0310
DALG066	DALG0660	MG-0311
DALG069	DALG0690	MG-0312
DALG073	DALG0730	MG-0313
DALG078	DALG0780	MG-0314
DALG083	DALG0830	MG-0315
DALG088	DALG0880	MG-0316
DALG093	DALG0930	MG-0317
DALG099	DALG0990	MG-0318
DALG105	DALG1050	MG-0319
DALG111	DALG1110	MG-0320
DALG118	DALG1180	MG-0321
DALG124	DALG1240	MG-0322
DALG132	DALG1320	MG-0324
DALG140	DALG 1400	MG-0324
DALG149	DALG 1490	MG-0325
DALG154	DALG1540	MG-0326
DALG160	DALG 1605	MG-0327
DALG166	DALG 1665	MG-0328
DALG172	DALG 1725	MG-0329

DOUBLE ALUMINUM		
AFL NO.	DULMISON®	PLP®*
DALG179	DALG 1790	MG-0330
DALG188	DALG 1880	MG-0331
DALG201	DALG 2015	MG-0332
DALG213	DALG 2135	MG-0333
DALG228	DALG 2285	MG-0334
DALG242	DALG 2425	MG-0335
DALG250	DALG 2505	MG-0336
DALG258	DALG 2585	MG-0337
DALG270	DALG 2705	MG-0338
DALG279	DALG 2790	MG-0339
DALG293	DALG 2930	MG-0340
DALG307	DALG 3070	MG-0341
DALG322	DALG 3225	MG-0342
DALG337	DALG 3375	MG-0343
DALG353	DALG 3535	MG-0344
DALG366	DALG 3660	MG-0345
DALG383	DALG 3835	—
DALG401	DALG 4010	—
DALG419	DALG4195	—
DALG439	DALG 4390	—

*PLP is a trademark of Preformed Line Products.

Distribution Dead End

Aluminum Covered Steel Materials

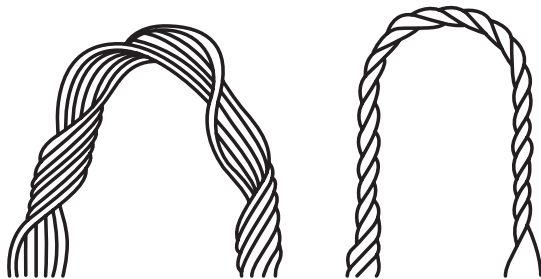
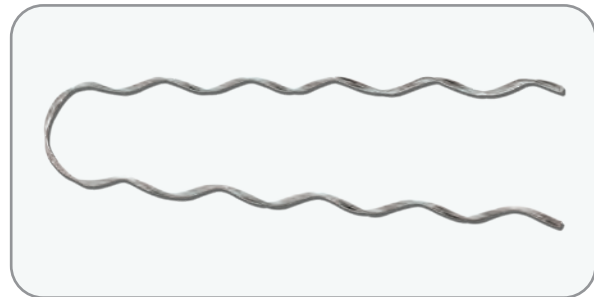
MATERIALS

Dead End - Aluminum covered steel and galvanized steel.

Color code and crossover marks - Identifies proper conductor size and indicates application starting point.

Identification tag - Shows catalog number, conductor diameter range (when applicable) and nominal conductor size.

Loop type - Open helix for smaller sizes and cabled for larger sizes.



Open Helix Loop

Cabled Loop

General Recommendations

Distribution Grip Dead Ends are recommended as a replacement for Bare Looped Dead Ends because of their stronger loops and higher holding strengths on ACSR cable. Aluminum covered steel Grips are used on bare aluminum based conductors and galvanized steel Grips are used for plastic jacketed conductors. Coated Dead Ends are also recommended for jacketed conductors. Distribution Grip Dead Ends are specifically designed for single pole distribution construction.

Rated Holding Strength

The mechanical strengths of Distribution Grip Dead Ends meet the requirements of primaries, secondaries, and substation feeders.

Tapping

Tapping onto the applied legs of the Distribution Grip Dead Ends is not recommended. Taps should be located either six inches from the gritted legs on the conductor or on the other end of the conductor passing through the Dead End.

continued



Distribution Dead End

Aluminum Covered Steel Materials

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted ACSR

Open Helix Loop Standard/Right Hand Lay Standard Ordering Information

AFL NO.	ACSR	ALL ALUMINUM	ALUMINUM ALLOY	COMPACTED ACSR	AWAC 6/1	UNITS PER CARTON	WT. PER CARTON POUNDS	LENGTH INCHES	COLOR CODE
AWDG 050	#6, 6/1	#6, 7W	#6, 7W	#6, 6/1		100	14	16	Blue
AWDG 063	#4, 6/1 #4, 7/1	#4, 7W	#4, 7W	#4, 6/1	#4	100	20	17	Orange
AWDG 080	#2, 6/1 #2, 7/1	#2, 7W	#2, 7W	#2, 6/1	#2	100	33	24	Red
AWDG 090	#1, 6/1	#1, 7W	#1, 7W	#1, 6/1	#1	100	44	26	Green
AWDG 099	1/0, 6/1	1/0, 7W	1/0, 7W	1/0, 6/1	1/0	50	31	26	Yellow
AWDG 113	2/0, 6/1	2/0, 7W	2/0, 7W	2/0, 6/1	2/0	50	31	28	Blue
AWDG 127	3/0, 6/1	3/0, 7W	3/0, 7W	3/0, 6/1	3/0	50	43	32	Orange
AWDG 143	4/0, 6/1	4/0, 7W	4/0, 7W	4/0, 6/1	4/0	25	30	34	Red

Note: The following Dead Ends are designed only for the specific conductors listed.

Cabled Loop Standard/Right Hand Lay Standard Ordering Information

AFL NO.	ACSR	ALL ALUMINUM	ALUMINUM ALLOY	COMPACTED ACSR	UNITS PER CARTON	WT. PER CARTON POUNDS	LENGTH INCHES	COLOR CODE
AWDG 147	266.8, 18/1	266.8, 19W	266.8, 19W	336.4, 18/1	25	3935		Black
AWDG 166	336.4, 18/1	336.4, 19W	336.4, 19W	397.5, 18/1	25	5339		Green
AWDG 188	397.5, 18/1 477, 36/1 477, 18/1	450, 19W 477, 19W 500, 37W	397.5, 19W	477, 18/1 556, 19W	10	35	50	Orange
AWDG 213	556.5, 36/1 605, 36/1 636, 18/1	556.5, 7W 636, 37W 650, 61W	477, 19W 556.5, 19W	636, 18/1 795, 19W	10	45	55	Blue
AWDG 241	666.6, 36/1 715.5, 36/1 795, 36/1	715.5, 37W 750, 61W 795, 61W	636, 37W	874.5, 37W 954, 37W	5	64	62	Brown
AWDG 273	874.5, 36/1 954, 36/1 1033.5, 36/1	874.5, 61W 954, 61W 1033.5, 61W	795, 37W		5	46	70	Orange

Notes: 1. The rated holding strengths of the above Distribution End Grip Dead Ends are between 60% and 100% of the conductors RBS depending on the conductor used.

2. Consult AFL for sizes and stranding or holding strengths not listed.

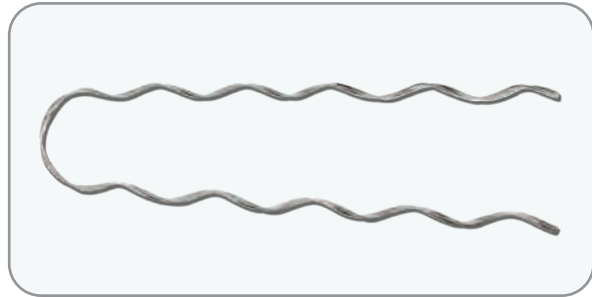
Service Dead End

MATERIALS

Dead End - Manufactured of aluminum covered steel.

Color code and crossover marks - Identifies conductor size and indicates application starting point.

Identification tag - Shows catalog number, conductor diameter range, and nominal conductor size



General Recommendations

Service Dead Ends are used to make service drops on bare neutral messengers of self supporting cable. They are designed for minimum length, maximum economy and neatness of appearance. Service Dead Ends should not be reused after original installation. They are designed to be applied to spool insulators or wire holders having a smooth contour with diameters no less than 1 inch and no greater than 3 inches.

Rated Holding Strength

The mechanical strength of Service Dead Ends meets or exceeds NESC Grade "N", rule 263-E, Supply Services, for spans not exceeding 150 feet. For service drops exceeding 150 feet. Distribution Dead Ends are recommended. For direct application onto plastic jacketed conductors Coated Dead Ends are recommended.

The published Rated Holding Strengths listed on page 5 are actual test results on unweathered conductor and are conservative when compared to typical values.

Tapping

Tapping over the applied legs of the Service Dead End is not recommended. Taps should be located either six inches from the gritted legs or on the neutral tail continued past the crossover point.

Vibration

When vibration is suspected or encountered, Distribution Dead Ends should be used since the design of Service Dead Ends are not intended for use under vibration conditions.

continued



Service Dead End Aluminized Steel

Selection Information

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
SG 043	.169 - .198	#6, 6/1 #6, 7W All Aluminum #6, 7W Aluminum Alloy	300	24	11	Blue
SG 050	.199-.224	#5, 6/1 #4, Solid #5, 7W Aluminum Alloy	300	27	12	White
SG 057	.225 - .257	#4, 6/1, 7/1 #4, 7W All Aluminum #4, 7W Aluminum Alloy	300	29	13	Orange
SG 065	.258-.289	#3, 6/1 #3, 7W All Aluminum #2, Solid #3, 7W Aluminum Alloy	200	27	14	Black
SG 073	.290-.325	#2, 6/1, 7/1 #2, 7W All Aluminum #2, 7W Aluminum Alloy	200	28	15	Red
SG 083	.326-.360	#1, 6/1 #1.7W All Aluminum #1.7W Aluminum Alloy	200	31	17	Green
SG 091	.361 - .400	1/0,6/1 1/0, 7W All Aluminum 1/0, 7W Aluminum Alloy	100	28	19	Yellow
SG 102	.401 - .450	2/0,6/1 2/0, 7W All Aluminum 2/0, 7W Aluminum Alloy	100	31	21	Blue
SG 114	.451 - .510	3/0,6/1 3/0, 7W All Aluminum 3/0, 7W Aluminum Alloy	100	33	23	Orange
SG 130	.511-.580	4/0,6/1,18/1 4/0, 7W All Aluminum 4/0, 7W Aluminum Alloy	100	37	26	Red

Right-Hand Lay Standard

continued
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Service Dead End Aluminized Steel

Rated Holding Strength for Aluminum Based Conductor

AFL NO.	ACSR	ALL ALUMINUM	ALUMINUM ALLOY
SG 043	#6, 6/1 585 lbs. (50%)	#6, 7W 488 lbs. (88%) #5, Solid 549 lbs. (88%)	#6, 7W 840 lbs. (80%)
SG 050	#5, 6/1 730 lbs. (50%)	#4, Solid 772 lbs. (88%)	#5, 7W 1,080 lbs. (50%)
SG 057	#4, 6/1 915 lbs. (50%) #4, 7/1 1,144 lbs. (50%)	#4, 7W 770 lbs. (88%) #3 Solid 854 lbs. (88%)	#4, 7W 1,336 lbs. (80%)
SG 065	#3, 6/1 1,125 lbs. (50%)	#3, 7W 900 lbs. (88%) #2 Solid 1,078 lbs. (88%)	#3, 7W 1,720 lbs. (80%)
SG 073	#2, 6/1 1,395 lbs. (50%)	#2, 7W 1,175 lbs. (88%)	#2, 7W 2,124 lbs. (80%)
SG 083	#1, 6/1 1,740 lbs. (50%)	#1, 6/1 1,430 lbs. (88%)	#1, 7W 2,736 lbs. (80%)
SG 091	1/0, 6/1 2,140 lbs. (50%) 1/0, 5/1 1,698 lbs. (50%)	1/0, 7W 1,734 lbs. (88%)	1/0, 7W 3,384 lbs. (80%)
SG 102	2/0, 6/1 2,673 lbs. (50%)	2/0, 7W 2,182 lbs. (88%)	2/0, 7W 4,044 lbs. (80%)
SG 114	3/0, 6/1 3,338 lbs. (50%)	3/0, 7W 2,644 lbs. (88%)	3/0, 7W 5,092 lbs. (80%)
SG 130	4/0, 6/1 4,210 lbs. (50%) 4/0, 18/1 2,523 lbs. (50%)	4/0, 7W 3,335 lbs. (88%)	4/0, 7W 6,420 lbs. (80%)

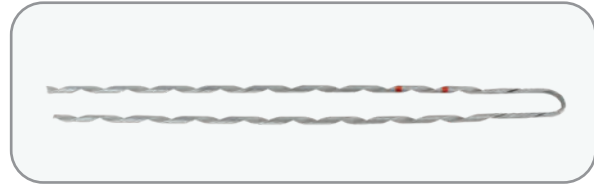
Guy Dead End

MATERIALS

Dead End - Manufactured of aluminum covered steel.

Color code and crossover marks - Identifies conductor size and indicates application starting point.

Identification tag - Shows catalog number, conductor diameter range, and nominal conductor size



General Recommendations

Guy Dead Ends are designed for guying of poles in the construction of power and communication lines. Guy dead ends are designed for use with standard guy strands of 1" diameter or less. Manufactured from similar wire, the dead ends can be applied to galvanized steel or Alumoweld® guy wire. Unless otherwise specified, all dead ends and guy strand are left hand lay. Once in place, under normal conditions, guy dead ends hold their grip regardless of the condition of the conductor to which they are attached, relaxed or in tension.

Offset Tips

To simplify installation, AFL Conductor Accessories' guy dead ends are designed with offset ends. This feature is important in that toward the end of the installation of the dead end, the tips are easier to handle and wrap around the cable. No additional modification is required.

Reusable after Initial Installation

Guy dead ends may be removed and reapplied twice after initial installation to retension guy strands. Should it become necessary to remove a guy dead end after it has been installed for a period of three months, it should be replaced with a new dead end.

Color Coded

For ease of identification to guy strand size, the dead ends are color coded on both legs of the product.

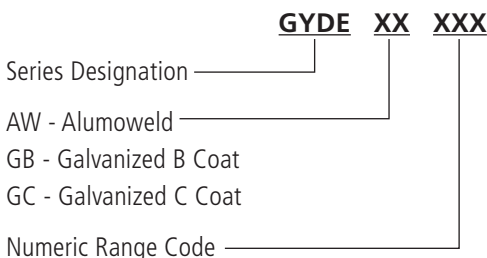
Cabled Loop

Guy dead ends are manufactured with a cabled loop for all strand sizes.

Customized Guy Dead Ends

For guy dead ends with special requirements, such as longer lengths or non-standard lay direction contact AFL at (800) 866-7385.

Selection Information



continued
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Guy Dead Ends

AFL NO.	DIA. RANGE INCHES	NOMINAL GUY SIZE	UNITS/CARTON	WT./CARTON POUNDS	APPLIED LENGTH (INCHES)	COLOR CODE
Alumoweld®						
GYDEAW044	.174-.181	3/16, 3#12	100	21	18	Orange
GYDEAW055	.219-.230	4M, 3#10	50	20	21	Green
GYDEAW060	.237-.247	1/4, 6M, 3#9	50	20	24	Yellow
GYDEAW068	.270-.280	8M,3#8	50	22	24	Blue
GYDEAW077	.303-.313	5/16, 10M, 3#7, 3#9	50	29	26	Black
GYDEAW082	.325-.336	11.5M	50	30	26	Green
GYDEAW087	.343-.355	12.5M, 3#6, 7#9	50	41	29	Yellow
GYDEAW090	.356-.364	14M	50	53	31	Blue
GYDEAW096	.380-.394	3/8, 16M, 3#5, 7#8	50	55	32	Orange
GYDEAW104	.410-.426	18M	25	37	34	Black
GYDEAW108	.427-.442	7/16, 7#7	25	50	36	Green
GYDEAW112	.443-.459	20M	25	55	37	Yellow
GYDEAW120	.475-.494	1/2, 7#6	25	60	42	Blue
GYDEAW125	.495-.515	19#10	25	62	44	Green
GYDEAW131	.516-.536	25M	20	66	47	Red
GYDEAW136	.537-.555	7#5	20	67	48	Yellow
GYDEAW141	.556-.570	9/16	15	68	49	Blue
GYDEAW145	.571-.591	19#9	20	68	50	Orange
GYDEAW150	.592-.612	–	15	50	50	Green
GYDEAW155	.613-.635	5/8	10	49	54	Yellow
GYDEAW161	.636-.661	19#8	10	50	56	Black
GYDEAW168	.662-.686	19 X .1363	10	66	59	Blue
GYDEAW174	.687-.712	–	10	68	61	Red
GYDEAW181	.713-.741	19#7, 37#10	10	70	63	Black
GYDEAW188	.742-.772	3/4, 19 X .1499	5	41	71	Yellow
GYDEAW201	.773-.800	–	5	50	80	Blue
GYDEAW203	.801-.827	37#9, 19#6, 19 X .1660	5	69	84	Green
GYDEAW215	.849-.866	19 X .1730, 37 X .121	5	70	87	Black
GYDEAW228	.880-.898	7/8, 37#8	5	76	91	Yellow
GYDEAW231	.910-.934	19#5, 19 X .1868	5	78	93	Blue
GYDEAW249	.970-.990	37 X .1401	4	52	95	Red
GYDEAW256	.991-1.010	1, 37#7	4	85	108	Green
GYDEAW279	1.050-1.120	37 X .1571	3	83	117	Black
GYDEAW288	1.130-1.170	37#6	3	86	120	Yellow
Galvanized 'B' Coat						
GYDEGB047	–	3/16"	100	20	20	Red
GYDEGB055	–	7/32"	100	25	22	Green
GYDEGB061	–	1/4"	50	17	25	Yellow
GYDEGB071	–	9/32"	50	27	28	Blue
GYDEGB079	–	5/16"	50	35	30	Black
GYDEGB091	–	3/8"	50	52	35	Orange
GYDEGB110	–	7/16"	50	40	38	Green
Galvanized 'C' Coat						
GYDEGC047	–	3/16"	100	20	20	Red
GYDEGC055	–	7/32"	100	25	22	Green
GYDEGC061	–	1/4"	50	17	25	Yellow
GYDEGC071	–	9/32"	50	27	28	Blue
GYDEGC079	–	5/16"	50	35	30	Black
GYDEGC091	–	3/8"	50	52	35	Orange
GYDEGC110	–	7/16"	50	40	38	Green
GYDEGC125	–	1/2"	25	63	45	Blue
GYDEGC143	–	9/16"	10	40	55	Yellow
GYDEGC157	–	5/8"	10	50	64	Black
GYDEGC225	–	7/8"	5	67	90	Green
GYDEGC254	–	1"	3	75	100	Blue

Formed Wire

Longspan Tie

MATERIALS

Tie - Aluminum alloy for aluminum based conductor.

Center section - Specially formulated elastomer.

Identification tag - Identifies catalog number, neck size, nominal conductor size and conductor range.

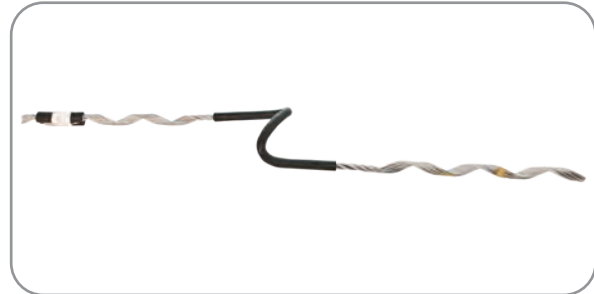
Color code - Identifies proper conductor range.

Insulator identification mark (identifies insulator head size)

Black -C Neck

Yellow -F Neck

Green -J Neck



General Recommendations

To insure proper fit and service life, it is recommended that only insulators corresponding to C Neck, F Neck, or J Neck be used as specified by ANSI C29.5 The top groove radius, neck size, and groove height relationship corresponding to each neck size are shown at the beginning of each listing.

Longspan Ties are recommended as an improvement over Armor Rods secured with hand tie wire. For areas subject to both wind sway and vibration, Longspan Ties provide superior abrasion protection and are superior to a well made hand tie - Armor Rod combination in regard to conductor fatigue.

Longspan Tie Pad

The pad component is recommended for bare conductor because it prevents contact with the insulator and compensates for insulator misalignment. With the pad, Longspan Ties not only replace armoring products, but provide superior protection by eliminating abrasion rather than sacrificing outside surfaces to abrasion.

Maximum Size

Longspan Ties are available for conductors up to 1. 240" O. D. depending on the insulators top groove radius.

Line Angle

On vertically mounted insulators, Longspan Ties are recommended for running line angles of up to 10 degrees. Larger angles can be turned when Longspan Ties are used with Side Ties or with pins and brackets having various degrees of cant.

Unbalanced Loading

Under unbalanced load conditions, the Longspan Tie has the resiliency to permit some longitudinal displacement of the conductor over the insulator without loosening the tie or damaging the conductor.

Radio Interference

The RIV characteristics of Longspan Ties are superior to those of well made hand ties when originally installed. During service-life, the pre-contoured helix assures consistent fit which has better RIV characteristics than loosened tie-wire.

Tapping

Tapping over applied legs of the Longspan Tie is not recommended. Taps should be located at least 6 inches from the end of the legs.

Double Supports

At double crossarms, double Support Ties can be used to cross major highways and railroads, or turn angles where it is practical to hold the conductor in the top groove during installation.

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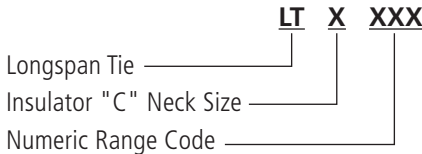


Longspan Tie

C Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

Selection Information



2-1/4" Neck Diameter ANSI Class 55-2 and 55-3 / Groove Height Relationship 9/16" Min. 7/8" Max.
 Insulator Identification Mark: Black

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
LTC 063	.248-.259	#4, 6/1-7/1 #4, 7W, Aluminum Alloy	100	21	19	Orange
LTC 066	.260-.269	#4, AWAC, 5/2 #3, 7W, All-Aluminum #2, 7W Compacted	100	21	19	Green
LTC 068	.270-.280	#3, 7W, Aluminum Alloy #3, AWAC, 6/1	100	21	19	Yellow
LTC 071	.281-.291	#4, AWAC, 4/3 #3, 6/1 #2, 6/1, Compacted	100	24	20.5	White
LTC 074	.292-.303	#3, AWAC, 5/2 #2, 7W, All Aluminum #2, 7/1 Compacted	100	24	20.5	Purple
LTC 077	.304-.314	#4, AWAC, 3/4 #2, AWAC, 6/1	100	24	21.5	Brown
LTC 080	.315-.327	#2, 6/1-7/1 #2, 7W, Aluminum Alloy	100	24	21.5	Red
LTC 083	.328-.340	#2, AWAC, 5/2 #1, 7W, All Aluminum 1/0, 7W COMP	100	25	22.5	Blue
LTC 086	.341-.353	#3, AWAC, 3/4 #1, 7W, Aluminum Alloy	100	25	22.5	Orange
LTC 090	.354-.367	#2, AWAC, 4/3 #1, 6/1 1/0, 6/1, COMP,	100	26	23.5	Green
LTC 093	.368-.381	1/0, 7W, All Aluminum 2/0, 7W, Compacted	100	26	20	Black
LTC 097	.382-.394	#2, AWAC, 3/4 1/0, AWAC, 6/1	100	27	21	White
LTC 100	.395-.411	1/0, 6/1 1/0, 7W, Aluminum Alloy	100	27	21	Yellow
LTC 104	.412-.437	2/0, 7W-19W, All Aluminum 3/0, 7W-19W, COMP	100	27	22	Brown
LTC 111	.438-.463	2/0, 6/1-7/1 2/0, 7W, Aluminum Alloy	100	28	23	Blue
LTC 118	.464-.492	3/0, 7W-19W, All Aluminum 4/0, 7W-19W, COMP	50	18	24.5	Green

continued



Formed Wire



Longspan Tie C Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

Selection Information

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
LTC 125	.493-.522	3/0, 6/1 3/0, 7W, Aluminum Alloy 4/0, 7W, All Aluminum	50	18	24.5	Orange
LTC 133	.523-.554	3/0, AWAC, 5/2 4/0, 19W, All Aluminum 266.8, 7W-19W, COMP	50	18	26.5	Black
LTC 141	.555-.594	4/0, 6/1 4/0, 7W, Aluminum Alloy 266.8, 7W-19W, All Alum	50	19	27.5	Red
LTC 151	.595-.630	266.8, 18/1 300, 19W-37W, All Aluminum	50	21	28.5	Purple
LTC 160	.631-.664	266.8, 26/7 266.8, 19W, Aluminum Alloy	50	21	28.5	Yellow
LTC 169	.665-.705	336.4, 18/1-36/1 336.4, 19W, All Aluminum 350, 19W-37W, All Aluminum	50	21	29.5	Brown
LTC 179	.706-.747	336.4, 26/7-30/7 397.5, 19W, All Aluminum	50	22	30.5	Green
LTC 190	.748-.795	397.5, 24/7-26/7 397.5, 19W, Aluminum Alloy 477, 19W-37W, All Aluminum	50	18	33	Orange
LTC 202	.796-.846	477, 18/1, 36/1 500, 19W, All Aluminum	50	20	37	Purple
LTC 215	.847-.900	556.5, 18/1, 36/1 556.5, 19W, 37W, All Aluminum	50	21	39	Blue
LTC 229	.901-.958	636, 18/1, 36/1 636, 37W, All Aluminum 556.5M, 19W, Aluminum Alloy	50	21	41	Green
LTC 243	.959-1.018	666.6, 24/7, 54/7 750, 37W, All Aluminum 636, 37W, Aluminum Alloy	50	22	43	White
LTC 259	1.019-1.083	795, 36/1, 45/7 795, 37W, All Aluminum	50	23	45	Brown
LTC 275	1.084-1.151	954, 36/1 954, 37W, All Aluminum 795, 37W, Aluminum Alloy	50	24	47	Orange
LTC 292	1.152-1.223	954, 45/7, 54/7 1033.5, 37W, All Aluminum 954, 37W, Aluminum Alloy	50	25	49	Purple
LTC 311	1.224-1.240		50	27	59	Black

Right-Hand Lay Standard

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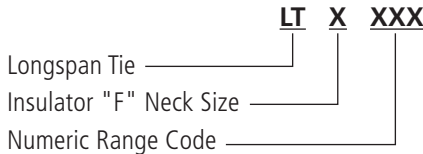


Longspan Tie

F Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

Selection Information



2-7/8" Neck Diameter ANSI Class 55-4 and 55-5 Pin Type/57-1. 57-2 and 57-3 Post Type
 Groove Height Relationship 9/16" Min. 7/8" Max.

Insulator Identification Mark: Yellow

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
LTF 063	.248-.259	#4, 6/1-7/1 #4, 7W Aluminum Alloy	100	24	20.75	Orange
LTF 066	.260-.269	#4, AWAC, 5/2 #3, 7W, All- Aluminum #2, 7W Compacted	100	24	20.75	Green
LTF 068	.270-.280	#3, 7W, Aluminum Alloy #3, AWAC, 6/1	100	24	20.75	Yellow
LTF 071	.281-.291	#4, AWAC, 4/3 #3, 6/1 #2, 6/1, Compacted	100	26	21.75	White
LTF 074	.292-.303	#3, AWAC, 5/2 #3, 7W, All Aluminum #2, 7/1 Compacted	100	26	21.75	Purple
LTF 077	.304-.314	#4, AWAC, 3/4 #2, AWAC, 6/1	100	27	22.75	Brown
LTF 080	.315-.327	#2, 6/1-7/1 #2, 7W, Aluminum Alloy	100	27	22.75	Red
LTF 083	.328-.340	#2, AWAC, 5/2 #1, 7W, All Aluminum 1/0, 7W COMP	100	27	23.75	Blue
LTF 086	.341-.353	#3, AWAC, 3/4 #1, 7W, Aluminum Alloy	100	27	23.75	Orange
LTF 090	.354-.367	#2, AWAC, 4/3 #1, 6/1 1/0, 6/1, COMP,	100	28	24.75	Green
LTF 093	.368-.381	1/0, 7W, All Aluminum 2/0, 7W, Compacted	100	29	21.5	Black
LTF 097	.382-.394	#2, AWAC, 3/4 1/0, AWAC, 6/1	100	29	22.5	White
LTF 100	.395-.411	1/0, 6/1 1/0, 7W, Aluminum Alloy	100	29	22.5	Yellow
LTF 104	.412-.437	2/0, 7W-19W, All Aluminum 3/0, 7W-19W, COMP	100	30	23.5	Brown
LTF 111	.438-.463	2/0, 6/1-7/1 2/0, 7W, Aluminum Alloy	100	31	24.5	Blue
LTF 118	.464-.492	3/0, 7W-19W, All Aluminum 4/0, 7W-19W, COMP	50	20	25.5	Green

continued



Formed Wire



Longspan Tie
F Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

Selection Information

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
LTF 125	.493-.522	3/0, 6/1 3/0, 7W, Aluminum Alloy 4/0, 7W, All Aluminum	50	20	25.5	Orange
LTF 133	.523-.554	3/0, AWAC. 5/2 4/0, 19W, All Aluminum 4/0, 18/1 266.8, 7W-19W, COMP	50	20	25.5	Black
LTF 141	.555-.594	4/0, 6/1 4/0, 7W, Aluminum Alloy 266.8, 7W- 19W, All Alum	50	20	26.5	Red
LTF 151	.595-.630	266.8, 18/1 300, 19W-37W, All Aluminum	50	22	28	Purple
LTF 160	.631-.664	266.8, 26/7 266.8, 19W, Aluminum Alloy	50	22	29	Yellow
LTF 169	.665-.705	336.4, 18/1-36/1 336.4, 19W, All Aluminum 350, 19W-37W, All Aluminum	50	22	29	Brown
LTF 179	.706-.747	336.4, 26/7-30/7 397.5, 19W, All Aluminum	50	23	30	Green
LTF 190	.748-.795	397.5, 24/7-26/7 397.5, 19W, Aluminum Alloy 477, 19W-37W, All Aluminum	50	24	32.5	Orange
LTF 202	.796-.846	477, 18/1, 36/1 500, 19W, All Aluminum	50	20	37	Purple
LTF 215	.847-.900	556.5, 18/1, 36/1 556.5, 19W, 37W, All Aluminum	50	21	39	Blue
LTF 229	.901 -.958	636, 18/1, 36/1 636, 37W, All Aluminum 556.5M, 19W, Aluminum Alloy	50	22	41	Green
LTF 243	.959-1.018	666.6, 24/7, 54/7 750, 37W, All Aluminum 636, 37W, Aluminum Alloy	50	22	43	White
LTF 259	1.019-1.083	795, 36/1.45/7 795, 37W, All Aluminum	50	23	45	Brown
LTF 275	1.084-1.151	954, 36/1 954, 37W, All Aluminum 795, 37W, Aluminum Alloy	50	24	47	Orange
LTF 292	1.152-1.223	954, 45/7, 54/7 1033.5, 37W, All Aluminum 954, 37W, Aluminum Alloy	50	25	49	Purple
LTF 311	1.224- 1.240		50	29	59	Black

Right-Hand Lay Standard

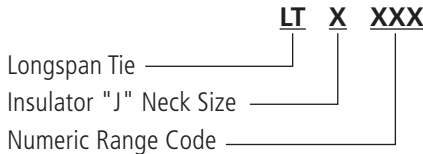
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Longspan Tie

J Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

Selection Information



3-1/2" Neck Diameter ANSI Class 55-6 and 65-7 Single Skirt Pin / 56-1 Double Skirt Pin Type Groove Height Relationship 1/4" Min. 5/8" Max.

Insulator Identification Mark: Green

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
LTJ 063	.248-.259	#4,6/1-7/1 #4, 7W Aluminum Alloy	100	29	21	Orange
LTJ 066	.260-.269	#4, AWAC, 5/2 #3, 7W, All- Aluminum #2, 7W Compacted	100	29	21	Green
LTJ 068	.270-.280	#3, 7W, Aluminum Alloy #3, AWAC, 6/1	100	29	21	Yellow
LTJ 071	.281-.291	#4, AWAC, 4/3 #3, 6/1 #2, 6/1, Compacted	100	32	21	White
LTJ 074	.292-.303	#3, AWAC, 5/2 #2, 7W, All Aluminum #2, 7/1 Compacted	100	32	22	Purple
LTJ 077	.304-.314	#4, AWAC, 3/4 #2, AWAC, 6/1	100	33	22	Brown
LTJ 080	.315-.327	#2, 6/1-7/1 #2, 7W, Aluminum Alloy	100	33	23	Red
LTJ 083	.328-.340	#2, AWAC, 5/2 #1, 7W, All Aluminum 1/0, 7W COMP	100	33	23	Blue
LTJ 086	.341-.353	#3, AWAC, 3/4 #1, 7W, Aluminum Alloy	100	33	24	Orange
LTJ 090	.354-.367	#2, AWAC, 4/3 #1,6/1 1/0, 6/1, COMP,	100	33	24	Green
LTJ 093	.368-.381	1/0, 7W, All Aluminum 2/0, 7W, Compacted	100	33	25	Black
LTJ 097	.382-.394	#2, AWAC, 3/4 1/0, AWAC, 6/1	100	34	23	White
LTJ 100	.395-.411	1/0, 6/1 1/0, 7W, Aluminum Alloy	100	34	24	Yellow
LTJ 104	.412-.437	2/0, 7W-19W, All Aluminum 3/0, 7W-19W, COMP	100	35	25	Brown
LTJ 111	.438-.463	2/0, 6/1-7/1 2/0, 7W, Aluminum Alloy	100	35	26	Blue
LTJ 118	.464-.492	3/0, 7W-19W, All Aluminum 4/0, 7W-19W, COMP	50	21	28	Green

continued





Longspan Tie

J Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

Selection Information

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
L TJ 125	.493-.522	3/0, 6/1 3/0, 7W, Aluminum Alloy 4/0, 7W, All Aluminum	50	21	28	Orange
L TJ 133	.523-.554	3/0, AWAC, 5/2 4/0, 19W, All Aluminum 4/0, 18/1 266.8, 7W-19W, COMP	50	21	28	Black
L TJ 141	.555-.594	4/0, 6/1 4/0, 7W, Aluminum Alloy 266.8, 7W- 19W, All Alum	50	22	29	Red
L TJ 151	.595-.630	266.8, 18/1 300, 19W-37W, All Aluminum	50	24	30	Purple
L TJ 160	.631-.664	266.8, 26/7 266.8, 19W, Aluminum Alloy	50	24	31	Yellow
L TJ 169	.665-.705	336.4, 18/1-36/1 336.4, 19W, All Aluminum 350, 19W-37W, All Aluminum	50	24	31	Brown
L TJ 179	.706-.747	336.4, 26/7-30/7 397.5, 19W, All Aluminum	50	25	32	Green
L TJ 190	.748-.795	397.5, 24/7-26/7 397.5, 19W, Aluminum Alloy 477, 19W-37W, All Aluminum	50	26	34	Orange
L TJ 202	.796-.846	477, 18/1, 36/1 500, 19W, All Aluminum	50	21	39.5	Purple
L TJ 215	.847-.900	556.5, 18/1, 36/1 556.5, 19W, 37W, All Aluminum	50	22	41	Blue
L TJ 229	.901-.958	636, 18/1, 36/1 636, 37W, All Aluminum 556.5M, 19W, Aluminum Alloy	50	23	43	Green
L TJ 243	.959-1.018	666.6, 24/7, 54/7 750, 37W, All Aluminum 636, 37W, Aluminum Alloy	50	24	45	White
L TJ 259	1.019-1.083	795, 36/1.45/7 795, 37W, All Aluminum	50	24	47	Brown
L TJ 275	1.084-1.151	954, 36/1 954, 37W, All Aluminum 795, 37W, Aluminum Alloy	50	25	49	Orange
L TJ 292	1.152-1.223	954, 45/7, 54/7 1033.5, 37W, All Aluminum 954, 37W, Aluminum Alloy	50	26	51	Purple
L TJ 311	1.224-1.240		50	30	59.5	Black

Right-Hand Lay Standard

Distribution Tie

MATERIALS

Tie - Aluminum covered steel.

Pad - An elastomer tube is supplied with each Distribution Tie used on bare conductor, and they are identified by catalog number suffix P.

Distribution Ties are supplied without pads for plastic jacketed conductor identified by catalog number suffix T.

Identification tag - Identifies catalog number, neck size, nominal conductor range, and conductor diameter range.

Color code - There are two color codes on Distribution Ties. The inside color code identifies the proper conductor size and the outside color code identifies the insulator neck size as shown below:

Insulator identification mark (identifies insulator head size)

Black - C Neck

Yellow - F Neck

General Neck

General Recommendations

To insure proper fit and service life, it is recommended that only insulators corresponding to C Neck, F Neck, or J Neck be used. The neck diameters and groove height dimensions appear in ANSI Standard for low and medium voltage pin type insulators and also at the beginning of each listing.

Distribution Ties are recommended as an improvement over Armor Rods secured with hand tie wire and clamp top insulators. When installed with a pad on bare conductor, they provide superior protection against abrasion and all types of conductor motion. The pad is a resilient cushion at the point of contact between conductor and insulator.

Distribution Ties without pads are intended for plastic jacketed conductor but may be used to replace hand tie wire in areas where abrasion damage has not been experienced.

Maximum Size

Conductor sizes up to 1.240" O.D. can be accommodated depending on the insulator top groove radius.

Line Angle

On vertically mounted insulators, Distribution Ties are recommended for running line angles of up to 10 degrees. Larger angles can be turned when Distribution Ties are used with Side Ties or with pins and brackets having various degrees of cant.

Unbalanced Loading

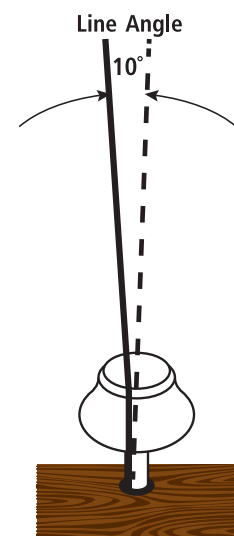
Under unbalanced load conditions, the Distribution Tie has the resiliency to permit some longitudinal displacement of the conductor over the insulator without loosening the tie or damaging the conductor.

Radio Interference

The RIV characteristics of Distribution Ties are superior to those of well made hand ties when originally installed. During service life, the pre-contoured helix assures consistent fit which has better RIV characteristics than loosened tie wire.

Tapping

Tapping over applied legs of the Distribution Tie is not recommended. Taps should be located at least 6 inches from the end of the legs.



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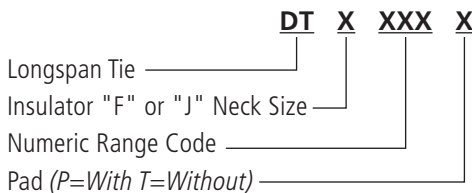


Distribution Tie

C Neck with Pad

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

Selection Information



2-1/4" Neck Diameter ANSI Class 55-2 and 55-3 / Groove Height Relationship 9/16" Min. 7/8" Max.

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
DTC 048P	.190-.215	#6, 6/1 #4, 7W, Compacted	100	17	24	Blue
DTC 055P	.216-.244	#4, 7W, All Aluminum #4, 6/1, 7/1 Compacted	100	18	25	Brown
DTC 062P	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	100	18	26	Orange
DTC 070P	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	100	18	26	Purple
DTC 080P	.316-.357	#2, 6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	100	19	28	Red
DTC 091P	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	100	20	30	Yellow
DTC 103P	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	17	25	Blue
DTC 117P	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	50	17	25	Orange
DTC 132P	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	50	18	28	Red
DTC 149P	.589-.665	266.8, 37W, All Aluminum 266.8, 18/1	50	18	30	Purple
DTC 169P	.666-.755	336.4, 19W, All Aluminum 336.4, 18/1 397.5, 19W, All Aluminum 400, 19W, 37W, All Aluminum	50	19	31	Brown
DTC 192P	.756-.855	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	50	19	32	Red
DTC 217P	.856-.968	556.5, 24/7 636, 18/1 700, 37W, 61W, All Aluminum	50	20	34	Blue
DTC 246P	.969-1.096	795, 37W, All Aluminum 795, 61W, All Aluminum 715.5, 24/7 795, 54/7	50	21	37	Green
DTC 278P	1.097-1.240	954, 36/1, 54/7 1033.5, 37W 61W, All Aluminum	50	22	40	Yellow

Right-Hand Lay Standard

Note: For further information on how to order, see the Selection Information above.

continued



Distribution Tie

F Neck with Pad

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

2-7/8" Neck Diameter ANSI Class 55-4 and 55-5 Pin Type/57-1, 57-2 and 57-3 Post Type
Groove Height Relationship 9/16" Min. 7/8" Max.

Insulator Identification Mark: Yellow

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
DTF 048P	.190-.215	#6, 6/1 #4, 7W, Compacted	100	18	25	Blue
DTF 055P	.216-.244	#4, 7W, All Aluminum #4, 6/1, 7/1 Compacted	100	19	26	Brown
DTF 062P	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	100	19	27	Orange
DTF 070 P	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	100	20	29	Purple
DTF 080P	.316-.357	#2, 6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	100	20	31	Red
DTF 091P	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	100	21	32	Yellow
DTF 103P	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	18	26	Blue
DTF 117P	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	50	18	27	Orange
DTF 132P	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	50	19	29	Red
DTF 149P	.589-.665	266.8, 37W, All Aluminum 266.8, 18/1	50	19	32	Purple
DTF 169P	.666-.755	336.4, 19W, All Aluminum 336.4, 18/1 397.5, 19W, All Aluminum 400, 19W, 37W, All Aluminum	50	20	32	Brown
DTF 192P	.756-.955	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	50	20	33	Red
DTF 217P	.856-.968	556.5, 24/7 636, 18/1 700, 37W, 61W, All Aluminum	50	21	35	Blue
DTF 246P	.969-1.096	795, 37W, All Aluminum 795, 61W, All Aluminum 715.5, 24/7 795, 54/7	50	22	38	Green
DTF 278P	1.097-1.240	954, 36/1, 54/7 1033.5, 37W 61W, All Aluminum	50	23	41	Yellow

Right-Hand Lay Standard

Note: For further information on how to order, see the Selection Information on page 15.

continued



Distribution Tie

J Neck with Pad

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum, Compacted ACSR

3-1/2" Diameter ANSI Class 55-6 and 55-7 Single Skirt Pin Type/56-1 Double Skirt Pin Type
Groove Height Relationship 9/16" Min. 7/8" Max.

Insulator Identification Mark: Green

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
DTJ 048P	.190-.215	#6, 6/1 #4, 7W, Compacted	100	19	26	Blue
DTJ 055P	.216-.244	#4, 7W, All Aluminum #4, 6/1, 7/1 Compacted	100	20	27	Brown
DTJ 062P	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	100	20	28	Orange
DTJ 070P	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	100	21	30	Purple
DTJ 080P	.316-.357	#2, 6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	100	21	32	Red
DTJ 091P	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	100	22	33	Yellow
DTJ 103P	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	19	27	Blue
DTJ 117P	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	50	19	28	Orange
DTJ 132P	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	50	20	30	Red
DTJ 149P	.589-.665	266.8, 37W, All Aluminum 266.8, 18/1	50	20	33	Purple
DTJ 169P	.666-.755	336.4, 19W, All Aluminum 336.4, 18/1 397.5, 19W, All Aluminum 400, 19W, 37W, All Aluminum	50	21	33	Brown
DTJ 192P	.756-.855	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	50	21	34	Red
DTJ 217P	.856-.968	556.5, 24/7 636, 18/1 700, 37W, 61W, All Aluminum	50	22	36	Blue
DTJ 246P	.969-1.096	795, 37W, All Aluminum 795, 61W, All Aluminum 715.5, 24/7 795, 54/7	50	23	39	Green
DTJ 278P	1.097 -1.240	954, 36/1, 54/7 1033.5, 37W 61W, All Aluminum	50	24	42	Yellow

Right-Hand Lay Standard

Note: For further information on how to order, see the Selection Information on page 15.

Double Support Tie

MATERIALS

Ties - (2 each) Aluminum alloy.

Pads - (2 each) Specially formulated elastomer

Identification tags - (2 each) Identifies catalog number, neck size, nominal conductor size and conductor diameter range.

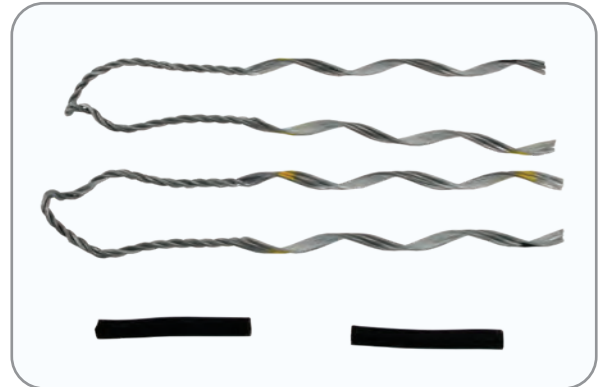
Color code - Each Double Support Tie has two color codes. The inside code identifies the proper conductor size and the leg color code identifies the insulator neck size:

Insulator identification mark (identifies insulator head size)

Black - C Neck

Yellow - F Neck

Green - J Neck



General Recommendations

To insure proper fit and service life, it is recommended that only insulators corresponding to C Neck, F Neck, or J Neck be used. These neck diameter and groove height dimensions appear in ANSI Standard for low and medium voltage pin type insulators.

Double Support Ties are recommended as an improvement over Armor Rods secured with hand tie wire. For areas subject to both wind sway and vibration. Double Support Ties provide superior abrasion protection, to a well made hand tie - Armor Rod combination in regard to conductor fatigue.

Pad

The pad component is provided for bare conductor because it prevents contact with the insulator and compensates for insulator misalignment. With the pad. Double Support Ties not only replace armoring products but provide superior protection by eliminating rather than sacrificing outside surfaces to abrasion.

Maximum Size

Double Support Ties are available for conductors up to 1.240" O.D. depending on the insulators top groove radius.

Line Angle

On vertically mounted insulators. Double Support Ties are recommended for running line angles of up to 10 degrees.

Unbalanced Loading

Under unbalanced load conditions, the Double Support Tie has the resiliency to permit some longitudinal displacement of the conductor over the insulator without loosening the tie or damaging the conductor.

Radio Interference

The RIV characteristics of Double Support Ties are superior to those of well made hand ties when originally installed. During service-life, the pre-contoured helix assures consistent fit which has better RIV characteristics than loosened tie wire.

Tapping

Tapping over applied legs of the Double Support Tie is not recommended. Taps should be located at least 6 inches from the end of the legs.

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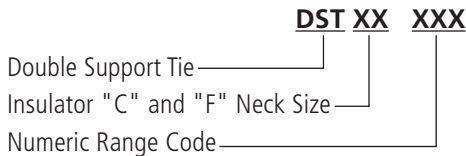


Double Support Tie

C Neck and F Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

Selection Information



C Neck 2-1/4" Neck Diameter ANSI Class 55-2 and 55-3 / F Neck 2-7/8" Neck Diameter ANSI Class 55-4 and 55-5 Pin Type 57-1, 57-2 and 57-3 Post Type

Insulator Identification Mark: Black/Yellow

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
DSTCF 062	.245-.277	#4, 6/1-7/1 #4, 7W, Aluminum Alloy	50	11	13	Orange
DSTCF 070	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	50	11	13	Purple
DSTCF 080	.316-.357	#2, 6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	50	15	14	Red
DSTCF 091	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	50	16	14	Yellow
DSTCF 103	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	16	15	Blue
DSTCF 117	.460-.520	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	23	16	Orange
DSTCF 132	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	50	23	17	Red
DSTCF 149	.589-.665	266.8, 37W, All Aluminum 266.8, 18/1	50	26	17	Purple
DSTCF 169	.666-.755	336.4, 19W, All Aluminum 336.4, 18/1 336.4, 37W, All Aluminum 397.5, 19W, All Aluminum 400, 19W, 37W, All Aluminum	50	28	18	Brown
DSTCF 192	.756-.855	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	50	30	20	Red
DSTCF 217	.856-.968	556.5, 19W, All Aluminum 636, 18/1 700, 37W, 61W, All Aluminum	50	30	21	Blue
DSTCF 246	.969-1.096	795, 37W, 61W, All Aluminum 715.5, 24/7 795, 54/7	50	30	22	Green
DSTCF 278	1.097-1.240	954, 36/1, 54/7 1033.5, 37W, 61W, All Aluminum	50	30	23	Yellow

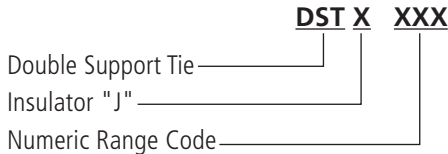
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Double Support Tie

J Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

Selection Information



3-1/2" Diameter ANSI Class 55-6 and 55-7 Single Skirt Pin Type /56-1 Double Skirt Pin Type
Groove Height Relationship 1/4" Mill. 5/8" Max.

Insulator Identification Mark: Green

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
DSTJ 0620	.245-.277	#4, 6/1-7/1 #4, 7W, Aluminum Alloy	50	12	14	Orange
DSTJ 0705	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	50	12	14	Purple
DSTJ 0800	.316-.357	#2, 6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	50	16	15	Red
DSTJ 0910	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	50	17	15	Yellow
DSTJ 1030	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	17	16	Blue
DSTJ 1170	.460-.520	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	25	16	Orange
DSTJ 1325	.521-.598	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	50	25	18	Red
DSTJ 1495	.589-.665	266.8, 37W, All Aluminum 266.8, 18/1	50	30	18	Purple
DSTJ 1695	.666-.755	336.4, 19W, All Aluminum 336.4, 18/1 336.4, 37W, All Aluminum 397.5, 19W, All Aluminum 400, 19W, 37W, All Aluminum	50	30	19	Brown
DSTJ 1920	.756-.855	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	50	33	21	Red
DSTJ 2175	.856-.968	556.5, 19W, All Aluminum 636, 18/1 700, 37W, 61W, All Aluminum	50	34	22	Blue
DSTJ 2460	.969-1.096	795, 37W, 61W, All Aluminum 715.5, 24/7 795, 54/7	50	37	23	Green
DSTJ 2785	1.097-1.240	954, 36/1, 54/7 1033.5, 37W, 61W, All Aluminum	50	40	24	Yellow

Formed Wire

Side Tie

MATERIALS

Tie - Manufactured from aluminized steel for use on aluminum based conductors.

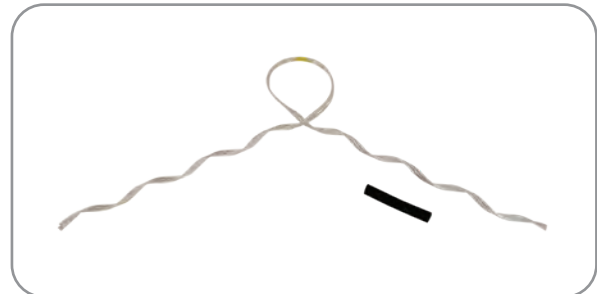
Pad - An elastomer tube is supplied with each Side Tie used on bare conductor. They are identified by catalog number suffix P. Side Ties without pads are used for plastic jacketed conductors. They are identified by catalog number suffix T.

Identification tag - Identifies catalog number, neck size, nominal conductor size, and conductor diameter range.

Color code - Each Side Tie has two color codes; the center code identifies the proper conductor size and the leg color code identifies the insulator neck sizes:

Insulator identification mark (identifies insulator head size)

- Black - C Neck
- Yellow - F Neck
- Green - J Neck



General Recommendations

To insure proper fit and service life, it is recommended that only insulators corresponding to C Neck, F Neck, or J Neck be used. The neck diameters and groove height dimensions appear in ANSI Standard for low and medium voltage pin type insulators and also at the beginning of each listing.

Side Ties are recommended as an improvement over Armor Rods secured with hand tie wire, and clamp top insulators. When installed with a pad on bare conductor, they provide superior protection against abrasion and all types of conductor motion. The pad is a resilient cushion at the point of contact between conductor and insulator.

Side Ties without pads are intended for plastic jacketed conductor but may be used to replace hand tie wire in areas where abrasion damage has not been experienced.

In the case of the smaller sizes, the completed installation should show the applied leg tucked under the corner of the Tie Pad as shown (figure 1).

On the larger size conductor, it is optional whether the legs go under or over the corner of the Tie Pad (figure 2).

Side Ties exactly match the conductor ranges of the Distribution Ties which means identical color codes.

Maximum Size

Conductor sizes up to 1.240" O.D. can be accommodated depending on the insulator side groove radius.

Line Angle

On horizontally mounted insulators. Side Ties are recommended for running line angles of up to 10 degrees. Larger angles can be turned when Distribution Ties are used with side ties or with pins and brackets having various degrees of cant.

Unbalanced Loading

Under unbalanced load conditions, the Side Tie has the resiliency to permit some longitudinal displacement of the conductor over the insulator without loosening the tie or damaging the conductor.

Radio Interference

The RIV characteristics of Side Ties are superior to those of a well made hand tie when originally installed. During service-life, the pre-contoured helix assures consistent fit which has better RIV characteristics than loosened tie wire.

Tapping

Tapping over applied legs of the Side Tie is not recommended. Taps should be located at least 6 inches from the end of the legs.

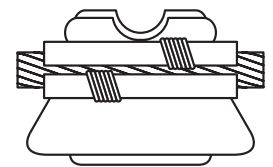


Figure 1

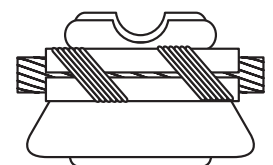


Figure 2

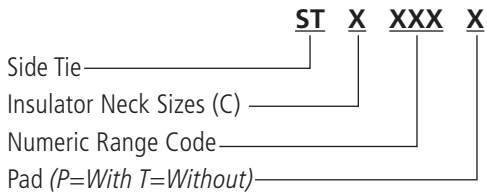
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Side Tie

C Neck with Pad

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

Selection Information



2-7/4" Neck Diameter ANSI Class 55-2 and 55-3 / Groove Height Relationship 9/16" Min. 7/8" Max.

Insulator Identification Mark: Black

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
STC 048P	.190-.215	#6, 6/1 #4, 7W, Compacted	75	10	16	Blue
STC 055P	.216-.244	#4, 7W, All Aluminum #4, 6/1, 7/1 Compacted	75	10	17	Brown
STC 062P	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	75	13	19	Orange
STC 070P	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	75	13	21	Purple
STC 080P	.316-.357	#2, 6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	75	18	24	Red
STC 091P	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	75	18	26	Yellow
STC 103P	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	75	24	28	Blue
STC 117P	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	75	23	31	Orange
STC 132P	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	35	13	32	Red
STC 149P	.589-.665	266.8, 37W, All Aluminum 266.8, 18/1	35	13	23	Purple
STC 169P	.666-.755	336.4, 18/1 336.4, 37W, All Aluminum 397.5, 19W, All Aluminum 336.4, 19W, All Aluminum	35	14	25	Brown
STC 192P	.756-.855	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	35	15	26	Red
STC 217P	.856-.968	556.5, 19W, All Aluminum 636, 18/1 700, 37W, 61W, All Aluminum	35	14	28	Blue
STC 246P	.969-1.096	795, 37W, 61W, All Aluminum 715.5, 24/7 795, 54/7			29	Green
STC 278P	1.097-1.240	954, 36/1, 54/7 1033.5, 37W, 61W, All Aluminum			33	Yellow

Right-Hand Lay Standard

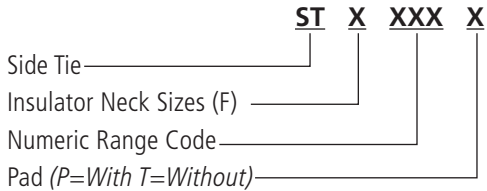
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Side Tie

F Neck with Pad

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

Selection Information



2-7/8" Neck Diameter ANSI Class 55-4 and 55-5 Pin Type/57-1, 57-2 and 57-3 Post Type Groove Height Relationship 9/16" Min. 7/8" Max.

Insulator Identification Mark: Yellow

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
STF 048P	.190-.215	#6, 6/1 #4, 7W, Compacted	75	11	16	Blue
STF 055P	.216-.244	#4, 7W, All Aluminum #4, 6/1, 7/1 Compacted	75	12	17	Brown
STF 062P	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	75	14	19	Orange
STF 070P	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	75	14	21	Purple
STF 080P	.316-.357	#2, 6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	75	18	24	Red
STF 091P	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	75	18	26	Yellow
STF 103P	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	75	26	28	Blue
STF 117P	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	75	26	30	Orange
STF 132P	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	35	13	32	Red
STF 149P	.589-.665	266.8, 37W, All Aluminum 266.8, 18/1	35	15	23	Purple
STF 169P	.666-.755	336.4, 18/1 336.4, 37W, All Aluminum 397.5, 19W, All Aluminum 336.4, 19W, All Aluminum	35	16	25	Brown
STF 192P	.756-.855	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	35	17	26	Red
STF 217P	.856-.968	556.5, 19W, All Aluminum 636, 18/1 700, 37W, 61W, All Aluminum	35	19	28	Blue
STF 246P	.969-1.096	795, 37W, 61W, All Aluminum 715.5, 24/7 795, 54/7			29	Green
STF 278P	1.097-1.240	954, 6/1, 54/7 1033.5, 37W, 61W, All Aluminum			33	Yellow

Right-Hand Lay Standard

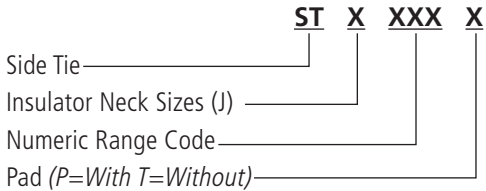
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Side Tie

J Neck with Pad

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

Selection Information



3-1/2" Neck Diameter ANSI Class 55-6 and 55- 7 Single Skirt Pin Type / 56-1 Double Skirt Pint Type Groove Height Relationship 1/4" Min. 5/8" Max.

Insulator Identification Mark: Green

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
STJ 048P	.190-.215	#6, 6/1 #4, 7W, Compacted	75	11	16	Blue
STJ 055P	.216-.244	#4, 7W, All Aluminum #4, 6/1, 7/1 Compacted	75	11	17	Brown
STJ 062P	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	75	14	19	Orange
STJ 070P	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	75	15	21	Purple
STJ 080P	.316-.357	#2,6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	75	19	24	Red
STJ 091P	.358-.405	1/0, 7W-19W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	75	20	26	Yellow
STJ 103P	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	75	29	31	Blue
STJ 117P	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	75	29	32	Orange
STJ 132P	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	35	16	34	Red
STJ 149P	.589-.665	266.8, 37W, All Aluminum 266.8, 18/1, 26/7	35	11	23	Purple
STJ 169P	.666-.755	336.4, 18/1 336.4, 37W, All Aluminum 397.5, 19W, All Aluminum 336.4, 19W, All Aluminum	35	15	25	Brown
STJ 192P	.756-.855	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	35	15	26	Red
STJ 217P	.856-.968	556.5, 19W, All Aluminum 636, 18/1 700, 37W, 61W, All Aluminum	35	16	28	Blue
STJ 246P	.969-1.096	795, 37W, 61W, All Aluminum 715.5, 24/7 795, 54/7			29	Green
STJ 278P	1.097-1.240	954, 36/1, 54/7 1033.5, 37W, 61W, All Aluminum			33	Yellow

Right-Hand Lay Standard

Formed Wire

Double Side Tie

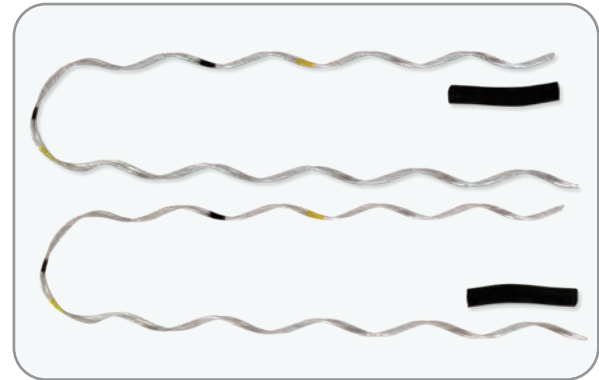
MATERIALS

Ties - (2 each) Aluminum covered steel.

Identification tag - Identifies catalog number, neck size, nominal conductor size, and conductor diameter range.

Color code - Indicates the proper conductor diameter range. The C Neck and F Neck Double Side Ties have two color codes. The inner color code indicates the crossover mark for C Neck insulators and the outer color code indicates the F Neck crossover mark. J Neck Double Side Ties have only one color code.

Pads - (2 each) Specially formulated elastomer.



General Recommendations

To insure proper fit and service life, it is recommended that only insulators corresponding to C Neck, F Neck, or J Neck be used. The neck diameters and groove height dimensions appear in ANSI Standard for low and medium voltage pin type insulators.

Non-Standard Insulators

Double Side Ties are recommended as an improvement over Armor Rods secured with hand tie wire and clamp top insulators. When installed with a pad on bare conductor, they provide superior protection against abrasion and all types of conductor motion. The pad is a resilient cushion at the point of contact between conductor and insulator.

Double Side Ties are designed for double cross arm conductor support.

Maximum Size

Conductor sizes up to 1.20" O.D. can be accommodated depending on the insulator side groove radius.

Line Angle

At double cross arms, Double Side Ties are recommended for running line angles of up to 30 degrees with no more than 15 degrees at each insulator.

Unbalanced Loading

Under unbalanced load conditions, the Double Side Tie has the resiliency to permit some longitudinal displacement of the conductor over the insulator without loosening the tie or damaging the conductor.

Radio Interference

The RIV characteristics of Double Side Ties are superior to those of a well made hand tie when originally installed. During service-life, the pre-contoured helix assures consistent fit which has better RIV characteristics than loosened tie wire.

Tapping

Tapping over applied legs of the Double Side Tie is not recommended. Taps should be located at least 6 inches from the end of the legs.

continued
→

Double Side Tie

C Neck and F Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

C Neck 2-1/4" Neck Diameter ANSI Class 55-2 and 55-3

F Neck 2-7/8" Neck Diameter ANSI Class 55-4 and 55-5 Pin Type

57-1, 57-2 and 57-3 Post Type

Insulator Identification Mark: Black and Yellow

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
DBST 062	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	50	21	16	Orange
DBST 070	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	50	21	16	Purple
DBST 080	.316-.357	#2, 6/1, 7/1 #2, 7W, Aluminum Alloy #11, 6/1	50	21	17	Red
DBST 091	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	50	21	16	Yellow
DBST 103	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	21	18	Blue
DBST 117	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	50	36	19	Orange
DBST 132	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	50	36	19	Red
DBST 149	.589-.665	266.8, 37W, All Aluminum 266.8, 18/1	50	38	20	Purple
DBST 169	.666-.755	336.4, 19W, All Aluminum 336.4, 18/1 397.6, 19W, All Aluminum 400, 19W, 37W, All Aluminum	50	39	20	Brown
DBST 192	.756-.855	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	50	39	20	Red
DBST 217	.856-.968	556.5, 19W, All Aluminum 636, 18/1 700, 37W, 61W, All Aluminum	50	42	22	Blue
DBST 246	.969-1.096	795, 37W, All Aluminum 795, 61W, All Aluminum 715.5, 24/7 795, 54/7	50	44	24	Green
DBST 278	1.097-1.240	954, 36/1, 54/7 1033.5, 37W, 61W, All Aluminum	50	44	24	Yellow

Right-Hand Lay Standard

continued
→



Double Side Tie

J Neck

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

3-1/2" Neck Diameter ANSI Class 55-6 and 55-7 Single Skirt Pin Type
56-1 Double Skirt Pin Type

Insulator Identification Mark: Green

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
DBSTJ 062	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	50	24	19	Orange
DBSTJ 070	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	50	21	17	Purple
DBSTJ 080	.316-.357	#2, 6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	50	27	22	Red
DBSTJ 091	.358-.405	1/0, 7W-19W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	50	26	21	Yellow
DBSTJ 103	.406-.459	2/0, 7W-19W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	50	36	19	Blue
DBSTJ 117	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	50	37	20	Orange
DBSTJ 132	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	50	39	21	Red
DBSTJ 149	.589-.665	266.8, 37W, All Aluminum 266.8, 18/1	50	45	24	Purple
DBSTJ 169	.666-.755	336.4, 19W, All Aluminum 336.4, 18/1 397.6, 19W, All Aluminum 4W, 19W, 37W, All Aluminum	50	46	25	Brown
DBSTJ 192	.756-.855	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	50	44	24	Red
DBSTJ 217	.856-.968	556.5, 24/7 636, 18/1 700, 37W, 61W, All Aluminum	50	43	23	Blue
DBSTJ 246	.969-1.096	795, 37W, All Aluminum 795, 61W, All Aluminum 715.5, 34/7 795, 54/7	50	43	23	Green
DBSTJ 278	1.097-1.240	954, 36/1, 54/7 1033.5, 37W, 61W, All Aluminum	50	48	25	Yellow

Right-Hand Lay Standard

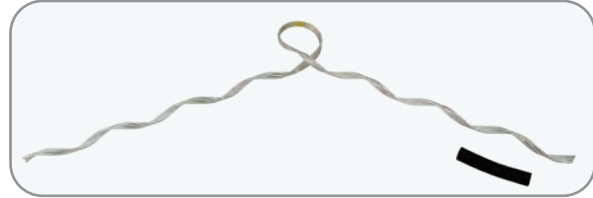
Spool Tie

MATERIALS

Ties - Manufactured of aluminum covered steel.

Pads - A specially formulated elastomer pad is supplied with each Spool Tie used for bare conductor, identified by catalog number suffix P. To specify the Spool Tie without the pad use the suffix T (for use on jacketed conductor).

Identification tag - Identifies catalog number, neck size, nominal conductor size, and conductor size.



General Recommendations

To ensure proper fit and service life, it is recommended that only spool insulators of 1-3/4" neck diameter be used of ANSI class 53-1, 53-2 and 53-3.

Spool Ties not only replace hand ties over armor rods, but Spool Ties with pads provide superior protection against abrasion and all types of conductor motion from high frequency aeolian vibration to low frequency galloping.

The pad, which surrounds the conductor is a resilient cushion where the conductor is in contact with the insulator.

Spool Ties without pads are used for jacketed conductor.

Maximum Size

Spool Ties are available for conductor sizes up to 0.968".

Line Angle

The following are the maximum permissible angles:

	HORIZONTALLY MOUNTED SPOOL	VERTICALLY MOUNTED SPOOL
LINE ANGLE	20°	15°
SAG ANGLE	15°	20°

Unbalanced Loading

Under unbalanced load conditions, the Spool Tie has the resiliency to permit some longitudinal displacement of the conductor over the insulator without loosening the tie or damaging the conductor.

Radio Interference

The RIV characteristics of Spool Ties are superior to those of a well made hand tie when originally installed. During service-life, the pre-contoured helix assures consistent fit which has better RIV characteristics than loosened tie-wire.

Tapping

Tapping over applied legs of the Spool Tie is not recommended. Taps should be located at least 6 inches from the end of the legs.

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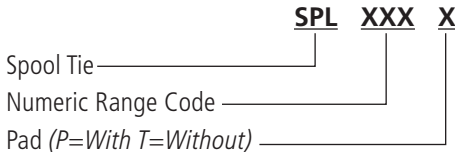


Spool Tie

1-3/4 Neck With Pad

ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

Selection Information



ANSI Class 53-1, 53-2, and 53-3 1 3/4" Neck Diameter

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
SPL 048P	.190-.215	#6, 6/1 #4, 7W, Compacted	100	12	16	Blue
SPL 055P	.216-.244	#4, 7W, All Aluminum #4, 6/1, 7/1 Compacted	100	13	17	Brown
SPL 062P	.245-.277	#4, 6/1, 7/1 #4, 7W, Aluminum Alloy	100	16	19	Orange
SPL 070IP	.278-.315	#3, 7W, Aluminum Alloy #2, 7W, All Aluminum	100	17	21	Purple
SPL 080P	.316-.357	#2, 6/1, 7/1 #2, 7W, Aluminum Alloy #1, 6/1	100	23	24	Red
SPL 091P	.358-.405	1/0, 7W, All Aluminum 1/0, 6/1 1/0, 7W, Aluminum Alloy	100	24	26	Yellow
SPL 103P	.406-.459	2/0, 7W, All Aluminum 2/0, 6/1 2/0, 7W, Aluminum Alloy	100	28	28	Blue
SPL 117P	.460-.520	3/0, 7W, All Aluminum 3/0, 6/1 3/0, 7W, Aluminum Alloy	100	32	31	Orange
SPL 132P	.521-.588	4/0, 7W, All Aluminum 4/0, 6/1 4/0, 7W, Aluminum Alloy	50	18	32	Red
SPL 149P	.589-.665	266.8, 37W, All Aluminum 266.8, 18/1	50	19	23	Purple
SPL 169P	.666-.755	336.4, 19W, All Aluminum 336.4, 18/1 336.4, 37W, All Aluminum 397.5, 19W, All Aluminum 400, 19W, 37W, All Aluminum	50	24	25	Brown
SPL 192P	.756-.855	477, 19W, 37W, All Aluminum 477, 18/1, 24/7	50	25	26	Red
SPL 217P	.856-.968	556.5, 19W, All Aluminum 636, 18/1 700, 37W, 61W, All Aluminum	50	26	28	Blue

Quick Spool Tie

MATERIALS

Ties - Manufactured of aluminum covered steel.

Pads - A specially formulated elastomer pad is supplied with each Quick Spool Tie used for bare conductor, identified by catalog number suffix P. To specify the Quick Spool Tie without the pad use the suffix T (for use on jacketed conductor).



Identification tag - Identifies catalog number, neck size, nominal conductor size, and conductor size.

General Recommendations

To insure proper fit and service life, it is recommended that only spool insulators of 1-3/4" neck diameter be used of ANSI class 53-1, 53-2 and 53-3.

Spool Ties not only replace hand ties over armor rods, but Spool Ties with pads provide superior protection against abrasion and all types of conductor motion from high frequency aeolian vibration to low frequency galloping.

The pad, which surrounds the conductor is a resilient cushion where the conductor is in contact with the insulator.

Maximum Size

Spool Ties are available for conductor sizes up to 0.968".

Line Angle

The following are the maximum permissible angles:

	HORIZONTALLY MOUNTED SPOOL	VERTICALLY MOUNTED SPOOL
LINE ANGLE	40°	10°

Unbalanced Loading

Under unbalanced load conditions, the Spool Tie has the resiliency to permit some longitudinal displacement of the conductor over the insulator without loosening the tie or damaging the conductor.

Radio Interference

The RIV characteristics of Spool Ties are superior to those of a well made hand tie when originally installed. During service-life, the pre-contoured helix assures consistent fit which has better RIV characteristics than loosened tie-wire.

Tapping

Tapping over applied legs of the Spool Tie is not recommended. Taps should be located at least 6 inches from the end of the legs.

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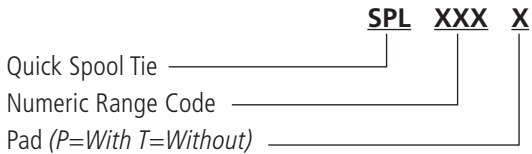


Quick Spool Tie

1-3/4 Neck With Pad

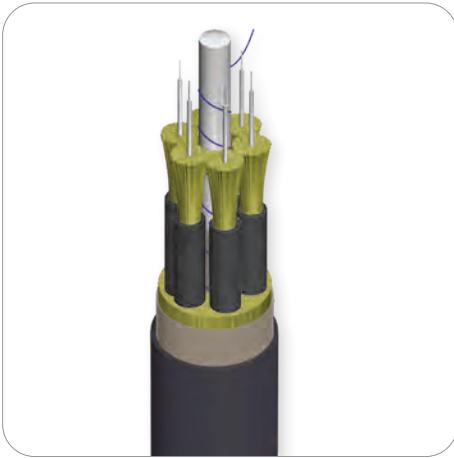
ACSR, All-Aluminum, Aluminum Alloy, AWAC, Compacted All-Aluminum and Compacted ACSR

Selection Information



Spool Insulators ANSI Class 53-1, 53-2, and 53-3 1 3/4" Neck Diameter

AFL NO.	DIA. RANGE INCHES	NOMINAL CONDUCTOR SIZE	UNITS PER CARTON	WT. PER CARTON POUNDS	APPLIED LENGTH INCHES	COLOR CODE
QSPL 062 P	.245 - .277	#4, 6/1, 7/1 #4, 7W, Alum. Alloy	100	16	15	Orange
QSPL 070 P						
QSPL 080 P	.316 - .357	#2, 6/1, 7/1 #2, 7W, Alum. Alloy #1, 6/1	100	23	18	Red
QSPL 091 P	.358 - .405	1/0, 7W, All Alum. 1/0, 6/1 1/0, 7W, Alum Alloy	100	24	20	Yellow
QSPL 103 P	.406 - .459	2/0, 7W, All Alum. 2/0, 6/1 2/0, 7W, Alum. Alloy	100	28	22	Blue
QSPL 117 P	.460 - .520	3/0, 7W, All Alum. 3/0, 6/1 3/0, 7W, Alum. Alloy	100	32	24	Orange
QSPL 132 P	.521 - .588	4/0, 7W, All Alum. 4/0, 6/1 4/0, 7W, Alum. Alloy	50	18	25	Red
QSPL 149 P	.589 - .665	266.8, 37W, All Alum. 266.8, 18/1	50	19	28	Purple
QSPL 169 P	.666 - .755	336.4, 19W, All Alum. 336.4, 18/1 336.4, 37W, All Alum. 397.5, 19W, All Alum. 400, 19W, 37W, All Alum.	50	24	31	Brown
QSPL 192 P	.756 - .855	477, 19W, 37W, All Alum. 477, 18/1, 24/7	50	25	32	Red
QSPL 217 P	.856 - .968	556.5, 19W, All Alum. 636, 18/1 700, 37W, All Alum.	50	26	33	Blue



Indoor/Outdoor Low Smoke Zero Halogen Breakout Cable

AFL's Indoor/Outdoor Low Smoke Zero Halogen (LSZH) Breakout Cables are perfectly suited for rugged applications and installations requiring increased performance. LSZH-rated I/O Breakout cables are available from 2-24 count with variable sub-cable dimensions to support specific termination and routing requirements. These cables feature a durable IEC-compliant, zero halogen, UV and fungal resistant outer jacket. Sub-cables can be specified at 2.0 mm, 2.4 mm or 2.9 mm diameters to fit the specific application. Additional strength member is applied to specifically support wedge-style industrial termination schemes. Tested and qualified to the most stringent safety and performance standards, Low Smoke Zero Halogen Breakout cables can be deployed with confidence in the most demanding of conditions.

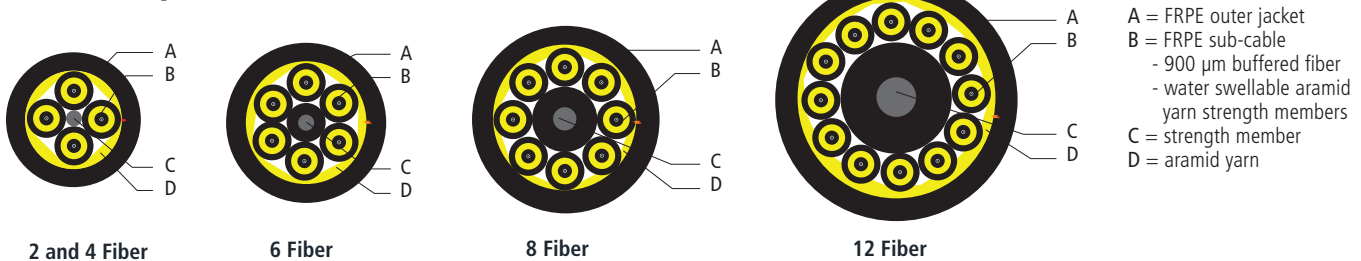
Features

- Fiber counts from 2-24
- Water-blocked sub-units
- Sub-units and tight buffer available in a variety of colors

Applications

- Harsh Environment
- Industrial
- Campus Environment

Cable Components



Fiber Specifications

CORE SIZE/ FIBER TYPE	ISO/ IEC	MAXIMUM ATTENUATION (DB/KM)			OVERFILL LAUNCH MIN. BANDWIDTH (MHZ•KM)		EMB _C (MHZ•KM)	GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)		10 GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)	
		850 NM	1300 NM	1550 NM	850 NM	1300 NM		850 NM	1300 NM	850 NM	1300 NM
(6) 62.5 Giga-Link™ 300	OM1	3.5	1.2	N/A	200	600	N/A	300	550	32	—
(5) 50 Giga-Link™ 600	OM2	3.5	1.5	N/A	500	500	N/A	600	600	82	—
(A) 50 Laser-Link 150	OM2	3.0	1.2	N/A	700	500	950	800	550	150	—
(L) 50 Laser-Link 300	OM3	3.0	1.2	N/A	1500	500	2000	1000	550	300	—
(C) 50 Laser-Link 550	OM4	3.0	1.2	N/A	3500	550	4700	1040	550	550	—
(K) AFL G.657.A1 Single-mode	OS2	N/A	0.5	0.5	N/A	N/A	N/A	N/A	5000	N/A	10,000
(9) SM	OS2	N/A	0.5	0.5	N/A	N/A	N/A	N/A	5,000	N/A	10,000



Indoor/Outdoor Low Smoke Zero Halogen Breakout Cable (cont.)

Mechanical Data

AFL NO.	UNITS	NOMINAL DIAMETER	WEIGHT	TENSION LBS (N)		BENDING RADIUS INCHES (CM)	
		INCHES (MM)	LBS/1000 FT (KG/KM)	INSTALLATION	LONG TERM	INSTALLATION	LONG TERM
BE002★201##E	2	.30(7.7)	42(62)	300(1334)	90(400)	4.5(11.4)	3.0(7.6)
BE004★201##E	4	.30(7.7)	42(62)	300(1334)	90(400)	4.5(11.4)	3.0(7.6)
BE006★201##E	6	.35(8.8)	54(81)	300(1334)	90(400)	5.2(13.2)	3.5(8.8)
BE012★201##E	12	.50(12.7)	115(171)	600(2667)	180(800)	7.5(19.0)	5.0(12.7)
BE024★201##E	24	.57(14.9)	140(208)	600(2667)	180(800)	8.8(22.4)	5.9(14.9)
BE002★241##E	2	.34(8.6)	50(75)	300(1334)	90(400)	5.0(12.7)	3.4(8.6)
BE004★241##E	4	.34(8.6)	50(75)	300(1334)	90(400)	5.0(12.7)	3.4(8.6)
BE006★241##E	6	.40(10.2)	70(104)	300(1334)	90(400)	6.0(15.3)	4.0(10.2)
BE012★241##E	12	.58(14.8)	154(230)	600(2667)	180(800)	8.7(22.2)	5.8(14.8)
BE024★241##E	24	.66(16.8)	183(273)	600(2667)	180(800)	9.9(25.2)	6.6(16.8)
BE002★301##E	2	.39(9.8)	62(93)	300(1334)	90(400)	5.8(14.7)	3.9(9.8)
BE004★301##E	4	.39(9.8)	62(93)	300(1334)	90(400)	5.8(14.7)	3.9(9.8)
BE006★301##E	6	.45(11.6)	87(130)	300(1334)	90(400)	6.8(17.3)	4.6(11.6)
BE012★301##E	12	.71(18.0)	217(323)	600(2667)	180(800)	10.6(27.0)	7.1(18.0)
BE024★301##E	24	.79(20.0)	245(365)	600(2667)	180(800)	11.8(30.0)	7.8(20.0)

★ Fiber Types – Replace asterisk (★) in AFL number with number in the Fiber Specifications table on previous page.
 # Outer Jacket Color – Replace hashtag (#) in AFL number with number in the Cable Jacket Color table below.

Cable Jacket Color Options

1 - Blue	6 - White	A - Violet
2 - Orange	7 - Red	B - Rose
3 - Green	8 - Black	C - Aqua
4 - Brown	9 - Yellow	K - Erika Violet (RAL 4003)
5 - Slate		

* All jacket colors are UV stable and contain anti-fungal additive.
 For Best performance, AFL recommends Black Outer Jacket.



Qualifications

GOVERNING BODY	STANDARD CODE
IEC	Regulatory
RoHS	2002/95/EC
EIA/TIA	See Typical Performance Table
ICEA	S-104-696
ISO	
ITU	
Telcordia	GR-409-CORE

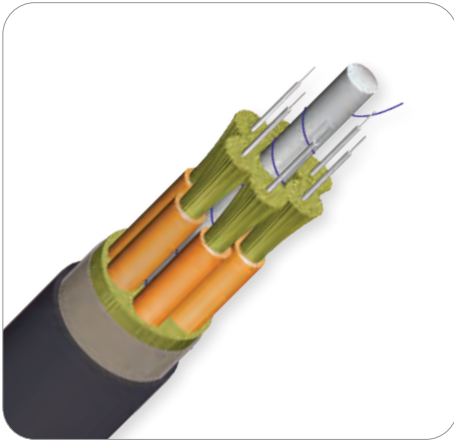
Contact AFL for further details.

Typical Performance

Weathering	720 hrs	FOTP-89
Low/High Temp Bend	-20°C to 70°C	FOTP-37
External Freeze		FOTP-98
Cyclic Flex	2000 cycles	FOTP-104
Impact	1500 impacts	FOTP-25
Cold Impact	-20°C	FOTP-25
Crush Resistance	2200 N/cm	FOTP-41
Cable Twist		FOTP-85

Temperature Specifications

TEMPERATURE RANGE	
INSTALLATION	-20°C to +70°C
OPERATING	-40°C to +70°C
STORAGE	-40°C to +70°C



Indoor/Outdoor Breakout Cable

AFL Indoor/Outdoor Riser Breakout cable is suited for applications requiring a high performance fiber optic cable. Water-blocked and re-inforced with all-dielectric strength members within the core, this cable can withstand the rigors presented by higher end installations. Available in 2-12 fiber counts, these cables feature a UV-and Fungal-Resistant semi-pressure extruded outer jacket. Individual sub-units measure 2.5 mm, allowing for ease of field termination. Sub-units are also water-blocked adding to the overall protection of the fiber optic components from environmental damage.

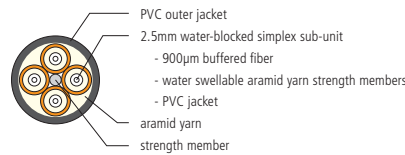
Features

- Fiber counts 2-12
- Fungus, water and UV-resistant PVC jacket featuring SP extrusion technology
- Riser-rated with water-blocked sub-units
- Sub-units and tight buffer available in a variety of colors

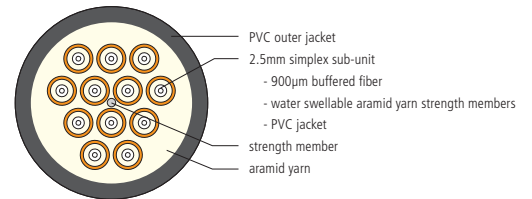
Applications

- Harsh Environment
- Mining
- Industrial
- Campus Environment

Cable Components



2 and 4 Fiber



12 Fiber

Fiber Specifications

CORE SIZE/FIBER TYPE	ISO/IEC	MAXIMUM ATTENUATION (DB/KM)			OVERFILL LAUNCH MIN. BANDWIDTH (MHZ•KM)		EMB _c (MHZ•KM)	GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)		10 GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)	
		850 NM	1300 NM	1550 NM	850 NM	1300 NM		850 NM	1300 NM	850 NM	1300 NM
(6) 62.5 Giga-Link™ 300	OM1	3.5	1.2	N/A	200	600	N/A	300	550	32	—
(5) 50 Giga-Link™ 600	OM2	3.5	1.5	N/A	500	500	N/A	600	600	82	—
(L) 50 Laser-Link 300	OM3	3.0	1.2	N/A	1,500	500	2,000	1,000	550	300	—
(C) 50 Laser-Link 550	OM4	3.0	1.2	N/A	3,500	500	4,700	1,040	550	550	—
(W) AFL Wideband Multimode	OM5	3.0	1.2	N/A	3,500	500	4,700	1,040	550	550	—
(9) Single-mode (ITU G.652.D/G.657.A1)	OS2	N/A	0.5	0.5	N/A	N/A	N/A	N/A	5,000	N/A	10,000

Indoor/Outdoor Breakout Cable

Mechanical Data

AFL NO.	FIBER COUNT	NOMINAL DIAMETER	WEIGHT	TENSION LBS (N)		BENDING RADIUS INCHES (CM)	
		INCHES (MM)	LBS/1000FT (KG/KM)	INSTALLATION	LONG TERM	INSTALLATION	LONG TERM
BM002★251##1	2	.34 (8.6)	49 (73)	300 (1334)	90 (400)	5.0 (12.6)	3.3 (8.4)
BM004★251##1	4	.34 (8.6)	49 (73)	300 (1334)	90 (400)	5.0 (12.6)	3.3 (8.4)
BM006★251##1	6	.40 (10.1)	69 (102)	300 (1334)	90 (400)	6.02 (15.3)	4.1 (10.2)
BM008★251##1	8	.46 (11.8)	93 (138)	300 (1334)	90 (400)	7.0 (18.0)	4.6 (11.8)
BM012★251##1	12	.51 (13.0)	95 (142)	300 (1334)	90 (400)	8.0 (20.0)	5.3 (13.5)

★ Fiber Types – Replace asterisk (★) in AFL number with number in the Fiber Specifications table on previous page.

Outer Jacket Color – Replace hashtag (#) in AFL number with number in the Cable Jacket Color table below.

Cable Jacket Color* Options

1 - Blue	8 - Black
2 - Orange	9 - Yellow
3 - Green	A - Violet
4 - Brown	B - Rose
5 - Slate	C - Aqua
6 - White	K - Erika Violet (RAL 4003)
7 - Red	

* All jacket colors are UV stable and contain anti-fungal additive. For Best performance, AFL recommends Black Outer Jacket.

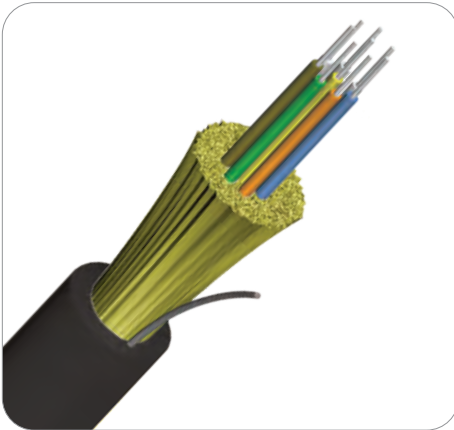
Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-409-CORE
EIA/TIA	568-A
RoHS	2002/95/EC
ICEA	
MSHA	

Temperature Specifications

TEMPERATURE RANGE	
INSTALLATION	-20°C to +70°C
OPERATING	-40°C to +70°C
STORAGE	-40°C to +70°C

Contact AFL for further details.



Indoor/Outdoor Riser Tight Buffered Cable

Indoor/Outdoor Tight Buffered cables are specified for campus network cabling between buildings where interbuilding lengths are short enough that the installer can recognize savings from the lower costs of terminating tight buffered cables.

For indoor applications the cable is OFNR listed. For outdoor applications the cable is manufactured with an outer jacket that incorporates a UV stabilizer for protection against exposure to the sun plus an anti-fungus protection for use in underground applications.

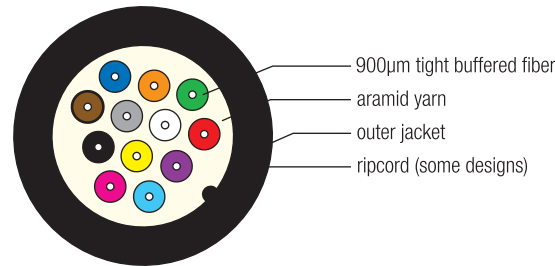
Features

- Available with 2 to 24 fibers
- 12-fiber water-blocked sub-units
- Moisture-resistant, fungus-resistant and UV-resistant outer jacket

Applications

- ONFR inside plant and outside plant environments
- Campus LAN
- Building Interconnections
- Mining

Cable Components



Fiber Specifications

CORE SIZE/FIBER TYPE	ISO/IEC	MAXIMUM ATTENUATION (DB/KM)			OVERFILL LAUNCH MIN. BANDWIDTH (MHZ•KM)		EMB _C (MHZ•KM)	GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)		10 GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)	
		850 NM	1300 NM	1550 NM	850 NM	1300 NM		850 NM	1300 NM	850 NM	1300 NM
		(6) 62.5 Giga-Link™ 300	OM1	3.5	1.2	N/A		200	600	N/A	300
(5) 50 Giga-Link™ 600	OM2	3.5	1.5	N/A	500	500	N/A	600	600	82	—
(L) 50 Laser-Link 300	OM3	3.0	1.2	N/A	1,500	500	2,000	1,000	550	300	—
(C) 50 Laser-Link 550	OM4	3.0	1.2	N/A	3,500	500	4,700	1,040	550	550	—
(W) AFL Wideband Multimode	OM5	3.0	1.2	N/A	3,500	500	4,700	1,040	550	550	—
(9) Single-mode (ITU G.652.D/G.657.A1)	OS2	N/A	0.5	0.5	N/A	N/A	N/A	N/A	5,000	N/A	10,000



STOCK ITEM

Indoor/Outdoor Riser Tight Buffered Cable

Mechanical Data

CABLE TYPE	AFL NO.	FIBER COUNT	NOMINAL DIAMETER	WEIGHT	TENSION		BENDING RADIUS	
			INCHES (MM)	LBS/1000FT (KG/KM)	LBS (N)		INCHES (CM)	
	RISER				INSTALLATION	LONG TERM	INSTALLATION	LONG TERM
Indoor/Outdoor Tight Buffered Cable	KR002★481#01	2	0.19 (4.8)	14 (21)	150 (660)	45 (198)	2.8 (7.2)	1.9 (4.8)
	KR004★481#01	4	0.19 (4.8)	15 (23)	150 (660)	45 (198)	2.8 (7.2)	1.9 (4.8)
	KR006★531#01	6	0.21 (5.3)	19 (28)	150 (660)	45 (198)	3.1 (8.0)	2.1 (5.3)
	KR008★561#01	8	0.22 (5.6)	23 (33)	150 (660)	45 (198)	3.3 (8.4)	2.2 (5.6)
	KR012★651#01	12	0.26 (6.5)	26 (38)	150 (660)	45 (198)	3.5 (9.0)	2.6 (6.5)
	KR018★801#01	18	0.31 (8.0)	40 (59)	300 (1320)	90 (396)	4.7 (12.0)	3.1 (8.0)
	KR024★871#01	24	0.33 (8.7)	46 (69)	300 (1320)	90 (396)	5.2 (13.1)	3.4 (8.7)

★ Fiber Types – Replace asterisk (★) in AFL number with number in the Fiber Specifications table on previous page.

Outer Jacket Color – Replace hashtag (#) in AFL number with number in the Cable Jacket Color table below.

Cable Jacket Color* Options

1 - Blue	8 - Black
2 - Orange	9 - Yellow
3 - Green	A - Violet
4 - Brown	B - Rose
5 - Slate	C - Aqua
6 - White	K - Erika Violet (RAL 4003)
7 - Red	

* All jacket colors are UV stable and contain anti-fungal additive.
For best performance, AFL recommends Black Outer Jacket.

Qualifications

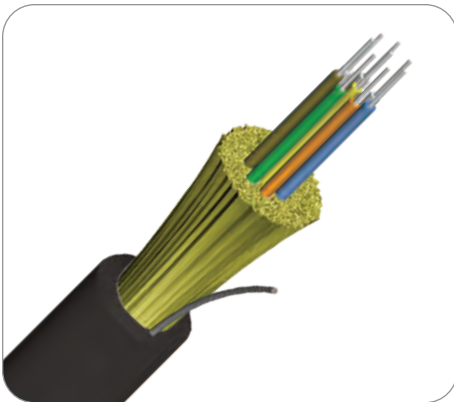
GOVERNING BODY	STANDARD CODE	COMPONENT
Telcordia	GR-20-CORE GR-409-CORE	Water-Blocked Cabled Buffer Tube Core Sub-units
EIA/TIA	598-A	Sub-units
ICEA	S-104-696	Sub-units
MSHA		
RoHS	2002/95/EC	Cable

Temperature Specifications

TEMPERATURE RANGE	
Installation	-20°C to +75°C
Operation	-40°C to +75°C
Storage	-40°C to +75°C

Contact AFL for further details.

Premise Cable



Indoor/Outdoor Plenum Distribution Cable

Indoor/Outdoor Plenum Distribution cables are specified for campus network cabling between buildings where interbuilding lengths are short enough that the installer can recognize savings from the lower costs of terminating tight buffered cables.

For indoor applications the cable is ONFP listed. For outdoor applications the cable is manufactured with an outer jacket that incorporates a UV stabilizer for protection against exposure to the sun plus an anti-fungus protection for use in underground applications.

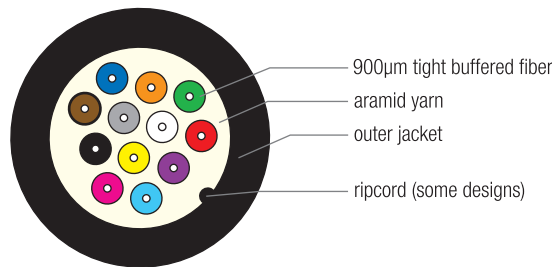
Features

- Available with 2 to 24 fibers
- Water-blocked jacket protects fibers
- Moisture-resistant, fungus-resistant and UV-resistant outer jacket

Applications

- ONFP inside plant and outside plant environments
- Underground applications
- Building Interconnections (Campus LAN)

Cable Components



Fiber Specifications

CORE SIZE/FIBER TYPE	ISO/IEC	MAXIMUM ATTENUATION (DB/KM)			OVERFILL LAUNCH MIN. BANDWIDTH (MHZ•KM)		EMB _c (MHZ•KM)	GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)		10 GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)	
		850 NM	1300 NM	1550 NM	850 NM	1300 NM		850 NM	1300 NM	850 NM	1300 NM
(6) 62.5 Giga-Link™ 300	OM1	3.5	1.2	N/A	200	600	N/A	300	550	32	—
(5) 50 Giga-Link™ 600	OM2	3.5	1.5	N/A	500	500	N/A	600	600	82	—
(L) 50 Laser-Link 300	OM3	3	1.2	N/A	1,500	500	2,000	1,000	550	300	—
(C) 50 Laser-Link 550	OM4	3	1.2	N/A	3,500	500	4,700	1,040	550	550	—
(W) AFL Wideband Multimode	OM5	3	1.2	N/A	3,500	500	4,700	1,040	550	550	—
(9) Single-mode (ITU G.652.D/G.657.A1)	OS2	N/A	0.5	0.5	N/A	N/A	N/A	N/A	5,000	N/A	10,000



Indoor/Outdoor Plenum Distribution Cable

Mechanical Data

AFL NO.	FIBER COUNT	DIAMETER INCHES (MM)	WEIGHT	TENSILE STRENGTH LBS (N)		BEND RADIUS INCHES (CM)	
			LBS/1000FT (KG/KM)	INSTALLATION	LONG TERM	INSTALLATION	LONG TERM
KQ002★461#01	2	0.18 (4.6)	15 (22)	150 (667)	45 (200)	2.7 (6.9)	1.8 (4.6)
KQ004★501#01	4	0.20 (5.0)	17 (26)	150 (667)	45 (200)	3.0 (7.5)	2.0 (5.0)
KQ006★541#01	6	0.21 (5.4)	20 (30)	150 (667)	45 (200)	3.2 (8.1)	2.1 (5.4)
KQ012★611#01	12	0.24 (6.1)	27 (40)	150 (667)	45 (200)	3.6 (9.1)	2.4 (6.1)
KQ024★791#01	24	0.31 (7.9)	46 (69)	150 (667)	45 (200)	4.7 (11.9)	3.1 (7.9)

★ Fiber Types – Replace asterisk (★) in AFL number with number in the Fiber Specifications table on previous page.

Outer Jacket Color – Replace hashtag (#) in AFL number with number in the Cable Jacket Color table below.

Cable Jacket Color Options

1 - Blue	8 - Black
2 - Orange	9 - Yellow
3 - Green	A - Violet
4 - Brown	B - Rose
5 - Slate	C - Aqua
6 - White	K - Erika Violet (RAL 4003)
7 - Red	

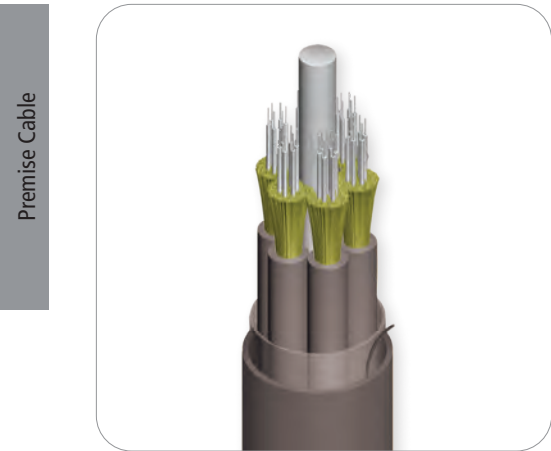
Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
Telcordia	GR-20-CORE GR-409-CORE	Water-Blocked Cabled Buffer Tube Core Weatherized Cable
EIA/TIA	568	Cable
ICEA	S-104-696	Cable
RoHS	REACH	Cable

Temperature Specifications

TEMPERATURE RANGE	
Installation	0°C to +70°C
Operation	-40°C to +70°C
Storage	-40°C to +70°C

Contact AFL for further details.



Indoor/Outdoor Multi-unit Riser Tight Buffered Cable

AFL now offers high fiber count Indoor/Outdoor Riser Cables. Waterblocked 12-fiber sub-units are helically stranded to provide sub-unitized cables ranging from 24 to 72 fiber counts. These cables are OFNR listed for indoor applications. Both the sub-unit jackets and outer sheath contain a UV stabilizer and anti-fungus protection for use in outdoor applications. Sub-units contain a water-swellable aramid and 12 tight buffered fibers.

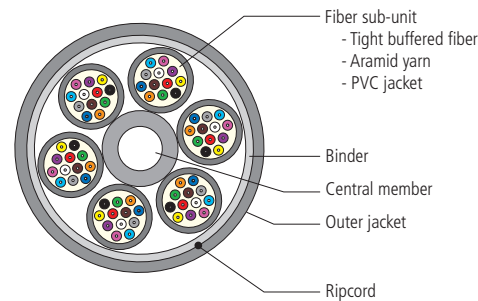
Features

- Available with 24 to 72 fibers
- 12-fiber water-blocked sub-units
- Moisture-resistant, fungus-resistant and UV-resistant sub-unit jackets and outer sheath

Applications

- ONFR inside plant and outside plant environments

Cable Components



Fiber Specifications

CORE SIZE/FIBER TYPE	ISO/IEC	MAXIMUM ATTENUATION (DB/KM)			OVERFILL LAUNCH MIN. BANDWIDTH (MHZ•KM)		EMB _c (MHZ•KM)	GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)		10 GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)	
		850 NM	1300 NM	1550 NM	850 NM	1300 NM		850 NM	1300 NM	850 NM	1300 NM
(6) 62.5 Giga-Link™ 300	OM1	3.5	1.2	N/A	200	600	N/A	300	550	32	—
(5) 50 Giga-Link™ 600	OM2	3.5	1.5	N/A	500	500	N/A	600	600	82	—
(L) 50 Laser-Link 300	OM3	3	1.2	N/A	1,500	500	2,000	1,000	550	300	—
(C) 50 Laser-Link 550	OM4	3	1.2	N/A	3,500	500	4,700	1,040	550	550	—
(W) AFL Wideband Multimode	OM5	3	1.2	N/A	3,500	500	4,700	1,040	550	550	—
(9) Single-mode (ITU G.652.D/G.657.A1)	OS2	N/A	0.5	0.5	N/A	N/A	N/A	N/A	5,000	N/A	10,000

Indoor/Outdoor Multi-unit Riser Tight Buffered Cable

Mechanical Data

CABLE TYPE	AFL NO.		NOMINAL DIAMETER	WEIGHT	TENSION		BENDING RADIUS	
	RISER	FIBER COUNT			LBS (N)		INCHES (CM)	
			INCHES (MM)	LBS/1000 FT (KG/KM)	INSTALLATION	LONG TERM	INSTALLATION	LONG TERM
Indoor/Outdoor Tight Buffered Cable	KR024★611##1	24	0.67 (16.9)	169 (252)	300 (1320)	90 (396)	10.0 (25.3)	6.7 (16.9)
	KR036★611##1	36	0.67 (16.9)	178 (265)	300 (1320)	90 (396)	10.0 (25.3)	6.7 (16.9)
	KR048★611##1	48	0.67 (16.9)	187 (278)	300 (1320)	90 (396)	10.0 (25.3)	6.7 (16.9)
	KR060★611##1	60	0.76 (19.2)	197 (293)	300 (1320)	90 (396)	11.3 (28.8)	7.6 (19.2)
	KR072★611##1	72	0.81 (20.7)	233 (346)	300 (1320)	90 (396)	12.2 (31.0)	8.1 (20.7)

★ Fiber Types – Replace asterisk (★) in AFL number with number in the Fiber Specifications table on previous page.

Outer Jacket Color – Replace hashtag (#) in AFL number with number in the Cable Jacket Color table below.

Cable Jacket Color Options

1 - Blue	8 - Black
2 - Orange	9 - Yellow
3 - Green	A - Violet
4 - Brown	B - Rose
5 - Slate	C - Aqua
6 - White	K - Erika Violet (RAL 4003)
7 - Red	

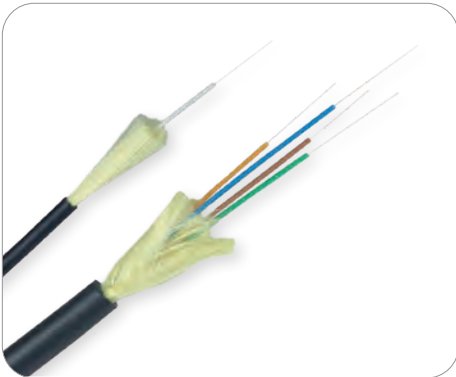
Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
Telcordia	GR-20-CORE GR-409-CORE	Water-Blocked Cabled Buffer Tube Core Sub-units
EIA/TIA	598-A	Sub-units
ICEA	S-104-696	Sub-units
RoHS	2002/95/EC	Cable

Temperature Specifications

TEMPERATURE RANGE	
Installation	-20°C to +75°C
Operation	-40°C to +75°C
Storage	-40°C to +75°C

Contact AFL for further details.



Tactical Tight Buffered Cable

AFL Tactical Tight Buffered Cables are ideal for use in installations where extreme environmental conditions are present. Designed to be deployed and retrieved in the field, AFL's Tactical Tight Buffered Cables are highly resistant to damage caused by repeated impacts crushing forces, abrasion and extreme temperatures.

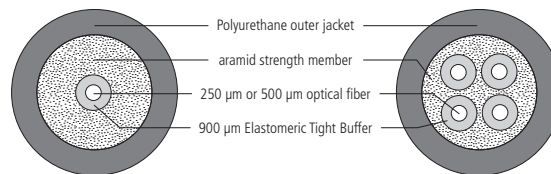
Features

- Cut resistant polyurethane jacket with flame retardant options available
- Highly flexible construction allows for multiple deployments
- All aramid strength members
- Performance in wide temperature range
- UV, Fungus and water resistant
- High impact and crush resistance
- Durable in high traffic areas
- MIL-PRF-49291 qualified fiber available (-RH designation)

Applications

- Field deployment in abusive environments
- Temporary installation of critical communications lines where quick retrieval and re-use is necessary
- High Traffic areas
- Security and Sensing applications
- Broadcast deployments
- Installations in harsh environments

Cable Components



Specifications

CHARACTERISTIC	TEST PROCEDURE	PERFORMANCE
Tensile and elongation	EIA/TIA-455-33	
Operating tensile strength	EIA/TIA-455-33	
Low-temp flexibility	EIA/TIA-455-37	
Cyclic flexing	EIA/TIA-455-104	2000
Crush resistance	EIA/TIA-455-41	1800 N/cm or greater
Impact	EIA/TIA-455-25	200
Temperature cycling	EIA/TIA-455-3	-46°C to 85°C
Temperature/humidity cycling	EIA/TIA-455-5 Method B	
Life aging	EIA/TIA-455-4	
Freezing water immersion	EIA/TIA-455-98	

Tactical Tight Buffered Cable

Mechanical Data

AFL NO.	FIBER COUNT	NOMINAL DIAMETER		NOMINAL WEIGHT		MAXIMUM TENSILE LOAD		MINIMUM BEND RADIUS	
		INCHES	(MM)	LBS/1000FT	(KG/KM)	LBS (N)		INCHES (CM)	
						INSTALLATION	LONG TERM	INSTALLATION	LONG TERM
X%002*551#0H	2	0.22	(5.5)	16.2	(25)	400 (1780)	130 (578)	2.2 (5.5)	1.1 (2.8)
X%004*551#0H	4	0.22	(5.5)	16.2	(25)	400 (1780)	130 (578)	2.2 (5.5)	1.1 (2.8)
X%002*581#0H	2	0.23	(5.8)	21.5	(32)	400 (1780)	130 (578)	3.4 (8.7)	2.3 (5.8)
X%004*581#0H	4	0.23	(5.8)	21.5	(32)	400 (1780)	130 (578)	3.4 (8.7)	2.3 (5.8)
X%006*611#0H	6	0.24	(6.1)	22.2	(33)	400 (1780)	130 (578)	3.6 (9.2)	2.4 (6.1)
X%008*641#0H	8	0.25	(6.4)	28.8	(44)	470 (2090)	160 (712)	2.5 (6.4)	1.3 (3.2)
X%012*641#0H	12	0.25	(6.4)	30.8	(47)	470 (2090)	160 (712)	2.5 (6.4)	1.3 (3.2)

Note: Diameter and weight subject to change without notice

Note: For fiber counts other than those listed, please contact AFL

Replace percent (%) in AFL No. with corresponding jacket type below.

- 1 = Tactical Polyurethane
- 2 = Flame Retardant Polyurethane
- 3 = LSZH Polyurethane

500 µm primary coated fiber available, replace H in AFL number with number corresponding below.

- G = 500 µm Coated Optical Fiber
- H = 250 µm Coated Optical Fiber

Replace asterisk (*) in AFL No. with corresponding fiber type below.

- 5 = 50/125 µm multimode GIGA-Link™ 600
- 6 = 62.5/125 µm multimode GIGA-Link™ 300
- K = Bend Insensitive G.657A1 single-mode
- L = 50/125 µm OM3
- C = 50/125 µm OM4

Replace hashtag (#) in AFL No. with jacket color. See Tactical Cable Ordering Guide on page 17.

Customer specified print available.

See Tactical Cable Ordering Guide on page 17 for AFL No. designations.

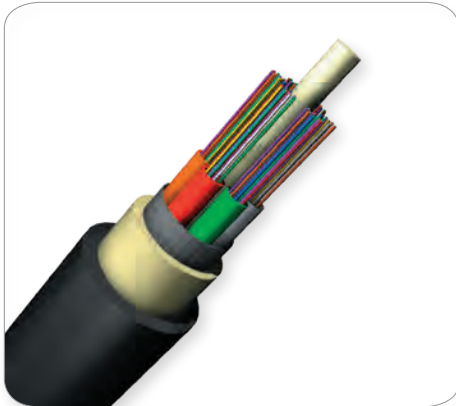
Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
EIA/TIA	EIA/TIA-455-33, EIA/TIA-455-37, EIA/TIA-455-104, EIA/TIA-455-41, EIA/TIA-455-25, EIA/TIA-455-3, EIA/TIA-455-5 Method B, EIA/TIA-455-4, EIA/TIA-455-98	Fiber Optic Cable
U.S. Department of Defense	MIL-PRF-49291 MIL-PRF-85045	Optical Fiber Fiber Optic Cable

Temperature Specifications

TEMPERATURE RANGE	
INSTALLATION	-46°C to +85°C
OPERATION	-46°C to +85°C
STORAGE	-55°C to +85°C

Contact AFL for further details.



LV-Series Indoor/Outdoor Riser Loose Tube – Single Jacket

Indoor/outdoor stranded loose tube combines the robust mechanical and environmental characteristics of an outside plant cable with the flexibility of an inside plant riser cable. By installing an indoor/outdoor stranded loose tube, splice locations entering into a building are avoided, being routed directly from the outside plant to telecommunications closets, or main distribution frames (MDF) through the riser of a building and eliminating the “50-foot rule.” Indoor/Outdoor Stranded Design loose tube cable is moisture and U.V. resistant and is SZ stranded to allow slack for mid-span access.

Features

- Fiber counts up to 144
- Compact design
- Gel-filled or gel-free tubes are reverse-oscillated (SZ stranded) to allow slack for mid-span access

Applications

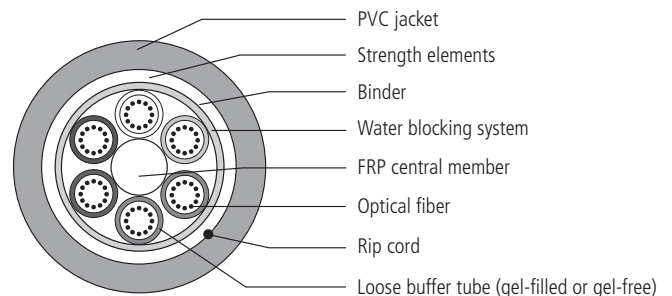
- Underground Duct
- Long Haul Networking
- Building Interconnections (Campus LAN)
- Trunking Lines Direct to Telecommunications Closet
- Local Loop
- Intrabuilding Backbones
- Distance Learning

Typical Lengths

FIBER COUNT	MAXIMUM LENGTHS*			
	SINGLE-MODE		MULTIMODE	
	FEET	METERS	FEET	METERS
6 - 144	22,900	7,000	22,900	7,000

* Longer lengths may be available.

Cable Components



Fiber Specifications

CORE SIZE/FIBER TYPE	AFL FIBER IDENTIFIER	ISO/IEC	MAXIMUM ATTENUATION (DB/KM)				OVERFILL LAUNCH MIN. BANDWIDTH (MHZ•KM)		GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)	
			850 NM	1300 NM	1310 NM	1550 NM	850 NM	1300 NM	850 NM	1300 NM
62.5/125 GIGA-Link™ 300	6	OM1	3.5	1.2	N/A	N/A	200	600	300	550
50/125 GIGA-Link™ 600	5	OM2	3.5	1.5	N/A	N/A	500	500	600	600
50/125 Laser-Link™ 300	L	OM3	3.0	1.2	N/A	N/A	1500	500	1000	550
50/125 Laser-Link™ 300	C	OM4	3.0	1.2	N/A	N/A	3500	500	1040	550
Single-mode (ITU G.652.D/G.657.A1)	9	OS2	N/A	N/A	0.35	0.25	N/A	N/A	N/A	N/A
Corning Single-mode (ITU G.652.D/G.657.A1)	AZ	OS2	N/A	N/A	0.35	0.25	N/A	N/A	N/A	N/A

Gigabit Ethernet Minimum Link Distances are based on “bandwidth”/modal dispersion constraints. Actual link distances may be constrained by attenuation, depending on specific loss budget.

continued
→

LV-Series Indoor/Outdoor Riser Loose Tube – Single Jacket

Ordering Information

AFL NO.	FIBER COUNT	NUMBER OF TUBES/FIBERS	NOMINAL DIAMETER	NOMINAL WEIGHT	MAXIMUM TENSILE LOAD		MINIMUM BEND RADIUS	
			INCHES (MM)	LBS/1,000 FT (KG/KM)	LBS. (N)		INCHES (CM)	
					SHORT TERM	LONG TERM	SHORT TERM	LONG TERM
GEL-FILLED								
LV012★C5101N1	12	1w/12 (4 fillers)	0.51 (12.9)	108 (160)	600 (2700)	200 (890)	10.2 (26)	7.7 (20)
LV024★C5101N1	24	2w/12 (3 fillers)	0.51 (12.9)	108 (161)	600 (2700)	200 (890)	10.2 (26)	7.7 (20)
LV036★C5101N1	36	3w/12 (2 fillers)	0.51 (12.9)	109 (162)	600 (2700)	200 (890)	10.2 (26)	7.7 (20)
LV048★C5101N1	48	4w/12 (1 filler)	0.51 (12.9)	110 (164)	600 (2700)	200 (890)	10.2 (26)	7.7 (20)
LV060★C5101N1	60	5w/12 (No fillers)	0.51 (12.9)	111 (165)	600 (2700)	200 (890)	10.2 (26)	7.7 (20)
LV072★C6101N1	72	6w/12 (No fillers)	0.54 (13.7)	128 (190)	600 (2700)	200 (890)	10.8 (28)	8.1 (21)
LV096★C8101N1	96	8w/12 (No fillers)	0.61 (15.5)	159 (237)	600 (2700)	200 (890)	12.2 (31)	9.2 (24)
LV144★CC101N1	144	12w/12 (No fillers)	0.76 (19.3)	243 (361)	600 (2700)	200 (890)	15.2 (39)	11.4 (29)
GEL-FREE								
LV012★C5101N1D	12	1/12 (4 fillers)	0.48 (12.3)	100 (148)	600 (2670)	180 (800)	9.7 (25)	7.2 (19)
LV024★C5101N1D	24	2/12 (3 fillers)	0.48 (12.3)	99 (146)	600 (2670)	180 (800)	9.7 (25)	7.2 (19)
LV036★C5101N1D	36	3/12 (2 fillers)	0.48 (12.3)	99 (147)	600 (2670)	180 (800)	9.7 (25)	7.2 (19)
LV048★C5101N1D	48	4/12 (1 filler)	0.48 (12.3)	99 (147)	600 (2670)	180 (800)	9.7 (25)	7.2 (19)
LV060★C5101N1D	60	5/12 (no fillers)	0.48 (12.3)	98 (146)	600 (2670)	180 (800)	9.7 (25)	7.2 (19)
LV072★C6101N1D	72	6/12 (no fillers)	0.52 (13.1)	103 (154)	600 (2670)	180 (800)	10.3 (26)	7.8 (20)
LV096★C8101N1D	96	8/12 (no fillers)	0.58 (14.7)	138 (205)	600 (2670)	180 (800)	11.6 (29)	8.7 (23)
LV144★CC101N1D	144	12/12 (no fillers)	0.72 (18.2)	198 (295)	600 (2670)	180 (800)	14.3 (37)	10.8 (28)

Note: Diameter and weight subject to change without notice

★ Fiber Types – Replace asterisk (★) in AFL number with AFL Fiber Identifier in the Fiber Specifications table on previous page.

Reel Information

ITEM	REEL A		REEL B		REEL C		REEL D		REEL E	
	INCHES	CM	INCHES	CM	INCHES	CM	INCHES	CM	INCHES	CM
Reel Height	42	106.7	58	147.3	66	167.6	72	182.8	84	213.4
Reel Width Outside	36	91.4	38	96.5	42	106.7	42	106.7	40	101.6
Reel Width Inside	32	81.6	32	81.3	36	91.4	36	91.4	34	86.4
Drum Diameter	23	58.7	28	71.1	36	91.4	36	91.4	35	88.9
Arbor Hole Diameter	3	7.9	3	7.9	3	7.9	3	7.9	3	7.9
Reel Weight With Lagging	180 lbs	82 kg	420 lbs	191 kg	685 lbs	311 kg	710 lbs	320 kg	950 lbs	431 kg

AFL typically provides Loose Tube cable on several standard sizes of non-returnable wooden reels. Non-standard reel sizes are available upon request.

Larger reel sizes may be required to accommodate long cable lengths.

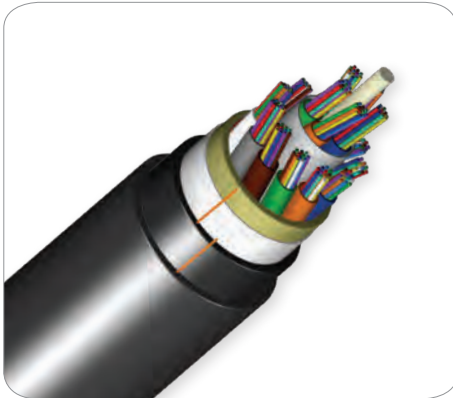
Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
Telcordia	GR-20-CORE	Cable
UL	1666 (OFNR)	Cable
ICEA	S-104-696	Cable
CSA	22.2 (FT4)	Cable
TIA	598-D	Fiber

Temperature Specifications

TEMPERATURE RANGE	
Operation	-40°C to +70°C
Storage	-40°C to +70°C
Installation	-30°C to +70°C

Contact AFL for your customized cable solution.



All-Dielectric Armored Rodent-Resistant OSP Loose Tube (LN Series)

AFL's All-dielectric Rodent-Resistant cable is designed for environments that have an increased risk of rodent infestation and disturbance. The LN-series product line covers the range of fiber counts of up to 432 fibers. The ultra-hard, non-metallic outer polymer shell reduces the risk of transmission interruptions in vital OSP network interconnections.

Features

- Fiber counts up to 432
- All-dielectric Armor
- Double jacket design provides additional protection to the fibers
- Gel-filled tubes are reverse-oscillated (SZ stranded) to allow slack for mid-span access

Applications

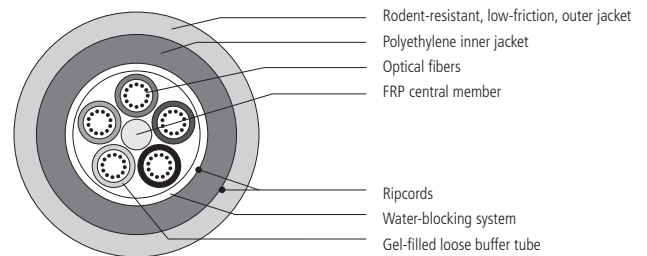
- Direct Buried
- Long Haul Networking
- Building Interconnections (Campus LAN)
- Steam-tunnel Substreet Drainage Networks
- Airport (FAA-E-2761c, Type B)

Typical Lengths

FIBER COUNT	MAXIMUM LENGTHS*			
	SINGLE-MODE		MULTIMODE	
	FEET	METERS	FEET	METERS
6 - 60	22,900	7,000	22,900	8,000
72 - 96	22,900	7,000	22,900	7,000
108 - 120	22,900	7,000	22,900	7,000
132 - 144	22,600	6,900	22,600	6,900
146 - 216	17,000	5,200	17,000	5,200
218 - 288	15,000	4,600	15,000	4,600
290 - 432	10,800	3,300	10,800	3,300

* Longer lengths may be available upon request.

Cable Components



Fiber Specifications

FIBER TYPE	MAXIMUM ATTENUATION (DB/KM)				OVERFILL LAUNCH MIN. BANDWIDTH (MHZ•KM)		GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)	
	850 NM	1300 NM	1310 NM	1550 NM	850 NM	1300 NM	850 NM	1300 NM
(6) 62.5/125 GIGA-Link™ 300	3.5	1.2	N/A	N/A	200	600	300	550
(5) 50/125 GIGA-Link™ 600	2.9	0.9	N/A	N/A	500	500	600	600
(L) 50/125 Laser-Link™ 300	2.9	0.9	N/A	N/A	1500	500	900	550
(9) Single-mode	N/A	N/A	0.35	0.25	N/A	N/A	N/A	5000
(Q) Non-zero Dispersion-shifted Single-mode	N/A	N/A	N/A	0.25	N/A	N/A	N/A	N/A

Gigabit Ethernet Minimum Link Distances are based on "bandwidth"/modal dispersion constraints. Actual link distances may be constrained by attenuation, depending on specific loss budget.

continued
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All-Dielectric Armored Rodent-Resistant OSP Loose Tube (LN Series)

Ordering Information

AFL NO.	FIBER COUNT	NUMBER OF TUBES/FIBERS	NOMINAL DIAMETER		NOMINAL WEIGHT		MAXIMUM TENSILE LOAD		MINIMUM BEND RADIUS	
			INCHES	MM	LBS/1,000FT	KG/KM	LBS (N)		INCHES (CM)	
							SHORT TERM	LONG TERM	SHORT TERM	LONG TERM
LN006★C5101N1	6	1w/6 (4 fillers)	0.49	12.5	56	84	600 (2670)	200 (890)	9.8 (25)	7.4 (19)
LN012★C5101N1	12	1w/12 (4 fillers)	0.49	12.5	56	84	600 (2670)	200 (890)	9.8 (25)	7.4 (19)
LN018★C5101N1	18	1w/12,1w/6 (3 fillers)	0.49	12.5	56	84	600 (2670)	200 (890)	9.8 (25)	7.4 (19)
LN024★C5101N1	24	2w/12 (3 fillers)	0.49	12.5	56	84	600 (2670)	200 (890)	9.8 (25)	7.4 (19)
LN030★C5101N1	30	2w/12,1w/6 (2 fillers)	0.49	12.5	56	84	600 (2670)	200 (890)	9.8 (25)	7.4 (19)
LN036★C5101N1	36	3w/12 (2 fillers)	0.49	12.5	56	84	600 (2670)	200 (890)	9.8 (25)	7.4 (19)
LN048★C5101N1	48	4w/12 (1 filler)	0.49	12.5	56	84	600 (2670)	200 (890)	9.8 (25)	7.4 (19)
LN060★C5101N1	60	5w/12 (no fillers)	0.49	12.5	56	84	600 (2670)	200 (890)	9.8 (25)	7.4 (19)
LN072★C6101N1	72	6w/12 (no fillers)	0.53	13.4	65	97	600 (2670)	200 (890)	10.6 (27)	8.0 (21)
LN084★C8101N1	84	7w/12 (1 filler)	0.60	15.2	81	121	600 (2670)	200 (890)	12.0 (31)	9.0 (23)
LN096★C8101N1	96	8w/12 (no fillers)	0.60	15.2	81	121	600 (2670)	200 (890)	12.0 (31)	9.0 (23)
LN108★CA101N1	108	9w/12 (1 filler)	0.67	17.1	101	151	600 (2670)	200 (890)	13.4 (35)	10.1 (26)
LN120★CA101N1	120	10w/12 (no fillers)	0.67	17.1	101	151	600 (2670)	200 (890)	13.4 (35)	10.1 (26)
LN132★CC101N1	132	11w/12 (1 filler)	0.75	19.0	123	184	600 (2670)	200 (890)	15.0 (39)	11.3 (29)
LN144★CC101N1	144	12w/12 (no fillers)	0.75	19.0	123	184	600 (2670)	200 (890)	15.0 (39)	11.3 (29)
LN216★CI301N1	216	18w/12 (no fillers)	0.76	19.3	125	187	600 (2670)	200 (890)	15.2 (39)	11.4 (29)
LN288★OC101N1	288	12w/24 (no fillers)	0.73	18.6	183	272	600 (2670)	200 (890)	14.6 (38)	11.0 (28)
LN432★OI301N1	432	18w/24 (no fillers)	0.72	18.4	181	269	600 (2670)	200 (890)	14.4 (37)	10.8 (28)

Note: Diameter and weight subject to change without notice

★ Fiber Types – Replace asterisk (★) in AFL number with number in the Fiber Specifications table on previous page.

Reel Information

ITEM	REEL A		REEL B		REEL C		REEL D		REEL E	
	INCHES	CM	INCHES	CM	INCHES	CM	INCHES	CM	INCHES	CM
Reel Height	42	106.7	58	147.3	66	167.6	72	182.8	84	213.4
Reel Width Outside	36	91.4	38	96.5	42	106.7	42	106.7	40	101.6
Reel Width Inside	32	81.6	32	81.3	36	91.4	36	91.4	34	86.4
Drum Diameter	23	58.7	28	71.1	36	91.4	36	91.4	35	88.9
Arbor Hole Diameter	3	7.9	3	7.9	3	7.9	3	7.9	3	7.9
Reel Weight With Lugging	180 lbs	82 kg	420 lbs	191 kg	685 lbs	311 kg	710 lbs	320 kg	950 lbs	431 kg

AFL typically provides Loose Tube cable on several standard sizes of non-returnable wooden reels. Non-standard reel sizes are available upon request. Larger reel sizes may be required to accommodate long cable lengths.

Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
Telcordia	GR-20-CORE	Cable
ICEA	640	Cable
TIA	598-D	Fiber

Temperature Specifications

TEMPERATURE RANGE	
Operation	-40°C to +70°C
Storage	-40°C to +75°C
Installation	-30°C to +70°C

Contact AFL for your customized cable solution.



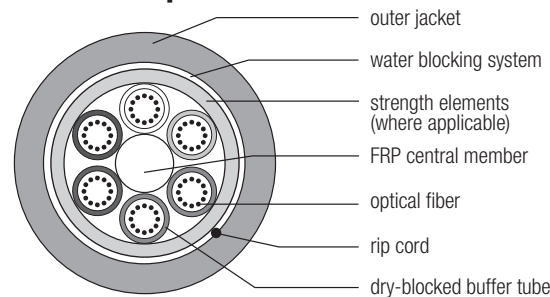
Non-Armored Single Jacket Dry Loose Tube Cable

Acting as the backbone for most of today's fiber based systems, stranded fiber optic cables play a critical role in the high speed network. AFL's Non-Armored Dry Loose Tube fiber optic cables are designed to provide high fiber counts with the flexibility and versatility required for today's most demanding installations. Our dry buffer tube cables feature fiber counts up to 288, compliance with EIA/TIA and REA/RUS PE-90, and are S-Z stranded for easy mid-span access. The dry buffer tube and core permit rapid cable preparation and termination. Water blocking materials are easily removed. Industry standard designs combined with innovative technologies, such as a dry core and dry tube product, yield a world class cable that will support today's and tomorrow's technological needs.

Applications

- Building Interconnections (Campus LAN)
- Trunking Lines Direct to Telecommunications Closet
- Local Loop
- Distance Learning
- Distribution
- Intrabuilding Backbones

Cable Components



Typical Lengths

FIBER COUNT	MAXIMUM LENGTHS*			
	SINGLE-MODE		MULTIMODE	
	FEET	METERS	FEET	METERS
6 - 60	39,370	12,000	26,200	8,000
72 - 96	32,800	10,000	26,200	8,000
108 - 120	31,100	9,500	26,200	8,000
132 - 144	22,900	7,000	22,900	7,000
146 - 288	22,900	7,000	—	—

* Longer lengths may be available upon request.

Optical Information

FIBER TYPE	MAXIMUM ATTENUATION (dB/km)				OVERFILL LAUNCH MIN. BANDWIDTH (MHz•km)		GIGABIT ETHERNET MIN. LINK DISTANCE (meters)	
	850 nm	1300 nm	1310 nm	1550 nm	850 nm	1300 nm	850 nm	1300 nm
(6) 62.5/125 GIGA-Link™ 300	3.5	1.2	N/A	N/A	200	600	300	550
(8) 62.5/125 GIGA-Link™ 1000	3.5	1.2	N/A	N/A	350	600	500	1000
(5) 50/125 GIGA-Link™ 600	2.9	0.9	N/A	N/A	500	500	600	600
(7) 50/125 GIGA-Link™ 2000	2.9	0.9	N/A	N/A	500	800	750	2000
(L) 50/125 Laser-Link™ 300	2.9	0.9	N/A	N/A	1500	500	900	550
(9) Single-mode	N/A	N/A	0.35	0.25	N/A	N/A	N/A	5000
(Q) Non-zero Dispersion-shifted Single-mode	N/A	N/A	N/A	0.25	N/A	N/A	N/A	N/A
(K) SM Futureguide SR-15e Bend Insensitive	N/A	N/A	0.35	0.25	N/A	N/A	N/A	5000

Gigabit Ethernet Minimum Link Distances are based on "bandwidth"/modal dispersion constraints. Actual link distances may be constrained by attenuation, depending on specific loss budget.

continued →

Non-Armored Single Jacket Dry Loose Tube Cable

Ordering Information

AFL NO.	FIBER COUNT	NUMBER OF TUBES/FIBERS	NOMINAL DIAMETER	NOMINAL WEIGHT	MAXIMUM TENSILE LOAD		MINIMUM BEND RADIUS	
			INCHES (MM)	LBS/1,000FT (KG/KM)	LBS. (N)		INCHES (CM)	
					SHORT TERM	LONG TERM	SHORT TERM	LONG TERM
LE006★C5101N1D	6	1w/6 (4 fillers)	0.45 (11.4)	53.8 (80.2)	600 (2700)	200 (890)	9.0 (22.8)	4.5 (11.4)
LE012★C5101N1D	12	1w/12 (4 fillers)	0.45 (11.4)	53.8 (80.2)	600 (2700)	200 (890)	9.0 (22.8)	4.5 (11.4)
LE018★C5101N1D	18	1w/12, 1w/6 (3 fillers)	0.45 (11.4)	53.8 (80.2)	600 (2700)	200 (890)	9.0 (22.8)	4.5 (11.4)
LE024★C5101N1D	24	2w/12 (3 fillers)	0.45 (11.4)	53.8 (80.2)	600 (2700)	200 (890)	9.0 (22.8)	4.5 (11.4)
LE030★C5101N1D	30	2w/12, 1w/6 (2 fillers)	0.45 (11.4)	53.8 (80.2)	600 (2700)	200 (890)	9.0 (22.8)	4.5 (11.4)
LE036★C5101N1D	36	3w/12 (2 fillers)	0.45 (11.4)	53.8 (80.2)	600 (2700)	200 (890)	9.0 (22.8)	4.5 (11.4)
LE048★C5101N1D	48	4w/12 (1 filler)	0.45 (11.4)	53.8 (80.2)	600 (2700)	200 (890)	9.0 (22.8)	4.5 (11.4)
LE060★C5101N1D	60	5w/12 (No fillers)	0.45 (11.4)	53.8 (80.2)	600 (2700)	200 (890)	9.0 (22.8)	4.5 (11.4)
LE072★C6101N1D	72	6w/12 (No fillers)	0.49 (12.4)	62.6 (93.4)	600 (2700)	200 (890)	9.8 (24.8)	4.9 (12.4)
LE084★C8101N1D	84	7w/12 (1 filler)	0.56 (14.2)	80.9 (120.7)	600 (2700)	200 (890)	11.2 (28.4)	5.6 (14.2)
LE096★C8101N1D	96	8w/12 (No fillers)	0.56 (14.2)	80.9 (120.7)	600 (2700)	200 (890)	11.2 (28.4)	5.6 (14.2)
LE108★CA101N1D	108	9w/12 (1 filler)	0.63 (15.9)	101.5 (151.4)	600 (2700)	200 (890)	12.6 (31.8)	6.3 (15.9)
LE120★CA101N1D	120	10w/12 (No fillers)	0.63 (15.9)	101.5 (151.4)	600 (2700)	200 (890)	12.6 (31.8)	6.3 (15.9)
LE132★CC101N1D	132	11w/12 (1 filler)	0.70 (17.8)	127.5 (190.1)	600 (2700)	200 (890)	14.0 (35.6)	7.0 (17.8)
LE144★CC101N1D	144	12w/12 (No fillers)	0.70 (17.8)	127.5 (190.1)	600 (2700)	200 (890)	14.0 (35.6)	7.0 (17.8)
LE216★C1301N1D	216	18w/12 (No fillers)	0.71 (18.0)	116.1 (173.1)	600 (2700)	200 (890)	14.2 (36.0)	7.1 (18.0)

Note: Diameter and weight subject to change without notice

★ Fiber Types – Replace asterisk (★) in part number with number corresponding to desired fiber type below.

- 5 = 50/125µm multimode GIGA-Link™ 600
- 7 = 50/125µm multimode GIGA-Link™ 2000
- 6 = 62.5/125µm multimode GIGA-Link™ 300
- 8 = 62.5/125µm multimode GIGA-Link™ 1000
- 9 = Single-mode
- L = 50/125µm multimode Laser-Link™ 300
- K = SM Futureguide SR-15e Bend Insensitive
- Q = Non-zero dispersion-shifted single-mode

Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
EIA/TIA		Fiber
REA/RUS	PE-90	Cable

Temperature Specifications

TEMPERATURE RANGE	
Operation	-40°C to +70°C
Storage	-40°C to +75°C
Installation	-30°C to +70°C

Contact AFL for cable designs.



LM-Series OSP MicroCore® Cable

AFL OSP MicroCore® cable series is designed for outside plant installation in microduct conduit systems. The foundation of the design is the multi-fiber-set, gel-filled buffer tube construction. The kink-resistant buffer tube contains multiple 12-fiber sets of color-coded fibers. Each set within the buffer tube is grouped using dual color-coded binder threads. The dry-blocked core is made up of SZ-stranded buffer tubes around a central strength member. The low-friction, high-strength overall jacketing system protects the cable-core while providing an optimized cable package supporting high-speed, long-distance jetting performance. The unique, high-fiber density geometry yields a cable construction that can accommodate up to 432 fibers and can be blown into microducts ranging in inside diameters from 10 mm to 16 mm.

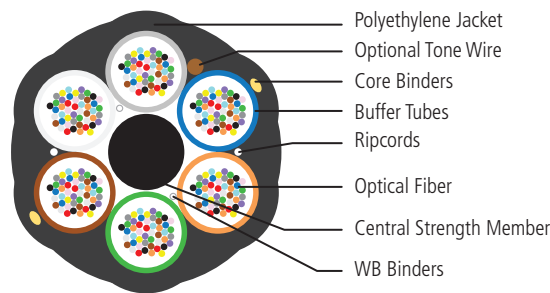
Features

- 12 up to 432 fibers
- Robust, kink-resistant buffer tubes reduce time and handling issues associated with enclosure build-outs
- 300lb installation tensile load rating
- OD compatible with 10 mm to 16 mm inside diameter microducts
- Toneable option includes a low-resistance copper wire that allows cable/pathway to be located using standard electromagnetic detector devices

Applications

- Long-haul, middle-mile and metro-loop
- Campus inter-building backbone distribution
- Low-cost fiber upgrade migration strategies

Cable Components



Fiber Specifications

CORE SIZE/FIBER TYPE	AFL FIBER IDENTIFIER	ISO/IEC	MAXIMUM ATTENUATION (DB/KM)				OVERFILL LAUNCH MIN. BANDWIDTH (MHZ•KM)		GIGABIT ETHERNET MIN. LINK DISTANCE (METERS)	
			850 NM	1300 NM	1310 NM	1550 NM	850 NM	1300 NM	850 NM	1300 NM
62.5/125 GIGA-Link™ 300	6	OM1	3.5	1.2	N/A	N/A	200	600	300	550
50/125 GIGA-Link™ 600	5	OM2	3.5	1.5	N/A	N/A	500	500	600	600
50/125 Laser-Link™ 300	L	OM3	3.0	1.2	N/A	N/A	1500	500	1000	550
50/125 Laser-Link™ 300	C	OM4	3.0	1.2	N/A	N/A	3500	500	1040	550
Single-mode (ITU G.652.D/G.657.A1)	9	OS2	N/A	N/A	0.35	0.25	N/A	N/A	N/A	N/A
Corning Single-mode (ITU G.652.D/G.657.A1)	AZ	OS2	N/A	N/A	0.35	0.25	N/A	N/A	N/A	N/A

Gigabit Ethernet Minimum Link Distances are based on "bandwidth"/modal dispersion constraints. Actual link distances may be constrained by attenuation, depending on specific loss budget.

continued
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LM-Series OSP MicroCore® Cable

Physical and Mechanical Data

LM-SERIES AFL NO.*	FIBER COUNT	FIBERS/ NUMBER OF TUBES**	DIAMETER		WEIGHT LBS/1000FT (KG/KM)	MAXIMUM TENSILE LOAD LBS (N)		MINIMUM BEND RADIUS INCHES (CM)	
			INCHES (MM)	INCHES (MM)		INSTALLATION	OPERATION	INSTALLATION	OPERATION
LM012xC6101#S	12	12/1 (5 fillers)	0.299 (7.6)	0.394 (10.0)	31 (46)	300 (1334)	90 (400)	6 (15)	4.5 (12)
LM024xC6101#S	24	12/2 (4 fillers)	0.299 (7.6)	0.394 (10.0)	31 (46)	300 (1334)	90 (400)	6 (15)	4.5 (12)
LM048xC6101#S	48	12/4 (2 fillers)	0.299 (7.6)	0.394 (10.0)	31 (46)	300 (1334)	90 (400)	6 (15)	4.5 (12)
LM072xC6101#S	72	12/6	0.299 (7.6)	0.394 (10.0)	34 (51)	300 (1334)	90 (400)	6 (15)	4.5 (12)
LM096xO6101#S	96	24/4 (2 fillers)	0.311 (7.9)	0.394 (10.0)	34 (51)	300 (1334)	90 (400)	6.5 (16)	5 (12)
LM144xO6101#S	144	24/6	0.311 (7.9)	0.394 (10.0)	36 (53)	300 (1334)	90 (400)	6.5 (16)	5 (12)
LM288xR6101#S	288	48/6	0.409 (10.4)	0.512 (13.0)	63 (93)	300 (1334)	90 (400)	8.5 (21)	6.5 (16)
LM432xOI301#S	432	24/18	0.496 (12.6)	0.630 (16.0)	87 (130)	300 (1334)	90 (400)	10 (26)	7.5 (19)

* Replace "x" in AFL number with Fiber Identifier in the Fiber Specifications table on previous page.

Replace # with "N" for all-dielectric cable or "T" for toneable option.

** Fibers are arranged in 12-fiber sets identified by colored binder threads. For fiber identification details [click here](#).

Standard Packaging Details

FIBER COUNT	REEL DIMENSIONS (FLANGE X WIDTH)	STANDARD REEL LENGTH	TYPICAL TOTAL WEIGHT
12-144	48 x 36 in.	20,000 ft (6,096 m)	950lbs (430 kg)
288	58 x 38 in.	20,000 ft (6,096 m)	1,800 lbs (816 kg)
432	66 x 42 in.	20,000 ft (6,096 m)	2,450lbs (1,111 kg)

Recommended Products

DESCRIPTION	AFL NO.
Apex X-2 Sealed Splice Closure	Refer to spec sheet for AFL No.
Apex X-2S Sealed Splice Closure	Refer to spec sheet for AFL No.
FUSEConnect® MPO Splice-on Connectors	Refer to spec sheet for AFL No.
FUSConnect® Field-installable Splice-on Connectors	Refer to spec sheet for AFL No.
LMHD-Series OSP MicroCore® Cable	Refer to spec sheet for AFL No.
Poli-MOD® Patch and Splice Module	Refer to spec sheet for AFL No.

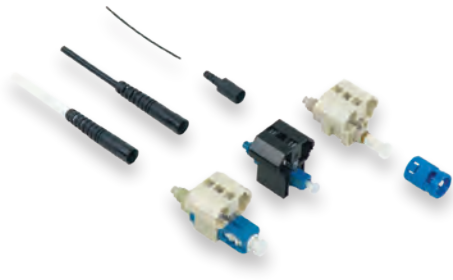
Temperature Specifications

TEMPERATURE RANGE	
Operation	-30°C to +70°C
Storage	-30°C to +75°C
Installation	-10°C to +40°C

Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
Telcordia	GR-20-CORE	Water-Blocked Cabled Buffer Tube Core
TIA	598-D	Fiber

Contact AFL for further details.



FASTConnect® Field-Installable Connectors

FASTConnect are factory pre-polished, field-installable connectors that completely eliminate the need for hand polishing in the field. Proven mechanical splice technology ensuring precision fiber alignment, a factory pre-cleaved fiber stub and a proprietary index-matching gel combine to offer an immediate low loss termination to either single-mode or multimode optical fibers. FASTConnect are compatible with 250 μm and 900 μm optical fibers, as well as 4.8 mm (SC only) cordage.

All primary fiber types are supported, and each connector is color coded per industry standard requirements to aid in identification during and after installation. A factory-installed wedge clip (included with each connector) is removed and discarded upon completion of the termination. Incorporated into this device is an innovative, translucent wedge enabling the use of a common VFI to provide a "pass/fail" signal once physical contact is achieved.

Features

- No epoxy, no Polish
- Low insertion loss
- Fiber can be reinserted up to three times
- 4.8 mm (SC only) cordage compatibility
- VFI accessory to confirm proper installation

Applications

- Premise/Enterprise Networks
- LAN/WAN Connections
- Patch Panels
- Equipment Termination
- FTTx Applications
- Field Repair/Replacement
- Equipment Test Leads

Specifications

PARAMETER	TYPE	VALUE
Insertion Loss:	Single-mode - UPC	Average: 0.2 dB, Maximum: 0.5 dB
	Single-mode - APC	Average: 0.3 dB, Maximum: 0.6 dB
	Multimode - PC	Average: 0.1 dB, Maximum: 0.5 dB
Return Loss at Room Temperature	Single-mode - UPC	Average: -50 dB, Maximum: -45 dB
	Single-mode - APC	Average: -55 dB, Maximum: -50 dB
	Multimode	Average: -25 dB, Maximum: -20 dB

Ordering Information

FIBER TYPE	HOUSING COLOR	CABLE SIZE	AFL NO.	
			PACKAGE OF 6	PACKAGE OF 100
FASTCONNECT SC				
Multimode 62.5/125 μm, OM1	Beige	900 μm	FAST-SC-MM62.5-6	FAST-SC-MM62.5-100
Multimode 50/125 μm, OM2	Black		FAST-SC-MM50-6	FAST-SC-MM50-100
Multimode 50/125 μm, OM3/OM4 compatible	Aqua		FAST-SC-MM50L-6	FAST-SC-MM50L-100
Single-mode, UPC	Blue		FAST-SC-SM-6	FAST-SC-SM-100
Single-mode, APC	Green		FAST-SC-SMAU-6	FAST-SC-SMAU-100
Single-mode, APC	Green	4.8 mm	FAST-SC48-SMAU-6	FAST-SC48-SMAU-100
FASTCONNECT ST				
Multimode 62.5/125 μm, OM1	Beige	900 μm	FAST-ST-MM62.5-6	FAST-ST-MM62.5-100
Multimode 50/125 μm, OM2	Black		FAST-ST-MM50-6	FAST-ST-MM50-100
Multimode 50/125 μm, OM3/OM4 compatible	Aqua		FAST-ST-MM50L-6	FAST-ST-MM50L-100
Single-mode, UPC	Blue		FAST-ST-SM-6	FAST-ST-SM-100
FASTCONNECT LC				
Multimode 62.5/125 μm, OM1	Beige	900 μm	FAST-LC-MM62.5-6	FAST-LC-MM62.5-100
Multimode 50/125 μm, OM2	Black		FAST-LC-MM50-6	FAST-LC-MM50-100
Multimode 50/125 μm, OM3/OM4 compatible	Aqua		FAST-LC-MM50L-6	FAST-LC-MM50L-100
Single-mode, UPC	Blue		FAST-LC-SM-6	FAST-LC-SM-100
Single-mode, APC	Green		FAST-LC-SMAU-6	FAST-LC-SMAU-100

continued
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FASTConnect® Field-Installable Connectors

Accessories

DESCRIPTION			AFL NO.	AFL NO.
BOOT KITS FOR 2 MM AND 3 MM CORDAGE	COLOR	CABLE SIZE	PACK OF 6	PACK OF 100
2 mm Boot Kit, SC/LC/ST	Black	2 mm	FAST-BOOT-2MM-6	FAST-BOOT-2MM-100
3 mm Boot Kit, SC/LC/ST	Black	3 mm	FAST-BOOT-3MM-6	FAST-BOOT-3MM-100
DUPLEX CLIPS				
LC Duplex Clip (LC only)	Transparent		CS010437-06	CS010437-100
TOOL KITS				AFL NO.
FASTConnect High Precision Tool Kit with CT50 Cleaver				CS001201
FASTConnect High Precision Tool Kit with CT08 Cleaver				CS010975
VISUAL FAULT IDENTIFIERS				AFL NO.
VFI4 visual fault identifier with 2.5 mm and 1.25 mm adapters				VFI4-01-0900PR
2.5 mm Universal for VFI port				2900-50-0013MR
1.25 mm Universal for VFI port				2900-50-0012MR

Qualifications

GOVERNING BODY	STANDARD CODE
EIA/TIA	568-C.3 604 (FOCIS)

Temperature Specifications

TEMPERATURE RANGE	
Operating Temperature	-40°C to +75°C

Patents

COUNTRY	PATENT NUMBER(S)
U.S.	5,963,699 5,984,532 6,179,482 7,003,208 7,258,496

Contact AFL for further details.



Field Master® Field-Installable Connectors

Field Master Connectors, for field-termination of fiber optics, feature high-precision, high-reliability and low-applied connector cost. Durable metal components, industry-standard connector designs, and proven crimp technology give the customer peace-of-mind that their installed network is steady and reliable. Field Master Tool Kits come complete with all necessary tools and consumables for the professional installation of Field Master Connectors.

Features

- High-precision ceramic ferrules ensure fiber alignment and repeatable performance
- Rugged metal connector bodies provide sturdy cable terminations
- Industry standard interfaces allow interoperability with media equipment
- Field proven crimp technology improves connector/cable tensile performance

Applications

- Premise environments
- Desk for LAN environments
- Patch panels
- Direct equipment termination
- Fiber to the Subscriber (FTTx) applications
- Repair/replacement requirements

Ordering Information

CONNECTOR	FIBER TYPE	BOOT COLOR	AFL NO.*
SC Field Master Connector (900 µm boot)	Multimode	Black	CS000308
SC Field Master Connector (3.0 mm boot)	Multimode	Beige	CS000309
SC Field Master Connector (900 µm & 3.0 mm boot)	Multimode	Black /Beige	CS005144
SC Field Master Connector (900 µm boot)	Single-mode	Blue	CS000310
SC Field Master Connector (3.0 mm boot)	Single-mode	Blue	CS000311
SC Field Master Connector (900 µm & 3.0 mm boot)	Single-mode	Blue	CS005145
ST Field Master Connector (900 µm boot)	Multimode	Black	CS000316
ST Field Master Connector (3.0 mm boot)	Multimode	Black	CS000317
ST Field Master Connector (900 µm & 3.0 mm boot)	Multimode	Black	CS005147
ST Field Master Connector (900 µm boot)	Single-mode	Blue	CS000318
ST Field Master Connector (3.0 mm boot)	Single-mode	Blue	CS000319
ST Field Master Connector (900 µm & 3.0 mm boot)	Single-mode	Blue	CS005148
LC Field Master Connector (900 µm boot)	Multimode	White	CS000320
LC Field Master Connector (2.0 mm boot)	Multimode	White	CS000321
LC Field Master Connector (900 µm boot)	Single-mode	Blue	CS000322
LC Field Master Connector (2.0 mm boot)	Single-mode	Blue	CS000323
LC Duplex Field Master Connector (2.0 mm boot)	Multimode	White	CS000467
LC Duplex Field Master Connector (2.0 mm boot)	Single-mode	Blue	CS000466

* Packaged 100 pieces per bag.

Qualifications

GOVERNING BODY	STANDARD CODE
EIA/TIA	568B

Contact AFL for further details.



Field Master® Tool Kit

Field Master® Tool Kit comes with tools and consumables to professionally install Field Master® connectors. Crimp Tool sold separately.

Ordering Information

DESCRIPTION	AFL NO.
Field Master Tool Kit	FM000065
Kit includes:	
Strip Template	CS000868
Film, Lap, 5 inch disc, AL203, 3µm (10 per pack)	CS004881-10
Film, Lap, 5 inch disc, AL203, 1µm (10 per pack)	CS004882-10
Film, Lap, 5 inch disc, Diamond, 3µm (1 per pack)	CS004883-01
Rubber Polishing Pad (5")	C015407
Sharpie® Permanent Marker	C015830
Fiber Stripper	CS01205
Kevlar Scissors	C095257
Scribe Tool	C182635
Polishing Puck - SC, ST	CS000446
Polishing Puck - LC	CS000338
Cleto Stick Cleaner	C008812
Fiber Preparation Fluid (3 oz)	FPF1-00-0900
Applicator Tips for Adhesive	C006037
Water Bottle (1 oz)	C015849
Field Installable Adhesive with MSDS (1.75 oz)	C180691
Field Installable Primer with MSDS (1.75 oz)	C181310
Lint Free Cloth Wipes	FM000413
Installation Instructions (SC, ST, LC)	CS004389
Carrying Case	C199528

Features

- Quick and easy to use
- Compact
- Complete instructions included
- For use with SC, ST, and LC Field Master® Connectors



Crimp Tool for Field Master® Connectors

ITEM DESCRIPTION	AFL NO.
Crimp Tool with Die Set (SC, ST and LC) (Crimp diameters: 0.128" hex, 0.151" hex, 0.178" hex, 0.197" hex, 0.215" hex)	CS000337

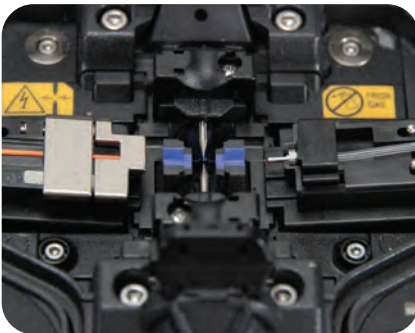


FUSEConnect Connectors (SC, FC, LC, ST)

FUSEConnect® Fusion-Spliced, Field-Installable Connectors

AFL's FUSEConnect fusion-spliced, field installable connectors are uniquely designed and feature only four to five components. The factory pre-polished ferrule eliminates the need for polishing, adhesives, and crimping in the field, which minimizes the potential for operator error and expensive connector scrap.

FUSEConnect utilizes a fusion splicer to terminate the connector in the field, addressing return loss concerns present in analog optical networks. This advanced process yields true APC performance for SC/APC and LC/APC configurations. FUSEConnect is compatible with Fujikura fusion splicers and most other fiber holder-based fusion splicing platforms.



FUSEConnect in Fusion Splicer

Features

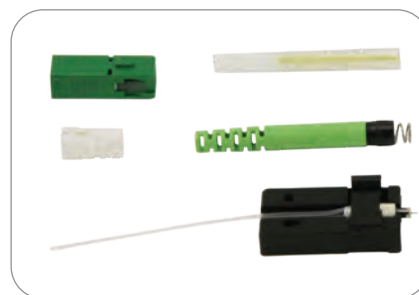
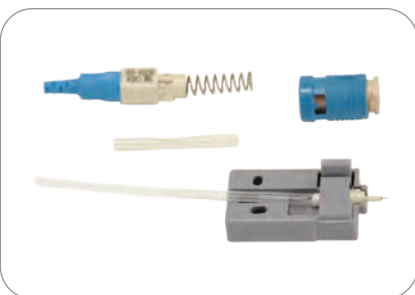
- Field installable
- No adhesives, crimping or polishing
- True APC performance
- Compatible with most fusion splicers

Applications

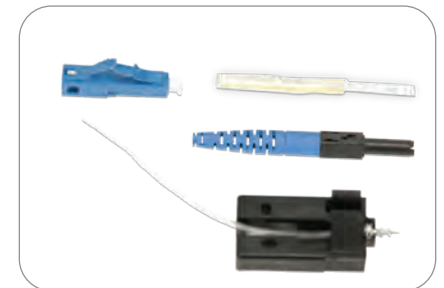
- Connectorization in:
 - RF-overlay FTTP networks
 - Cable TV backbone networks
 - Outside plant
 - FTTH
 - MDU FTTP Cabling
- Central office connector replacement
- Data center installation

Specifications

PARAMETER	VALUE
Connector Type	SC, LC, FC, ST
Cable Type	900 μm, 2 mm, 3 mm, 4.8 mm (SC only)
Polish	APC, UPC, PC
Insertion Loss	SM: 0.15 dB (average), 0.25 dB (maximum) / MM: 0.10 dB (average), 0.25 dB (maximum)
Return Loss	SM: ≤ -65 dB (APC), ≤ -55 dB (UPC) / MM: ≤ -35 dB (PC)



FUSEConnect Kits—ST (blue), SC (green), LC (blue)



continued
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FUSEConnect® Fusion-Spliced, Field-Installable Connectors

Ordering Information

CONNECTOR TYPE	BOOT TYPE	AFL NO.*				
		UPC SM (Blue)	APC SM (Green)	PC 62.5 μm MM (Beige)	PC 50 μm MM (Black)	PC 50 μm LOMMF (AQUA) **
SC	900 μm	FUSE-SC9SMU-6	FUSE-SC9SMA-6	FUSE-SC9M62-6	FUSE-SC9M50-6	FUSE-SC9M50L-6
	3 mm	FUSE-SC3SMU-6	FUSE-SC3SMA-6	FUSE-SC3M62-6	FUSE-SC3M50-6	FUSE-SC3M50L-6
	4.8 mm	FUSE-SC48SMU-6	FUSE-SC48SMA-6	—	—	—
LC	900 μm	FUSE-LC9SMU-6	FUSE-LC9SMA-6	FUSE-LC9M62-6	FUSE-LC9M50-6	FUSE-LC9M50L-6
	2 mm	FUSE-LC2SMU-6	FUSE-LC2SMA-6	FUSE-LC2M62-6	FUSE-LC2M50-6	FUSE-LC2M50L-6
FC	900 μm	FUSE-FC9SMU-6	—	FUSE-FC9M62-6	FUSE-FC9M50-6	FUSE-FC9M50L-6
	2 mm	FUSE-FC2SMU-6	—	FUSE-FC2M62-6	FUSE-FC2M50-6	FUSE-FC2M50L-6
	3 mm	FUSE-FC3SMU-6	—	FUSE-FC3M62-6	FUSE-FC3M50-6	FUSE-FC3M50L-6
ST	900 μm	FUSE-ST9SMU-6	—	FUSE-ST9M62-6	FUSE-ST9M50-6	FUSE-ST9M50L-6
	2 mm	FUSE-ST2SMU-6	—	FUSE-ST2M62-6	FUSE-ST2M50-6	FUSE-ST2M50L-6
	3 mm	FUSE-ST3SMU-6	—	FUSE-ST3M62-6	FUSE-ST3M50-6	FUSE-ST3M50L-6

* AFL NO. is for one pack of 6 pieces

** Laser Optimized MM Fiber (LOMMF) compatible with OM3 and OM4 fibers

Temperature Specifications

TEMPERATURE RANGE	
Operating Temperature	-40°C to +75°C



FUSEConnect MPO Connectors, Cable



FUSEConnect MPO Connectors, Ribbon

FUSEConnect® MPO Splice-On, Field-Installable Connectors with Heat Sleeve

AFL's FUSEConnect MPO splice-on, field-installable connectors are uniquely designed and feature just six components. The innovative factory pre-polished ferrule allows for a field-termination process that eliminates the need for polishing, adhesives and crimping in the field and minimizes the potential for operator error and expensive connector scrap. FUSEConnect MPO is part of the FUSEConnect splice-on connector family which includes SC, LC, ST and FC style connectors.

This updated design for the FUSEConnect MPO replaces the mechanical clamp splice protector with a heat protection sleeve utilizing the on-board splicer heater eliminating the need for a separate mechanical clamp tool. The connector is designed for use with the new RT-02 ribbonizing tool which does not require ribbonizing glue resulting in a cleaner termination process.

FUSEConnect MPO performs as an equivalent to the standard factory terminated MPO/MTP® assemblies. Designed to utilize standard ribbon, SpiderWeb Ribbon®, or loose tube cable, this connector helps minimize the complexity involved in the termination of a multi-fiber connection, allowing for a reliable and repeatable termination in field applications. AFL offers a tool kit as well as a variety of accessories designed to meet all your installation needs for your FUSEConnect MPO application.

Features

- Field installable splice-on connector
- Heat sleeve style splice protector
- Utilizes RT-02 ribbonizing tool for glueless termination process
- Only six components
- No adhesives, crimping or polishing
- Field MPO polarity customization
- Includes 3.0 mm round and flat ribbon boots in each pack

Applications

- Connectorization in:
 - RF-overlay FTTP networks
 - Cable TV backbone networks
 - Outside plant
 - MDU FTTP Cabling
- Connector restoration in the field
- Data center installation
- Patch cord customization in the field

Specifications

PARAMETER		VALUE
Insertion Loss	Single-mode (OS1)	Average: 0.25 dB; Max: 0.75 dB
	Single-mode (OS1), Low Loss	Average: 0.10 dB; Max: 0.35 dB
	62.5/125 (OM1)	Average: 0.10 dB; Max: 0.35 dB
	50/125 (OM4)	Average: 0.10 dB; Max: 0.35 dB
Return Loss	Single-mode (OS1)	>65 dB
	62.5/125 (OM1)	>30 dB
	50/125 (OM4)	>30 dB

continued
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FUSEConnect® MPO Splice-On, Field-Installable Connectors with Heat Sleeve

Ordering Information

AFL NO.*	CONNECTOR TYPE	FIBER TYPE	POLISH	CABLE SIZE		HOUSING COLOR
				ROUND	FLAT	
FUSEMPO-S-SMA-3-F-6	MPO, Female (No Guide Pins)	Single-mode (OS1)	APC	3.0 mm	250 µm	Green
FUSEMPO-S-SMA-3-M-6	MPO, Male (Guide Pins)	Single-mode (OS1)	APC	3.0 mm	250 µm	Green
FUSEMPO-S-LSMA-3-F-6	MPO, Female (No Guide Pins)	Single-mode (OS1), Low Loss	APC	3.0 mm	250 µm	Mustard
FUSEMPO-S-LSMA-3-M-6	MPO, Male (Guide Pins)	Single-mode (OS1), Low Loss	APC	3.0 mm	250 µm	Mustard
FUSEMPO-S-MM6-3-F-6	MPO, Female (No Guide Pins)	Multimode 62.5 µm (OM1)	PC	3.0 mm	250 µm	Beige
FUSEMPO-S-MM6-3-M-6	MPO, Male (Guide Pins)	Multimode 62.5 µm (OM1)	PC	3.0 mm	250 µm	Beige
FUSEMPO-S-OM4-3-F-6	MPO, Female (No Guide Pins)	Multimode , 50 µm (OM4)	PC	3.0 mm	250 µm	Aqua
FUSEMPO-S-OM4-3-M-6	MPO, Male (Guide Pins)	Multimode , 50 µm (OM4)	PC	3.0 mm	250 µm	Aqua

*Pack of 6 pieces

Ordering Information – Accessories

DESCRIPTION	AFL NO.
TOOL KIT	
FUSEConnect MPO Tool Kit	FUSEMPO-TL-KT
ACCESSORIES	
FUSEConnect Stripping Tool (3.0 mm, 2.8 mm, 2.0 mm and 1.6 mm)	FUSE-ST-TL
FUSEConnect MPO Heater Attachment Tool	FUSE-HT-TL
MPO Boot Kit for Jacketed Ribbon (Pack of 6)	FUSEMPO-BOOT-JK-6

Temperature Specifications

TEMPERATURE RANGE	
Operating Temperature	-40°C to +75°C

Qualifications

GOVERNING BODY	STANDARD CODE
TIA	604-5-C
IEC	61754-7
EIA/TIA	568-C.3
FOCIS	FOCIS-5

Contact AFL for further details.



FUSEConnect Tool Kit Contents



FUSEConnect Accessory Kit



Cord Splitter Tool

FUSEConnect® Tool Kit and Accessories

The FUSEConnect tool kit provides all the necessary installation tools required for fiber preparation of 900 μm fiber, 2 mm or 3 mm cordage for AFL’s FUSEConnect Fusion Spliced Field Installable Connectors except for a fusion splicer and precision cleaver. Included in the kit are standard fiber preparation tools and cleaning supplies as well as a FUSEConnect accessory kit and cord splitter tool, which can be bought separately from the tool kit. The cord splitter tool is uniquely designed to open the cordage of 2 mm and 3 mm cable allowing the termination of the ST and FC type connectors on simplex cordage.

Features

- Industry standard fiber preparation tools
- Compact design, flexible yet rugged case

Applications

- Premise environments
- LAN Fiber to the Desk environments
- Patch panel/wiring closets
- FTTx applications
- Quick repair/replacement areas

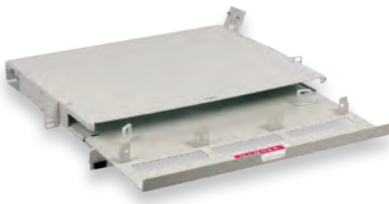
Ordering Information

DESCRIPTION	AFL NO.
FUSECONNECT TOOL KIT (INCLUDES ITEMS BELOW)	FUSE-TL-KT
Tool Case	CS001202
Fiber Stripper	CS001205
Kevlar Scissors	C095257
Lint-Free Wipes	FM000413
Fiber Preparation Fluid	FPF1-00-0900
Permanent Marker	C015830
Cord Splitter Tool	FUSE-ST-TL
FUSEConnect Accessory Kit	FUSE-AC-KT

FUSEConnect Accessory Kit (includes items below)	FUSE-AC-KT
Utility Storage Box	CS012351
Clamp for holding 3 mm Simplex Cordage	S014704
Clamp for holding 2 mm Simplex Cordage	S014705
250 μm / 900 μm Fiber Clamp	CS004442
3 mm FUSEConnect Fiber Holder	S014695
2 mm FUSEConnect Fiber Holder	S014696
900 μm FUSEConnect Fiber Holder	S014697
CLAMP-S70D Sheath Clamp	S015862
CLAMP-S31B Sheath Clamp	S017101

Cord Splitter Tool	FUSE-ST-TL
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Legacy Splicer Accessories (Required for Fanout Splicing)	
CLAMP-S21B Sheath Clamp	S016853
CLAMP-S60D Sheath Clamp	S014750



LightLink LANSystem 1RU Fiber Termination Patch/Splice Panel

The AFL 1RU Fiber Termination Patch/Splice Panel is designed for use as a rack mount interconnect point where termination and connectivity of up to 36 fibers is desired. The panel design is based on a 1 rack unit height and is provisioned with three LGX® 118 compatible mounting positions that can accommodate adapter plates, XFM® optical cassettes, passive optical modules or any combination therein.

Standard 1RU Fiber Termination Patch Panels are available empty for complete field configuration, half loaded with adapter plates, or stubbed with a factory installed circular premise cable (CPC) or loose tube cable assembly.

Standard 1RU Fiber Patch and Splice Panels are available empty for complete field configuration, half loaded with adapter plates and splice trays, or loaded with pigtails, adapter plates and splice trays.

Features

- Fits comfortably into new and existing interconnect, cross-connect, customer premise, and co-location environments
- Most common connector styles and types available
- Compatible with industry standard equipment frames
- Modular design
- Slide-out tray with relief cut-outs for simplified connector access
- Optional splice tray kit for on site conversion to patch and splice panel
- Optional front door key lock for heightened protection of internal components

Applications

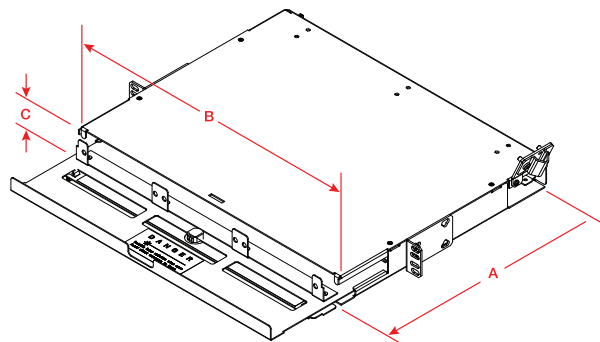
- Telecommunications closets
- Data Centers
- Customer Premise
- LAN / WAN Networks
- Central Offices / Headends
- Hubs / Cabinets / Remote Terminals
- FTTH / FTTB Networks

Specifications

- Designed around Telcordia® GR-63NEBS
- Aluminum construction per ASTMB209
- Durable textured powder coat finish available in black or white
- Universal 19/23" EIA/TIA rack compatibility
- Standard density: up to 18-fiber
- High density: up to 36-fiber
- LGX 118 compatible
- Standard cable stub location is right rear exiting upward
- 1RU Patch and Splice Panel holds up to three splice tray kits

Dimensions

DEPTH (A) IN INCHES	WIDTH (B) IN INCHES	HEIGHT (C) IN INCHES	RACK UNITS	CAPACITY	UNLOADED WEIGHT
13.51	17.00	1.75	1	18 / 36	4 lbs.



LGX is a registered trademark of Furukawa Electric North America, Inc.
Telcordia is a registered trademark of Telcordia Technologies, Inc.

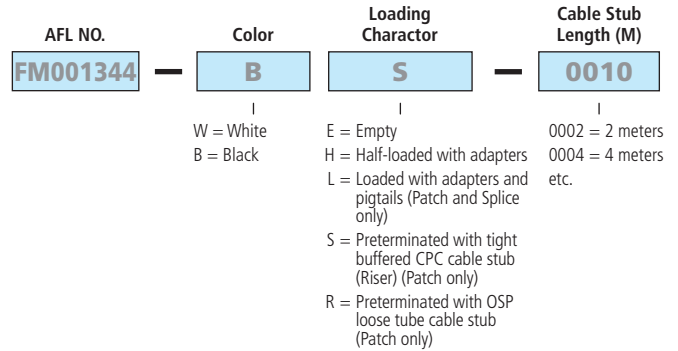
LightLink LANSystem 1RU Fiber Termination Patch/Splice Panel

Ordering Information

Select the seven digit AFL panel part number, specify the color, and choose the loading character desired.

When ordering stubbed (S), enter the cable stub length required in meters.

Note: Standard stub is Circular Premise Cable (CPC).



Example: Order number for a panel Black in color, loaded with 12 PSC adapters (2 six packs), connectors and a cable stub 10 meters in length.

Ordering Information

CONFIGURATION	AFL NO.
CON012P—1 RU PATCH PANELS—12 FIBERS—LGX118	
EMPTY	FM001038
12 PSC adapters (2 Six Packs)	FM001344
12 UST adapters (2 Six Packs)	FM001346
12 PST adapters (2 Six Packs)	FM001347
6 UDL (dup) adapters (2 Three Packs)	FM001353
6 PDL (dup) adapters (2 Three Packs)	FM001354
12 ASC adapters (2 Six Packs)	FM001352
12 UFC adapters (2 Six Packs)	FM001349
12 USC adapters (2 Six Packs)	FM001351
12 AFC adapters (2 Six Packs)	FM001350
CON024HD—1 RU HIGH DENSITY PATCH PANELS—24 FIBERS—LGX118	
24 UST adapters (2 Twelve Packs)	FM001355
24 PST adapters (2 Twelve Packs)	FM001356
12 PDL (dup) adapters (2 Six Packs)	FM001348
12 USF (dup) adapters (2 Six Packs)	FM001357
12 ASF (dup) adapters (2 Six Packs)	FM001358

CONFIGURATION	AFL NO.
CNS012P—1RU PATCH AND SPLICE PANELS—12 FIBERS—LGX118	
EMPTY	FM001328
12 PSC adapters (2 Six Packs), Splice Tray	FM001323
12 UST adapters (2 Six Packs), Splice Tray	FM001329
12 PST adapters (2 Six Packs), Splice Tray	FM001325
6 UDL (dup) adapters (2 Three Packs), Splice Tray	FM001334
6 PDL (dup) adapters (2 Three Packs), Splice Tray	FM001335
12 ASC adapters (2 Six Packs), Splice Tray	FM001333
12 UFC adapters (2 Six Packs), Splice Tray	FM001330
12 USC adapters (2 Six Packs), Splice Tray	FM001332
12 AFC adapters (2 Six Packs), Splice Tray	FM001331
CNS024HD—1 RU HIGH-DENSITY PATCH & SPLICE PANELS—24 FIBERS—LGX118	
24 UST adapters (2 Twelve Packs), Splice Tray	FM001336
24 PST adapters (2 Twelve Packs), Splice Tray	FM001337
12 USF (dup) adapters (2 Six Packs), Splice Tray	FM001338
12 ASF (dup) adapters (2 Six Packs), Splice Tray	FM001339

Qualifications

GOVERNING BODY	STANDARD CODE
ASTM	ASTMB209
Telcordia	GR-63NEBS

Accessories

DESCRIPTION	AFL NO.
Splice Tray Kit: Single Fusion, 12 fiber, 1RU Patch Panel Standard Density (1 splice tray)	FM002826-1
Splice Tray Kit: Single Fusion, 12 fiber, 1RU Patch Panel High Density (2 splice trays)	FM002826-2
Ribbon Splice Tray Kit: Mass Fusion, 12 fiber, 1RU Patch Panel Standard Density (1 splice tray)	FM002826-1R
Ribbon Splice Tray Kit: Mass Fusion, 12 fiber, 1RU Patch Panel High Density (2 splice trays)	FM002826-2R
Kit, Lock, for CON/CNS Panels	FM001318

Connector/Adapter Key

TYPE	DESCRIPTION
ASC	SC—Angle Polish, Simplex, SM
ASF	SC—Angle Polish, Duplex, SM
PSC	SC—Physical Polish, Simplex, MM
PSF	SC—Physical Polish, Duplex, MM
USC	SC—Ultra Polish, Simplex, SM
USF	SC—Ultra Polish, Duplex, SM
PST	ST—Physical Polish, Simplex, MM
UST	ST—Ultra Polish, Simplex, SM
AFC	FC—Angle Polish, Simplex, SM
PFC	FC—Physical Polish, Simplex, MM
UFC	FC—Ultra Polish, Simplex, SM
ADL	LC—Angle Polish, Duplex, SM
PLC	LC—Physical Polish, Simplex, MM
PDL	LC—Physical Polish, Duplex, MM
ULC	LC—Ultra Polish, Simplex, SM
UDL	LC—Ultra Polish, Duplex, SM

Notes:

- 1) All MM cable is 62.5 μm unless otherwise specified.
- 2) When ordering Empty Termination Patch/Splice Panel, accessories are available for field configuration.



LightLink LANSystem 2RU Fiber Termination Patch/Splice Panel

The AFL 2RU Fiber Termination Patch/Splice Panel is designed for use as a rack mount interconnect point where termination and connectivity of up to 72 fibers is desired. The panel design is based on a 2 rack unit height and is provisioned with three LGX® 118 compatible mounting positions that can accommodate adapter plates, XFM optical cassettes, passive optical modules or any combination therein.

Standard 2RU Fiber Termination Patch Panels are available empty for complete field configuration, half loaded with adapter plates, or stubbed with a factory installed circular premise cable (CPC) or loose tube cable assembly.

Standard 2RU Fiber Patch and Splice Panels are available empty for complete field configuration, half loaded with adapter plates and splice trays, or loaded with pigtails, adapter plates and splice trays.

Specifications

- Designed around Telcordia® GR-63NEBS
- Aluminum construction per ASTM B209
- Durable textured powder coat finish available in black or white
- Universal 19/23" EIA/TIA rack compatibility
- Standard density: up to 36 fiber
- High density: up to 72 fiber
- LGX 118 compatible
- Standard cable stub location is right rear exiting upward
- 2RU Patch and Splice Panel holds up to four splice tray kits

Features

- Fits comfortably into new and existing interconnect, cross-connect, customer premise, and co-location environments
- Most common connector styles and types available
- Compatible with industry standard equipment frames
- Modular design
- Slide-out tray with relief cut-outs for simplified connector access
- Optional splice tray kit for on site conversion to patch and splice panel
- Optional front door key lock for height-ened protection of internal components

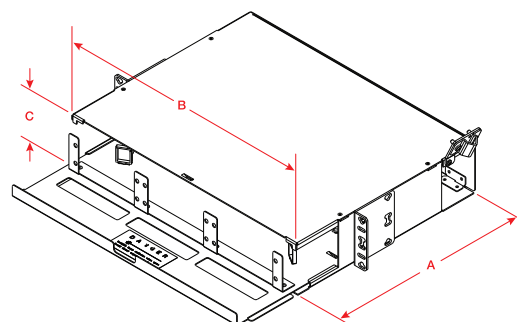
Applications

- Telecommunications closets
- Data Centers
- Customer Premise
- LAN / WAN Networks
- Central Offices / Headends
- Hubs / Cabinets / Remote Terminals
- FTTH / FTTB Networks

Dimensions

DEPTH (A) IN INCHES	WIDTH (B) IN INCHES	HEIGHT (C) IN INCHES	RACK UNITS	CAPACITY	UNLOADED WEIGHT
13.51	17.00	3.50	2	36 / 72*	5 lbs.

* 72 fiber capacity not available in Patch and Splice configuration.



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Telcordia is a registered trademark of Telcordia Technologies, Inc.

LightLink LANSystem 2RU Fiber Termination Patch/Splice Panel

Ordering Information

Select the seven digit AFL panel part number, specify the color, and choose the loading character desired.

When ordering stubbed (S), enter the cable stub length required in meters.

Note: Standard stub is Circular Premise Cable (CPC).

AFL NO.	Color	Loading Character	Cable Stub Length (M)
FM001433	B	S	0010
	W = White B = Black	E = Empty H = Half-loaded with adapters L = Loaded with adapters and pigtails (Patch and Splice only) S = Preterminated with tight buffered CPC cable stub (Riser) (Patch only) R = Preterminated with OSP loose tube cable stub (Patch only)	0002 = 2 meters 0004 = 4 meters etc.

Example: Order number for a panel Black in color, loaded with 24 PSC adapters (4 six packs), connectors and a cable stub 10 meters in length.

Ordering Information

CONFIGURATION	AFL NO.
CON024P—2 RU PATCH PANELS—24 FIBERS—LGX118	
EMPTY	FM001029
24 PSC adapters (4 Six Packs) 118 LGX (Beige)	FM001433
24 UST adapters (4 Six Packs) 118 LGX	FM001434
24 PST adapters (4 Six Packs) 118 LGX	FM001435
12 UDL (dup) adapters (4 Three Packs) 118 LGX (Blue)	FM001441
12 PDL (dup) adapters (4 Three Packs) 118 LGX (Beige)	FM001442
24 ASC adapters (4 Six Packs) 118 LGX (Green)	FM001439
24 UFC adapters (4 Six Packs) 118 LGX	FM001436
24 USC adapters (4 Six Packs) 118 LGX (Blue)	FM001438
24 AFC adapters (4 Six Packs) 118 LGX	FM001437

CONFIGURATION	AFL NO.
CNS024P—2U PATCH AND SPLICE PANELS—24 FIBERS—LGX118	
EMPTY	FM001414
24 PSC adapters (4 Six Packs) 118 LGX, Splice tray	FM001411
24 UST adapters (4 Six Packs) 118 LGX, Splice tray	FM001412
24 PST adapters (4 Six Packs) 118 LGX, Splice tray	FM001413
12 UDL (dup) adapters (4 three Packs) 118 LGX , Splice tray	FM001419
12 PDL (dup) adapters (4 three Packs) 118 LGX , Splice tray	FM001420
24 ASC adapters (4 Six Packs) 118 LGX, Splice tray	FM001418
24 UFC adapters (4 Six Packs) 118 LGX, Splice tray	FM001415
24 USC adapters (4 Six Packs) 118 LGX, Splice tray	FM001417
24 AFC adapters (4 Six Packs) 118 LGX, Splice tray	FM001416

Notes:
 1) All MM cable is 62.5 μm unless otherwise specified.
 2) When ordering Empty Termination Patch/Splice Panel, accessories are available for field configuration.

Qualifications

GOVERNING BODY	STANDARD CODE
ASTM	ASTM B209
Telcordia	GR-63NEBS

Accessories

DESCRIPTION	AFL NO.
Splice Tray Kit: Single Fusion, 12 fiber, 2RU, WME02, WME04 (1 splice tray)	FM002827-1
Splice Tray Kit: Single Fusion, 12 fiber, 2RU, WME02, WME04 (2 splice trays)	FM002827-2
Splice Tray Kit: Single Fusion, 12 fiber, 2RU, WME02, WME04 (3 splice trays)	FM002827-3
Splice Tray Kit: Single Fusion, 12 fiber, 2RU, WME02, WME04 (4 splice trays)	FM002827-4
Splice Tray Kit: Single Fusion, 12 fiber, 2RU, WME02, WME04, Ribbon (1 splice tray)	FM002827-1R
Splice Tray Kit: Single Fusion, 12 fiber, 2RU, WME02, WME04, Ribbon (2 splice trays)	FM002827-2R
Splice Tray Kit: Single Fusion, 12 fiber, 2RU, WME02, WME04, Ribbon (3 splice trays)	FM002827-3R
Splice Tray Kit: Single Fusion, 12 fiber, 2RU, WME02, WME04, Ribbon (4 splice trays)	FM002827-4R
Kit, Lock, for CON / CNS Panels	FM001318

Connector/Adapter Key

TYPE	DESCRIPTION
ASC	SC—Angle Polish, Simplex, SM
ASF	SC—Angle Polish, Duplex, SM
PSC	SC—Physical Polish, Simplex, MM
PSF	SC—Physical Polish, Duplex, MM
USC	SC—Ultra Polish, Simplex, SM
USF	SC—Ultra Polish, Duplex, SM
PST	ST—Physical Polish, Simplex, MM
UST	ST—Ultra Polish, Simplex, SM
AFC	FC—Angle Polish, Simplex, SM
PFC	FC—Physical Polish, Simplex, MM
UFC	FC—Ultra Polish, Simplex, SM
ADL	LC—Angle Polish, Duplex, SM
PLC	LC—Physical Polish, Simplex, MM
PDL	LC—Physical Polish, Duplex, MM
ULC	LC—Ultra Polish, Simplex, SM
UDL	LC—Ultra Polish, Duplex, SM



LightLink LANSystem 3RU Fiber Termination Patch Panel

The AFL 3RU Fiber Termination Patch Panel is designed for use as a rack mount interconnect point where termination and connectivity of up to 96 fibers is desired. The panel design is based on a 3 rack unit height with a master plate that is provisioned with nine LGX® 118 compatible mounting positions that can accommodate adapter plates, XFM® optical cassettes, passive optical modules or any combination therein.

Standard 3RU Fiber Termination Patch Panels are available empty for complete field configuration, half loaded with adapter plates, or stubbed with a factory installed circular premise cable (CPC) or loose tube cable assembly.

Specifications

- Telcordia® GR-63 NEBS Tested
- Aluminum construction per ASTM B209
- Durable textured powder coat finish available in black or white
- Universal 19/23" EIA/TIA rack compatibility
- Standard density: up to 48-fiber
- High density: up to 96-fiber
- LGX 118 compatible
- Standard cable stub location is right rear exiting upward

Features

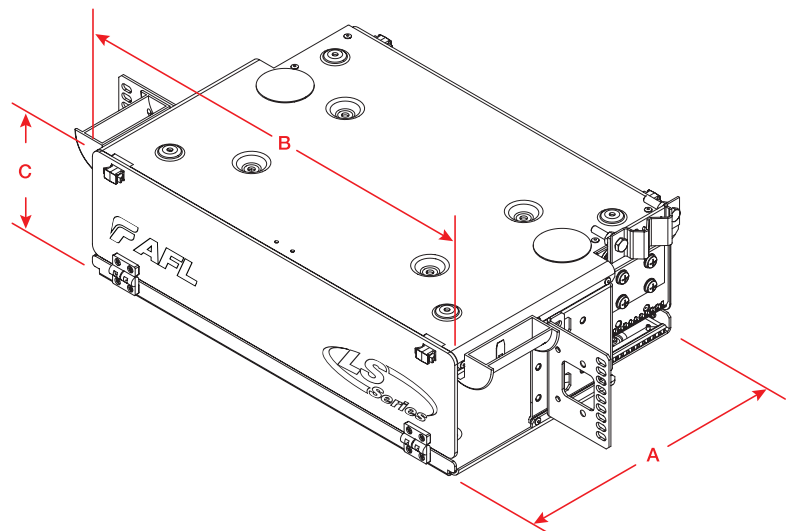
- Fits comfortably into new and existing interconnect, cross-connect, customer premise, and co-location environments
- Most common connector styles and types available
- Compatible with industry standard equipment frames
- LGX compatible master plate (118 mm)
- Modular design
- Provides maximum protection of optical components

Applications

- Telecommunications closets
- Data Centers
- Customer Premise
- LAN / WAN Networks
- Central Offices / Headends
- Hubs / Cabinets / Remote Terminals
- FTTH / FTTB Networks

Dimensions

DEPTH (A) IN INCHES	WIDTH (B) IN INCHES	HEIGHT (C) IN INCHES	RACK UNITS	FIBER CAPACITY	UNLOADED WEIGHT	MATERIAL GAUGE
11.00	17.00	5.25	3	48/96	8.4 lbs.	2.03 mm



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Telcordia is a registered trademark of Telcordia Technologies, Inc.

LightLink LANSystem 3RU Fiber Termination Patch Panel

Ordering Information

Select the seven digit AFL part number you need, specify black or white, and choose the loading character desired.

When ordering stubbed (S), enter the cable stub length required in meters.

Note: Standard stub is Circular Premise Cable (CPC).

AFL NO.	Color	Loading Character	Cable Stub Length (M)
C211309	B	S	0010
	W = White B = Black	E = Empty H = Half-loaded with adapters S = Preterminated with tight buffered CPC cable stub (Riser) (Patch only) R = Preterminated with OSP loose tube cable stub (Patch only)	0002 = 2 meters 0004 = 4 meters etc.

Example: Order number for a panel Black in color, loaded with 48 PSC adapters (8 six packs), connectors and a cable stub 10 meters in length.

Configuration Part Numbers

All cable clamps offered separately so that customers may choose the correct clamp for their application.

CONFIGURATION	AFL NO.
CON048P—3 RU PATCH PANELS—48 FIBERS—LGX118	
EMPTY	C211291
48 PSC adapters (8 Six Packs)	C211309
48 UST adapters (8 Six Packs)	C211336
48 PST adapters (8 Six Packs)	C211345
24 UDL (dup) adapters (8 Three Packs)	FM000181
24 PDL (dup) adapters (8 Three Packs)	FM000182
48 ASC adapters (8 Six Packs)	C213928
48 UFC adapters (8 Six Packs)	C213916
48 USC adapters (8 Six Packs)	C213923
48 AFC adapters (8 Six Packs)	C213919
24 PSF (dup) adapters (8 Three Packs)	FM000183
24 USF (dup) adapters (8 Three Packs)	FM000184
24 ASF (dup) adapters (8 Three Packs)	FM000185
CON096HD—3 RU HIGH DENSITY PATCH PANELS—96 FIBERS—LGX118	
96 UST adapters (8 Twelve Packs)	FM000187
96 PST adapters (8 Twelve Packs)	FM000188
48 UDL (dup) adapters (8 Six Packs)	C211349
48 PSF (dup) adapters (8 Six Packs)	C211313
48 PDL (dup) adapters (8 Six Packs)	C211360
48 USF (dup) adapters (8 Six Packs)	FM000189
48 ASF (dup) adapters (8 Six Packs)	FM000190

Notes:

- 1) All MM cable is 62.5 μm unless otherwise specified.
- 2) When ordering Empty Termination Patch/Splice Panel, accessories are available for field configuration.

Qualifications

GOVERNING BODY	STANDARD CODE
ASTM	ASTMB209
Telcordia	GR-63NEBS

Connector/Adapter Key

TYPE	DESCRIPTION
ASC	SC—Angle Polish, Simplex, SM
ASF	SC—Angle Polish, Duplex, SM
PSC	SC—Physical Polish, Simplex, MM
PSF	SC—Physical Polish, Duplex, MM
USC	SC—Ultra Polish, Simplex, SM
USF	SC—Ultra Polish, Duplex, SM
PST	ST—Physical Polish, Simplex, MM
UST	ST—Ultra Polish, Simplex, SM
AFC	FC—Angle Polish, Simplex, SM
PFC	FC—Physical Polish, Simplex, MM
UFC	FC—Ultra Polish, Simplex, SM
ADL	LC—Angle Polish, Duplex, SM
PLC	LC—Physical Polish, Simplex, MM
PDL	LC—Physical Polish, Duplex, MM
ULC	LC—Ultra Polish, Simplex, SM
UDL	LC—Ultra Polish, Duplex, SM



LightLink LANSystem 4RU Fiber Termination Patch Panel

The AFL 4RU Fiber Termination Patch Panel is designed for use as a rack mount interconnect point where termination and connectivity of up to 144 fibers is desired. The panel design is based on a 4 rack unit height with a master plate that is provisioned with 12 LGX® 118 compatible mounting positions that can accommodate adapter plates, XFM® optical cassettes, passive optical modules or any combination therein.

Standard 4RU Fiber Termination Patch Panels are available empty for complete field configuration, half loaded with adapter plates, or stubbed with a factory installed circular premise cable (CPC) or loose tube cable assembly.

Specifications

- Telcordia® GR-63 NEBS Tested
- Aluminum construction per ASTM B209
- Durable textured powder coat finish available in black or white
- Universal 19/23" EIA/TIA rack compatibility
- Standard density: up to 72-fiber
- High density: up to 144-fiber
- LGX 118 compatible
- Standard cable stub location is right rear exiting upward

Features

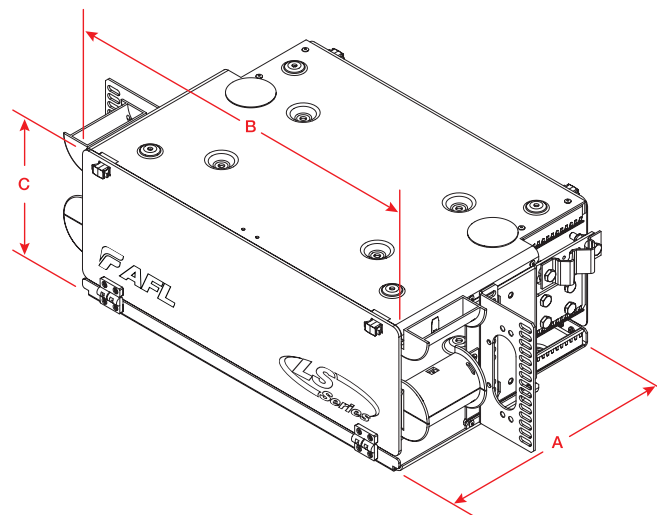
- Fits comfortably into new and existing interconnect, cross-connect, customer premise, and co-location environments
- Most common connector styles and types available
- Compatible with industry standard equipment frames
- LGX compatible master plate and footprint (118 mm)
- Modular design
- Provides maximum protection of optical components

Applications

- Telecommunications closets
- Data Centers
- Customer Premise
- LAN / WAN Networks
- Central Offices / Headends
- Hubs / Cabinets / Remote Terminals
- FTTH / FTTB Networks

Dimensions

DEPTH (A) IN INCHES	WIDTH (B) IN INCHES	HEIGHT (C) IN INCHES	RACK UNITS	FIBER CAPACITY	UNLOADED WEIGHT	MATERIAL GAUGE
11.00	17.00	7.00	4	72/96/144	9 lbs.	2.03 mm



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Telcordia is a registered trademark of Telcordia Technologies, Inc.

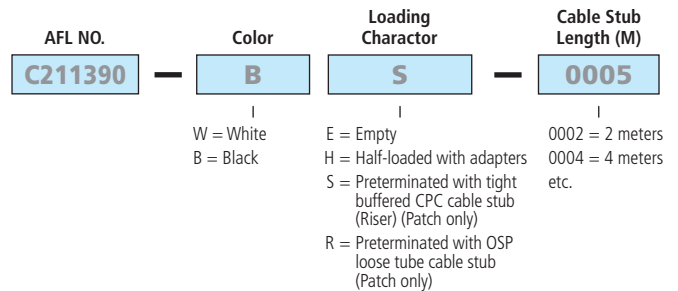
LightLink LANSystem 4RU Fiber Termination Patch Panel

Ordering Information

Select the seven digit AFL panel part number, specify the color, and choose the loading character desired.

When ordering stubbed (S), enter the cable stub length required in meters.

Note: Standard stub is Circular Premise Cable (CPC).



Example: Order number for a panel Black in color, loaded with 72 PSC adapters (12 six packs), connectors and a cable stub 5 meters in length.

Ordering Information

CONFIGURATION	AFL NO.
CON072P—4 RU PATCH PANELS—72 FIBERS—LGX118	
EMPTY	C211372
72 PSC adapters (12 Six Packs)	C211390
72 UST adapters (12 Six Packs)	C211417
72 PST adapters (12 Six Packs)	C211426
36 UDL (dup) adapters (12 Three Packs)	FM000191
36 PDL (dup) adapters (12 Three Packs)	FM000192
72 ASC adapters (12 Six Packs)	C213955
72 UFC adapters (12 Six Packs)	C213941
72 USC adapters (12 Six Packs)	C213952
72 AFC adapters (12 Six Packs)	C213946
36 PSF (dup) adapters (12 Three Packs)	FM000193
36 USF (dup) adapters (12 Three Packs)	FM000136
36 ASF (dup) adapters (12 Three Packs)	FM000194

CONFIGURATION	AFL NO.
CON096P—4 RU PATCH PANELS—96 FIBERS—LGX118	
EMPTY	FM000344
96 PSC adapters (12 Eight Packs)	FM000203
96 UST adapters (12 Eight Packs)	C213964
96 PST adapters (12 Eight Packs)	FM000204
96 ASC adapters (12 Eight Packs)	C213982
96 UFC adapters (12 Eight Packs)	C213970
96 USC adapters (12 Eight Packs)	C213977
96 AFC adapters (12 Eight Packs)	C213973

Notes:
 1) All MM cable is 62.5 μm unless otherwise specified.
 2) When ordering Empty Termination Patch/Splice Panel, accessories are available for field configuration.

Qualifications

GOVERNING BODY	STANDARD CODE
ASTM	ASTMB209
Telcordia	GR-63NEBS

CONFIGURATION	AFL NO.
CON144HD—4 RU HIGH DENSITY PATCH PANELS—144 FIBERS—LGX118	
EMPTY	FM000344
72 UDL (dup) adapters (12 Six Packs)	C211432
72 ADL (dup) adapters (12 Six Packs)	FM000345
72 PSF (dup) adapters (12 Six Packs)	C211396
72 PDL (dup) adapters (12 Six Packs)	C211439
72 USF (dup) adapters (12 Six Packs)	FM000196
72 ASF (dup) adapters (12 Six Packs)	FM000197
144 UST adapters (12 Twelve Packs)	FM000198
144 PST adapters (12 Twelve Packs)	FM000199
144 UFC adapters (12 Twelve Packs)	FM000200
144 USC adapters (12 Twelve Packs)	FM000133
144 ASC adapters (12 Twelve Packs)	FM000201

Connector/Adapter Key

TYPE	DESCRIPTION
ASC	SC—Angle Polish, Simplex, SM
ASF	SC—Angle Polish, Duplex, SM
PSC	SC—Physical Polish, Simplex, MM
PSF	SC—Physical Polish, Duplex, MM
USC	SC—Ultra Polish, Simplex, SM
USF	SC—Ultra Polish, Duplex, SM
PST	ST—Physical Polish, Simplex, MM
UST	ST—Ultra Polish, Simplex, SM
AFC	FC—Angle Polish, Simplex, SM
PFC	FC—Physical Polish, Simplex, MM
UFC	FC—Ultra Polish, Simplex, SM
ADL	LC—Angle Polish, Duplex, SM
PLC	LC—Physical Polish, Simplex, MM
PDL	LC—Physical Polish, Duplex, MM
ULC	LC—Ultra Polish, Simplex, SM
UDL	LC—Ultra Polish, Duplex, SM



LightLink LANSystem 6RU Fiber Patch and Splice Panel

The AFL 6RU Fiber Patch and Splice Panel is designed for use as a rack mount interconnect point where termination and connectivity of up to 96 fibers is desired. The two panel design is based on a 6-rack unit height comprised of a 3RU Termination Patch Panel and a 3RU Optical Splice Shelf. The 3RU Termination Patch Panel is provisioned with nine LGX® 118 compatible mounting positions. The 3RU Optical Splice Shelf utilizes two STF-48 telescoping splice drawers.

Standard 6RU Fiber Patch and Splice Panels are available empty for complete field configuration, half loaded with adapter plates and STF-48 telescoping splice trays, or loaded with pigtails, adapter plates and STF-48 telescoping splice trays.

Specifications

- Designed around Telcordia® GR-63NEBS
- Aluminum construction per ASTM B209
- Durable textured powder coat finish available in black or white
- Universal 19/23" EIA/TIA rack compatibility
- Standard density: up to 48-fiber
- High density: up to 96-fiber
- Fiber storage capacity—one meter per spliced fiber (3 mm jacket)
- Uses two STF-48 telescoping splice drawers
- Two panel package—3U patch, 3U splice
- Nine LGX 118 mm positions

Features

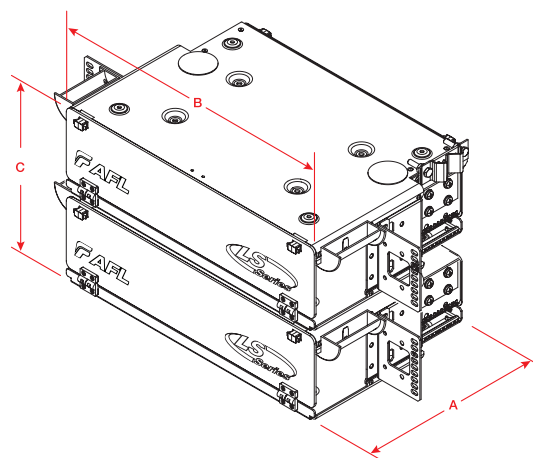
- Fits comfortably into new and existing interconnect, cross-connect, customer premise and co-location environments
- Most common connector styles and types available
- Compatible with industry standard equipment frames
- LGX-compatible master plate (118 mm)
- Modular design
- Compact and versatile method of organizing splicing and connectivity
- Provides maximum protection of optical components

Applications

- Telecommunications closets
- Data Centers
- Customer Premise
- LAN / WAN Networks
- Central Offices / Headends
- Hubs / Cabinets / Remote Terminals
- FTTH / FTTB Networks

Dimensions

DEPTH (A) IN INCHES	WIDTH (B) IN INCHES	HEIGHT (C) IN INCHES	RACK UNITS	FIBER CAPACITY
11.00	17.00	10.5	6	48/96

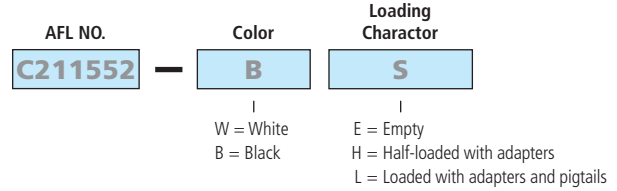


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Telcordia is a registered trademark of Telcordia Technologies, Inc.

LightLink LANSystem 6RU Fiber Patch and Splice Panel

Ordering Information

Select the seven-digit AFL panel part number, specify the color and choose the loading character desired.



Example: Order number for a panel Black in color, loaded with, master plate, adapter plates, 48 PSC adapters (8 Six packs), splice drawer (2-48 position), pigtails with connectors, hardware, cable clamp.

Empty - Includes master plate, mounting hardware, cable clamp.

Unloaded - Includes master plate, adapter plates, adapters, splice drawer (48 & up), hardware, cable clamp.

Loaded - Includes master plate, adapter plates, adapters, splice drawer (48 & up), pigtails with connectors, hardware, cable clamp.

Configuration Part Numbers

CONFIGURATION	AFL NO.
CNS048P—6U PATCH & SPLICE PANELS (1 EA. 3U PATCH, 3U SPLICE)—LGX118	
EMPTY	C211534
48 PSC adapters (8 Six Packs) Splice Drawer (2-48 position)	C211552
48 UST adapters (8 Six Packs) Splice Drawer (2-48 position)	C211579
48 PST adapters (8 Six Packs) Splice Drawer (2-48 position)	C211588
24 UDL (dup) adapters (8 Three Packs) Splice Drawer (2-48 position)	FM000234
24 PDL (dup) adapters (8 Three Packs) Splice Drawer (2-48 position)	FM000235
48 ASC adapters (8 Six Packs) Splice Drawer (2-48 position)	C210928
48 UFC adapters (8 Six Packs) Splice Drawer (2-48 position)	C210913
48 USC adapters (8 Six Packs) Splice Drawer (2-48 position)	C210922
48 AFC adapters (8 Six Packs) Splice Drawer (2-48 position)	C210917
24 PSF (dup) adapters (8 Three Packs) Splice Drawer (2-48 position)	FM000236
24 USF (dup) adapters (8 Three Packs) Splice Drawer (2-48 position)	FM000237
24 ASF (dup) adapters (8 Three Packs) Splice Drawer (2-48 position)	FM000238
CNS096HD—6U HIGH DENSITY PATCH & SPLICE PANELS—LGX118	
96 UST adapters (8 Twelve Packs) Splice Drawer 2-48 position)	FM000240
96 PST adapters (8 Twelve Packs) Splice Drawer (2-48 position)	FM000241
48 UDL (dup) adapters (8 Six Packs) Splice Drawer (2-48 position)	C211594
48 PSF (dup) adapters (8 Six Packs) Splice Drawer (2-48 position)	C211558
48 PDL (dup) adapters (8 Six Packs) Splice Drawer (2-48 position)	C211601
48 USF (dup) adapters (8 Six Packs) Splice Drawer (2-48 position)	FM000242
48 ASF (dup) adapters (8 Six Packs) Splice Drawer (2-48 position)	FM000243

Notes:

- 1) All MM cable is 62.5 μm unless otherwise specified.
- 2) When ordering Empty Termination Patch/Splice Panel, accessories are available for field configuration.

Qualifications

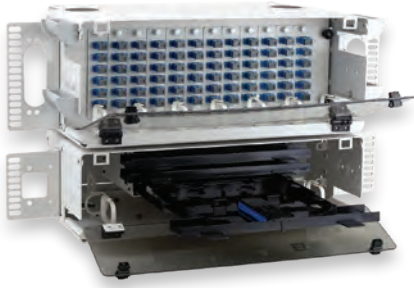
GOVERNING BODY	STANDARD CODE
ASTM	ASTMB209
Telcordia	GR-63NEBS

Accessories

DESCRIPTION	AFL NO.
STF-48 Telescoping Splice Drawer	911442-00-00

Connector/Adapter Key

TYPE	DESCRIPTION
ASC	SC—Angle Polish, Simplex, SM
ASF	SC—Angle Polish, Duplex, SM
PSC	SC—Physical Polish, Simplex, MM
PSF	SC—Physical Polish, Duplex, MM
USC	SC—Ultra Polish, Simplex, SM
USF	SC—Ultra Polish, Duplex, SM
PST	ST—Physical Polish, Simplex, MM
UST	ST—Ultra Polish, Simplex, SM
AFC	FC—Angle Polish, Simplex, SM
PFC	FC—Physical Polish, Simplex, MM
UFC	FC—Ultra Polish, Simplex, SM
ADL	LC—Angle Polish, Duplex, SM
PLC	LC—Physical Polish, Simplex, MM
PDL	LC—Physical Polish, Duplex, MM
ULC	LC—Ultra Polish, Simplex, SM
UDL	LC—Ultra Polish, Duplex, SM



LightLink LANSystem 7RU Fiber Patch and Splice Panel

The AFL 7RU Fiber Patch and Splice Panel is designed for use as a rack mount interconnect point where termination and connectivity of up to 144 fibers is desired. The two panel design is based on a 7 rack unit height comprised of a 4RU Termination Patch Panel and a 3RU Optical Splice Shelf. The 4RU Termination Patch Panel includes a master plate that is provisioned with 12 LGX® 118 compatible mounting positions. The 3RU Optical Splice Shelf utilizes three STF-48 telescoping splice drawers.

Standard 7RU Fiber Patch and Splice Panels are available empty for complete field configuration, half loaded with adapter plates and STF-48 telescoping splice trays, or loaded with pigtails, adapter plates and STF-48 telescoping splice trays.

Specifications

- Designed around Telcordia® GR-63NEBS
- Aluminum construction per ASTM B209
- Durable textured powder coat finish available in black or white
- Universal 19/23" EIA/TIA rack compatibility
- Standard density: up to 72-fiber
- High density: up to 144-fiber
- Fiber storage capacity—one meter per spliced fiber (3 mm jacket)
- Uses three STF-48 telescoping splice drawers
- Two panel package—4U patch and 3U splice
- 12 LGX 118 mm positions

Features

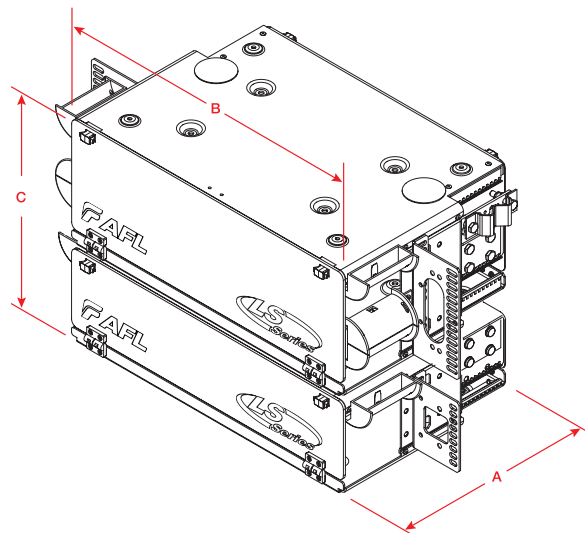
- Fits comfortably into new and existing interconnect, cross-connect, customer premise, and co-location environments
- Most common connector styles and types available
- Compatible with industry standard equipment frames
- LGX-compatible master plate (118 mm)
- Modular design
- Compact and versatile method of organizing splicing and connectivity
- Provides maximum protection of optical components

Applications

- Telecommunications closets
- Data Centers
- Customer Premise
- LAN / WAN Networks
- Central Offices / Headends
- Hubs / Cabinets / Remote Terminals
- FTTH / FTTB Networks

Dimensions

DEPTH (A) IN INCHES	WIDTH (B) IN INCHES	HEIGHT (C) IN INCHES	RACK UNITS	FIBER CAPACITY
11.00	17.00	12.25	7	72/144



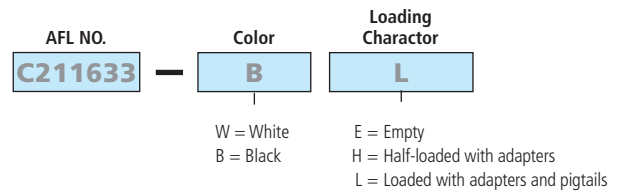
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Telcordia is a registered trademark of Telcordia Technologies, Inc.

LightLink LANSystem 7RU Fiber Patch and Splice Panel

Ordering Information

Select the seven-digit AFL number, specify the color and choose the loading character desired.

Example: Order number for a panel Black in color, loaded with master plate, adapter plates, 72 PSC adapters (12 Six packs), splice drawer (3-48 position), pigtails with connectors, hardware, cable clamp.



Empty - Includes master plate, mounting hardware, cable clamp.

Unloaded - Includes master plate, adapter plates, adapters, splice drawer (48 & up), hardware, cable clamp.

Loaded - Includes master plate, adapter plates, adapters, splice drawer (48 & up), pigtails with connectors, hardware, cable clamp.

Ordering Information

CONFIGURATION	AFL NO.
CNS072P—7U PATCH & SPLICE PANELS (1 EA. 4U PATCH, 3U SPLICE)—LGX118	
EMPTY	C211615
72 PSC adapters (12 Six Packs)Splice Drawers (3-48 position)	C211633
72 UST adapters (12 Six Packs) Splice Drawers (3-48 position)	C211660
72 PST adapters (12 Six Packs)Splice Drawers (3-48 position)	C211669
36 UDL (dup) adapters (12 Three Packs)Splice Drawers (3-48 position)	FM000244
36 PDL (dup) adapters (12 Three Packs)Splice Drawers (3-48 position)	FM000245
72 ASC adapters (12 Six Packs)Splice Drawers (3-48 position)	C210958
72 UFC adapters (12 Six Packs)Splice Drawers (3-48 position)	C210946
72 USC adapters (12 Six Packs)Splice Drawers (3-48 position)	C210953
72 AFC adapters (12 Six Packs) Splice Drawers (3-48 position)	C210949
36 PSF (dup) adapters (12 Three Packs)Splice Drawers (3-48 position)	FM000246
36 USF (dup) adapters (12 Three Packs)Splice Drawers (3-48 position)	FM000247
36 ASF (dup) adapters (12 Three Packs)Splice Drawers (3-48 position)	FM000248
CNS096P—7U PATCH & SPLICE PANELS (1 EA. 4U PATCH, 3U SPLICE)—LGX118	
EMPTY	C210967
96 UST adapters (12 Eight Packs) Splice Drawers (2-48 position)	C210971
96 UFC adapters (12 Eight Packs) Splice Drawers (2-48 position)	C210976
96 AFC adapters (12 Eight Packs) Splice Drawers (2-48 position)	C210982
96 USC adapters (12 Eight Packs) Splice Drawers (2-48 position)	C210985
96 ASC adapters (12 Eight Packs) Splice Drawers (2-48 position)	C210989

Notes:

1) All MM cable is 62.5 µm unless otherwise specified.

2) When ordering Empty Termination Patch/Splice Panel, accessories are available for field configuration.

Qualifications

GOVERNING BODY	STANDARD CODE
ASTM	ASTMB209
Telcordia	GR-63NEBS

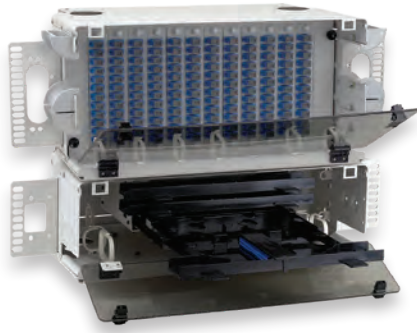
CONFIGURATION	AFL NO.
CNS144HD—7RU HIGH DENSITY PATCH PANELS (1 EA. 4U PATCH, 3U SPLICE)—LGX118	
72 UDL (dup) adapters (12 Six Packs)Splice Drawers (3-48 position)	C211673
72 PSF (dup) adapters (12 Six Packs)Splice Drawers (3-48 position)	C211637
72 PDL (dup) adapters (12 Six Packs)Splice Drawers (3-48 position)	C211684
72 USF (dup) adapters (12 Six Packs)Splice Drawers (3-48 position)	FM000250
72 ASF (dup) adapters (12 Six Packs)Splice Drawers (3-48 position)	FM000251
144 UST adapters (12 Twelve Packs)Splice Drawers (3-48 position)	FM000252
144 PST adapters (12 Twelve Packs)Splice Drawers (3-48 position)	FM000253
144 UFC adapters (12 Twelve Packs)Splice Drawers (3-48 position)	FM000254
144 USC adapters (12 Twelve Packs)Splice Drawers (3-48 position)	FM000255
144 ASC adapters (12 Twelve Packs)Splice Drawers (3-48 position)	FM000256

Accessories

DESCRIPTION	AFL NO.
STF-48 Telescoping Splice Drawer	911442-00-00

Connector/Adapter Key

TYPE	DESCRIPTION
ASC	SC—Angle Polish, Simplex, SM
ASF	SC—Angle Polish, Duplex, SM
PSC	SC—Physical Polish, Simplex, MM
PSF	SC—Physical Polish, Duplex, MM
USC	SC—Ultra Polish, Simplex, SM
USF	SC—Ultra Polish, Duplex, SM
PST	ST—Physical Polish, Simplex, MM
UST	ST—Ultra Polish, Simplex, SM
AFC	FC—Angle Polish, Simplex, SM
PFC	FC—Physical Polish, Simplex, MM
UFC	FC—Ultra Polish, Simplex, SM
ADL	LC—Angle Polish, Duplex, SM
PLC	LC—Physical Polish, Simplex, MM
PDL	LC—Physical Polish, Duplex, MM
ULC	LC—Ultra Polish, Simplex, SM
UDL	LC—Ultra Polish, Duplex, SM



LightLink LANSystem 8RU Fiber Patch and Splice Panel

The AFL 8RU Fiber Patch and Splice Panel is designed for use as a rack mount interconnect point where termination and connectivity of up to 144 fibers is desired. The standard density, two panel design is based on an 8 rack unit height comprised of a 5RU Termination Patch Panel and a 3RU Optical Splice Shelf. The 5RU Termination Patch Panel includes a master plate that is provisioned with twelve LGX® 170 compatible mounting positions. The 3RU Optical Splice Shelf utilizes three STF-48 telescoping splice drawers.

Standard 8RU Fiber Patch and Splice Panels are available empty for complete field configuration, half loaded with adapter plates and STF-48 telescoping splice trays, or loaded with pigtails, adapter plates and STF-48 telescoping splice trays.

Specifications

- Designed around Telcordia® GR-63NEBS
- Aluminum construction per ASTM B209
- Durable textured powder coat finish available in black or white
- Universal 19/23" EIA/TIA rack compatibility
- Standard density: up to 144-fiber
- Fiber storage capacity—one meter per spliced fiber (3 mm jacket)
- Uses three STF-48 telescoping splice drawers
- Two panel package Standard Density: 5U patch and 3U splice
- 12 LGX 170 mm positions

Features

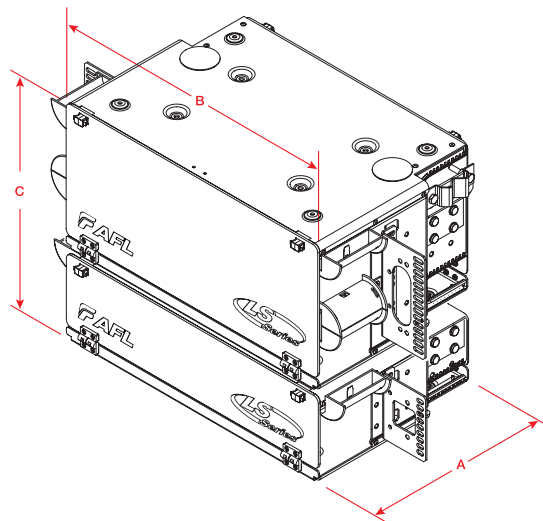
- Fits comfortably into new and existing interconnect, cross-connect, customer premise, and co-location environments
- Most common connector styles and types available
- Compatible with industry standard equipment frames
- LGX compatible master plate (170 mm)
- Modular design
- Compact and versatile method of organizing splicing and connectivity
- Provides maximum protection of optical components

Applications

- Telecommunications closets
- Data Centers
- Customer Premise
- LAN / WAN Networks
- Central Offices / Headends
- Hubs / Cabinets / Remote Terminals
- FTTH / FTTB Networks

Dimensions

PANEL VERSION	DEPTH (A) IN INCHES	WIDTH (B) IN INCHES	HEIGHT (C) IN INCHES	RACK UNITS	FIBER CAPACITY
Standard	11.00	17.00	14.00	8	144



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Telcordia is a registered trademark of Telcordia Technologies, Inc.

LightLink LANSystem 8RU Fiber Patch and Splice Panel

Ordering Information

Select the seven-digit AFL number, specify the color and choose the loading character desired.

AFL NO.	Color	Loading Character
C211714	B	L
	W = White B = Black	E=Empty H = Half-loaded with adapters L=Loaded with adapters and pigtails

Example: Order number for a panel Black in color, loaded with, master plate, adapter plates, 144 PSC adapters (12 Twelve packs), splice drawer (3-48 position), pigtails with connectors, hardware, cable clamp.

Empty - Includes master plate, mounting hardware, cable clamp.

Unloaded - Includes master plate, adapter plates, adapters, splice drawer (48 & up), hardware, cable clamp.

Loaded - Includes master plate, adapter plates, adapters, splice drawer (48 & up), pigtails with connectors, hardware, cable clamp.

Configuration Part Numbers

CONFIGURATION	AFL NO.
CNS144P—8U PATCH & SPLICE PANELS (1 EA. 4U PATCH, 3U SPLICE)— LGX170	
EMPTY	C211696
144 PSC adapters (12 Twelve Packs) Splice Drawers (3-48 position)	C211714
144 UST adapters (12 Twelve Packs) Splice Drawers (3-48 position)	C211741
144 PST adapters (12 Twelve Packs) Splice Drawers (3-48 position)	C211750
72 UDL (dup) adapters (12 Six Packs) Splice Drawers (3-48 position)	FM000258
72 PDL (dup) adapters (12 Six Packs) Splice Drawers (3-48 position)	FM000259
144 ASC adapters (12 Twelve Packs) Splice Drawers (3-48 position)	C211021
144 UFC adapters (12 Twelve Packs) Splice Drawers (3-48 position)	C211007
144 USC adapters (12 Twelve Packs) Splice Drawers (3-48 position)	FM000260
72 PSF (dup) adapters (12 Six Packs) Splice Drawers (3-48 position)	FM000261
72 USF (dup) adapters (12 Six Packs) Splice Drawers (3-48 position)	FM000262
72 ASF (dup) adapters (12 Six Packs) Splice Drawers (3-48 position)	FM000263

Notes:

- 1) All MM cable is 62.5 µm unless otherwise specified.
- 2) When ordering Empty Termination Patch/Splice Panel, accessories are available for field configuration.

Qualifications

GOVERNING BODY	STANDARD CODE
ASTM	ASTMB209
Telcordia	GR-63NEBS

Accessories

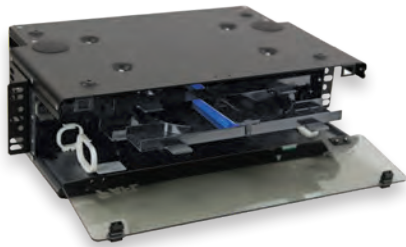
DESCRIPTION	AFL NO.
STF-48 Telescoping Splice Drawer	911442-00-00

Connector/Adapter Key

TYPE	DESCRIPTION
ASC	SC—Angle Polish, Simplex, SM
ASF	SC—Angle Polish, Duplex, SM
PSC	SC—Physical Polish, Simplex, MM
PSF	SC—Physical Polish, Duplex, MM
USC	SC—Ultra Polish, Simplex, SM
USF	SC—Ultra Polish, Duplex, SM
PST	ST—Physical Polish, Simplex, MM
UST	ST—Ultra Polish, Simplex, SM
AFC	FC—Angle Polish, Simplex, SM
PFC	FC—Physical Polish, Simplex, MM
UFC	FC—Ultra Polish, Simplex, SM
ADL	LC—Angle Polish, Duplex, SM
PLC	LC—Physical Polish, Simplex, MM
PDL	LC—Physical Polish, Duplex, MM
ULC	LC—Ultra Polish, Simplex, SM
UDL	LC—Ultra Polish, Duplex, SM

LightLink LANSystem SPL3RU and SPL5RU—Optical Splice Shelf

The LightLink LANSystem Optical Splice Shelf is designed to provide a convenient in-rack splicing and interconnection point for Outside Plant (OSP) cable entering a Central Office (CO), Controlled Environmental Vault (CEV), Headend (HE) or customer location. Units are available with three or six STF-48 Telescoping Splice Drawers. Each drawer is capable of handling up to 48 individual single-fused or up to 144 mass-fused fibers, with minimum bend radius routing and protection.



SPL3RU



SPL5RU

Specifications

- Designed around Telcordia® GR-63NEBS
- Aluminum construction per ASTM B209
- Durable textured powder coat finish available in black or white
- Universal 19/23" EIA/TIA rack compatibility

Features

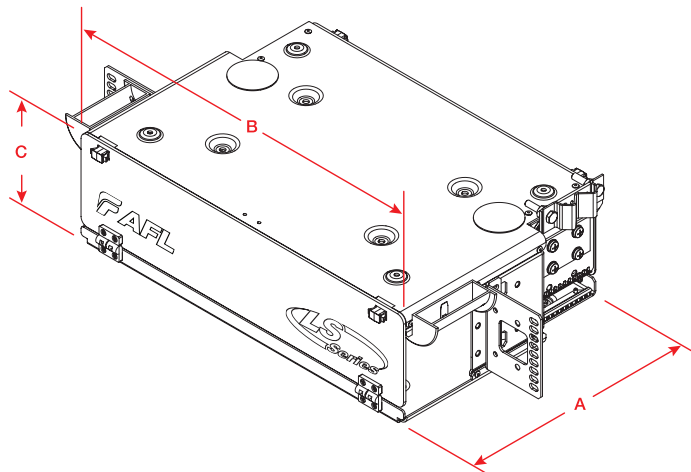
- Fits comfortably into new and existing interconnect, cross-connect, customer premise, and co-location environments
- Compatible with industry standard equipment frames
- For in-rack splicing of outside plant cable to connectorized pigtails or riser cable
- Drawers handle up to 48 single-fused or 144 mass-fused fibers
- Cable entry/exit grommet seals
- Durable and scratch resistant power coated antique white finish
- Hinged plexiglass front and rear door
- Spring loaded latches

Applications

- Telecommunications closets
- Data Centers
- Customer Premise
- LAN / WAN Networks
- Central Offices / Headends
- Hubs / Cabinets / Remote Terminals
- FTTH / FTTB Networks

Dimensions

MODEL	NO. OF TRAYS	DEPTH (A) (INCHES)	WIDTH (B) (INCHES)	HEIGHT (C) (INCHES)	RACK UNITS	SPLICE CAPACITY	UNLOADED WEIGHT	MATERIAL GAUGE
SPL3RU	3	11.00	17.00	5.25	3	144 single, 432 mass	8.4 lbs.	2.03 mm
SPL5RU	6	11.00	17.00	7.00	5	288 single, 864 mass	9.0 lbs.	2.03 mm



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Telcordia is a registered trademark of Telcordia Technologies, Inc.

LightLink LANSystem SPL3RU and SPL5RU—Optical Splice Shelf

Ordering Information

DESCRIPTION	AFL NO.
SPL3RU	
White, 3RU Optical Splice Shelf—EMPTY	C211777 - W
Black, 3RU Optical Splice Shelf—EMPTY	C211777 - B
White, 3RU Optical Splice Shelf—with 3 telescoping splice drawers	C211781 - W
Black, 3RU Optical Splice Shelf—with 3 telescoping splice drawers	C211781 - B
SPL5RU	
White, 5RU Optical Splice Shelf—EMPTY	C211795 - W
Black, 5RU Optical Splice Shelf—EMPTY	C211795 - B
White, 5RU Optical Splice Shelf—with 6 telescoping splice drawers	C211799 - W
Black, 5RU Optical Splice Shelf—with 6 telescoping splice drawers	C211799 - B

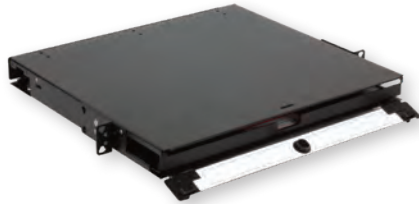
Accessories

DESCRIPTION	AFL NO.
STF-48 Telescoping Splice Drawer, up to 48 single fused or 144 mass fused splices	911442-00-00
1x8 Universal Core Tube Fiber Routing Kit	FC000008
1x6 Universal Ribbon or Loose Tube Fiber Routing Kit	FC000070

Qualifications

GOVERNING BODY	STANDARD CODE
ASTM	ASTMB209
Telcordia	GR-63NEBS

Xpress Fiber Management® (XFM®) 1RU Patch Panel



The Xpress Fiber Management (XFM) 1U patch panel is a rack mountable interconnect point specifically designed to manage dense fiber applications. Based on the LGX® intermateability platform, the panel is fully compatible with AFL's XFM Optical Cassette, Passive Optical Coupler Modules, and Poli-MOD® solutions. This panel offers enhanced management of densities up to 72 fibers using MTP-LC XFM Optical Cassettes (24 fibers).

Features

- Steel construction
- Textured black powder coat finish
- Universal WECO/TIA 19"/23" rack compatibility
- (3) LGX 118 adapter plate / module mounting positions
- Slide-out tray with relief cut-outs for simplified connector access
- Optional front door key lock for heightened protection of internal components

Applications

- Data Centers
- Enterprise Networks
- Telecommunications Closets
- Central Offices / Headends

Specifications

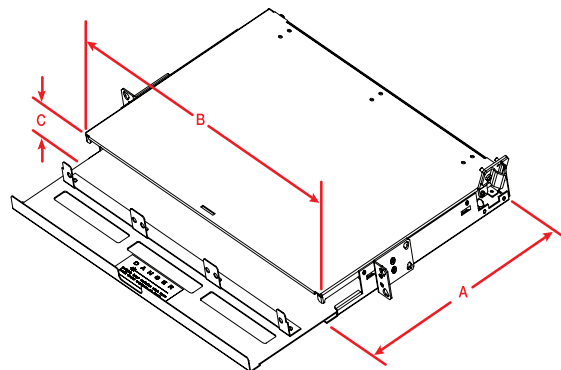
DEPTH (A) (inches)	WIDTH (B) (inches)	HEIGHT (C) (inches)	RACK UNITS	CAPACITY	UNLOADED WEIGHT
15.5	17	1.7	1	(3) LGX 118	13 lbs.

Ordering Information

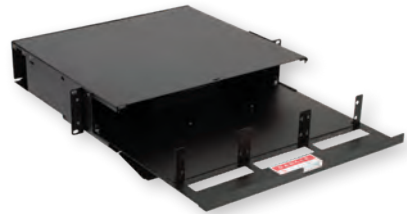
DESCRIPTION	MODEL NUMBER	AFL NO.
Xpress Fiber Management 1U Patch Panel, Black, Empty	XFM-1-U-B-0	FM002711-BE

Accessories

DESCRIPTION	AFL NO.
Kit, Lock, for CON/CNS Panels	FM001318



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Xpress Fiber Management® (XFM) 2RU Patch Panel

The Xpress Fiber Management (XFM) 2U patch panel is a rack mountable interconnect point specifically designed to manage dense fiber applications. Based on the LGX® intermateability platform, the panel is fully compatible with AFL's XFM Optical Cassette, Passive Optical Coupler Modules, and Poli-MOD® solutions. This panel offers enhanced management of densities up to 144 fibers using MTP-LC XFM Optical Cassettes (24 fibers).

Features

- Steel construction
- Textured black powder coat finish
- Universal WECO/TIA 19"/23" rack compatibility
- (6) LGX 118 adapter plate / module mounting positions
- Slide-out tray with relief cut-outs for simplified connector access
- Optional front door key lock for heightened protection of internal components

Applications

- Data Centers
- Enterprise Networks
- Telecommunications Closets
- Central Offices / Headends

Specifications

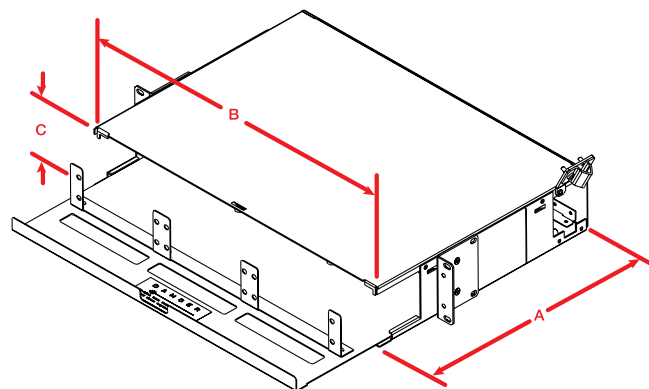
DEPTH (A) IN INCHES	WIDTH (B) IN INCHES	HEIGHT (C) IN INCHES	RACK UNITS	CAPACITY	UNLOADED WEIGHT
15.5	17	3.5	2	(6) LGX 118	15 lbs.

Ordering Information

DESCRIPTION	MODEL NUMBER	AFL NO.
Xpress Fiber Management 2U Patch Panel, Black, Empty	XFM-2-U-B-0	FM002712-BE

Accessories

DESCRIPTION	AFL NO.
Kit, Lock, for CON/CNS Panels	FM001318



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Xpress Fiber Management® (XFM®) 4RU Patch Panel



The Xpress Fiber Management (XFM) 4RU patch panel is a rack mountable interconnect point specifically designed to manage dense fiber applications. Based on the LGX® intermateability platform, the panel is fully compatible with AFL's XFM Optical Cassette, Poli-MOD® and WDM solutions, offering enhanced management of densities up to 288F using MTP/MPO, single fiber, or patch and splice methodologies. Routing rings on the top and bottom of the front panel provide enhanced cable routing allowing cable assemblies to exit comfortably. This panel can be provisioned with a key lock at the time of order for secure environments.

Features

- Aluminum construction
- Textured black powder coat finish
- Universal WECO/TIA 19"/23" rack compatibility
- (12) LGX 118 adapter plate / module mounting positions
- Mounting depth adjustable from flush to 8" in 1" increments

Applications

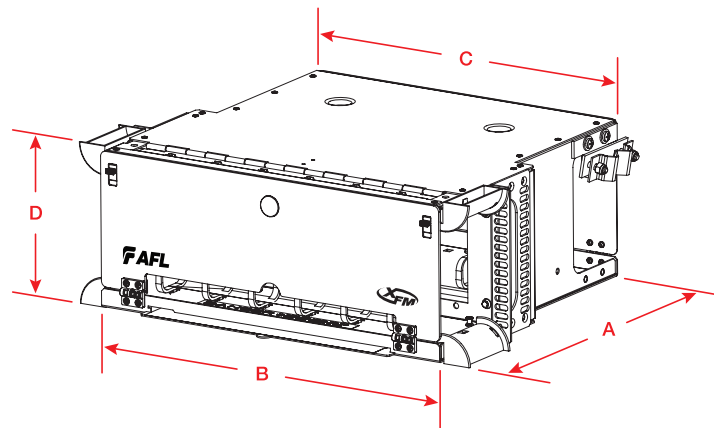
- Data Centers
- Enterprise Networks
- Telecommunications Closets
- Central Offices / Headends

Specifications

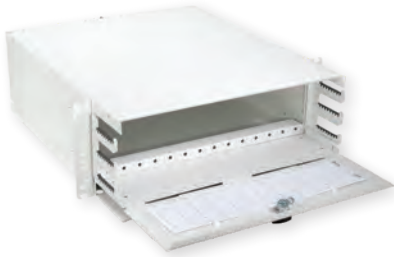
DEPTH (A) IN INCHES	FRONT WIDTH (B) IN INCHES	REAR WIDTH (C) IN INCHES	HEIGHT (D) IN INCHES	RACK UNITS	CAPACITY	UNLOADED WEIGHT
15.5	17	15	7	4	(12) LGX 118	9 lbs.

Ordering Information

DESCRIPTION	MODEL NO.	AFL NO.
Xpress Fiber Management 4U Patch Panel, Black, Empty	XFM-4U-B-0	FM001090-B
Xpress Fiber Management 4U Patch Panel, Black, Empty, Key Lock	XFM-4U-B-K	FM001218-B



LGX is a registered trademark of Furukawa Electric North America, Inc.



Front View—Door Open



Side Ports and Lower Pass-thru

XFM®-28 Dual Access Module Panel

AFL's XFM-28 Dual Access Module Panel is designed to maximize module capacity via both front and rear access in just four rack units.

In applications where additional rack space is unavailable, the XFM-28 doubles the capacity of traditional 14 slot, front-access only 4RU panels, offering a total of 28 slots to accommodate modules (14 front / 14 rear). The panel is lightweight yet robust, with efficient cable management features for routing flexibility.

Features

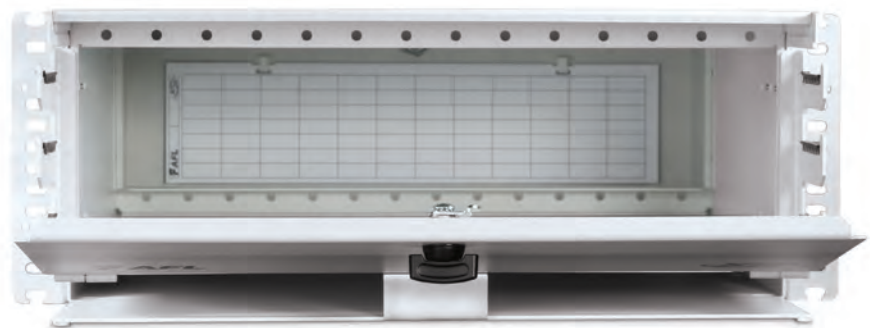
- Dual access via front and rear panel doors
- Aluminum construction
- Universal WECO/TIA 19"/23" rack compatibility
- (28) LGX® 118 module mounting positions (14 front / 14 rear)
- Cable management features include side cable ports and full pass-thru underneath the main bulkhead compartment to allow cable routing from front to back within the panel without eliminating any module positions

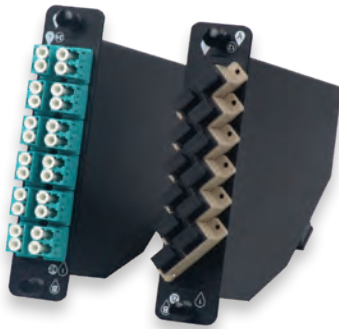
Specifications

DEPTH	WIDTH	HEIGHT	RACK UNITS	CAPACITY	UNLOADED WEIGHT
21 in.	17 in.	7 in.	4	(28) LGX 118	10 lbs.

Ordering Information

DESCRIPTION	MODEL NO.	AFL NO.
XFM-28, Enclosure, 4RU, 19/23"	XFM-28	FM004268





Xpress Fiber Management® (XFM) MPO Optical Cassettes

AFL's Xpress Fiber Management Optical Cassette product line is a family of preterminated fanout modules that streamline the deployment of optical network infrastructure. The primary function of these products is to break out multi-fiber ribbon connectors to simplex or duplex style connectors for connection to adjacent network elements.

The Xpress Fiber Management Optical Cassette solution features low-loss MPO style trunk cable assemblies. These cassettes are available in the industry standard LGX® footprint as well as a selection of Corning Cable Systems™ footprints to support embedded base installations. All modules feature a durable powder coat finish, and are compatible with all 1U-4U LANSysSystem platforms. All modules are clearly labeled with a silk-screened "A" and "B" positioning reference to ensure proper polarity is maintained in the network, referenced to the polarity convention being deployed.

Applications

- Data centers
- LAN, WAN and SAN
- Interoffice cross-connects
- Campus environments

Features

- 12- and 24- port configurations
- Single-slot LGX packages
- Compatible with LANSysSystem and WME hardware
- Available in black with rear MPO connection(s)
- SMF, 62.5 μm MMF and 50 μm MMF supported
- SC- and LC-MPO standard configurations
- ST- and FC-MPO configurations available on special order

Optical Performance Data

PARAMETER	Single-mode Fiber (OS1)					Multimode Fiber (OM1, OM2 and 50 μm Laser Optimized)		
	LC - MPO	LCAPC - MPO	SC - MPO	SCAPC - MPO	ST - MPO	LC - MPO	SC - MPO	ST - MPO
Max IL (dB)	1.15	1.15	1.3	1.3	1.3	1.15	1.3	1.3
Typical IL (dB)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Reflectance (dB)	-55	-65	-55	-65	-55	-30	-30	-30

Notes:

1. Single-mode IL test wavelengths 1310 nm and 1550 nm
2. Multimode IL test wavelengths 850 nm and 1300 nm
3. Single-mode RL test wavelengths 1310 nm and 1550 nm
4. Multimode RL test wavelengths 850 nm and 1300 nm

Ordering Information

FIBER COUNT, CONNECTOR OPTION	SINGLE-MODE		MULTIMODE	
	UPC - MPO (MALE, APC)	APC - MPO (Male, APC)	62.5 μm OM1 PC - MPO (Male, PC)	50 μm LOMMF OM4 PC - MPO (Male, PC)
12F, LC	FM000090-B	FM001477-B	FM000092-B	FM000273-B
24F, LC	FM000691-B	FM001653-B	FM000663-B	FM000692-B
12F, SC	FM000087-B	FM001465-B	FM000089-B	FM000272-B
12F, ST	FM000093-B	N/A	FM000095-B	FM000274-B

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Telcordia is a registered trademark of Telcordia Technologies, Inc.

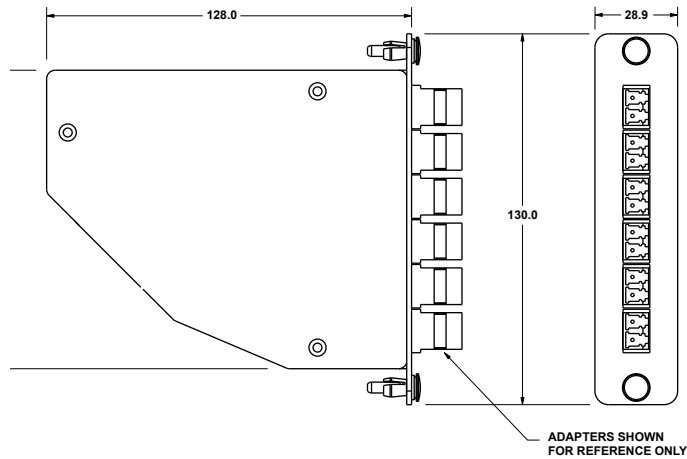
Xpress Fiber Management® (XFM) MPO Optical Cassettes

Ordering Information – Accessories

DESCRIPTION	AFL NO.
145 mm Adapter Bracket	FM001636

NOTE: Allows standard LGX modules, such as AFL's Poli-Mod Interconnect Module and the XFM Optical Cassette, to be mounted into existing Corning Cable Systems™ CCH series and PCH series racks and wall mount products.

Dimensions



Qualifications

GOVERNING BODY	STANDARD CODE
ANSI/TIA/EIA	ANSI/TIA/EIA-568-B.3
Telcordia	GR-326
Telcordia	GR-1435



ASCEND Fiber Housings in Rack

Features

- High Density: 1RU/144F, 2RU/288F and 4RU/576F
- Designed for 19" rack. Optional 23" rack mount kit available.
- Galvannealed steel construction
- Hinged front and rear doors and removable back cover
- BASE-8, BASE-12 and BASE-24 compatibility
- Interchangeable cassette options for multiple applications
- Cassettes install independently from front or rear of housing
- Trunk cable management area accommodates ASCEND Trunk Cable Assemblies equipped with integrated cable mounting clip
- Compatible with all ASCEND Cassettes

Applications

- Data Centers
- Central Offices
- Headends
- Structured Cabling Networks
- Wavelength Division Multiplexing (WDM)

ASCEND® Fiber Housings

ASCEND fiber housings are available in 1RU, 2RU and 4RU sizes with densities of up to 144, 288, and 576 fibers for LC connections, respectively. Designed to support incremental growth or a full-scale deployment, ASCEND housings provide the ultimate in ease-of-use and fiber management features.

ASCEND housings are 19" or 23" (separate kit) rack-mountable and constructed using galvannealed steel for an extended service life. The front and rear doors are both hinged on the bottom, while the rear section of the housing cover is removable on the 1RU and 2RU for unobstructed access to all connector interfaces. The 4RU Housing features a fixed top equipped with lance positions to accommodate additional trunk cable assemblies, enabling both bottom and top cable entry and flexible routing options. Integrated routing rings at the front of the trays enable secure and organized routing of patch cords which facilitates efficient Moves, Adds and Changes (MACs).

The rear of the housing incorporates a trunk cable management area which features multiple trunk cable outback clip mounting positions that are designed to securely manage slack while allowing the trays to slide in/out for installation and service.

NOTE: A separate external cable mounting bracket is required if non-ASCEND cable assemblies are going to be installed in ASCEND Fiber Housings.

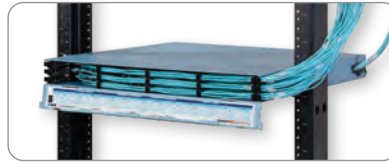
Ordering Information

PANEL TYPE	DESCRIPTION	AFL NO.
BASE-8	ASCEND HOUSING, 1RU, BASE-8 TRAYS	ASCEND-1RU-8-RT
	ASCEND HOUSING, 2RU, BASE-8 TRAYS	ASCEND-2RU-8-RT
	ASCEND HOUSING, 4RU, BASE-8 TRAYS	ASCEND-4RU-8-RT
BASE-12	ASCEND HOUSING, 1RU, BASE-12 TRAYS	ASCEND-1RU-12-RT
	ASCEND HOUSING, 2RU, BASE-12 TRAYS	ASCEND-2RU-12-RT
	ASCEND HOUSING, 4RU, BASE-12 TRAYS	ASCEND-4RU-12-RT
BASE-24	ASCEND HOUSING, 1RU, BASE-24 TRAYS	ASCEND-1RU-24-RT
	ASCEND HOUSING, 2RU, BASE-24 TRAYS	ASCEND-2RU-24-RT
	ASCEND HOUSING, 4RU, BASE-24 TRAYS	ASCEND-4RU-24-RT

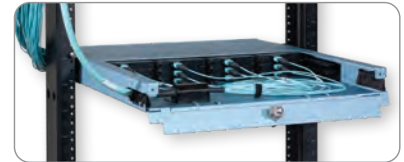
ASCEND® Fiber Housings



ASCEND 1RU



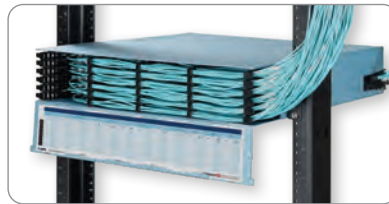
ASCEND 1RU front



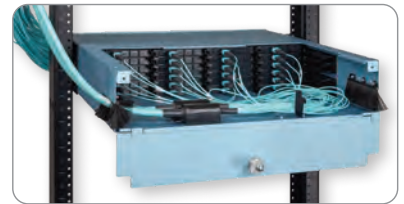
ASCEND 1RU rear



ASCEND 2RU



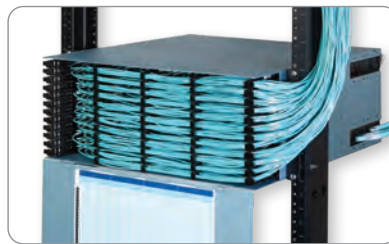
ASCEND 2RU front



ASCEND 2RU rear



ASCEND 4RU



ASCEND 4RU front



ASCEND 4RU rear

Specifications

PARAMETER	MODEL		
	ASCEND 1RU	ASCEND 2RU	ASCEND 4RU
Rack Space	1 RU	2 RU	4 RU
Fiber Density (BASE-12, BASE-24)	144 (LC), 864 (MPO)	288 (LC), 1,728 (MPO)	576 (LC), 3,456 (MPO)
Fiber Density (BASE-8)	144 (LC), 576 (MPO)	288 (LC), 1,152 (MPO)	576 (LC), 2,304 (MPO)
Number of Trays	3	6	12
Cassette Capacity	18 x BASE-8 Cassettes (6 per tray) 12 x BASE-12 Cassettes (4 per tray) 6 x BASE-24 Cassettes (2 per tray)	36 x BASE-8 Cassettes (6 per tray) 24 x BASE-12 Cassettes (4 per tray) 12 x BASE-24 Cassettes (2 per tray)	72 x BASE-8 Cassettes (6 per tray) 48 x BASE-12 Cassettes (4 per tray) 24 x BASE-24 Cassettes (2 per tray)
Dimensions (HxWxD)	44.5 x 438.2 x 501.6 mm 1.75 x 17.25 x 19.75 in.	88.9 x 438.2 x 501.6 mm 3.5 x 17.25 x 19.75 in.	177.8 x 438.2 x 501.6 mm 7.0 x 17.25 x 19.75 in.
Weight	7.5 kg 16.6 lb.	10.2 kg 22.4 lb.	15.7 kg 34.6 lb.
Color	Blue	Blue	Blue
Material	Metal Components: 16 GA Galvannealed Sheet Steel per ASTM A653	Metal Components: 16 GA Galvannealed Sheet Steel per ASTM A653	Metal Components: 16 GA Galvannealed Sheet Steel per ASTM A653

Qualifications

GOVERNING BODY	STANDARD CODE
RoHS	Compliant



ASCEND® Optical Cassettes

ASCEND optical cassettes are the building blocks of the high density platform and are available in a wide range of configurations for multiple applications in BASE-8, BASE-12 and BASE-24 configurations.

Available in single-mode and multimode fiber types, ASCEND optical cassettes feature low loss MPO connectors and VFL-compatible shuttered LC adapters.

ASCEND cassettes are compatible with all ASCEND housings and can be independently installed from the front or rear of the housing onto a sliding tray system. This allows access to individual connections while minimizing disruption to other fiber connections.

Features

- Wide variety of cassettes for multiple applications
 - Fanout
 - Patch
 - Splice
 - WDM
- BASE-8, BASE-12 and BASE-24 configurations
- SM, MM (OM3) and MM (OM4)
- Low loss MPO connectors
- VFL-compatible shuttered LC adapters
- Install independently from front or rear of housing
- Compatible with all ASCEND housings

Applications

- Data Centers
- Central Offices
- Headends
- Structured Cabling Networks



ASCEND® Fanout Cassettes

ASCEND Fanout Cassettes are pre-terminated plug-and-play breakout modules designed to transition a trunk cable into individual connector ports. Available in single-mode and multimode fiber types, Fanout Cassettes feature low-loss MPO connectors and VFL-compatible shuttered LC adapters. All cassettes are offered in BASE-8, BASE-12 and BASE-24 configurations.

Fanout Cassettes are compatible with all standard ASCEND housings and can be independently installed from the front or rear onto a sliding tray system. This allows access to individual connections while minimizing disruption to other fiber connections.

Optical Performance Data

PARAMETER	Single-mode Fiber (OS2)	Single-mode Fiber (OS2)	Multimode Fiber (OM3/4)
	LC/UPC - MPO	LC/APC - MPO	LC/PC - MPO
Max IL (dB)	0.55	0.60	0.45
Typical IL (dB)	0.35	0.35	0.30
Reflectance (dB)	-55	-60	-20
Dimensions (L x W) (mm)	132.5 x 94	132.5 x 94	132.5 x 94
Color	Blue - Black	Green - Black	Aqua - Black

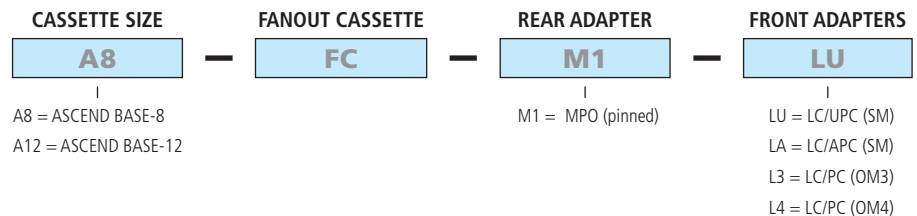
Features

- Plug and Play
- BASE-8, BASE-12 or BASE-24 configurations
- SM, MM (OM3) and MM (OM4)
- VFL-compatible shuttered Quad LC adapters
- Low loss MPO connectors
- Compatible with all ASCEND housings
- Install independently from front or rear of housing

Applications

- Data Centers
- Central Offices
- Headends
- Structured Cabling Networks

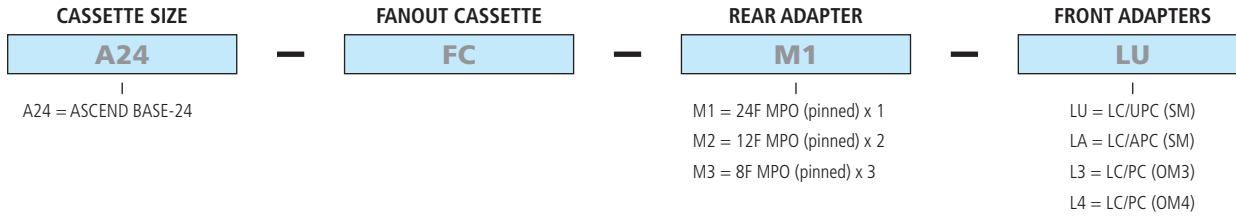
Ordering Information (BASE-8 and BASE-12)



CATEGORY	DESCRIPTION	AFL NO.
BASE-8 FANOUT CASSETTES	ASCEND-8 FANOUT CASSETTE, BASE-8, PINNED MPO-LC/UPC, SM	A8-FC-M1-LU
	ASCEND-8 FANOUT CASSETTE, BASE-8, PINNED MPO-LC/APC, SM	A8-FC-M1-LA
	ASCEND-8 FANOUT CASSETTE, BASE-8, PINNED MPO-LC/PC, OM3	A8-FC-M1-L3
	ASCEND-8 FANOUT CASSETTE, BASE-8, PINNED MPO-LC/PC, OM4	A8-FC-M1-L4
BASE-12 FANOUT CASSETTES	ASCEND-12 FANOUT CASSETTE, BASE-12, PINNED MPO-LC/UPC, SM	A12-FC-M1-LU
	ASCEND-12 FANOUT CASSETTE, BASE-12, PINNED MPO-LC/APC, SM	A12-FC-M1-LA
	ASCEND-12 FANOUT CASSETTE, BASE-12, PINNED MPO-LC/PC, OM3	A12-FC-M1-L3
	ASCEND-12 FANOUT CASSETTE, BASE-12, PINNED MPO-LC/PC, OM4	A12-FC-M1-L4

ASCEND® Fanout Cassettes

Ordering Information (BASE-24)



CATEGORY	DESCRIPTION	AFL NO.
BASE-24 FANOUT CASSETTES	ASCEND-24 FANOUT CASSETTE, BASE-24, PINNED 24F MPO-LC/UPC, SM	A24-FC-M1-LU
	ASCEND-24 FANOUT CASSETTE, BASE-24, PINNED 24F MPO-LC/APC, SM	A24-FC-M1-LA
	ASCEND-24 FANOUT CASSETTE, BASE-24, PINNED 24F MPO-LC/PC, OM3	A24-FC-M1-L3
	ASCEND-24 FANOUT CASSETTE, BASE-24, PINNED 24F MPO-LC/PC, OM4	A24-FC-M1-L4
	ASCEND-24 FANOUT CASSETTE, BASE-24, PINNED 12F MPO-LC/UPC, SM	A24-FC-M2-LU
	ASCEND-24 FANOUT CASSETTE, BASE-24, PINNED 12F MPO-LC/APC, SM	A24-FC-M2-LA
	ASCEND-24 FANOUT CASSETTE, BASE-24, PINNED 12F MPO-LC/PC, OM3	A24-FC-M2-L3
	ASCEND-24 FANOUT CASSETTE, BASE-24, PINNED 12F MPO-LC/PC, OM4	A24-FC-M2-L4
	ASCEND-24 FANOUT CASSETTE, BASE-24, PINNED 8F MPO-LC/UPC, SM	A24-FC-M3-LU
	ASCEND-24 FANOUT CASSETTE, BASE-24, PINNED 8F MPO-LC/APC, SM	A24-FC-M3-LA
	ASCEND-24 FANOUT CASSETTE, BASE-24, PINNED 8F MPO-LC/PC, OM3	A24-FC-M3-L3
	ASCEND-24 FANOUT CASSETTE, BASE-24, PINNED 8F MPO-LC/PC, OM4	A24-FC-M3-L4

Qualifications

GOVERNING BODY	STANDARD CODE
RoHS	Compliant



ASCEND® Patch Cassettes

ASCEND Patch Cassettes are pre-loaded with MPO adapters or VFL-compatible shuttered LC adapters. Available in BASE-8 and BASE-12 configurations, Patch Cassettes install easily from the front or rear of any standard ASCEND housing. Each cassette independently mounts onto a sliding tray which allows access to individual connections while minimizing disruption to other fiber connections.

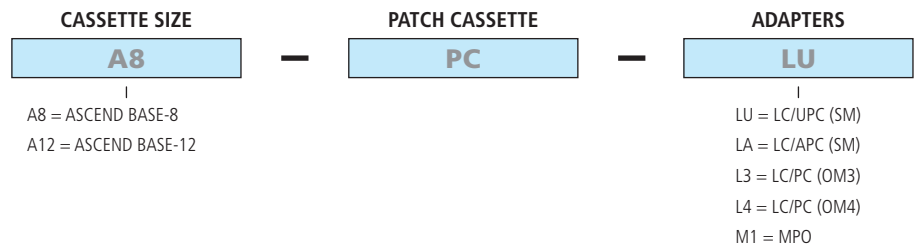
Features

- Plug and Play
- Install independently from front or rear of housing
- Compatible with all ASCEND housings
- Standard Duplex MPO or VFL-compatible shuttered Quad LC adapters

Applications

- Data Centers
- Central Offices
- Headends
- Structured Cabling Networks

Ordering Information



CATEGORY	DESCRIPTION	ADAPTERS/ FIBER COUNT	AFL NO.
BASE-8 PATCH CASSETTES	ASCEND-8 PATCH CASSETTE, BASE-8, LC/UPC, SM	8 LC/UPC (8 Fibers)	A8-PC-LU
	ASCEND-8 PATCH CASSETTE, BASE-8, LC/APC, SM	8 LC/APC (8 Fibers)	A8-PC-LA
	ASCEND-8 PATCH CASSETTE, BASE-8, LC/PC, OM3	8 LC/PC (8 Fibers)	A8-PC-L3
	ASCEND-8 PATCH CASSETTE, BASE-8, LC/PC, OM4	8 LC/PC (8 Fibers)	A8-PC-L4
	ASCEND-8 PATCH CASSETTE, BASE-8, MPO	4 MPO (48 Fibers)	A8-PC-M1
BASE-12 PATCH CASSETTES	ASCEND-12 PATCH CASSETTE, BASE-12, LC/UPC, SM	12 LC/UPC (12 Fibers)	A12-PC-LU
	ASCEND-12 PATCH CASSETTE, BASE-12, LC/APC, SM	12 LC/APC (12 Fibers)	A12-PC-LA
	ASCEND-12 PATCH CASSETTE, BASE-12, LC/PC, OM3	12 LC/PC (12 Fibers)	A12-PC-L3
	ASCEND-12 PATCH CASSETTE, BASE-12, LC/PC, OM4	12 LC/PC (12 Fibers)	A12-PC-L4
	ASCEND-12 PATCH CASSETTE, BASE-12-MPO (4 MPO Only)	4 MPO (48 Fibers)	A12-PC-M4
	ASCEND-12 PATCH CASSETTE, BASE-12, MPO	6 MPO (72 Fibers)	A12-PC-M1

Qualifications

GOVERNING BODY	STANDARD CODE
RoHS	Compliant



ASCEND® Splice Cassettes

ASCEND Splice Cassettes include 250 micron pre-terminated single fiber pigtails, or one SpiderWeb Ribbon® (SWR®) pigtail, that are loaded within the cassette and can be spliced directly to loose (or ribbon) fiber cable.

All Splice Cassettes feature VFL-compatible shuttered LC adapters with up to 12-fiber capacity. Available in single-mode and multimode fiber types, cassettes leverage a snap-in splice sleeve cradle to securely manage both single and ribbon fiber arrangements. A clear, removable cover allows for easy fiber viewing and access.

Splice Cassettes are compatible with all BASE-12 ASCEND housings and can be independently installed easily from the front or rear onto a sliding tray system. This allows access to individual connections while minimizing disruption to other fiber connections.

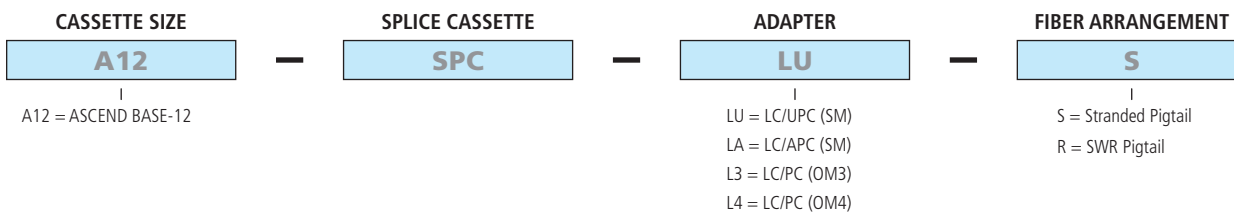
Applications

- Data Centers
- Central Offices
- Headends
- Structured Cabling Networks

Features

- Up to 12-fiber interconnection capacity
- SM, MM (OM3) and MM (OM4)
- 250 µm color-coded single fibers or SWR options
- VFL-compatible shuttered Quad LC adapters
- Clear, removable cover for viewing and access
- Inventive splice sleeve cradle
- Organized fiber routing
- BASE-12 configurations only
- Install independently from front or rear of housing

Ordering Information



STRANDED FIBER		
CATEGORY	DESCRIPTION	AFL NO.
Single-mode	ASCEND-12 SPLICE CASSETTE, LC/UPC, SM, STRANDED PIGTAIL	A12-SPC-LU-S
	ASCEND-12 SPLICE CASSETTE, LC/APC, SM, STRANDED PIGTAIL	A12-SPC-LA-S
Multi-Mode	ASCEND-12 SPLICE CASSETTE, LC/PC, OM3, STRANDED PIGTAIL	A12-SPC-L3-S
	ASCEND-12 SPLICE CASSETTE, LC/PC, OM4, STRANDED PIGTAIL	A12-SPC-L4-S

SPIDERWEB RIBBON FIBER		
CATEGORY	DESCRIPTION	AFL NO.
Single-mode	ASCEND-12 SPLICE CASSETTE, LC/UPC, SM, SWR PIGTAIL	A12-SPC-LU-R
	ASCEND-12 SPLICE CASSETTE, LC/APC, SM, SWR PIGTAIL	A12-SPC-LA-R
Multi-Mode	ASCEND-12 SPLICE CASSETTE, LC/PC, OM3, SWR PIGTAIL	A12-SPC-L3-R
	ASCEND-12 SPLICE CASSETTE, LC/PC, OM4, SWR PIGTAIL	A12-SPC-L4-R

Qualifications

GOVERNING BODY	STANDARD CODE
RoHS	Compliant



BASE-24 to BASE-8 Cassette
AFL No. A8-CC-24X1-8X3-1-1



BASE-12 to BASE-8 Cassette (Single Circuit)
AFL No. A12-CC-24X1-8X3-1-1



BASE-12 to BASE-8 Cassette (Dual Circuit)
AFL No. A12-CC-12X2-8X3-2-1

ASCEND® Conversion Cassettes

AFL's Conversion Cassettes provide an effective solution to transition from one BASE platform to another.

The cassettes fully utilize each fiber in a BASE-12 or BASE-24 array by breaking out the MTP/ MPO adapters at the rear of the cassette into a corresponding number of BASE-8 adapters at the front.

Features

- Accommodates 12 or 24 fiber MTP/MPO connections at the rear of the cassette and effectively transitions to 8 fiber MTP/MPO connections at the front of the cassette
- Compatible with all ASCEND Housings and installed easily from the front or rear of a corresponding BASE-8 or BASE-12 tray

Applications

- Data Centers
- Central Offices
- Headends
- Structured Cabling Networks

Specifications

OPERATING WAVELENGTHS	INSERTION LOSS *	REFLECTANCE
SM: 1310 and 1550 nm MM: 850 and 1300 nm	Typical IL (dB): 0.35 dB Max IL (dB): 0.55 dB	SM: 50 dB MM: 20 dB

* For grade B MPOs, the mean IL is ≤ 0.12 dB and max IL ≤ 0.25 dB for 97% of samples. Elite MTPs maintain max IL ≤ 0.25 dB for 98% of samples. The probability of both two mated pairs in a module being less than 0.25 dB each is 96%.

Temperature Specifications

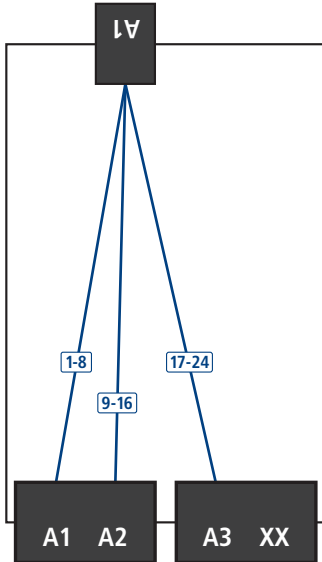
Operating Temperature	-20°C to +75°C
Storage Temperature	-40°C to +85°C

ASCEND® Conversion Cassettes

Schematics

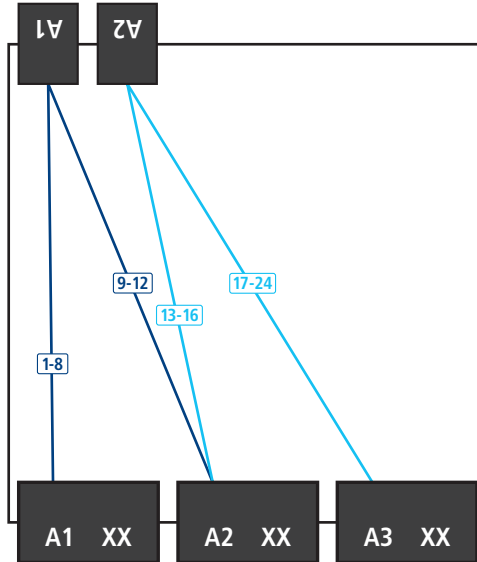
BASE-24 to BASE-8

A8-CC-24X1-8X3-1-1
A8-CC-24X1-8X3-1-3
A8-CC-24X1-8X3-1-4



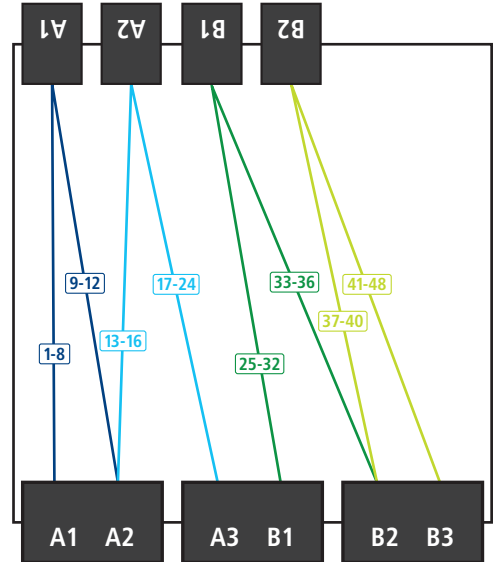
BASE-12 to BASE-8 (Single Circuit)

A12-CC-12X2-8X3-1-1
A12-CC-12X2-8X3-1-3
A12-CC-12X2-8X3-1-4



BASE-12 to BASE-8 (Dual Circuit)

A12-CC-12X2-8X3-2-1
A12-CC-12X2-8X3-2-3
A12-CC-12X2-8X3-2-4



Ordering Information

BASE-24 TO BASE-8 CONVERSION CASSETTE OPTIONS		
CATEGORY	DESCRIPTION	AFL NO.
BASE 8	ASCEND-8 CONVERSION CASSETTE,BASE-8,24X1 MPO REAR,8X3 MPO FRONT,1 CIRCUIT,SM	A8-CC-24X1-8X3-1-1
	ASCEND-8 CONVERSION CASSETTE,BASE-8,24x1 MPO REAR,8X3 MPO FRONT,1 CIRCUIT,OM3	A8-CC-24X1-8X3-1-3
	ASCEND-8 CONVERSION CASSETTE,BASE-8,24X1 MPO REAR,8X3 MPO FRONT,1 CIRCUIT,OM4	A8-CC-24X1-8X3-1-4

BASE-12 TO BASE-8 CONVERSION CASSETTE OPTIONS		
CATEGORY	DESCRIPTION	AFL NO.
BASE 12	ASCEND-8 CONVERSION CASSETTE,BASE-8,24X1 MPO REAR,8X3 MPO FRONT,1 CIRCUIT,SM	A8-CC-24X1-8X3-1-1
	ASCEND-8 CONVERSION CASSETTE,BASE-8,24x1 MPO REAR,8X3 MPO FRONT,1 CIRCUIT,OM3	A8-CC-24X1-8X3-1-3
	ASCEND-8 CONVERSION CASSETTE,BASE-8,24X1 MPO REAR,8X3 MPO FRONT,1 CIRCUIT,OM4	A8-CC-24X1-8X3-1-4
	ASCEND-8 CONVERSION CASSETTE,BASE-8,24X1 MPO REAR,8X3 MPO FRONT,1 CIRCUIT,SM	A8-CC-24X1-8X3-1-1
	ASCEND-8 CONVERSION CASSETTE,BASE-8,24x1 MPO REAR,8X3 MPO FRONT,1 CIRCUIT,OM3	A8-CC-24X1-8X3-1-3
	ASCEND-8 CONVERSION CASSETTE,BASE-8,24X1 MPO REAR,8X3 MPO FRONT,1 CIRCUIT,OM4	A8-CC-24X1-8X3-1-4

Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
EIA/TIA	568	Connectors
ITU-T	G.652.D and G.657-A1	Single Mode Fiber
IEC	60793-2-10 Type A1	OM1, OM2, OM3, OM4 Multimode Fiber
Telcordia	GR-20	Fiber
	GR-1435	Connectors
RoHS	Compliant Directive 2001/65/EU	Fiber and Connectors



BASE-8 Tap Cassette—Front and Rear Access
MPO Rear Input LC Input/ Output/Tap



BASE-12 Tap Cassette—Total Front Access
LC Input/ Output/Tap



BASE-12 Tap Cassette—Front and Rear Access
MPO Rear Input/ Output Front LC Tap ports

ASCEND® Tap Cassettes

High demands placed on modern fiber optic networks requires effective monitoring to maintain optimal performance and troubleshoot system security or other signal issues.

AFL's Tap Cassettes enable access points for monitoring live traffic signals in any fiber optic network.

Available with a variety of options to accommodate different split ratios for tap/ pass thru and input/ output configurations, it is quick and easy to tap and route network signals for any application.

Features

- Elite MPO connectors and adapters
- LC Shuttered Adapters
- Available with 50/50 and 30/70 Split Ratios to accommodate various Tap/ Pass Thru requirements
- Installs into all ASCEND Housings from the front or rear
- ITU-T G.657.D and G.652.A1 Compatible (SM)

Applications

- Data Centers
- Central Offices
- Headends
- Structured Cabling Networks

Temperature Specifications

Operating Temperature	-20°C to +75°C
Storage Temperature	-40°C to +85°C

ASCEND® Tap Cassettes

Specifications: Single-mode (SM)

OPTICAL WAVELENGTHS	POLARIZATION DEPENDENT LOSS (PDL)	CASSETTE TYPE	MAX INSERTION LOSS (IL) THRU PORT (dB) INCLUDING CONNECTORS	MAX INSERTION LOSS (IL) TAP PORT (dB) INCLUDING CONNECTORS	MIN RETURN LOSS (RL) (dB)
1310 nm +/- 40 nm 1550 nm +/- 40 nm	≤ 0.3 dB	50% Tap Port	4.1	4.1	50
		30% Tap Port	2.6	6.5	50

Specifications: Multimode (MM)

OPTICAL WAVELENGTHS	CASSETTE TYPE	MAX INSERTION LOSS (IL) THRU PORT (dB) INCLUDING CONNECTORS	MAX INSERTION LOSS (IL) TAP PORT (dB) INCLUDING CONNECTORS	MIN RETURN LOSS (RL) (dB)
850 nm +/- 20 nm 1300 nm +/- 20 nm	50% Tap Port	4.1	4.1	20
	30% Tap Port	2.6	6.5	20

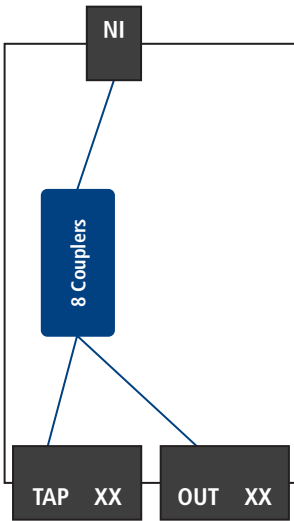


ASCEND® Tap Cassettes

Schematics

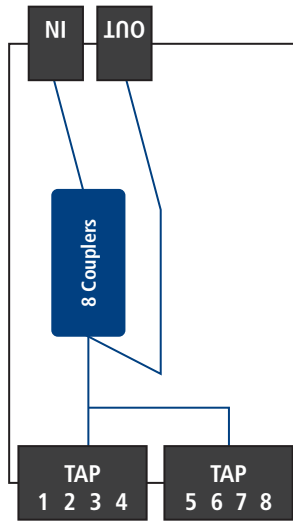
BASE-8

- A8-TC-1-1-XXX-50-1
- A8-TC-1-1-XXX-30-1
- A8-TC-4-1-XXX-50-1
- A8-TC-4-1-XXX-30-1



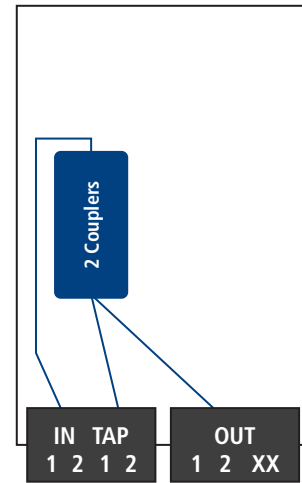
BASE-8

- A8-TC-1-2-ULC-50-1
- A8-TC-1-2-ULC-30-1
- A8-TC-1-2-ALC-50-1
- A8-TC-1-2-ALC-30-1
- A8-TC-4-2-PLC-50-1
- A8-TC-4-2-PLC-30-1



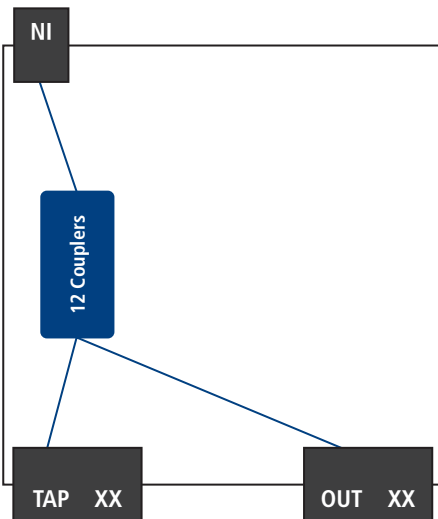
BASE-8

- A8-TC-1-3-ULC-50-1
- A8-TC-1-3-ULC-30-1
- A8-TC-1-3-ALC-50-1
- A8-TC-1-3-ALC-30-1
- A8-TC-4-3-PLC-50-1
- A8-TC-4-3-PLC-30-1



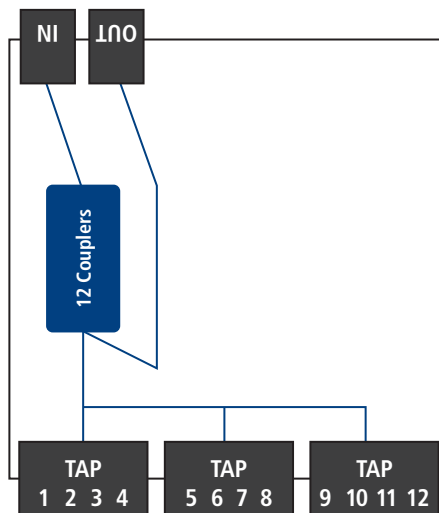
BASE-12

- A12-TC-1-1-XXX-50-1
- A12-TC-1-1-XXX-30-1
- A12-TC-4-1-XXX-50-1
- A12-TC-4-1-XXX-30-1



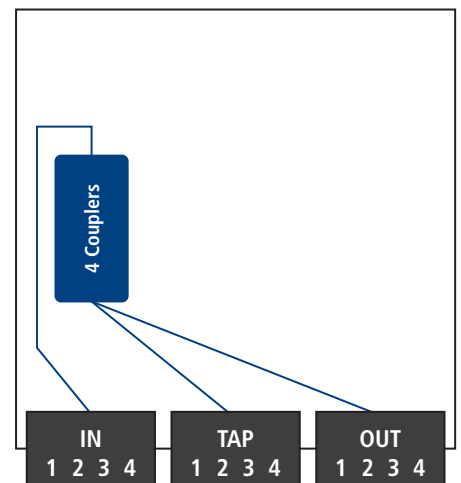
BASE-12

- A12-TC-1-2-ULC-50-1
- A12-TC-1-2-ULC-30-1
- A12-TC-1-2-ALC-50-1
- A12-TC-1-2-ALC-30-1
- A12-TC-4-2-PLC-50-1
- A12-TC-4-2-PLC-30-1



BASE-12

- A12-TC-1-3-ULC-50-1
- A12-TC-1-3-ULC-30-1
- A12-TC-1-3-ALC-50-1
- A12-TC-1-3-ALC-30-1
- A12-TC-4-3-PLC-50-1
- A12-TC-4-3-PLC-30-1



ASCEND® Tap Cassettes

Ordering Information

50/50 (TAP/ PASS THRU) SPLIT RATIO CONFIGURATIONS		
CATEGORY	DESCRIPTION	AFL NO.
BASE-8	ASCEND TAP CASSETTE, BASE-8, SM, MTP FRONT, MTP REAR, 50% TAP SPLIT, SINGLE	A8-TC-1-1-XXX-50-1
	ASCEND TAP CASSETTE, BASE-8, SM, LC/UPC FRONT, MTP REAR, 50% TAP SPLIT, SINGLE	A8-TC-1-2-ULC-50-1
	ASCEND TAP CASSETTE, BASE-8, SM, LC/APC FRONT, MTP REAR, 50% TAP SPLIT, SINGLE	A8-TC-1-2-ALC-50-1
	ASCEND TAP CASSETTE, BASE-8, SM, LC/UPC FRONT, 50% TAP SPLIT, SINGLE	A8-TC-1-3-ULC-50-1
	ASCEND TAP CASSETTE, BASE-8, SM, LC/APC FRONT, 50% TAP SPLIT, SINGLE	A8-TC-1-3-ALC-50-1
	ASCEND TAP CASSETTE, BASE-8, MM, MTP FRONT, MTP REAR, 50% TAP SPLIT, SINGLE	A8-TC-4-1-XXX-50-1
	ASCEND TAP CASSETTE, BASE-8, MM, LC/PC FRONT, MTP REAR, 50% TAP SPLIT, SINGLE	A8-TC-4-2-PLC-50-1
	ASCEND TAP CASSETTE, BASE-8, MM, LC/PC FRONT, 50% TAP SPLIT, SINGLE	A8-TC-4-3-PLC-50-1
BASE-12	ASCEND TAP CASSETTE, BASE-12, SM, MTP FRONT, MTP REAR, 50% TAP SPLIT, SINGLE	A12-TC-1-1-XXX-50-1
	ASCEND TAP CASSETTE, BASE-12, SM, LC/UPC FRONT, MTP REAR, 50% TAP SPLIT, SINGLE	A12-TC-1-2-ULC-50-1
	ASCEND TAP CASSETTE, BASE-12, SM, LC/APC FRONT, MTP REAR, 50% TAP SPLIT, SINGLE	A12-TC-1-2-ALC-50-1
	ASCEND TAP CASSETTE, BASE-12, SM, LC/UPC FRONT, 50% TAP SPLIT, SINGLE	A12-TC-1-3-ULC-50-1
	ASCEND TAP CASSETTE, BASE-12, SM, LC/APC FRONT, 50% TAP SPLIT, SINGLE	A12-TC-1-3-ALC-50-1
	ASCEND TAP CASSETTE, BASE-12, MM, MTP FRONT, MTP REAR, 50% TAP SPLIT, SINGLE	A12-TC-4-1-XXX-50-1
	ASCEND TAP CASSETTE, BASE-12, MM, LC/PC FRONT, MTP REAR, 50% TAP SPLIT, SINGLE	A12-TC-4-2-PLC-50-1
	ASCEND TAP CASSETTE, BASE-12, MM, LC/PC FRONT, 50% TAP SPLIT, SINGLE	A12-TC-4-3-PLC-50-1

30/70 (TAP/ PASS THRU) SPLIT RATIO CONFIGURATIONS		
CATEGORY	DESCRIPTION	AFL NO.
BASE-8	ASCEND TAP CASSETTE, BASE-8, SM, MTP FRONT, MTP REAR, 30% TAP SPLIT, SINGLE	A8-TC-1-1-XXX-30-1
	ASCEND TAP CASSETTE, BASE-8, SM, LC/UPC FRONT, MTP REAR, 30% TAP SPLIT, SINGLE	A8-TC-1-2-ULC-30-1
	ASCEND TAP CASSETTE, BASE-8, SM, LC/APC FRONT, MTP REAR, 30% TAP SPLIT, SINGLE	A8-TC-1-2-ALC-30-1
	ASCEND TAP CASSETTE, BASE-8, SM, LC/UPC FRONT, 30% TAP SPLIT, SINGLE	A8-TC-1-3-ULC-30-1
	ASCEND TAP CASSETTE, BASE-8, SM, LC/APC FRONT, 30% TAP SPLIT, SINGLE	A8-TC-1-3-ALC-30-1
	ASCEND TAP CASSETTE, BASE-8, MM, MTP FRONT, MTP REAR, 30% TAP SPLIT, SINGLE	A8-TC-4-1-XXX-30-1
	ASCEND TAP CASSETTE, BASE-8, MM, LC/PC FRONT, MTP REAR, 30% TAP SPLIT, SINGLE	A8-TC-4-2-PLC-30-1
	ASCEND TAP CASSETTE, BASE-8, MM, LC/PC FRONT, 30% TAP SPLIT, SINGLE	A8-TC-4-3-PLC-30-1
BASE-12	ASCEND TAP CASSETTE, BASE-12, SM, MTP FRONT, MTP REAR, 30% TAP SPLIT, SINGLE	A12-TC-1-1-XXX-30-1
	ASCEND TAP CASSETTE, BASE-12, SM, LC/UPC FRONT, MTP REAR, 30% TAP SPLIT, SINGLE	A12-TC-1-2-ULC-30-1
	ASCEND TAP CASSETTE, BASE-12, SM, LC/APC FRONT, MTP REAR, 30% TAP SPLIT, SINGLE	A12-TC-1-2-ALC-30-1
	ASCEND TAP CASSETTE, BASE-12, SM, LC/UPC FRONT, 30% TAP SPLIT, SINGLE	A12-TC-1-3-ULC-30-1
	ASCEND TAP CASSETTE, BASE-12, SM, LC/APC FRONT, 30% TAP SPLIT, SINGLE	A12-TC-1-3-ALC-30-1
	ASCEND TAP CASSETTE, BASE-12, MM, MTP FRONT, MTP REAR, 30% TAP SPLIT, SINGLE	A12-TC-4-1-XXX-30-1
	ASCEND TAP CASSETTE, BASE-12, MM, LC/PC FRONT, MTP REAR, 30% TAP SPLIT, SINGLE	A12-TC-4-2-PLC-30-1
	ASCEND TAP CASSETTE, BASE-12, MM, LC/PC FRONT, 30% TAP SPLIT, SINGLE	A12-TC-4-3-PLC-30-1

Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
EIA/TIA	568	Connectors
ITU-T	G.652.D and G.657-A1	Single-mode Fiber
IEC	60793-2-10 Type A1	OM1, OM2, OM3, OM4 Multimode Fiber
Telcordia	GR-20	Fiber
	GR-1435	Connectors
RoHS	Compliant Directive 2001/65/EU	Fiber and Connectors



ASCEND® Patch Cord Assemblies

ASCEND patch cord assemblies are constructed with AFL's Micro Dual-Link cable and terminated with a field-reversible LC Uniboot connector.

This round cable design, coupled with the Uniboot LC connector, minimizes the front-side cabling footprint and reduces the impact on airflow up and down the rack, and between racks.

In addition to being field-reversible, the Uniboot LC connector also features an extended push-pull latching mechanism to improve finger access in high density applications.

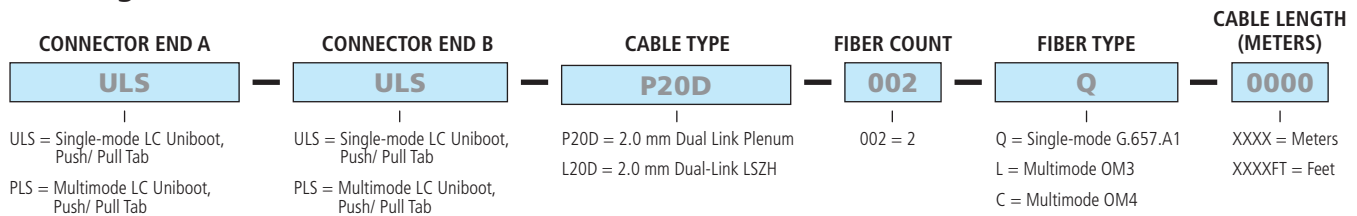
Applications

- Data Centers
- Central Offices
- Headends
- Structured Cabling Networks

Features

- Uniboot LC connector comes pre-terminated with A to B polarity and is field-reversible
- No tools required
- Extended push-pull latching mechanism
- Round 2.0 mm plenum-rated jacket
- SM, MM (OM3) and MM (OM4)
- Bend insensitive fiber (G.657.A1)

Ordering Information

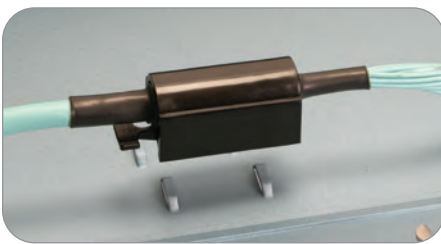


Specifications

PARAMETER	SM	MM
Insertion Loss (Typical)	0.10 dB	0.10 dB
Insertion Loss (Max)	0.30 dB	0.30 dB
Reflectance (Typical)	-55 dB	-30 dB
Durability	500 Cycles	
Operating Temperature	-40°C to +75°C	
Ferrule	Zirconia	

Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
ITU	G.657.A1	Single-mode optical fiber only
Telcordia	GR-409	Cable
	GR-326	Connectors
RoHS	Compliant	Cable



Integrated mounting clip

ASCEND® Trunk Cable Assemblies

ASCEND trunk cable assemblies provide a high performance plug-and-play solution for premise installations where space is a premium.

The small-diameter MicroCore® cable construction provides industry leading fiber density and offers the installer many advantages over traditional cable options – higher tolerance to bends during and after installation; requires less space in cable trays, raceways, ducts and conduits; and enables more efficient airflow in congested, high density cabling applications.

ASCEND trunk cable assemblies feature the MTP® PRO* connector on multimode assemblies which allows for field-reversible polarity and gender with no housing removal, exposed fibers, or loose pins. All trunk cable assemblies have a predefined breakout length which eliminates guess-work and guarantees a clean and well-organized installation.

ASCEND trunk cable assemblies also include an integrated cable mounting clip, or "Outback Clip" which mates directly with the trunk cable management area in the rear of all ASCEND housings. This clip eliminates the need for additional cable clamps and securely positions the incoming cable while eliminating unwanted stress during installation.

NOTE: A separate external cable mounting bracket is required if non-ASCEND cable assemblies are going to be installed in ASCEND Fiber Housings.

Features

- 12-288 fibers in BASE-8 and BASE-12 configurations
- SM, MM (OM3) and MM (OM4)
- Bend-insensitive fiber (G.657.A1)
- Reduced-diameter MicroCore® cable with 2.0 mm subunits (up to 144)
- Plenum or LSZH options available
- Low loss MTP® PRO* connectors with field-reversible polarity and gender
- Single-mode terminations provided with Elite® performance
- Integrated cable mounting clip eliminates the requirement for external clamps for all ASCEND housings
- Pulling eye option available

Applications

- Data Centers
- Central Offices
- Headends
- Structured Cabling Networks

* MTP® PRO connectors are a trademark of US Conec (For MM connectors only)

ASCEND® Trunk Cable Assemblies

Specifications

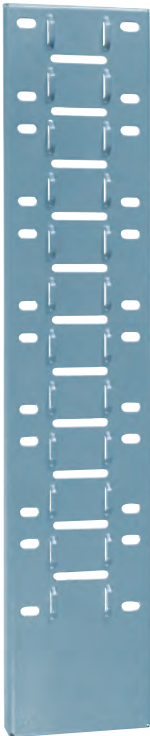
CONNECTOR	Connector Ordering Code	Connector Housing Color	Fiber Type	Cable Jacket Color	IL (Typical dB)	IL (MAX. DB)	Reflectance (Typical dB)
8F MTP Elite (unpinned)	EEF	Yellow	Single-mode G.657.A1 (BIF)	Yellow	0.1	0.35	-60
8F MTP Elite (pinned)	EEM	Yellow	Single-mode G.657.A1 (BIF)	Yellow	0.1	0.35	-60
8F MTP Pro (unpinned)	PFEF	Aqua	50 µm OM3, OM4	Aqua	0.1	0.35	-20
8F MTP Pro (pinned)	PFEM	Aqua	50 µm OM3, OM4	Aqua	0.1	0.35	-20
12F MTP Elite (unpinned)	ETF	Yellow	Single-mode G.657.A1 (BIF)	Yellow	0.1	0.35	-60
12F MTP Elite (pinned)	ETM	Yellow	Single-mode G.657.A1 (BIF)	Yellow	0.1	0.35	-60
12F MTP Pro (unpinned)	PFTF	Aqua	50 µm OM3, OM4	Aqua	0.1	0.35	-20
12F MTP Pro (pinned)	PFTM	Aqua	50 µm OM3, OM4	Aqua	0.1	0.35	-20

Ordering Information

CONNECTOR END A	CONNECTOR END B	CABLE TYPE	FIBER COUNT	FIBER TYPE	CABLE LENGTH	PULLING EYE	POLARITY	BASE SELECTION	PLATFORM
ETF	ETF	PL	012	Q	0001	PE	MF	12	ASCEND
EEF = MPO-SM Elite, 8 fiber, Female	EEM = MPO-SM Elite, 8 fiber, Male	Options for Trunk & Pigtail Assemblies: PL = Plenum MicroCore (250 µm) GE = LSZH MicroCore (250 µm)	008 = 8 012 = 12 024 = 24 048 = 48 072 = 72 096 = 96 144 = 144 288 = 288	Q = Single-mode G.657A BIF L = Multimode OM3 C = Multimode OM4	XXXX = Meters XXXXFT = Feet	Blank = No Pulling Eye PE = Pulling Eye (One End Only)	MF = Method F MA = Method A	08 = BASE-8 12 = BASE-12	ASCEND
PFEF = MTP PRO-MM, 8 fiber, Female	PFEM = MTP PRO-MM, 8 fiber, Male	Options for Pigtail Assemblies Only: GQS = 2.0 mm Plenum MicroCore (SWR) GES = 2.0 mm LSZH MicroCore (SWR)							
ETF = MPO-SM Elite, 12 fiber, Female	ETM = MPO-SM Elite, 12 fiber, Male								
PFTF = MTP PRO-MM, 12 fiber, Female	PFTM = MTP PRO-MM, 12 fiber, Male								
XXX = No Connector (Pigtail) *For connector End B only									

Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
ITU	G.657.A1	Single-mode optical fiber only
Telcordia	GR-326/GR-1435	Connectors
	GR-409-CORE	Cable
EIA/TIA	568-A	Cable
RoHS	Compliant	Cable



ASCEND® Outback Clip Management (OCM) Bracket

ASCEND trunk cable assemblies provide a high performance plug-and-play solution and come equipped with an integrated mounting clip or "Outback Clip." This Outback Clip eliminates the need for additional cable clamps and securely positions the incoming cable while eliminating unwanted stress during installation.

Trunk cables with Outback Clips are typically mounted directly in the rear of ASCEND Housings; however for applications that require cable mounting on the rack itself, the ASCEND OCM Bracket is designed to efficiently accommodate up to 12 ASCEND trunk cable assemblies.

Features

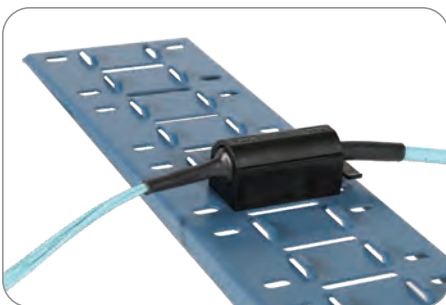
- Accommodates up to 12 Outback Clips/ Trunk Cables
- Rugged steel construction
- Includes rack tap screws

Applications

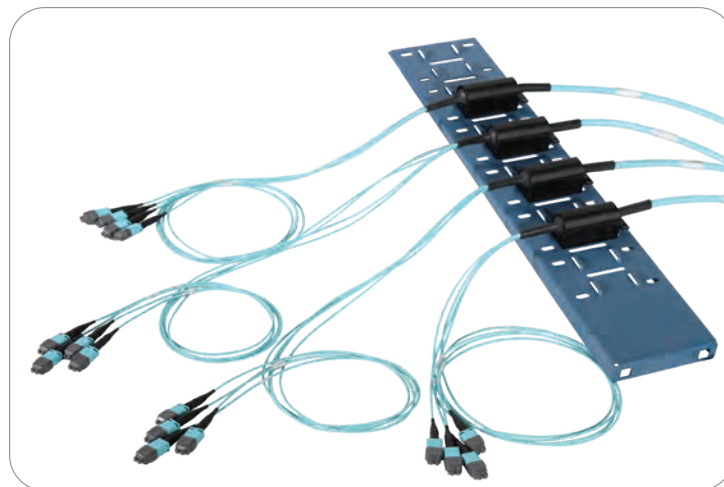
- Data Centers
- Central Offices
- Headends
- Structured Cabling Networks

Ordering Information

CATEGORY	DESCRIPTION	AFL NO.
ASCEND Accessories	ASCEND, Outback Mounting Clip Bracket, 12 Positions	OCM-12

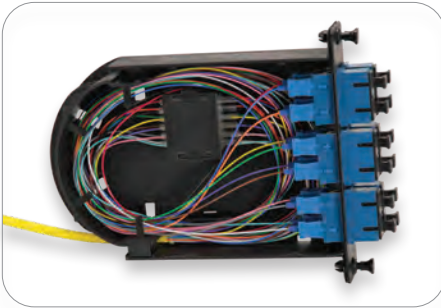


Integrated Mounting of "Outback Clip" on ASCEND trunk cable assemblies provide simple snap and push release tabs



Qualifications

GOVERNING BODY	STANDARD CODE
RoHS	Compliant



12-Fiber SC/UPC Configuration



24-Fiber LC/UPC Configuration



DAS Poli-MOD



Poli-MOD® Patch and Splice Module

AFL's new Poli-MOD is an innovative patch and splice module, which offers an inventive and effective means to accommodate up to 24 fiber interconnections in an industry-standard, single-slot LGX® 118 footprint. The new Poli-MOD offers a unique and robust way to secure cable without the need for time-wasting, tie-wrap alternatives. Additionally, the module leverages a creative snap-in splice sleeve cradle to securely manage both single and ribbon fiber arrangements. These features provide the capacity to outfit a standard 4RU rack-mount panel with up to 288-fiber interconnections.

The Poli-MOD is also offered in an arrangement that supports the low loss budget requirements of Distributed Antenna System (DAS) networks. This is accomplished through the elimination of an interconnection point while providing a robust splicing environment for rack and wall-mount panel applications.

Features

- 24-fiber interconnection capacity
- LGX 118 compatibility (single-slot module)
- Effective and time-saving cable mounting mechanism (no tie-wraps necessary)
- Inventive splice sleeve cradle
- Available in SC, LC, ST and FC connector arrangements
- Shuttered LC connectors for increased dust protection
- Organized fiber routing
- Fixed solution, no moving parts
- Multi-directional cable entry access
- DIN rail mountable (with DIN Mount Kit)

Applications

- Telecommunications Closets
- Data Centers
- Customer Premise
- Local Area Networks
- Wide Area Networks
- Central Offices
- Hub Sites
- Cabinets
- Remote Terminals
- Distributed Antenna Systems (DAS)

LGX is a registered trademark of Furukawa Electric North America, Inc.

Poli-MOD® Patch and Splice Module

Ordering Information

Example: PM-L-12-ASC-0-S-01

PM	L	12	ASC	0	S	01
Configuration	Fiber/Connector Count	Connector Type ³	Fiber Type	Fiber Arrangement	Packaging	
E = Empty (Splicing Only) H = Half Loaded (Adapter Plate only) L = Loaded (Adapter Plate & Pigtails) D = DAS Poli-MOD ¹	06 = 6 Fibers/Connectors 12 = 12 Fibers/Connectors 24 = 24 Fibers/Connectors ² XX = Empty	ASC = Angle-Polished SC USC = Ultra-Polished SC PSC = Multimode SC ALC = Angle-Polished LC ULC = Ultra-Polished LC PLC = Multimode LC UST = Ultra-Polished ST PST = Multimode ST AFC = Angle-Polished FC UFC = Ultra-Polished FC PFC = Multimode FC XXX = Empty	0 = Single-mode (G.657.A1 BIF) 1 = 62.5 μm (OM1) 2 = 50 μm (OM2) 3 = 50 μm (OM3) 4 = 50 μm (OM4) X = Empty	S = Single/Standard R = Ribbon 3 = 3 mm, 3 meter DAS W = SpiderWeb Ribbon® (SWR®) X = No Fiber (Half Loaded or Empty)	01 = 1 Poli-MOD per box* 06 = 6 Poli-MODs per box 12 = 12 Poli-MODs per box	

1. DAS Poli-MOD requires specialty packaging and is packaged as "1 Poli-MOD per box" ONLY.
2. 24 Fibers/Connectors are only available in a LC Duplex configuration.
3. Angle and Ultra-Polished connector types are only available with single-mode fiber configurations.

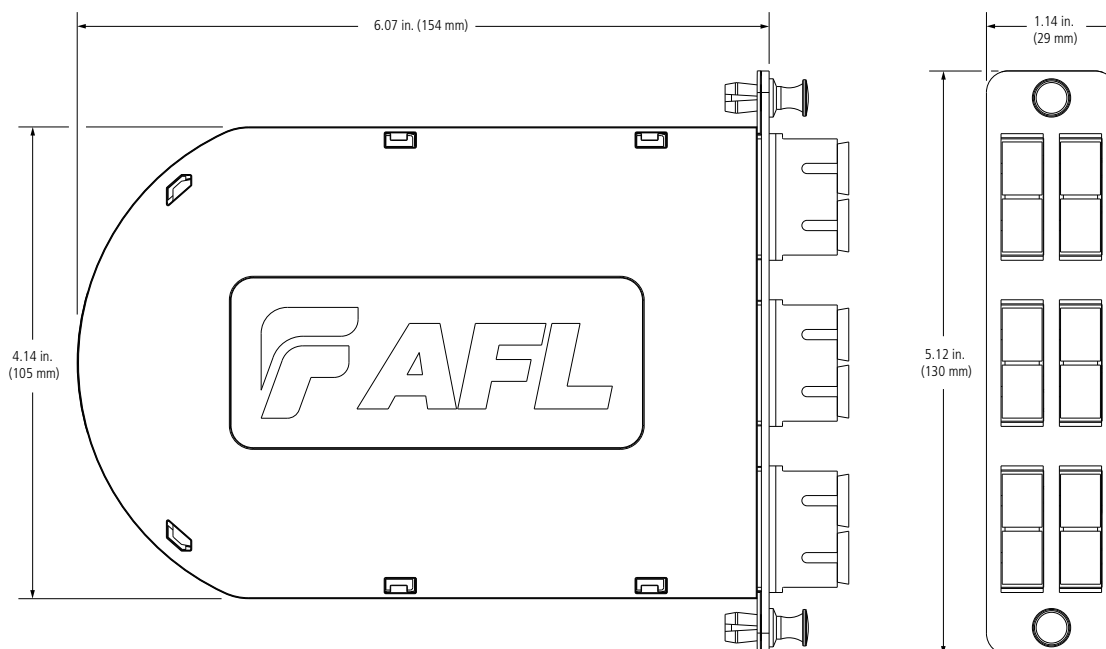
Adapter Color Codes

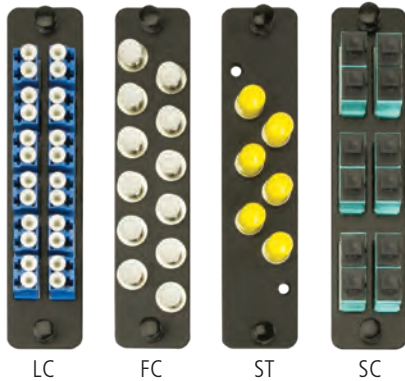
FIBER AND POLISH TYPE	ADAPTER COLOR
Single-mode, APC (Angled Physical Contact)	Green
Single-mode, UPC (Ultra Physical Contact)	Blue
Multimode OM1, PC (Physical Contact)	Beige
Multimode OM2, PC (Physical Contact)	Black
Multimode OM4, PC (Physical Contact)	Aqua

Poli-MOD Kits/Accessories

DESCRIPTION	AFL NO.
Poli-MOD Cable Mounting Clip Kit	FM003053
Poli-MOD Spiral Wrap Kit	FM003280
Poli-MOD Splice Chip Kit with 24 Splice Sleeves	FM003711
Fusion Splice Sleeve, FP-03, 40 mm	S000206
Adapter Bracket for Mounting Single Poli-MOD, angled	FM00948-B
Adapter Bracket for Mounting Single Poli-MOD, flat	FM003589-B
Corning CCH and PCH 145 mm Adapter Bracket	FM001636
DIN Mount Kit, LGX® 118	FM003394

Dimensions





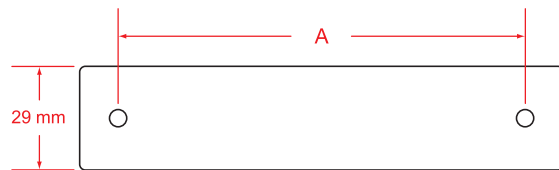
LightLink Adapter Plates

LightLink Adapter Plates add versatility to AFL's panel product line. Adapter plates are compatible with industry standard platforms allowing for easy upgrades to existing panels. Adapter Plates come preloaded with adapters and are available in 6, 8, 12 and 24 pack versions for single-fiber adapters. Higher fiber counts are achievable with multi-fiber adapters. Blank plates are also available for unused space in panels.

Features

- Metal Plate with Nylatches
- Polyurethane powder coated (white or black)
- LGX® compatible

Specifications



DIMENSION A
118 mm LGX®
170 mm LGX®

Ordering Information

AFL NO.	ADAPTER TYPE	SIMPLEX/DUPLEX/QUAD	ADAPTER COLOR	FIBER COUNT	PLATE HEIGHT	PLATE COLOR
BLANK						
FM003072	BLANK	BLANK	NA	0	LGX (118)	BLACK
FM003462	BLANK	BLANK	NA	0	LGX (118)	WHITE
FM000343	BLANK	BLANK	NA	0	LGX (118)	SMOOTH BLACK
FM003434	BLANK	BLANK	NA	0	LGX (170)	BLACK
FM003433	BLANK	BLANK	NA	0	LGX (170)	WHITE
SC						
FM003295	SC	DUPLEX	AQUA	12F	LGX (118)	BLACK
FM002272	SC	DUPLEX	AQUA	12F	LGX (118)	WHITE
FM003293	SC	DUPLEX	BEIGE	12F	LGX (118)	BLACK
FM002273	SC	DUPLEX	BEIGE	12F	LGX (118)	WHITE
FM003301	SC	DUPLEX	BLACK	12F	LGX (118)	BLACK
FM003297	SC	DUPLEX	BLUE	12F	LGX (118)	BLACK
FM002271	SC	DUPLEX	BLUE	12F	LGX (118)	WHITE
FM002633	SC	DUPLEX	GREEN	12F	LGX (118)	BLACK
FM002634	SC	DUPLEX	GREEN	12F	LGX (118)	WHITE
FM000149	SC	DUPLEX	BEIGE	12F	LGX (170)	WHITE
FM000148	SC	DUPLEX	BEIGE	12F	LGX (170)	BLACK
FM000144	SC	DUPLEX	BLUE	12F	LGX (170)	BLACK
FM000145	SC	DUPLEX	BLUE	12F	LGX (170)	WHITE
FM000152	SC	DUPLEX	GREEN	12F	LGX (170)	BLACK
FM000153	SC	DUPLEX	GREEN	12F	LGX (170)	WHITE
FM003287	SC	DUPLEX	AQUA	6F	LGX (118)	BLACK
FM003285	SC	DUPLEX	BEIGE	6F	LGX (118)	BLACK
FM003398	SC	DUPLEX	BEIGE	6F	LGX (118)	WHITE
FM003299	SC	DUPLEX	BLACK	6F	LGX (118)	BLACK
FM003289	SC	DUPLEX	BLUE	6F	LGX (118)	BLACK
FM003458	SC	DUPLEX	BLUE	6F	LGX (118)	WHITE
FM003283	SC	DUPLEX	GREEN	6F	LGX (118)	BLACK
FM000115	SC	DUPLEX	GREEN	6F	LGX (118)	WHITE

LGX is a registered trademark of Furukawa Electric North America, Inc.

LightLink Adapter Plates

Ordering Information (cont.)

AFL NO.	ADAPTER TYPE	SIMPLEX/DUPLEX/ QUAD	ADAPTER COLOR	FIBER COUNT	PLATE HEIGHT	PLATE COLOR
SC						
FM003120	SC	SIMPLEX	AQUA	12F	LGX (118)	BLACK
FM003118	SC	SIMPLEX	BEIGE	12F	LGX (118)	BLACK
FM003242	SC	SIMPLEX	BLACK	12F	LGX (118)	BLACK
FM003122	SC	SIMPLEX	BLUE	12F	LGX (118)	BLACK
FM002842-TW	SC	SIMPLEX	BLUE	12F	LGX (118)	WHITE
FM003116	SC	SIMPLEX	GREEN	12F	LGX (118)	BLACK
FM000800-TW	SC	SIMPLEX	GREEN	12F	LGX (118)	WHITE
FM003411	SC	SIMPLEX	BEIGE	12F	LGX (170)	WHITE
FM003409	SC	SIMPLEX	BLUE	12F	LGX (170)	BLACK
FM003407	SC	SIMPLEX	BLUE	12F	LGX (170)	WHITE
FM003414	SC	SIMPLEX	GREEN	12F	LGX (170)	BLACK
FM003455	SC	SIMPLEX	GREEN	12F	LGX (170)	WHITE
FM003098	SC	SIMPLEX	AQUA	6F	LGX (118)	BLACK
FM003096	SC	SIMPLEX	BEIGE	6F	LGX (118)	BLACK
FM003403	SC	SIMPLEX	BEIGE	6F	LGX (118)	WHITE
FM003238	SC	SIMPLEX	BLACK	6F	LGX (118)	BLACK
FM003100	SC	SIMPLEX	BLUE	6F	LGX (118)	BLACK
FM003467	SC	SIMPLEX	BLUE	6F	LGX (118)	WHITE
FM003094	SC	SIMPLEX	GREEN	6F	LGX (118)	BLACK
FM000480	SC	SIMPLEX	GREEN	6F	LGX (118)	WHITE
FM000156	SC	SIMPLEX	BLUE	8F	LGX (118)	BLACK
FM003435	SC	SIMPLEX	BLUE	8F	LGX (118)	WHITE
FM002841	SC	SIMPLEX	GREEN	8F	LGX (118)	BLACK
FM000158	SC	SIMPLEX	GREEN	8F	LGX (118)	WHITE
LC						
FM001004	LC	DUPLEX	GREEN	12F	LGX (118)	WHITE
FM001303	LC	DUPLEX	AQUA	12F	LGX (118)	WHITE
FM003108	LC	DUPLEX	GREEN	12F	LGX (118)	BLACK
FM003110	LC	DUPLEX	BEIGE	12F	LGX (118)	BLACK
FM003112	LC	DUPLEX	AQUA	12F	LGX (118)	BLACK
FM001185	LC	QUAD	AQUA	12F	LGX (118)	BLACK
FM000297	LC	DUPLEX	BLUE	12F	LGX (170)	WHITE
FM000298	LC	DUPLEX	BLUE	12F	LGX (170)	BLACK
FM000301	LC	DUPLEX	GREEN	12F	LGX (170)	WHITE
FM000302	LC	DUPLEX	GREEN	12F	LGX (170)	BLACK
FM000838	LC	DUPLEX	BLUE	24F	LGX (118)	WHITE
FM000851	LC	DUPLEX	BEIGE	24F	LGX (118)	WHITE
FM000853	LC	DUPLEX	AQUA	24F	LGX (118)	WHITE
FM003069	LC	DUPLEX	GREEN	24F	LGX (118)	WHITE
FM001184	LC	QUAD	AQUA	24F	LGX (118)	BLACK
FM000129	LC	DUPLEX	BLUE	24F	LGX (170)	WHITE
FM000130	LC	DUPLEX	BLUE	24F	LGX (170)	BLACK
FM000338	LC	DUPLEX	GREEN	24F	LGX (170)	WHITE
FM000339	LC	DUPLEX	GREEN	24F	LGX (170)	BLACK
FM000348	LC	DUPLEX	BEIGE	24F	LGX (170)	WHITE
FM000349	LC	DUPLEX	BEIGE	24F	LGX (170)	BLACK
FM000289	LC	DUPLEX	BLUE	6F	LGX (118)	WHITE
FM000293	LC	DUPLEX	GREEN	6F	LGX (118)	WHITE
FM000294	LC	DUPLEX	GREEN	6F	LGX (118)	BLACK
FM003092	LC	DUPLEX	BLUE	6F	LGX (118)	BLACK
FM003429	LC	DUPLEX	BEIGE	6F	LGX (118)	WHITE
FM004252	LC	DUPLEX	AQUA	6F	LGX (118)	BLACK

LightLink Adapter Plates

Ordering Information (cont.)

AFL NO.	ADAPTER TYPE	SIMPLEX/DUPLEX/ QUAD	ADAPTER COLOR	FIBER COUNT	PLATE HEIGHT	PLATE COLOR
LC						
FM003240	LC	DUPLEX	BLACK	12F	LGX (118)	BLACK
FM003425	LC	DUPLEX	BLUE	12F	LGX (118)	WHITE
FM003465	LC	DUPLEX	BLUE	12F	LGX (118)	BLACK
FM003202	LC	DUPLEX	GREEN	24F	LGX (118)	BLACK
FM003204	LC	DUPLEX	BEIGE	24F	LGX (118)	BLACK
FM003206	LC	DUPLEX	AQUA	24F	LGX (118)	BLACK
FM003208	LC	DUPLEX	BLUE	24F	LGX (118)	BLACK
FM003244	LC	DUPLEX	BLACK	24F	LGX (118)	BLACK
ST						
FM003126	ST	SIMPLEX	METAL SM/MM	12F	LGX (118)	BLACK
FM003456	ST	SIMPLEX	METAL SM/MM	12F	LGX (118)	WHITE
FM000286	ST	SIMPLEX	METAL SM/MM	12F	LGX (170)	BLACK
FM000285	ST	SIMPLEX	METAL SM/MM	12F	LGX (170)	WHITE
FM003104	ST	SIMPLEX	METAL SM/MM	6F	LGX (118)	BLACK
FM003422	ST	SIMPLEX	METAL SM/MM	6F	LGX (118)	WHITE
FM003102	ST	SIMPLEX	METAL SM/MM	6F	LGX (118)	BLACK
FM003441	ST	SIMPLEX	METAL SM/MM	8F	LGX (118)	BLACK
FM003439	ST	SIMPLEX	METAL SM/MM	8F	LGX (118)	WHITE
FC						
FM000284	FC	SIMPLEX	METAL	12F	LGX (118)	BLACK
FM000283	FC	SIMPLEX	METAL	12F	LGX (118)	WHITE
FM003447	FC	SIMPLEX	METAL	12F	LGX (170)	BLACK
FM003446	FC	SIMPLEX	METAL	12F	LGX (170)	WHITE
FM003420	FC	SIMPLEX	METAL, GREEN DUST CAP	6F	LGX (118)	BLACK
FM003419	FC	SIMPLEX	METAL, GREEN DUST CAP	6F	LGX (118)	WHITE
FM003443	FC	SIMPLEX	METAL	8F	LGX (118)	BLACK
FM003442	FC	SIMPLEX	METAL	8F	LGX (118)	WHITE
MISC						
FM003210	HEYCO	SIMPLEX	BLACK	12F	LGX (118)	BLACK
FM003430	MTP	SIMPLEX	BLACK	36F	LGX (118)	BLACK
FM003212	HEYCO	SIMPLEX	BLACK	6F	LGX (118)	BLACK
FM003437	SC-ST HYBRID	SIMPLEX	BLUE-METAL	6F	LGX (118)	WHITE
FM001606	MTP	SIMPLEX	BLACK	72F	LGX (118)	BLACK
FM003005	MTP	SIMPLEX	BLACK	96F	LGX (118)	BLACK



WME-02



WME-02 shown empty



WME-02 shown fully loaded

Wall Mount Interconnect Enclosure (WME) with Two LGX® Mounting Positions

AFL's wall mount interconnect enclosure (WME02) provides a convenient convergence point for interconnecting and/or splicing in wall mount applications. Provisioned for up to two LGX compatible adapter plates or optical modules, the enclosure features a well-engineered solution for fiber and cable management on both the ingress and egress openings of the enclosure. Robust steel construction ensures the highest level of protection for sensitive components while integrated roll-formed hinges eliminate possible fiber pinch points while deploying or servicing components within. The WME02 features discrete access doors for provider and customer access which are independently lockable with a common pad-lock or tube-style keyed lock.

Features

- Fits comfortably into new and existing interconnect, cross-connect and co-location environments
- U-shaped cable entry eliminates the need to feed preconnectorized cables through an inconvenient access port
- Modular design fully compatible with Poli-MOD® products and XFM optical cassettes
- Dual doors with separate locking options for flexibility and security
- Available empty, with adapters, or with adapters, splice trays and pigtails pre-installed
- LGX 118 compatible
- Optional splice tray and holder (ordered separately)
- All major connector types are supported

Applications

- Co-Location sites
- Customer premise
- Hub/OTN sites
- Telecommunication closets
- Campus/enterprise environments

Specifications

- Solid steel construction
- Powder coat black textured finish
- Top or bottom cable entry with dust resistant grommets
- Dual-hasp locking/security system
- 12 to 24 fiber patch and splice density
- Two LGX mounting positions
- Physical dimensions: 12.0"H x 14.0"W x 2.5"D
- Empty version weight: 10.65 lbs.

LGX is a registered trademark of Furukawa Electric North America, Inc.

Wall Mount Interconnect Enclosure (WME) with Two LGX® Mounting Positions

Ordering Information

EMPTY	
DESCRIPTION	AFL NO.
WME02 Empty	WME02E

Connector/Adapter Key

TYPE	DESCRIPTION
ASC	Angle Polish SC (ZR) sleeve-SM
ASF	Angle Polish SC Duplex (ZR) sleeve-SM
PSC	Physical Polish SC (PB) sleeve-MM
PSF	Physical Polish SC Duplex (PB) sleeve-MM
USC	Ultra Polish SC with (ZR) sleeve-SM
USF	Ultra Polish SC Duplex (ZR) sleeve-SM
PST	Physical Polish ST (PB) sleeve-MM
UST	Ultra Polish ST (ZR) sleeve-SM
AFC	Angle Polish FC (ZR) sleeve-SM
PFC	Physical Polish FC (PB) sleeve-MM
UFC	Ultra Polish FC (ZR) sleeve-SM
ADL	Angle Polish LC Duplex (ZR) sleeve-SM
PDL	Physical Polish LC Duplex (PB) sleeve-MM
PLC	Physical Polish LC (PB) sleeve-MM
UDL	Ultra Polish LC Duplex (ZR) sleeve-SM
ULC	Ultra Polish LC (ZR) sleeve-SM

HALF LOADED: WME WITH ADAPTER PLATES AND ADAPTERS ONLY				
CONNECTOR TYPE	FIBER COUNT	AFL NO.		
		UPC SM (BLUE)	APC SM (GREEN)	PC MM (BEIGE)
SC	6	WME02AS-USCSM-006000	WME02AS-ASCSM-006000	WME02AS-PSCM6-006000
	12	WME02AS-USCSM-012000	WME02AS-ASCSM-012000	WME02AS-PSCM6-012000
	24	WME02AH-USFSM-024000	WME02AH-ASFSM-024000	WME02AH-PSFM6-024000
LC	6	WME02AS-UDLSM-006000	WME02AS-ADLSM-006000	WME02AS-PDLM6-006000
	12	WME02AS-UDLSM-012000	WME02AS-ADLSM-012000	WME02AS-PDLM6-012000
	24	WME02AH-UDLSM-024000	WME02AH-ADLSM-024000	WME02AH-PDLM6-024000
ST	6	WME02AS-USTSM-006000	—	WME02AS-PSTM6-006000
	12	WME02AS-USTSM-012000	—	WME02AS-PSTM6-012000
	24	WME02AH-USTSM-024000	—	WME02AH-PSTM6-024000
FC	6	WME02AS-UFCSM-006000	WME02AS-AFCSM-006000	WME02AS-PFCM5-006000
	12	WME02AS-UFCSM-012000	WME02AS-AFCSM-012000	WME02AS-PFCM5-012000
	24	WME02AH-UFCSM-024000	WME02AH-AFCSM-024000	WME02AH-PFCM5-024000

LOADED: WME WITH ADAPTER PLATES/ADAPTERS/SPLICE TRAYS/PIGTAIL (900 μm TIGHT BUFFERED FIBERS 3 METERS IN LENGTH)					
CONNECTOR TYPE	FIBER COUNT	AFL NO.			
		UPC SM (BLUE)	APC SM (GREEN)	PC MM 62.5 μm (BEIGE)	PC MM 50 μm (BLACK)
SC	6	WME02FS-USCSM-006110	WME02FS-ASCSM-006110	WME02FS-PSCM6-006110	WME02FS-PSCM5-006110
	12	WME02FS-USCSM-012110	WME02FS-ASCSM-012110	WME02FS-PSCM6-012110	WME02FS-PSCM5-012110
	24	WME02FH-USFSM-024120	WME02FH-ASFSM-024120	WME02FH-PSFM6-024120	WME02FH-PSFM5-024120
LC	6	WME02FS-UDLSM-006110	WME02FS-ADLSM-006110	WME02FS-PDLM6-006110	WME02FS-PDLM5-006110
	12	WME02FS-UDLSM-012110	WME02FS-ADLSM-012110	WME02FS-PDLM6-012110	WME02FS-PDLM5-012110
	24	WME02FH-UDLSM-024120	WME02FH-ADLSM-024120	WME02FH-PDLM6-024120	WME02FH-PDLM5-024120
ST	6	WME02FS-USTSM-006110	—	WME02FS-PSTM6-006110	WME02FS-PSTM5-006110
	12	WME02FS-USTSM-012110	—	WME02FS-PSTM6-012110	WME02FS-PSTM5-012110
	24	WME02FH-USTSM-024120	—	WME02FH-PSTM6-024120	WME02FH-PSTM5-024120
FC	6	WME02FS-UFCSM-006110	WME02FS-AFCSM-006110	WME02FS-PFCM6-006110	WME02FS-PFCM5-006110
	12	WME02FS-UFCSM-012110	WME02FS-AFCSM-012110	WME02FS-PFCM6-012110	WME02FS-PFCM5-012110
	24	WME02FH-UFCSM-024120	WME02FH-AFCSM-024120	WME02FH-PFCM6-024120	WME02FH-PFCM5-024120

ACCESSORIES	
DESCRIPTION	AFL NO.
Splice Tray Kit: Single Fusion 12F, 2RU, WME02, WME04, 1 Splice Tray	FM002827-1
Splice Tray Kit: Single Fusion 12F, 2RU, WME02, WME04, 2 Splice Trays	FM002827-2

LGX is a registered trademark of Furukawa Electric North America, Inc.



WME-04

Wall Mount Interconnect Enclosure (WME) with Four LGX® Mounting Positions

AFL's wall mount interconnect enclosure (WME04) provides a convenient convergence point for interconnecting and/or splicing in wall mount applications. Provisioned for up to four LGX compatible adapter plates or optical modules, the enclosure features a well-engineered solution for fiber and cable management on both the ingress and egress openings of the enclosure. Robust steel construction ensures the highest level of protection for sensitive components while integrated roll-formed hinges eliminate possible fiber pinch points while deploying or servicing components within. The WME04 features discrete access doors for provider and customer access which are independently lockable with a common pad-lock or tube-style keyed lock.



WME-04 shown empty



WME-04 shown fully loaded

Features

- Fits comfortably into new and existing interconnect, cross-connect and co-location environments
- U-shaped cable entry eliminates the need to feed preconnectorized cables through an inconvenient access port
- Modular design fully compatible with Poli-MOD® products and XFM optical cassettes
- Dual doors with separate locking options for flexibility and security
- Available empty, with adapters, or with adapters, splice trays and pigtails pre-installed
- LGX 118 compatible
- Optional splice tray and holder (ordered separately)
- All major connector types are supported

Applications

- Co-Location sites
- Customer premise
- Hub/OTN sites
- Telecommunication closets
- Campus/enterprise environments

Specifications

- Solid steel construction
- Powder coat black textured finish
- Top or bottom cable entry with dust resistant grommets
- Dual-hasp locking/security system
- 24 to 48 fiber patch and splice density
- Four LGX mounting positions
- Physical dimensions: 12.0"H x 16.0"W x 3.63"D

Wall Mount Interconnect Enclosure (WME) with Four LGX® Mounting Positions

Ordering Information

EMPTY	
DESCRIPTION	AFL NO.
WME04 Empty	WME04E

HALF LOADED: WME WITH ADAPTER PLATES AND ADAPTERS ONLY				
CONNECTOR TYPE	FIBER COUNT	AFL NO.		
		UPC SM (BLUE)	APC SM (GREEN)	PC MM (BEIGE)
SC	24	WME04AS-USCSM-024000	WME04AS-ASCSM-024000	WME04AS-PSCM6-024000
	48	WME04AH-USFSM-048000	WME04AH-ASFSM-048000	WME04AH-PSFM6-048000
LC	24	WME04AS-UDLSM-024000	WME04AS-ADLSM-024000	WME04AS-PDLM6-024000
	48	WME04AH-UDLSM-048000	WME04AH-ADLSM-048000	WME04AH-PDLM6-048000
ST	24	WME04AS-USTSM-024000	—	WME04AS-PSTM6-024000
	48	WME04AH-USTSM-048000	—	WME04AH-PSTM6-048000
FC	24	WME04AS-UFCSM-024000	WME04AS-AFCSM-024000	WME04AS-PFCM5-024000
	48	WME04AH-UFCSM-048000	WME04AH-AFCSM-048000	WME04AH-PFCM5-048000

Connector/Adapter Key

TYPE	DESCRIPTION
ASC	Angle Polish SC (ZR) sleeve-SM
ASF	Angle Polish SC Duplex (ZR) sleeve-SM
PSC	Physical Polish SC (PB) sleeve-MM
PSF	Physical Polish SC Duplex (PB) sleeve-MM
USC	Ultra Polish SC with (ZR) sleeve-SM
USF	Ultra Polish SC Duplex (ZR) sleeve-SM
PST	Physical Polish ST (PB) sleeve-MM
UST	Ultra Polish ST (ZR) sleeve-SM
AFC	Angle Polish FC (ZR) sleeve-SM
PFC	Physical Polish FC (PB) sleeve-MM
UFC	Ultra Polish FC (ZR) sleeve-SM
ADL	Angle Polish LC Duplex (ZR) sleeve-SM
PDL	Physical Polish LC Duplex (PB) sleeve-MM
PLC	Physical Polish LC (PB) sleeve-MM
UDL	Ultra Polish LC Duplex (ZR) sleeve-SM
ULC	Ultra Polish LC (ZR) sleeve-SM

LOADED: WME WITH ADAPTER PLATES/ADAPTERS/SPLICE TRAYS/PIGTAIL (900 μm TIGHT BUFFERED FIBERS 3 METERS IN LENGTH)					
CONNECTOR TYPE	FIBER COUNT	AFL NO.			
		UPC SM (BLUE)	APC SM (GREEN)	PC MM 62.5 μm (BEIGE)	PC MM 50 μm (BLACK)
SC	24	WME04FS-USCSM-024120	WME04FS-ASCSM-024120	WME04FS-PSCM6-024120	WME04FS-PSCM5-024120
	48	WME04FH-USFSM-048140	WME04FH-ASFSM-048140	WME04FH-PSFM6-048140	WME04FH-PSFM5-048140
LC	24	WME04FS-UDLSM-024120	WME04FS-ADLSM-024120	WME04FS-PDLM6-024120	WME04FS-PDLM5-024120
	48	WME04FH-UDLSM-048140	WME04FH-ADLSM-048140	WME04FH-PDLM6-048140	WME04FH-PDLM5-048140
ST	24	WME04FS-USTSM-024120	—	WME04FS-PSTM6-024120	WME04FS-PSTM5-024120
	48	WME04FH-USTSM-048140	—	WME04FH-PSTM6-048140	WME04FH-PSTM5-048140
FC	24	WME04FS-UFCSM-024120	WME04FS-AFCSM-024120	WME04FS-PFCM6-024120	WME04FS-PFCM5-024120
	48	WME04FH-UFCSM-048140	WME04FH-AFCSM-048140	WME04FH-PFCM6-048140	WME04FH-PFCM5-048140

ACCESSORIES	
DESCRIPTION	AFL NO.
Splice Tray Kit: Single Fusion 12F, 2RU, WME02, WME04, 3 Splice Trays	FM002827-3
Splice Tray Kit: Single Fusion 12F, 2RU, WME02, WME04, 4 Splice Trays	FM002827-4



LL-400b shown with optional interconnect module



Hardware kit for external grounding (included)

LightLink 400b Optical Splicing and Distribution Enclosure

The LightLink (LL) 400b Fiber Optic Splicing and Distribution Enclosure provides for organizing, splicing and interconnecting fibers in FTTx, broadband, distribution and building entrance applications. Each LL-400b enclosure features a scratch resistant powder coated aluminum base and a fully gasketed cover. A unique self-sizing grommet design allows for express and preterminated cable installation. The LL-400b is a butt-style enclosure equipped with 6 independent cable entry/exit grommets, used for outdoor pedestal or indoor building entrance and riser splicing applications. The unit supports a maximum storage and splicing capacity of up to 240 single or 432 mass-fused fibers.

When installed into an LL-400b, the Inteconnect Module supports connectivity when used with LGX-118 adapter plates (purchased separately). It is used in outdoor pedestals or building mounted LL-400b enclosures where interconnection is required.

Features

- Independent cable strain relief system
- Cable entry/exit grommet seals
- Fiber routing system
- Splice tray support system
- Supports optional interconnect modules
- 240 single fusion splices
- 432 mass fusion splices
- Grounding hardware kit included

Applications

- OSP Splicing
- MDU Splicing
- FTTx Distribution

Specifications

PARAMETER	VALUE
Material	Chassis – aluminum
Coatings	Electrostatically applied, powder coat
Color	Antique white
Dimensions (H x W x D) in. (cm)	22.75 x 11.00 x 4.0 (57.79 x 27.94 x 10.16)
Weight lbs (kg)	6.5 (2.95)

Ordering Information

DESCRIPTION	AFL NO.
LL-400b	91894-04
LL-400b In 1212 Pedestal	FM000636
LL-410 Interconnect Module, Supports Up To 2 LGX-118 Adapter Plates	911410-00-04
LL-2448 Universal Splice Tray	911289-00-02
LL-2448-48S Single Fusion Splice Tray	FA000045
LL-2400 Single Fusion Splice Tray	91710-06
LL-400 Security Kit	FM000787
LL-400b Large Dual-port Grommet Kit	911406-00-00
LL-400b Large Multi-port Grommet Kit	FC000352
LG-410/LG-500 Dual-port Grommet Kit	911386-00-01
LG410/LG500 Multi-port Grommet Kit	FC000573



LL-400sx



LL-400sx in 1010 pedestal

LightLink 400sx Optical Splicing and Distribution Enclosure

The LightLink (LL) 400sx Fiber Optic Splicing and Distribution Enclosure provides for organizing, splicing, and interconnecting fibers in FTTx, broadband, distribution and building entrance applications. Each LL-400sx enclosure features a scratch resistant powder coated aluminum base and a fully gasketed cover. A unique self-sizing grommet design allows for express and preterminated cable installation. The LL-400sx is a butt-style enclosure equipped with four independent cable entry/exit grommets, used for outdoor pedestal or indoor building entrance and riser splicing applications. The unit supports a maximum storage and splicing capacity of up to 192 single or 576 mass-fused fibers. The LL-400sx can also mount up to two LGX118® adapter plates (splicing capacity limited to 144 single fusion and 432 mass fusion splices when adapter plates are installed).

Features

- Independent cable strain relief system
- Cable entry/exit grommet seals
- Removable Hinged Front Cover
- Fiber routing system
- Splice tray support system
- 192 single fusion splices
- 576 mass fusion splices
- Grounding hardware kit included

Applications

- OSP Splicing
- MDU Splicing
- FTTx Distribution

Specifications

PARAMETER	VALUE
Material	Chassis – aluminum
Coatings	Electrostatically applied, powder coat
Color	Antique white
Dimensions (H x W x D) in. (cm)	23.9 x 9.5 x 5.0 (58.4 x 24.13 x 12.7)
Weight lbs (kg)	5.0 (2.3)

Ordering Information

DESCRIPTION	AFL NO.
LL-400sx	EA000370
LL-4848 Mass Fusion Splice Tray	911437-00-02
LL-2448 Universal Splice Tray	911289-00-02
LL-2448-48S Single Fusion Splice Tray	FA000045
LL-2400 Single Fusion Splice Tray	91710-06
Channel MAH1010 Pedestal	FM000776
Channel MAH1212 Pedestal	FM000655
IDEAA® Module LGX Mount Bracket	EA000061
IDEAA Pigtail Kit	EA000166
IDEAA SC/APC 1x32 Splitter Module	EA000102
IDEAA SC/APC 1x16 Splitter Module	EA000103
IDEAA SC/APC 1x8 Splitter Module	EA000104
IDEAA SC/APC 1x4 Splitter Module	EA000105



LL-500 with interconnect kit installed



LL-500 with LL-2450 splice tray installed

LightLink 500 Optical Splicing and Distribution Enclosure

The LightLink (LL) 500 Optic Splicing and Distribution Enclosure provides for organizing, splicing and interconnecting fibers in broadband, distribution and building entrance applications. The enclosure features a scratch and corrosion resistant powder paint coating base and a fully gasketed hinged cover. A unique self-sizing grommet design allows for express and pre-terminated cable installation. The LL-500 supports up to five LL-2450 splice trays for up to 60 single fusion splices or three LL-4850 splice trays (not included in base unit) and an optional 12 fiber, hinged Interconnect Module.

Features

- Independent cable strain relief system
- Cable entry/exit grommet seals
- Fiber routing system
- Splice tray support system
- Hinged cover
- Supports optional Interconnect Modules
- Interconnect Module supports up to 12 SC bulkhead adapters
- Secured with a standard padlock
- 4 cable ports with standard grommets
- 8 cable ports with optional expansion kits

Specifications

PARAMETER	VALUE
Material	Steel
Coatings	Electrostatically applied, powder coat
Color	Antique white
Cable Ports	4-8
Cable Sizes (Max. O.D. – Min. O.D.)	4 @ 0.3-0.77" Up to 8 with Dual Grommet Kits 4 @ 0.3-0.65" 4 @ 0.3-0.5"
Dimensions (H x W x D) in. (cm)	17.5 x 9.0 x 4.0 (44.45 x 22.86 x 10.16)
Weight lbs. (kg)	6.5 (2.95)

Ordering Information

DESCRIPTION	AFL NO.
LL-500-U-0	FM000326
LL-500 Interconnect Kit with SC UPC adapters	FM000385
LL-500 Interconnect Kit with SC APC adapters	FM000407
LL-500 Interconnect Kit without adapters	FM000408
LL-500 with Multi-port Grommets	FM000659
LL-2450 Single Fusion Splice Tray (stores 12 single fusion splices)	91957-00
LL-4850 Mass Fusion Splice Tray (stores 8 mass fusion sleeves - 96 fibers)	91958-00
LL-500 Multi-port Grommet Kit, 6 drop cable entry up to 0.37" OD	FC000573

Qualifications

GOVERNING BODY	STANDARD CODE
NEMA	Type 3

Contact AFL for further details.



LightLink 580 Optical Splicing and Distribution Enclosure

The LightLink (LL) 580 Optical Splicing and Distribution Enclosure provides for organizing, splicing and interconnecting fibers in broadband, distribution and building entrance applications. The splice tray panel is equipped with LGX® 118 footprint snaps so various types of connectors may be installed. The enclosure features a scratch resistant powder coated base and a fully gasketed hinged cover. The cover was designed so that it may be installed on either side of the enclosure where there are space restrictions. The internal interconnect tray and back-plate may be removed from the enclosure and brought to a splicing table to complete splicing, fiber routing and fiber management. The cable entry base has four interchangeable configurations to allow the installation of cable through a grommet system, or through pre-installed conduit couplings.

Features

Enclosure

- Independent cable strain-relief for flat drop cable and 2 mm/3 mm drops
- Unique self-sealing grommet system
- Self-contained inner chassis frame with separate outer housing
- Dual telco can-wrench locking fasteners
- Hinged cover securable with standard padlock
- Internal, owner-accessible security screw
- Available with a variety of connector types and cable entrance choices

Interconnect Splice Tray Kit

- Included: (2) Factory Pre-installed LL-7644 Universal Splice Tray with SC-UPC 900 μm pigtails for up to 72 connections. LC-UPC Duplex adapters may be installed for up to 144 LC connections with mass fusion.
- Interconnect Tray may be purchased with either SC-UPC adapters and pigtails preinstalled or LC-UPC Duplex adapters and pigtails pre-installed.

Specifications

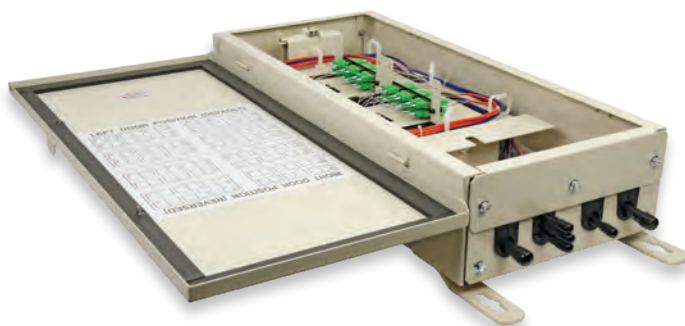
PARAMETER	VALUE
Material – Housing	16 Gauge Aluminum
Coating	Electrostatically applied powder paint
Color	Beige
Size (H x W x D in.)	27.5" x 13.0" x 5.625" (total length: 33.5" L x 13")
Weight (lbs)	15.2
Adapters	(72) SC or (72) LC Duplex
Splice	(2) LL-7644 up to 120 single fused fibers or 24 mass fusion sleeves (2) LL-4808 L-R up to 72 single fused fibers or 24 mass fusion sleeves

continued →

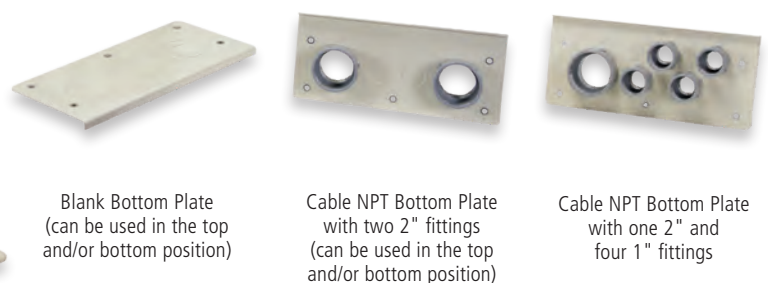
LightLink 580 Optical Splicing and Distribution Enclosure

Ordering Information

DESCRIPTION	AFL NO.
LL-580 Enclosure Base (No Bottom Plate or LGX® Tray)	FM002814
Interconnect Trays	
Kit, Splice/4x LGX® Interconnect Tray, with (2) LL-7644 Trays	FM002858-001
Kit, Splice/4x LGX® Interconnect Tray, 24 SCU, with (2) LL-7644 Trays	FM002858-SCU
Kit, Splice/4x LGX® Interconnect Tray, 24 SCA, with (2) LL-7644 Trays	FM002858-SCA
Kit, Splice/4x LGX® Interconnect Tray, 24 LCU, with (2) LL-7644 Trays	FM002858-LCU
Splice Trays	
LL-7644 Splice Tray used with LGX® Interconnect Tray	FA000044
LL-4808 L-R Splice Tray used with LGX® Interconnect Tray	FA000037
Plate Kits	
Plate Kit (2 – 2 in. NPT and 2 – 1 in. KO)	FM002653
Plate Kit (2 – Single Cable Grommets [L&R] and 2 – Multiport Grommets [Center])	FM001937
Plate Kit (2 – Single Cable Grommets [L&R])	FM003014
Plate Kit (1 – 2 in. NPT and 4 – 1 in. NPT)	FM001959
Plate Kit (3 – KO)	FM003023
Grommet and NPT Kits	
1 in. NPT Kit (2 – 1 in NPT Fittings and cable hardware to be used with FM002653)	FM003015
2 in. NPT Kit (2 – 2 in NPT Fittings and cable hardware to be used with FM003023)	FM003016
Dual Cable Grommet Kit (2/kit)	911386-00-01
Accessories	
Conduit Skirt	FM002895
Pre-configured Base Enclosures and Interconnect Tray	
LL-580, 24F SC/UPC Interconnect Kit, 24F SC/UPC Pigtail Kit, (2) LL-7644 Splice Trays, No Bottom Plate	FM003248
LL-580, 48F SC/UPC Interconnect Kit, 48F SC/UPC Pigtail Kit, (2) LL-7644 Splice Trays, No Bottom Plate	FM003249
LL-580, 72F SC/UPC Interconnect Kit, 72F SC/UPC Pigtail Kit, (2) LL-7644 Splice Trays, No Bottom Plate	FM003250
LL-580, Interconnect Kit, No Adapter Plates, No Pigtail Kit, (2) LL-7644 Splice Trays, No Bottom Plate	FM003251



LL-580 Enclosure shown with the Cable Grommet Bottom Plate installed



Blank Bottom Plate
(can be used in the top and/or bottom position)

Cable NPT Bottom Plate with two 2" fittings
(can be used in the top and/or bottom position)

Cable NPT Bottom Plate with one 2" and four 1" fittings

Qualifications

GOVERNING BODY	STANDARD CODE
NEMA	Type 3
Telcordia	GR-2898

Contact AFL for further details.



LightLink 24 Slim-Line Pedestal

The LightLink (LL) 24 Pedestal provides an easily accessible solution for splicing underground fiber cable, branches and drops. The pedestal may be buried up to the burying guide lines located on the pedestal base.

With the capability to hold up to three Apex™ X-2 Splice Trays, the LL-24 pedestal is capable of up to 216 single fusion, 432 mass fusion with standard ribbon, or 864 mass fusion with “rollable ribbon” fiber types such as AFL’s SpiderWeb Ribbon® (SWR®). One side of the pedestal may be used for splicing optical fibers while the opposite side may be used for copper splicing of branch or drop cables.

Features

- Easily installed in traditional buried pedestal applications
- All cable routing, retention, mounting and grounding accessories included
- Holds up to three (3) Apex X-2 splice trays
- Fiber routing rings allow for easy storage and maintenance of the buffer tubes and using tie-wraps, copper pairs may be secured to the mounting plate
- Defer deployment cost – open buffer tubes when access to fibers is required
- Standard 216-tool or similar tool required to remove the dome

Applications

- FTtx Networks
- Local Area Networks

Specifications

PARAMETER	VALUE
Height to Ground Line, in (cm)	30.2 (77.5)
Total Height, in (cm)	40.2 (102.1)
Inner Diameter, in (cm)	7.8 x 6.0 (19.7 x 15.2) Oval
Splice Capacity – Single, Mass (SWR), Mass (Standard)	216, 864, 432
Splice Tray Capacity	3

Ordering Information

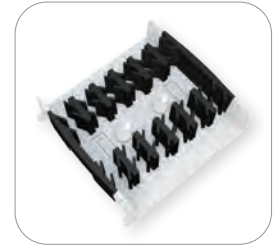
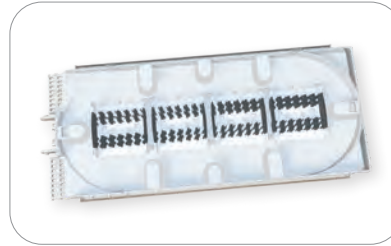
DESCRIPTION	AFL NO.
LL-24 Pedestal, Empty	FE000325

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LightLink 24 Slim-Line Pedestal

Splice Trays and Splice Modules

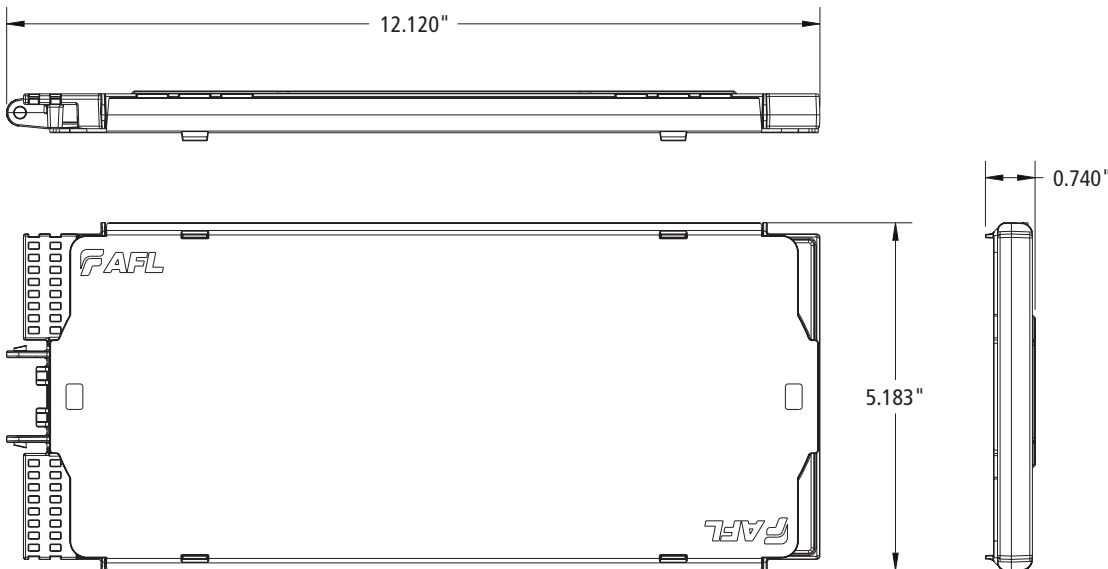
The LL-24 Pedestal utilizes X-2 size splice trays. Trays can be ordered fully loaded or half loaded with splice modules. For “rollable” type ribbon such as AFL’s SpiderWeb Ribbon, trays can be fully loaded for 24 mass splices or 288 fibers per tray. For standard ribbon, AFL recommends half loaded for 12 mass splices single-stacked, or 144 fibers.



Ordering Information

DESCRIPTION	TRAY CAPACITY		AFL NO.
	SINGLE	MASS	
X-2 Tray Loaded with Two Splice Modules	36	144	AX-TRAY-2-2
X-2 Tray Fully Loaded with Four Splice Modules	72	288	AX-TRAY-2-4
Additional splice module (18 single fusion triple stacked, 12 mass fusion double stacked, 6 mechanical) – Pack of 20	—	—	AX-TRAY-MOD-20
X-2 Tray Empty	—	—	AX-TRAY-2-E

Dimensions

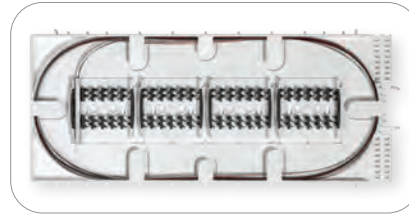


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LightLink 24 Slim-Line Pedestal

Splitter Splice Trays

Passive optical splitters, or PLCs (Planar Lightwave Circuits), can be provided preinstalled into the Apex X-2 splice tray. PLCs can either be installed and splice within the same tray, or provided with a separate dedicated tray for splicing, with fibers routed between trays using protective tubing. A third option provides one additional tray to separate input and output fiber splicing.



Ordering Information

DESCRIPTION	SPLIT RATIO	AFL NO.
X-2 Tray with Four Splice Modules, (1) 1x2 PLC Splitter	1x2	AX-TRAY-2-12-1
X-2 Tray with Four Splice Modules, (1) 1x4 PLC Splitter	1x4	AX-TRAY-2-14-1
X-2 Tray with Four Splice Modules, (1) 1x8 PLC Splitter	1x8	AX-TRAY-2-18-1
X-2 Tray with Four Splice Modules, (1) 1x16 PLC Splitter	1x16	AX-TRAY-2-116-1
X-2 Tray with Four Splice Modules, (1) 1x32 PLC Splitter	1x32	AX-TRAY-2-132-1
X-2 Tray with (1) 1x2 PLC Splitter and Separate Splicing Tray with Four Splice Modules	1x2	AX-TRAY-2-12-2
X-2 Tray with (1) 1x4 PLC Splitter and Separate Splicing Tray with Four Splice Modules	1x4	AX-TRAY-2-14-2
X-2 Tray with (1) 1x8 PLC Splitter and Separate Splicing Tray with Four Splice Modules	1x8	AX-TRAY-2-18-2
X-2 Tray with (1) 1x16 PLC Splitter and Separate Splicing Tray with Four Splice Modules	1x16	AX-TRAY-2-116-2
X-2 Tray with (1) 1x32 PLC Splitter and Separate Splicing Tray with Four Splice Modules	1x32	AX-TRAY-2-132-2
X-2 Tray with (1) 1x2 PLC Splitter and 2 Separate Splicing Trays with Four Splice Modules each	1x2	AX-TRAY-2-12-3
X-2 Tray with (1) 1x4 PLC Splitter and 2 Separate Splicing Trays with Four Splice Modules each	1x4	AX-TRAY-2-14-3
X-2 Tray with (1) 1x8 PLC Splitter and 2 Separate Splicing Trays with Four Splice Modules each	1x8	AX-TRAY-2-18-3
X-2 Tray with (1) 1x16 PLC Splitter and 2 Separate Splicing Trays with Four Splice Modules each	1x16	AX-TRAY-2-116-3
X-2 Tray with (1) 1x32 PLC Splitter and 2 Separate Splicing Trays with Four Splice Modules each	1x32	AX-TRAY-2-132-3



Shown with four SC/APC adapters, security cover and grounding



"U-Grommet" Entry Option



1/2" Hole Entry Option

OptiNID® Duo Optical Demarcation Enclosure

AFL's OptiNID (OPN) Duo Optical Demarcation Enclosure is the latest entry in the OptiNID fiber optic demarcation family of products. The ultra-compact OPN Duo is designed with flexibility in mind with the capability to house up to 4 SC simplex or LC duplex adapters, along with the ability to house up to 18 single fiber or 6 mass fusion splices. The OPN Duo is also optimized for the use of AFL's FASTConnect® or FUSEConnect® field-installable connectors. The base of the enclosure houses an insert which incorporates fiber routing, splice tray, adapter plate, and cable retention features. The OPN Duo also has several optional features such as a clear splice/security cover for protecting provider-side connectors or a grounding plate for grounding armored or toneable drop cables. The OPN Duo is available with two different base cable entry options, either a pair of U-shaped "drop-in" style grommets, or two half-inch ports allowing for a variety of different entry accessories.

Features

- Integrated splice tray for up to 18 single fusion splices or 6 mass fusion
- Optional clear splice/security cover covers splices, pigtails and provider-side connectors
- Snap lock cover with optional 3/8" screw for added security
- "U-Grommets" provide easy drop-in cable entry or two half-inch ports for a variety of cable entry options
- Integrated mounting points external to the enclosure allow mounting to walls or poles without drilling holes through the box, creating leak paths

Applications

- FTTx – Fiber-to-the-Home (single family, multi-dwelling), Fiber-to-the-Business (multi-tenant)
- Wireless – Macro and small cell

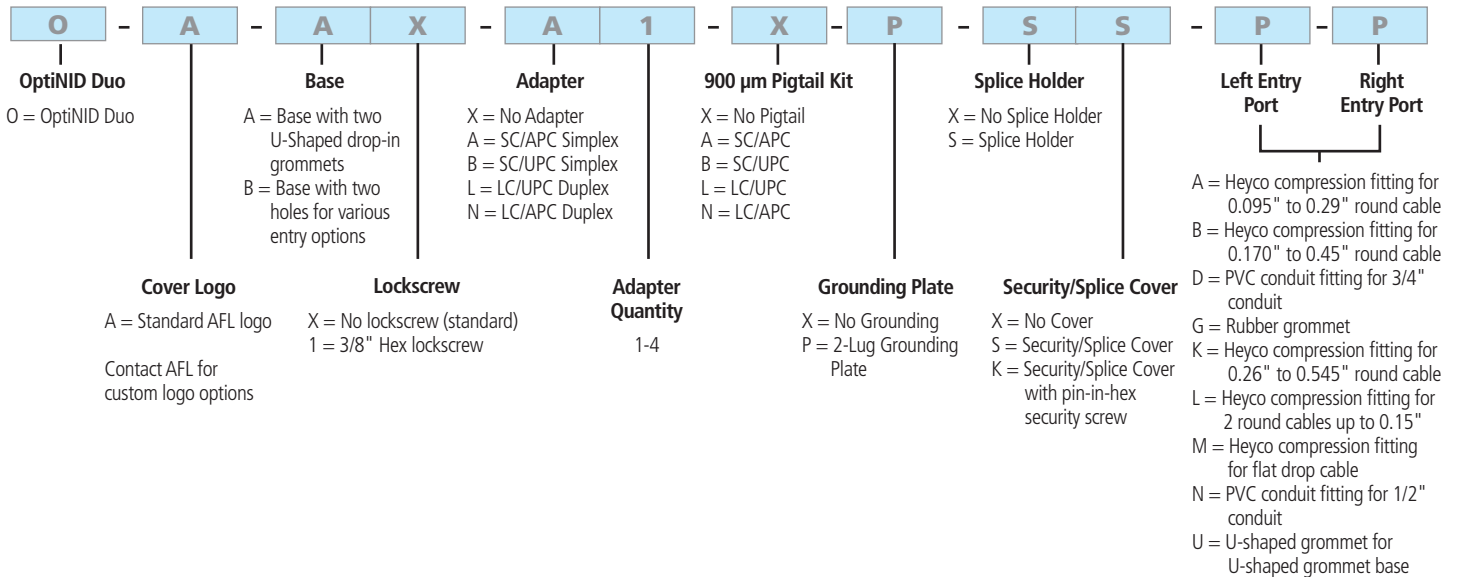
Specifications

PARAMETER	VALUES
Dimensions – H x W x D	9.6 x 7.0 x 2.7 inches (24.4 x 17.7 x 6.8 cm)
Material	UL® listed flame retardant thermoplastic alloy
UV Resistance (Days Exposed)	60 per ASTM-G26-84
Flammability	UL94-5VA
Impact Test	-40°F (-40°C), 10 ft-lbs. on all external surfaces
Chemical Resistance 30 Days at 100°F and 95% RH	Resists chipping and/or cracking when subject to house paint, wasp spray, sulfuric acid, kerosene and sodium hydroxide
Drop Test	-40°F (-40°C), 3 ft. onto concrete surface 4 times
Rain	24 hours at 10 psi
Temperature Cycling with Humidity	30 day cycling from -40°F to 149°F (-40°C to 65°C) with 95% RH

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OptiNID® Duo Optical Demarcation Enclosure

Ordering Information

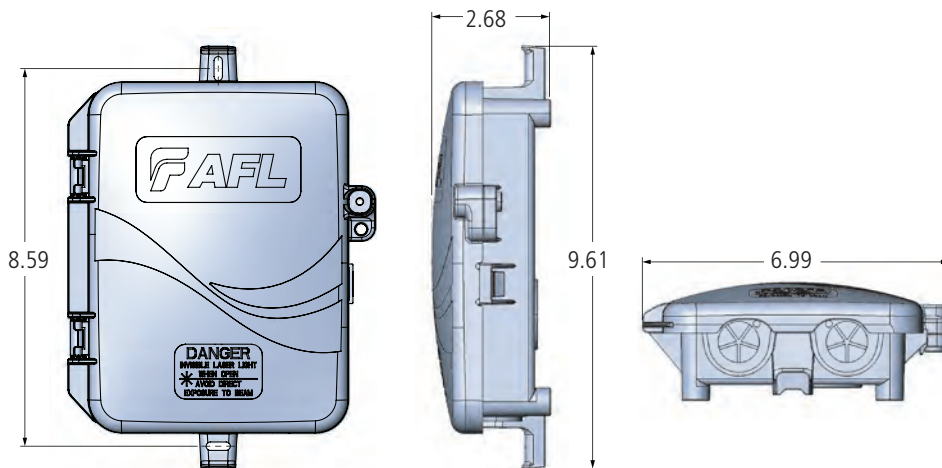


Ordering Information – Accessories

DESCRIPTION	AFL NO.
OptiNID Duo Splice Module, Pack of 20	AX-TRAY-MOD-20

NOTE: Options A-N available with the two-hole entry option only

Dimensions (in inches)



Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-49, GR-2898

Contact AFL for further details.



OptiNID® 300 Series Optical Demarcation Slack Storage Closure

The OptiNID (OPN) 300 series are optical demarcation closures designed for use in either indoor or outdoor environments. Smaller to suit FTTH demarcation applications and versatile to suit Cat5 or coax connections, the OPN-327SS and the OPN-350SS are equipped to handle up to two adapters each. Configured with routing rings positioned to accommodate safe slack storage, the OPN-300 series closures can be either wall or pole-mounted for ease of use and accessibility.

Features

- Weather-resistant thermoplastic alloy
- Self-latching, hinged cover design allows easy access without loose parts
- Routing rings positioned for safe slack storage
- Capacity for up to two adapters
- Ground stud provided in the OPN-350SS



OPN-327SS



OPN-350SS

Specifications

PARAMETER	VALUES
Dielectric Strength	Minimum 2500 Vrms for 1 minute
Impact Test	-40°F (-40°C), 5 ft-lbs on all external surfaces
Drop Test	-40°F (-40°C), 5 ft onto concrete surface four times
Rain	24 hours at 10 psi
UV Resistance (Days Exposed)	60 per ASTM-G26-84
Salt Fog (Days Exposed)	60 per ASTM-BLL7-90
Flammability	UL94-5V
Chemical Resistance 30 Days at 100°F and 95% RH	Resists chipping and/or cracking when subject to house paint, wasp spray, sulfuric acid, kerosene and sodium hydroxide
Material	UL® listed flame retardant thermoplastic alloy
Dimensions (H x W x D) in. (cm)	6.3 x 7.8 x 2.0 (15.7 x 19.7 x 5.0)
Cable Entrance in. (cm) diameter - Input	1 x 3/4" NPT (1.130"), 2 x 1/2" NPT (0.875")
Covers	Standard, molded-in snap finger and "F" termination
Operating Temperature Range – °F (°C)	-40 to 140 (-40 to 60)

Ordering Information

DESCRIPTION	AFL NO.
BASE PRODUCT ^{1,2}	
OptiNID OPN-327SS Slack Storage Box, 1 x SC/APC Adapter	DM000720
OptiNID OPN-350SS Slack Storage Box, 1 x SC/APC Adapter, Splice Chip, Ground Stud	DM000795
ACCESSORIES ³	
Heyco M3234 Compression Fitting, 18 mm to 11 mm Grip (includes 4) – Left Port Only	DM001171

Notes:

1. All standard OPN-300 Series configurations come equipped with a 3/4" NPT fitting, rubber grommet and Heyco M4519 compression fitting.
2. Contact AFL customer service for additional configurations.
3. See OptiNID Accessory Page for additional kits.



OptiNID® 500 Optical Demarcation Closure

The OptiNID (OPN) 500 is an optical demarcation closure designed for use in either indoor or outdoor environments. Small form factor for FTTH demarcation applications, the closure is capable of housing up to six bulkhead adapters in one 118 LGX® compatible adapter plate, and is equipped with an integrated splice tray, which holds up to six single fusion splices. The OPN-500 can be either wall or pole-mounted.

Features

- Weather-resistant thermoplastic alloy
- Self-latching, hinged cover design allows easy access without loose parts
- Capacity for one 118 LGX compatible adapter plate
- Provider override for customer lock
- 3/4" NPT conduit fitting, compression cable fittings or grommeted entry ports

Specifications

PARAMETER	VALUES
Dielectric Strength	Minimum 2500 Vrms for 1 minute
Impact Test	-40°F (-40°C), 5 ft-lbs on all external surfaces
Drop Test	-40°F (-40°C), 5 ft onto concrete surface four times
Rain	24 hours at 10 psi
UV Resistance (Days Exposed)	60 per ASTM-G26-84
Salt Fog (Days Exposed)	60 per ASTM-BLL7-90
Flammability	UL94-5V
Chemical Resistance 30 Days at 100°F and 95% RH	Resists chipping and/or cracking when subject to house paint, wasp spray, sulfuric acid, kerosene and sodium hydroxide
Material	UL® listed flame retardant thermoplastic alloy
Dimensions (H x W x D) in. (cm)	6.3 x 7.8 x 2.0 (15.7 x 19.7 x 5.0)
Cable Entrance in. (cm) diameter - Input	1 x 3/4" NPT (1.130"), 2 x 1/2" NPT (0.875")
Covers	Standard, molded-in snap finger and "F" termination
Operating Temperature Range – °F (°C)	-40 to 140 (-40 to 60)

Ordering Information

DESCRIPTION	AFL NO.
BASE PRODUCT ^{1,2}	
OptiNID OPN-500, No Adapters	DM001021
OptiNID OPN-500, 1 x SC/UPC Adapter	DM000550
OptiNID OPN-500, 1 x SC/APC Adapter	DM000766
OptiNID OPN-500, 6 x SC/UPC Adapters	DM000871
OptiNID OPN-500, 6 x SC/UPC Adapters, 6 x 1 m 900 µm Pigtailed	DM001109
ACCESSORIES ³	
Heyco M3234 Compression Fitting, 18 mm to 11 mm Grip (includes 4) – Left Port Only	DM001171
Kit, Six-Position Splice Chip, (includes 10)	DM000870

Notes:

1. All standard OPN-500 configurations come equipped with a 3/4" NPT fitting, rubber grommet and Heyco 3231 compression fitting, along with a splice chip for six single fusion splices.
2. Contact AFL customer service for additional configurations.
3. See OptiNID Accessory Page for additional kits.

LGX is a registered trademark of Furukawa Electric North America, Inc.

OptiNID® 760XL Optical Demarcation Closure

The OptiNID (OPN) 760XL is an optical demarcation closure designed for use in either indoor or outdoor environments. It is capable of housing up to 24 bulkhead adapters in two 118 LGX® compatible adapter plates and is equipped with a splice tray (LL-2425), which holds up to 32 single fusion splices. The OPN-760XL can be either wall or pole-mounted.

Features

- Capacity for up to two 118 LGX compatible adapter plates
- Rugged weather-resistant thermoplastic alloy
- Self-latching, hinged cover design allows easy access without loose parts
- Slip-in grommets allow pre-connectorized cable deployment
- Provider override is provided so that technician can override customer lock
- Security cover option available

Specifications

PARAMETER	VALUES
Dielectric Strength	Minimum 2500 Vrms for 1 minute
High Temperature Storage/Mold Stress	14 days at 159°F (70.55 °C)
Temperature Cycling with Humidity	150 day cycling from 40-140°F (4.44-60°C) with 95% RH
Impact Test	-40°F (-40°C), 5*/lbs on all external surfaces
Drop Test	-40°F (-40°C), 5* (12.7 cm) onto concrete surface 4 times
Rain	24 hours at 10 psi
UV Resistance (Days Exposed)	60 per ASTM-G26-84
Salt Fog (Days Exposed)	60 per ASTM-BLL7-90
Flammability	UL94-5V
Chemical Resistance 30 Days at 100 °F and 95% RH Subject to:	Resists chipping and/or cracking when subject to: house paint, wasp spray, sulfuric acid, kerosene and sodium hydroxide
Material	UL® listed flame retardant thermoplastic alloy
Dimensions (H x W x D) in. (cm)	13 x 13 x 3.75 (32.5 x 32.5 x 9.5)
Cable Entrances in. (cm) diameter—Input	4 x 0.875 (2.2)—3/4" conduit
Covers	Standard – molded-in snap finger and 3/8" hex head fastener



OPN-760XL with optional security cover kit



OPN-760XL with 3/4" Pipe Fitting Transition Kit



3/4" Pipe Fitting Transition Kit

Ordering Information

DESCRIPTION	AFL NO.
BASE PRODUCT ^{1,2}	
OptiNID OPN-760XL, No Adapters, No Security Cover	DM001000
OptiNID OPN-760XL, No Adapters, Security Cover	DM001022
ACCESSORIES ³	
3/4" Pipe Fitting Transition Kit (includes 2)	DM001174
OPN-760XL Security Cover Kit	DM000923
OPN-760XL Pole Mounting Kit	DM000927

Notes:

1. All standard OPN-760XL configurations come equipped with four slip-in rubber grommets and a splice tray equipped for 32 single fusion splices.
2. Contact AFL customer service for additional configurations.
3. See OptiNID Accessory Page for additional kits.



OptiNID® 1224 Optical Demarcation Closure

The OptiNID-1224 is an optical demarcation closure designed for use in either indoor or outdoor environments. It is capable of housing up to 36 bulkhead adapters in three 118 LGX® compatible adapter plates and comes equipped with a splice tray (LL-2425), which holds up to 32 single fusion splices. The OPN-1224 can be either wall or pole-mounted.

Features

- Capacity for up to three 118 LGX compatible adapter plates
- Weather-resistant thermoplastic alloy
- Self-latching, hinged cover design allows easy access without loose parts
- Self-sealing individual entrance ports prevent water and insects from entering
- Provider override is provided so that technician can override customer lock

Specifications

PARAMETER	VALUES
Dielectric Strength	Minimum 2500 Vrms for 1 minute
High Temperature Storage/Mold Stress	14 days at 159°F (70.55°C)
Temperature Cycling with Humidity	150 day cycling from 40-140°F (4.44-60°C) with 95% RH
Impact Test	-40°F (-40°C), 5*/lbs on all external surfaces
Drop Test	-40°F (-40°C), 5* (12.7 cm) onto concrete surface 4 times
Rain	24 hours at 10 psi
UV Resistance (Days Exposed)	60 per ASTM-G26-84
Salt Fog (Days Exposed)	60 per ASTM-BLL7-90
Flammability	UL94-5V
Chemical Resistance 30 Days at 100°F and 95% RH	Resists chipping and/or cracking when subject to: house paint, wasp spray, sulfuric acid, kerosene and sodium hydroxide
Material	UL® listed flame retardant thermoplastic alloy
Dimensions (H x W x D) in. (cm)	12.25 x 12 x 5.25 (22.80 x 22.80 x 7.60)
Cable Entrances in. (cm) diameter - Output	5 x 0.625 (1.5)
Cable Entrances in. (cm) diameter - Input	2 x 0.75 (1.5), 1 x 0.250 (0.6) (ground wire)
Covers	Standard - molded-in snap finger and "F" termination

Ordering Information

DESCRIPTION	AFL NO.
OptiNID OPN-1224, Splice Tray, No Adapter Plate Or Adapters	DM000183

OptiNID® Optical Demarcation Accessories

Heyco Compression Fittings for OPN-300 Series and OPN-500



Used on the bottom entry ports of the OPN-300 Series and OPN-500 for a tight compression fitting. The Heyco M3234 fits into the larger left port and can compress from 18 mm to 11 mm in port size. The Heyco M3231 fits into the smaller middle and right ports and can compress from 11 mm to 4 mm. Kits include nylon locknuts.

Ordering Information

DESCRIPTION	AFL NO.
Heyco M3234 Compression Fitting, 18 mm to 11 mm Grip (includes 4). Left Port Only	DM001171
Heyco M3231 Compression Fitting, 11 mm to 4 mm Grip (includes 4). Middle and Right Port	DM000911

NPT Conduit Fittings for OPN-300 Series and OPN-500



Used on the bottom entry ports of the OPN-300 series and OPN-500 as an open port or to accept NPT conduit. The 3/4" NPT fitting has a through-hole size of 0.71" and can accept 3/4" NPT conduit. The 1/2" NPT fitting has a through-hole size of 0.51" and can accept 1/2" NPT conduit. Kits include nylon locknuts.

Ordering Information

DESCRIPTION	AFL NO.
3/4" NPT Conduit Fitting (includes 4) – Left Port Only	DM001170
1/2" NPT Conduit Fitting (includes 4) – Middle and Right Port	DM000912

Rubber Grommet for OPN-300 Series and OPN-500



Used on the middle and right entry ports of the OPN-300 series and OPN-500. The rubber grommets can be easily inserted to create a grommetted entry port or to seal an unused port.

Ordering Information

DESCRIPTION	AFL NO.
Rubber Grommet, 0.875" (includes 10)	DM001119

continued
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Opti-NID® Optical Demarcation Accessories

Fiber Demarcation



Splice Chip Kit for OPN-500

Used on the OPN-500 to add an additional splice chip to the splice area to increase the splice capacity to 12 single fusion splices. The chip has an adhesive back, allowing it to adhere to multiple locations within the box.

Ordering Information

DESCRIPTION	AFL NO.
Kit, Six-Position Splice Chip (includes 10)	DM000870



Pipe Transition Kit for OPN-760XL

Used on the OPN-760XL to create a 3/4" NPT transition fitting. The fitting slides into any of the four entry ports on the OPN-760XL and securely clips into place. The 3/4" NPT fitting has a through-hole size of 0.67" and can accept 3/4" NPT conduit.

Ordering Information

DESCRIPTION	AFL NO.
3/4" Pipe Fitting Transition Kit (includes 2)	DM001174



Security Cover Kit for OPN-760XL

Used on the OPN-760XL to create a lockable security cover for provider access. The cover fits over the back portion of the OPN-760XL, covering the splice tray and provider side of the adapters and locks into place with a star head bolt.

Ordering Information

DESCRIPTION	AFL NO.
OPN-760XL Security Cover Kit	DM000923



Pole Mounting Kit for OPN-760XL

Used on the OPN-760XL to provide an easy pole mounting solution. The plate mounts to the back of the OPN-760XL and provides arms for straps or bolts to adhere to a pole.

Ordering Information

DESCRIPTION	AFL NO.
OPN-760XL Pole Mounting Kit	DM000927

IDEAA® (Integrated Distribution Enabling Access Apparatus)



288 Fiber (Closed)



864 Fiber (Open)

IDEAA Exterior Distribution Cabinet

The IDEAA Exterior Distribution Cabinet (EDC) provides a convenient modular approach to centralized fiber distribution. All sizes of the EDC utilize the IDEAA splitter module to enable versatility across the platform. The EDC utilizes innovative jumper routing to enable efficient fiber management utilizing equal length pigtails for the entire cabinet.

Features

- Modular distribution platform allows for incremental deployment costs and immediate cost savings
- Small size is unobtrusive in residential deployments
- Enhanced fiber management provides simplified routing and termination
- Dual-door entry allows easy access to distribution and fiber management fields
- Flexible pad and pole mounting options allow for deployment in convenient locations
- Expandable feeder cables allow for point-to-point distribution (cross-connect)

Specifications

THROUGH PORTS	HEIGHT	WIDTH	DEPTH	SPLITTER CAPACITY	INPUT/PASS
Up to 288 Fiber	38"	20"	20"	9	24
432 Fiber	46"	20"	20"	14-15	24 (48 available)
576 and 864	48"	42.5"	20"	28	144

Ordering Information

DESCRIPTION	AFL NO.
PAD MOUNT WITH SKIRT AND 100 FOOT TAILS	
IDEAA Exterior Distribution Cabinet - 72 Pad, 1 x 72 Fiber Distribution Cable (Loose Tube), 1 x 24 Fiber Input Cable (Loose Tube)	EA000307
IDEAA Exterior Distribution Cabinet - 144 Pad, 1 x 144 Fiber Distribution Cable (Loose Tube), 1 x 24 Fiber Input Cable (Loose Tube)	EA000304
IDEAA Exterior Distribution Cabinet - 216 Pad, 1 x 216 Fiber Distribution Cable (Loose Tube), 1 x 24 Fiber Input Cable (Loose Tube)	EA000305
IDEAA Exterior Distribution Cabinet - 288 Pad, 1 x 288 Fiber Distribution Cable (Loose Tube), 1 x 24 Fiber Input Cable (Loose Tube)	EA000301
IDEAA Exterior Distribution Cabinet - 432 Pad, 2 x 216 Fiber Distribution Cable (Loose Tube), 1 x 24 Fiber Input Cable (Loose Tube)	EA000321
IDEAA Exterior Distribution Cabinet - 864 Pad, 2 x 432 Fiber Distribution Cable (Wrapping Tube Cable (WTC), with SpiderWeb Ribbon®), 1 x 144 Fiber Input Cable (Wrapping Tube Cable (WTC), with SpiderWeb Ribbon®)	EA000590

POLE MOUNT WITH BRACKET AND 100 FOOT TAILS	
IDEAA Exterior Distribution Cabinet - 144 Pole, 1 x 144 Fiber Distribution Cable (Loose Tube), 1 x 24 Fiber Input Cable (Loose Tube)	EA000314
IDEAA Exterior Distribution Cabinet - 288 Pole, 1 x 288 Fiber Distribution Cable (Loose Tube), 1 x 24 Fiber Input Cable (Loose Tube)	EA000302
IDEAA Exterior Distribution Cabinet - 432 Pole, 2 x 216 Fiber Distribution Cable (Loose Tube), 1 x 24 Fiber Input Cable (Loose Tube)	EA000322

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-3215



Applications

- Direct Wall Mount
- Interior Wall Mount Enclosure / Pedestal
- Exterior Wall Mount Enclosure
- Exterior Distribution Enclosure / Pedestal
- Exterior Distribution Cabinet
- Splice Closure – Sealed
- Rack Mount Bracket

Features

- SC and LC Module configurations can accommodate up to a 64 fiber distribution
- Modular design allows for highly flexible and scalable deployments
- Durable hardened plastic exterior provides a rugged encasement
- Single and multi-package modules available

IDEAA®

Integrated Distribution Enabling Access Apparatus

AFL's Integrated Distribution Enabling Access Apparatus (IDEAA) product family revolutionizes the way passive optical splitters are deployed in the network. Utilizing a small modular design and leveraging planar waveguide technology to yield an ultra low polarization dependent loss, low insertion loss, and high port uniformity, the IDEAA product possesses the flexibility to be used in a wide variety of applications. The IDEAA module provides a lower cost and more versatile alternative to preexisting PON architecture arrangements. Rather than being confined to a traditional "splitter-in-cabinet" design, the IDEAA product family allows service providers to employ PON architecture across all areas of the network.

The IDEAA module's unique design enables customers to utilize a revolutionary stand-alone mounting capability. In addition to conforming to a number of different applications, each IDEAA module can be mounted as an independent distribution point. This unit can be neatly secured to a wall or even placed on an existing rack or cabinet.

IDEAA SC and LC Modules

The IDEAA SC and LC modules come equipped with an internal PLC device which is factory terminated and tested. An integrated hinge provides easy access to the SC or LC adapter interface while reducing space when mounted. The SC and LC modules use APC connectors to meet the strict back reflection requirements of the latest PON architectures. A wide variety of PLC splitter configurations are available. A dual 1x16 module is available with SC APC outputs and LC APC inputs. Two SC APC to LC APC jumpers are included to connect to the EDC SC APC input ports.

Direct Wall Mount Capability

The IDEAA product can easily mount to an interior wall without needing any additional enclosures. Simply use the integrated hinge plate to install the module directly to a wall. The module contains port identification for each output fiber.

Specifications

PARAMETER	VALUE				
	1 X 4	1 X 8	1 X 16	1 X 32	1 X 64
Wavelength Range (nm)	1260 - 1650				
Typical Insertion Loss (dB)	6.7	9.8	12.9	16.6	19.8
Max Insertion Loss (dB)	7.4	10.5	14	17.5	21
Max IL Uniformity (dB)	1	1	1.5	2	2.2
Return Loss (dB)	≥55				
Directivity (dB)	≥55				
Max PDL (dB)	0.3				

Ordering Information

DESCRIPTION	AFL NO.
IDEAA MODULE, SC, 1X32	EA000102
IDEAA MODULE, SC OUTPUT, LC INPUT, DUAL 1x16	EA000583
IDEAA MODULE, SC, 1X16	EA000103
IDEAA MODULE, SC, 1X8	EA000104
IDEAA MODULE, SC, 1X4	EA000105
IDEAA MODULE, LC, 2X32	EA000547

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-1209, GR-1221

IDEAA® (Integrated Distribution Enabling Access Apparatus)



LL-400sx Optical Splicing/Distribution Enclosure

The LightLink (LL) 400sx Fiber Optic Splicing and Distribution Enclosure provides for organizing, splicing, and interconnecting fibers in FTTx, broadband, distribution and building entrance applications. Each LL-400sx enclosure features a scratch resistant powder coated aluminum base and a fully gasketed cover. A unique self-sizing grommet design allows for express and preterminated cable installation. The LL-400sx is a butt-style enclosure equipped with four independent cable entry/exit grommets, used for outdoor pedestal or indoor building entrance and riser splicing applications. The unit supports a maximum storage and splicing capacity of up to 192 single or 576 mass-fused fibers.

The LL-400sx can also mount up to two LGX118® adapter plates (splicing capacity limited to 144 single fusion and 432 mass fusion splices when adapter plates are installed).

Features

- Independent cable strain relief system
- Cable entry/exit grommet seals
- Removable Hinged Front Cover
- Fiber routing system
- Splice tray support system
- 192 single fusion splices
- 576 mass fusion splices
- Grounding hardware kit included
- 1 1x32 IDEAA Module with LGX Mount Bracket

Specifications

PARAMETER	VALUE
Material	Chassis – aluminum
Coatings	Electrostatically applied, powder coat
Color	Antique white
Dimensions (H x W x D) in. (cm)	23.9 x 9.5 x 5.0 (58.4 x 24.13 x 12.7)
Weight lbs (kg)	5.0 (2.3)

Ordering Information

DESCRIPTION	AFL NO.
LL-400sx	EA000370
LL-4848 Mass Fusion Splice Tray	911437-00-02
LL-2448 Universal Splice Tray	911289-00-02
LL-2448-48S Single Fusion Splice Tray	FA000045
LL-2400 Single Fusion Splice Tray	91710-06
Channel MAH1010 Pedestal	FM000776
Channel MAH1212 Pedestal	FM000655
IDEAA® Module LGX Mount Bracket	EA000061
IDEAA Pigtail Kit	EA000166
IDEAA SC/APC 1x32 Splitter Module	EA000102
IDEAA SC/APC 1x16 Splitter Module	EA000103
IDEAA SC/APC 1x8 Splitter Module	EA000104
IDEAA SC/APC 1x4 Splitter Module	EA000105

Applications

- OSP Splicing
- MDU Splicing
- FTTx Distribution



IDEAA® Rack Mount Bracket

The IDEAA RMB allows attachment of one (1) IDEAA module to easily mount to industry standard LGX® 118 fiber management rack panels. Simple push-pull pins allow the module to be easily installed and removed.

Features

- Metal plate with push/pull pins
- Powder coated black
- LGX compatible

Capacity

IDEAA MODULE	1RU PANEL	2RU PANEL	3RU PANEL	4RU PANEL
# of 118 Positions	3	6	9	12
1x32 SC	N/A	N/A	3	4
1x16 SC	N/A	3	3	6
1x8 and 1x4 SC	3	6	9	12
3x96 MPO	3	6	9	12

Ordering Information

DESCRIPTION	AFL NO.
Rack-mount Panel LGX®118 Bracket for SC/APC IDEAA Module	EA000654
Rack-mount Panel LGX®118 Bracket for MPO IDEAA Module	EA000655

IDEAA® (Integrated Distribution Enabling Access Apparatus)



IDEAA® Splice Closure—Sealed

The IDEAA SCS is designed to mount either in buried or aerial applications. The splice closure comes equipped to install one (1) IDEAA module along with a tray to splice all input and output fiber cables. The splice closure is designed to handle multiple fiber cables.

Features

- Less than 20" overall length; ideal for small hand-holes
- Installation and re-entry using common hand tools
- Fully sealed to protect fiber and splices
- Fully kitted with all parts necessary for installation

Specifications

PARAMETER	VALUE
Splice Capacity (Max.) – single	36
Number of Splice Trays (Max.) – single	1
Cable Entrance Configuration	Butt
Cable Ports	5 Ports (14 cables total using flat-drop grommets)
Cable Sizes (O.D.)	Express Side – 2 (0.4"–1.0") Drop Side – 12 (0.31" flat-drop or 0.25" round)
Dimensions (L x D) – inches (cm)	19.8" x 10.0" (50.3 x 25.4)
Weight - lbs. (kg)	12 (5.44)

Ordering Information

DESCRIPTION	AFL NO.
IDEAA SPLICE CLOSURE	EA000076
IDEAA Splice Closure Pigtail Kit	EA000168



Sealed Fiber Optic Splice Closures

AFL's sealed fiber optic splice closures are designed to simplify splice management and maintenance. Intuitive engineering design reduces the installation time and complexity associated with fiber splicing in the field. No heat, adhesives, drills or powered equipment for installation or re-entry are required, just simply use a common can wrench to access and install cable. These closures are durable, easy-to-install and will increase productivity, reduce labor expenses, and last the life of your plant.

Features

- LG Series closures support stranded loose tube, Uniflex or ribbon fiber cables in either armored or dielectric configurations
- New Apex® Sealed Closures also support "rollable ribbon" fiber types including AFL's SpiderWeb Ribbon® (SWR®)
- Fully sealed to protect fiber and splices ensuring longevity
- Fully kitted with all parts to install cables

Specifications

DESCRIPTION	MODEL							
	LG-55-U-0	APEX X-2	APEX X-2S	LG-150-U-0	LG-250-U-0	LG-350-U-0	LG-350-AC	LG-350XL-U-0
Splice Capacity (Max.) – Single, Mass, Mechanical	24, n/a, 24	432, 3456, 864	216, 1728, 432	48, 192, 48	144, 432, 48	480, 1152, 108 ²	144, 432, 48	864, 2592, 288
Number of Splice Trays (Max.) – Single, Mass, Mechanical	1, n/a, 1	6		4, 3, 4		12, 8, 8	4, 3, 4	9, 9, 9
Cable Entrance Configuration	In-line / Butt	Butt						
Cable Ports	2	6		5			2 (Express Grommets) 3 (4-Drop Grommets)	5 (7 using dual port grommet Express sides)
Cable Sizes (Max. O.D.) in. (mm)	2 @ 0.70 (17.78) (splice)	Single Port: 0.40- 1.10 (10.0 - 28.0) Multi-Drop Kit: 0.20 - 0.39 (5.0 - 9.9) or flat drop		5 @ 0.62 (15.748)		3 @ 0.80 (20.32) 2 @ 1.00 (25.4)	2 @ 1.0 (25.4) 12 @ 0.312 (7.9248) Flat or 0.250" (6.35) Round	3 @ 1.08 (27.432) 2 @ 1.18 (29.972)
Testing - Cable Retention (100 lbs) - Water Resistance (waterhead) - Impact Resistance (0-40 °C) - Chemical Resistance - Cable Flexing	Passed 20 ft. Passed Passed Passed	—	—	Passed 20 ft. Passed Passed Passed				
Dimensions – (L x D) in. (cm)	14.00 x 4.00 (35.6 x 10.16)	25.0 x 12.0 (64 x 30)	20.0 x 12.0 (51 x 30)	18.25 x 8.75 (463.6 x 222.3)	19.0 x 8.75 (463.6 x 222.3)	28.00 x 10.00 (71.12 x 25.4)	20 x 10 (51 x 25.4)	31.00 x 12.00 (78.74 x 30.48)
Weight – lbs. (kg)	3.0 (1.36)	25 (11.3)	22 (10)	10.5 (4.76)	10.5 (4.76)	16 (7.26)	12.0 (5.44)	25 (11.34)

NOTES: 1. For the LG-250-U-0; 36 mechanical splices only using the LL-2448 splice tray.
2. For the LG-350-U-0; 108 mechanical splices only using the LL-2448 splice tray.

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771
Rural Utilities Service (RUS)	Listed



Apex® X-2 Sealed Splice Closure

The Apex X-2 is a sealed splice closure designed for protecting optical fiber splices in both above- or below-grade applications in a butt configuration. The Apex X-2 is capable of up to 432 single fusion, 864 mass fusion with standard ribbon, or 3456 (200 μm, 1728 max for 250 μm) mass fusion with “rollable ribbon” fiber types such as AFL’s SpiderWeb Ribbon® (SWR®). Cables are sealed by a unique wedge system spaced evenly around the circumference of the closure’s base. Each cable seal is opened by a press-to-release lever and sealing is completed by actuating a single screw for each cable. Each cable is sealed individually, ensuring original craftsmanship when cables may be added at a later date. Up to 6 splice trays are attached and hinge off a central organizer. A plastic slack storage basket resides underneath the trays with ample tie down points for managing tube and fiber slack.

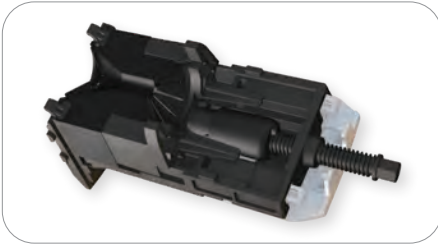
Features

- Individual cable sealing ports with tool-less release mechanism and gel sealing
- Hinging, lockable splice trays
- Plastic slack storage basket with optional segmented basket to separate ribbon and loose tube slack storage
- Six cable ports with up to six ground lugs
- Capable of up to 16 drop cables with an expressed distribution cable using multi-drop entry kits
- Splice trays with universal splice modules capable of holding single fusion, mass fusion and mechanical splices as well as other devices such as passive optical splitters
- Dome-to-base O-ring seal retained into dome to prevent loss or damage, but is still replaceable if necessary

Specifications

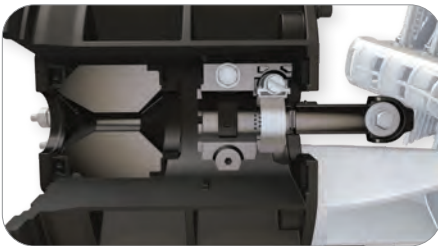
PARAMETER	VALUE
Dimensions – L x D, in (cm)	25.0 x 12.0 (64 x 30)
Weight, No Trays – lb (kg)	25 (11.3)
Splice Capacity – Single, Mass (SWR), Mass (Standard)	432, 3456, 864
Splice Tray Capacity	6
Cable Diameter, Single Port, in (mm)	0.40" – 1.10" (10.0 – 28.0)
Cable Diameter, Multi-Drop Kit, in (mm)	0.20" – 0.39" (5.0 – 9.9) or flat drop
Application	Direct Bury, Handhole, Aerial, Pole/Wall

Apex® X-2 Sealed Splice Closure



Gel Sealing

Individual wedges located evenly around the circumference of the base are removed with the press of a button. When cables are in place and ready to be sealed, the gel is compressed by a single screw, decreasing installation time. Individual port seals ensure cables never become unsealed when adding new cables at a later date.



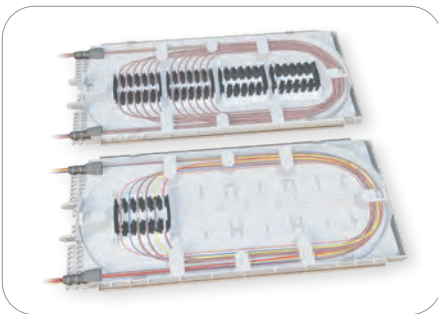
Cable Entry Ports and Strain Relief

The cable entry ports surrounding the circumference of the base accept single cables from 0.4" to 1.1" in diameter. These ports can be expanded through the use of optional drop cable entry kits, allowing up to 4 flat drops or cables from 0.2" to 0.39" to use a single port. Additionally, each port has the capability to be paired with its own grounding lug if necessary. Closures can be configured with enough strain relief kits for 2 to 6 cables from the factory. For closures with less than 6, additional cables can be added through the use of additional cable strain relief kits sold separately.



Slack Storage

A molded slack storage basket allows for use of the entire cross section of the closure to maximize storage. An optional segmented hinging basket is available to separate ribbon and loose tube slack, and can be locked in the upward position for access to expressed fibers below.



Splice Trays with Modular Splice Holders

Splice trays are organized in a hinging array that automatically lock when tilted to the upward position for easy access to the splice trays and slack storage below. The universal splice module holds up to 18 single fusion, 6 mass fusion or 12 mass fusion double-stacked when using SWR, or 6 mechanical splices as well as devices such as PLC splitters. This eliminates the need for specifying and stocking multiple splice trays for multiple applications.

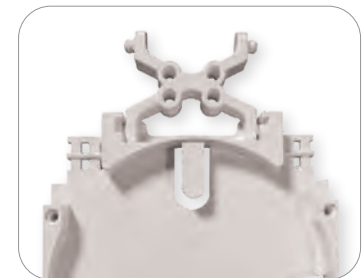
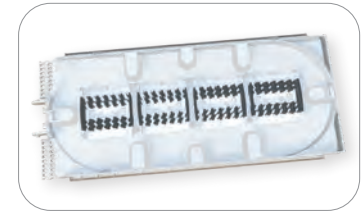
Ordering Information

AX	2	B	L	0	2	6	B
APEX CLOSURES	CLOSURE SIZE	BASKET TYPE	TRAY TYPE	NUMBER OF TRAYS	CABLE STRAIN RELIEF HARDWARE KITS	NUMBER OF GROUND LUGS	INNER BASKET
	2 = X-2 Size	B = X-2 Sized Basket	X = No preinstalled tray L = X-2 Tray Loaded with splice modules	0 1 6	2 4 6	0 2 6	X = No Inner Basket B = Include Inner Basket

Apex® X-2 Sealed Splice Closure

Splice Trays and Splice Modules

Apex X-2 closures utilize X-2 size splice trays. Trays can be ordered fully loaded or half loaded with splice modules. For "rollable" type ribbon such as AFL's SpiderWeb Ribbon®, trays can be fully loaded for 48 double-stacked mass splices, or 576 fibers per tray. For standard ribbon, AFL recommends half loaded for 12 mass splices single-stacked, or 144 fibers. Adapter kits available to install FOSC® A-B optical trays.

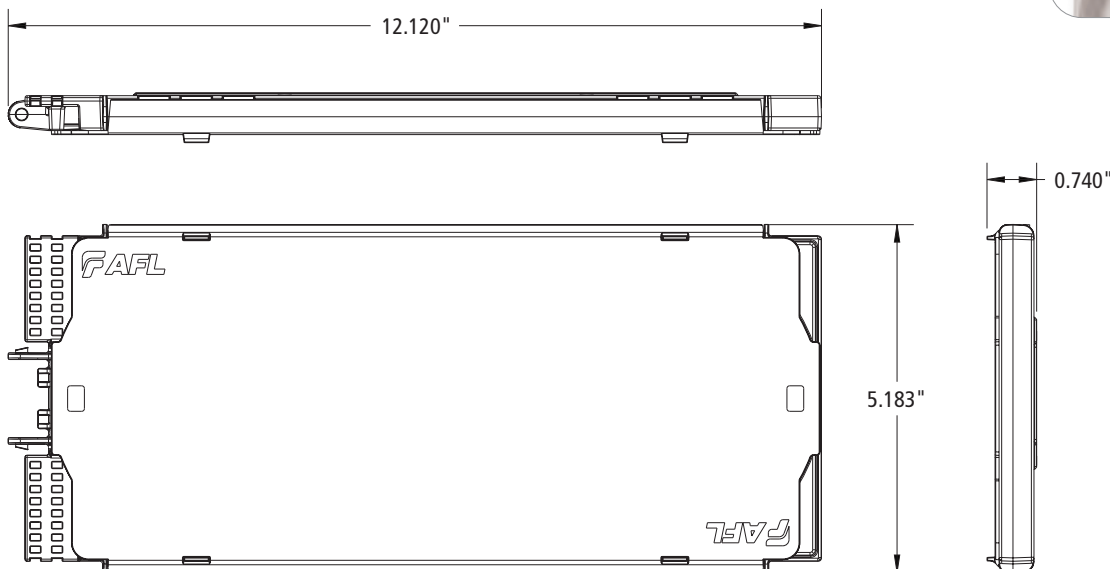


Ordering Information

DESCRIPTION	TRAY CAPACITY		AFL NO.
	SINGLE	MASS	
X-2 Tray Loaded with Two Splice Modules	36	144	AX-TRAY-2-2
X-2 Tray Fully Loaded with Four Splice Modules (576 fibers per tray only recommended for rollable ribbon, e.g. AFL SWR)	72	576	AX-TRAY-2-4
Additional splice module (18 single fusion triple stacked, 12 mass fusion double stacked, 6 mechanical) – Pack of 20	-	-	AX-TRAY-MOD-20
X-2 Tray Empty	-	-	AX-TRAY-2-E
KIT, APEX, A-B TRAY ADAPTER, 1 Kit of 6 pieces	-	-	AX-ADPTR-ABTRAY-6
KIT, APEX, A-B TRAY ADAPTER, 10 Kits of 6 pieces	-	-	AX-ADPTR-ABTRAY-60

*576 fibers per tray with mass fusion double-stacking (3456 total closure capacity) only recommended for 200 μm type rollable ribbon. For 250 μm, cut capacity in half with single-stacking

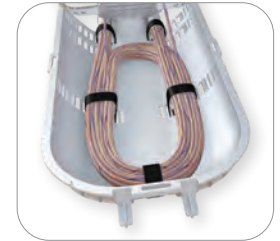
Dimensions



Apex® X-2 Sealed Splice Closure

Slack Storage Basket and Accessories

The Apex X-2 slack storage basket is molded with a rounded cross section to efficiently maximize space inside of the cylindrical dome closure. The basket has optional accessories such as the segmented basket, which provides a “basket within a basket” to manage ribbon and loose tube slack separately.



Ordering Information

DESCRIPTION	AFL NO.
Clear segmented basket for X-2. Can be used in combination with the basket cover	AX-KIT-SBASKET-2
Replacement slack storage basket tabs – Pack of 25	AX-KIT-BTAB-25

Slack Length

CABLE/COMPONENT	TYPE OF OPENING	STRIP LENGTH (INCHES)
WTC/SWR or Non-Matrix Ribbon	Mid Sheath	**111-134
	End Cut	**54-90
Flat Matrix Ribbon Cable	Mid Sheath	*108-110
	End Cut	*54-57
***Loose Tube Cable	Mid Sheath	**111-134
	End Cut	**54-90
STORAGE		
Each additional basket storage loop		23-27
Each additional splice tray service loop		26-27
Sheath to basket for tube retention		8-11
DEFINITION		
Midsheath	Slack loop in basket, service loop in tray, center cut	
End cut	Slack loop in basket, service loop in tray, to far splice	
* Ribbon minimum is slack loop in basket, no slack waterfall splicing in tray		
** Minimum no service loop in splice tray - Maximum allowing for service loop in splice tray		
*** LT storage max tubes	Additional tubes will decrease cable lengths	18 (432/24 per tube)

Apex® X-2 Sealed Splice Closure

Installation Accessories and Kits

The AFL Apex closure line has a variety of installation accessories kits to fit many applications. Additional accessories not listed here may be available by contacting AFL.



Apex Aerial Hanger Bracket



Apex Pole/Wall Mount



Mesh Transition Tubing



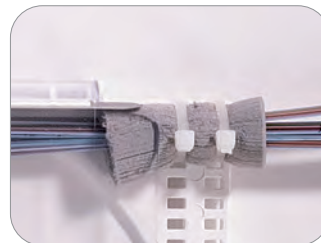
Ring Clamp Replacement Kit



Wedge Replacement Kit



Installation Stand



Foam Retention



Silicone Spiral Wrap

Ordering Information

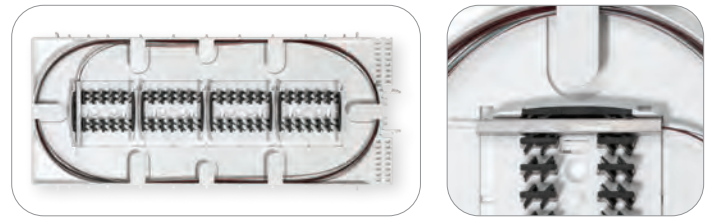
DESCRIPTION	AFL NO.
Aerial strand mount hanger kit	AX-KIT-AERIAL-1
Pole/wall mount kit	AX-BR30
1/4" Colored Mesh Transition Tubing, 250' Spool	AX-KIT-TUBE-014-XX*
Single Cable Strain Relief/Attachment Kit	AX-KIT-CBLSTRN
Multi-Drop Cable Entry Kit (fits up to 4 cables 0.20" to 0.39" in diameter or flat drop cable)	AX-KIT-DROP-4
X-2 and X-2S Dome to Base O-Ring Replacement Kit	AX-KIT-ORING-2
X-2 and X-2S O-Ring Grease, Pack of 10	AX-KIT-GREASE-10
X-2 and X-2S Dome to Base Locking Ring Clamp Replacement Kit	AX-KIT-CLAMP-2
X-2 and X-2S Wedge Replacement Kit	AX-KIT-WEDGE-2
X-2 and X-2S Installation Stand	FC104649
Apex X-2 and X-2S Inner Base Gel Replacement Kit	AX-KIT-GEL-2
Apex X-2 Dome Replacement Kit	AX-KIT-DOME-2
WTC-SWR Bundle Splice Tray Retention Kit - Includes 25 foam grommets for retaining SWR bundles to splice trays	HW000406
Silicone Spiral Wrap, 5.5 Foot Length	FC001657
Velcro, 75 Foot Length Roll – For securing SWR bundles in the slack basket	FC001759
Apex Cable Bonding Kit (Bonds armored cable sheath to ground) – Alligator clip on one end, eyelet on other end – Pack of 10	AX-KIT-GROUND-10

*Replace "XX" with any of the following for colors per the TIA-598 color code - BL, OR, GR, BR, SL, WH, RD, BK, YL, VI, RS or AQ

Apex® X-2 Sealed Splice Closure

Splitter Splice Trays

Passive optical splitters, or PLCs (Planar Lightwave Circuits), can be provided preinstalled into the Apex X-2 splice tray. PLCs can either be installed and splice within the same tray, or provided with a separate dedicated tray for splicing, with fibers routed between trays using protective tubing. A third option provides one additional tray to separate input and output fiber splicing.



Ordering Information

DESCRIPTION	SPLIT RATIO	AFL NO.
X-2 Tray with Four Splice Modules, (1) 1x2 PLC Splitter	1x2	AX-TRAY-2-12-1
X-2 Tray with Four Splice Modules, (1) 1x4 PLC Splitter	1x4	AX-TRAY-2-14-1
X-2 Tray with Four Splice Modules, (1) 1x8 PLC Splitter	1x8	AX-TRAY-2-18-1
X-2 Tray with Four Splice Modules, (1) 1x16 PLC Splitter	1x16	AX-TRAY-2-116-1
X-2 Tray with Four Splice Modules, (1) 1x32 PLC Splitter	1x32	AX-TRAY-2-132-1
X-2 Tray with (1) 1x2 PLC Splitter and Separate Splicing Tray with Four Splice Modules	1x2	AX-TRAY-2-12-2
X-2 Tray with (1) 1x4 PLC Splitter and Separate Splicing Tray with Four Splice Modules	1x4	AX-TRAY-2-14-2
X-2 Tray with (1) 1x8 PLC Splitter and Separate Splicing Tray with Four Splice Modules	1x8	AX-TRAY-2-18-2
X-2 Tray with (1) 1x16 PLC Splitter and Separate Splicing Tray with Four Splice Modules	1x16	AX-TRAY-2-116-2
X-2 Tray with (1) 1x32 PLC Splitter and Separate Splicing Tray with Four Splice Modules	1x32	AX-TRAY-2-132-2
X-2 Tray with (1) 1x2 PLC Splitter and 2 Separate Splicing Trays with Four Splice Modules each	1x2	AX-TRAY-2-12-3
X-2 Tray with (1) 1x4 PLC Splitter and 2 Separate Splicing Trays with Four Splice Modules each	1x4	AX-TRAY-2-14-3
X-2 Tray with (1) 1x8 PLC Splitter and 2 Separate Splicing Trays with Four Splice Modules each	1x8	AX-TRAY-2-18-3
X-2 Tray with (1) 1x16 PLC Splitter and 2 Separate Splicing Trays with Four Splice Modules each	1x16	AX-TRAY-2-116-3
X-2 Tray with (1) 1x32 PLC Splitter and 2 Separate Splicing Trays with Four Splice Modules each	1x32	AX-TRAY-2-132-3

Relevant Standards

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771



Apex® X-2S Sealed Splice Closure

The Apex X-2S is a sealed splice closure designed for protecting optical fiber splices in both above- or below-grade applications in a butt configuration. The Apex X-2S is capable of up to 216 single fusion, 432 mass fusion with standard ribbon, or 1728 (200 μm, 864 max for 250 μm) mass fusion with “rollable ribbon” fiber types such as AFL’s SpiderWeb Ribbon® (SWR®). Cables are sealed by a unique wedge system spaced evenly around the circumference of the closure’s base. Each cable seal is opened by a press-to-release lever and sealing is completed by actuating a single screw for each cable. Each cable is sealed individually, ensuring original craftsmanship when cables may be added at a later date. Up to 6 splice trays are attached and hinge off a central organizer. A plastic slack storage basket resides underneath the trays with ample tie down points for managing tube and fiber slack.

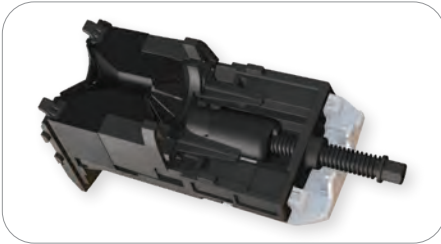
Features

- Individual cable sealing ports with tool-less release mechanism and gel sealing
- Hinging, lockable splice trays
- Plastic slack storage basket with optional segmented basket to separate ribbon and loose tube slack storage
- Six cable ports with up to six ground lugs
- Capable of up to 16 drop cables with an expressed distribution cable using multi-drop entry kits
- Splice trays with universal splice modules capable of holding single fusion, mass fusion and mechanical splices as well as other devices such as passive optical splitters
- Dome-to-base O-ring seal retained into dome to prevent loss or damage, but is still replaceable if necessary

Specifications

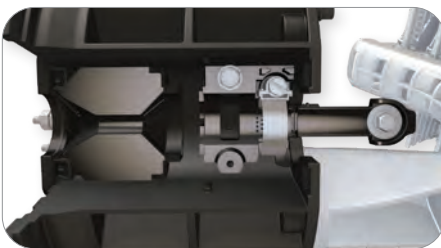
PARAMETER	VALUE
Dimensions – L x D, in (cm)	20.0 x 12.0 (51 x 30)
Weight, No Trays – lb (kg)	22 (10)
Splice Capacity – Single, Mass (SWR), Mass (Standard)	216, 1728, 432
Splice Tray Capacity	6
Cable Diameter, Single Port, in (mm)	0.40" – 1.10" (10.0 - 28.0)
Cable Diameter, Multi-Drop Kit, in (mm)	0.20" – 0.39" (5.0 - 9.9) or flat drop
Application	Direct Bury, Handhole, Aerial, Pole/Wall

Apex® X-2S Sealed Splice Closure



Gel Sealing

Individual wedges located evenly around the circumference of the base are removed with the press of a button. When cables are in place and ready to be sealed, the gel is compressed by a single screw, decreasing installation time. Individual port seals ensure cables never become unsealed when adding new cables at a later date.



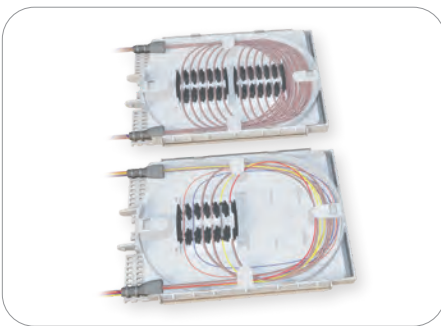
Cable Entry Ports and Strain Relief

The cable entry ports surrounding the circumference of the base accept single cables from 0.4" to 1.1" in diameter. These ports can be expanded through the use of optional drop cable entry kits, allowing up to 4 flat drops or cables from 0.2" to 0.39" to use a single port. Additionally, each port has the capability to be paired with its own grounding lug if necessary. Closures can be configured with enough strain relief kits for 2 to 6 cables from the factory. For closures with less than 6, additional cables can be added through the use of additional cable strain relief kits sold separately.



Slack Storage

A molded slack storage basket allows for use of the entire cross section of the closure to maximize storage.



Splice Trays with Modular Splice Holders

Splice trays are organized in a hinging array that automatically lock when tilted to the upward position for easy access to the splice trays and slack storage below. The universal splice module holds up to 18 single fusion, 6 mass fusion or 12 mass fusion double-stacked when using SWR, or 6 mechanical splices as well as devices such as PLC splitters. This eliminates the need for specifying and stocking multiple splice trays for multiple applications.

Ordering Information

AX	—	2S	—	B	—	L	—	0	—	2	—	6	—	X
APEX CLOSURES		CLOSURE SIZE		BASKET TYPE		TRAY TYPE		NUMBER OF TRAYS		CABLE STRAIN RELIEF HARDWARE KITS		NUMBER OF GROUND LUGS		INNER BASKET
		2S = X-2S Size		B = X-2S Sized Basket		X = No preinstalled tray L = X-2S Tray Loaded with splice modules		0 1 6		2 4 6		0 2 6		X = No Inner Basket

Apex® X-2S Sealed Splice Closure

Splice Trays and Splice Modules

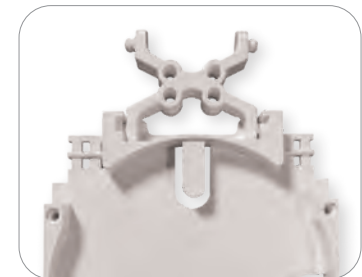
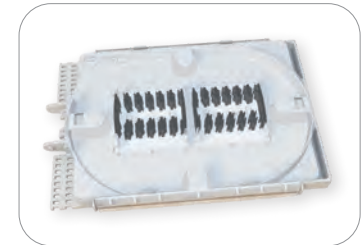
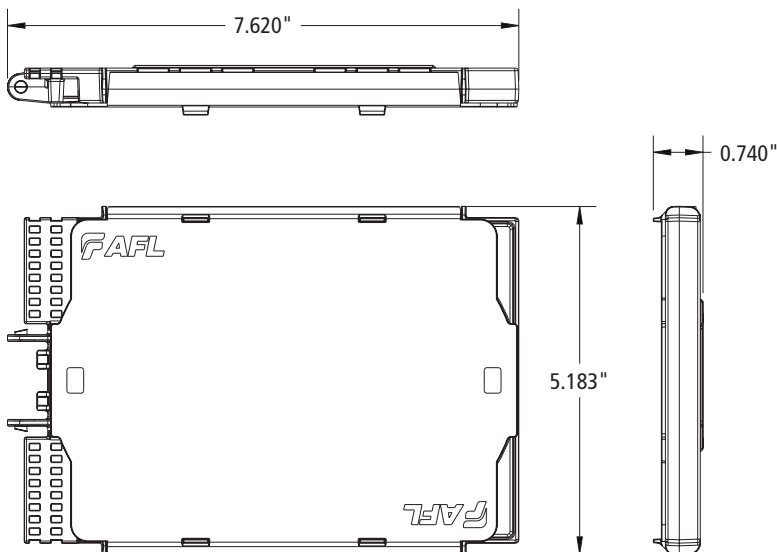
Apex X-2S closures utilize X-2S size splice trays. Trays can be ordered fully loaded or half loaded with splice modules. For "rollable" type ribbon such as AFL's SpiderWeb Ribbon®, trays can be fully loaded for 24 mass splices, or 288 fibers per tray. For standard ribbon, AFL recommends half loaded for 6 mass splices single-stacked, or 72 fibers. Adapter kits available to install up to four FOSC® A optical trays.

Ordering Information

DESCRIPTION	TRAY CAPACITY		AFL NO.
	SINGLE	MASS	
X-2S Tray Loaded with One Splice Module	18	72	AX-TRAY-2S-1
X-2S Tray Fully Loaded with Two Splice Modules (288 fibers per tray only recommended for rollable ribbon, e.g. AFL SWR)	36	288	AX-TRAY-2S-2
Additional splice module (18 single fusion triple stacked, 12 mass fusion double stacked, 6 mechanical) – Pack of 20	-	-	AX-TRAY-MOD-20
X-2S Tray Empty	-	-	AX-TRAY-2S-E
KIT, APEX, A-B TRAY ADAPTER, 1 Kit of 6 pieces	-	-	AX-ADPTR-ABTRAY-6
KIT, APEX, A-B TRAY ADAPTER, 10 Kits of 6 pieces	-	-	AX-ADPTR-ABTRAY-60

*288 fibers per tray with mass fusion double-stacking (1728 total closure capacity) only recommended for 200 μm type rollable ribbon. For 250 μm, cut capacity in half with single-stacking

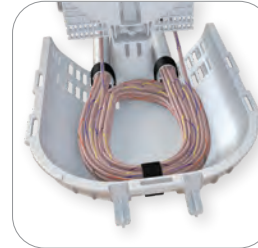
Dimensions



Apex® X-2S Sealed Splice Closure

Slack Storage Basket and Accessories

The Apex X-2S slack storage basket is molded with a rounded cross section to efficiently maximize space inside of the cylindrical dome closure.



Ordering Information

DESCRIPTION	AFL NO.
Replacement slack storage basket tabs – Pack of 25	AX-KIT-BTAB-25

Slack Length

CABLE / COMPONENT	TYPE OF OPENING	STRIP LENGTH (INCHES)
WTC/SWR or Non-Matrix Ribbon	Mid Sheath	**80 - 98
	End Cut	**40 - 66
Flat Matrix Ribbon Cable	Mid Sheath	*80 - 82
	End Cut	*40 - 42
***Loose Tube Cable	Mid Sheath	**80 - 98
	End Cut	**40 - 66
STORAGE		
Each additional basket storage loop		16 - 18
Each additional splice tray service loop		17 - 18
Sheath to basket for tube retention		7 - 9
DEFINITION		
Midsheath	Slack loop in basket, service loop in tray, center cut	
End cut	Slack loop in basket, service loop in tray, to far splice	
* Ribbon minimum is slack loop in basket, no slack waterfall splicing in tray		
** Minimum no service loop in splice tray - Maximum allowing for service loop in splice tray		
*** LT storage max tubes	Additional tubes will decrease cable lengths	12 (288/24 per tube)

Apex® X-2S Sealed Splice Closure

Installation Accessories and Kits

The AFL Apex closure line has a variety of installation accessories kits to fit many applications. Additional accessories not listed here may be available by contacting AFL.



Apex Aerial Hanger Bracket



Apex Pole/Wall Mount



Mesh Transition Tubing



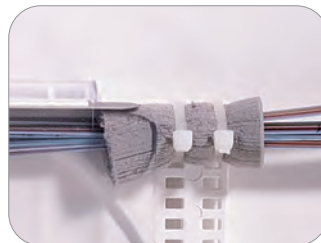
Ring Clamp Replacement Kit



Wedge Replacement Kit



Installation Stand



Foam Retention



Silicone Spiral Wrap

Ordering Information

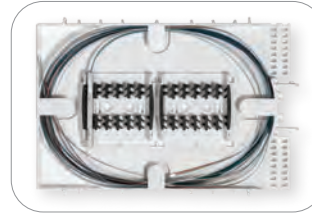
DESCRIPTION	AFL NO.
Aerial strand mount hanger kit	AX-KIT-AERIAL-1
Pole/wall mount kit	AX-BR30
1/4" Colored Mesh Transition Tubing, 250' Spool	AX-KIT-TUBE-014-XX*
Single Cable Strain Relief/Attachment Kit	AX-KIT-CBLSTRN
Multi-Drop Cable Entry Kit (fits up to 4 cables 0.20" to 0.39" in diameter or flat drop cable)	AX-KIT-DROP-4
X-2 and X-2S Dome to Base O-Ring Replacement Kit	AX-KIT-ORING-2
X-2 and X-2S O-Ring Grease, Pack of 10	AX-KIT-GREASE-10
X-2 and X-2S Dome to Base Locking Ring Clamp Replacement Kit	AX-KIT-CLAMP-2
X-2 and X-2S Wedge Replacement Kit	AX-KIT-WEDGE-2
X-2 and X-2S Installation Stand	FC104649
Apex X-2 and X-2S Inner Base Gel Replacement Kit	AX-KIT-GEL-2
Apex X-2S Dome Replacement Kit	AX-KIT-DOME-2S
WTC-SWR Bundle Splice Tray Retention Kit - Includes 25 foam grommets for retaining SWR bundles to splice trays	HW000406
Silicone Spiral Wrap, 5.5 Foot Length	FC001657
Velcro, 75 Foot Length Roll – For securing SWR bundles in the slack basket	FC001759
Apex Cable Bonding Kit (Bonds armored cable sheath to ground) – Alligator clip on one end, eyelet on other end – Pack of 10	AX-KIT-GROUND-10

*Replace "XX" with any of the following for colors per the TIA-598 color code - BL, OR, GR, BR, SL, WH, RD, BK, YL, VI, RS or AQ

Apex® X-2S Sealed Splice Closure

Splitter Splice Trays

Passive optical splitters, or PLCs (Planar Lightwave Circuits), can be provided preinstalled into the Apex X-2S splice tray. PLCs can either be installed and splice within the same tray, or provided with a separate dedicated tray for splicing, with fibers routed between trays using protective tubing. A third option provides one additional tray to separate input and output fiber splicing.



Ordering Information

DESCRIPTION	SPLIT RATIO	AFL NO.
X-2S Tray with Four Splice Modules, (1) 1x2 PLC Splitter	1x2	AX-TRAY-2S-12-1
X-2S Tray with Two Splice Modules, (1) 1x4 PLC Splitter	1x4	AX-TRAY-2S-14-1
X-2S Tray with Two Splice Modules, (1) 1x8 PLC Splitter	1x8	AX-TRAY-2S-18-1
X-2S Tray with Two Splice Modules, (1) 1x16 PLC Splitter	1x16	AX-TRAY-2S-116-1
X-2S Tray with Two Splice Modules, (1) 1x32 PLC Splitter	1x32	AX-TRAY-2S-132-1
X-2S Tray with (1) 1x2 PLC Splitter and Separate Splicing Tray with Two Splice Modules	1x2	AX-TRAY-2S-12-2
X-2S Tray with (1) 1x4 PLC Splitter and Separate Splicing Tray with Two Splice Modules	1x4	AX-TRAY-2S-14-2
X-2S Tray with (1) 1x8 PLC Splitter and Separate Splicing Tray with Two Splice Modules	1x8	AX-TRAY-2S-18-2
X-2S Tray with (1) 1x16 PLC Splitter and Separate Splicing Tray with Two Splice Modules	1x16	AX-TRAY-2S-116-2
X-2S Tray with (1) 1x32 PLC Splitter and Separate Splicing Tray with Two Splice Modules	1x32	AX-TRAY-2S-132-2
X-2S Tray with (1) 1x2 PLC Splitter and 2 Separate Splicing Trays with Two Splice Modules each	1x2	AX-TRAY-2S-12-3
X-2S Tray with (1) 1x4 PLC Splitter and 2 Separate Splicing Trays with Two Splice Modules each	1x4	AX-TRAY-2S-14-3
X-2S Tray with (1) 1x8 PLC Splitter and 2 Separate Splicing Trays with Two Splice Modules each	1x8	AX-TRAY-2S-18-3
X-2S Tray with (1) 1x16 PLC Splitter and 2 Separate Splicing Trays with Two Splice Modules each	1x16	AX-TRAY-2S-116-3
X-2S Tray with (1) 1x32 PLC Splitter and 2 Separate Splicing Trays with Two Splice Modules each	1x32	AX-TRAY-2S-132-3

Relevant Standards

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771



Expandable to support various cable diameters



Ease of installation (no tapes, washers, or glue)



Multiple layers of sealing protection

LightGuard® Peel and Seal Grommet Systems for Sealed Fiber Optic Closures

AFL's cable sealing grommet technology for the LightGuard (LG) Sealed Fiber Optic Closures improves sealing technology utilizing MULTICENTRIC® Grommets that do away with time-consuming tasks such as installing washers and messy sealing tapes for cable entry. MULTICENTRIC Grommets are designed to accept a wide range of cable diameters, eliminating the need to stock a variety of diameter-specific grommet kits.

Conversion kits for old LG-100, LG-200, and LG-300 closures allows for "Peel and Seal" grommet technology to be used without changing out the existing closure.

Features

- All Peel and Seal Grommet Systems support loose tube, core tube, dielectric and armored cable designs
- Installation and re-entry using common hand tools
- Accepts a wide range of cable diameters
- Fast and easy to install
- Fits existing AFL LightGuard sealed closures
- Fully sealed to protect fiber and splices ensuring longevity
- Full conversion kits and dual cable entry port kits



Single



Dual



Quad

Ordering information

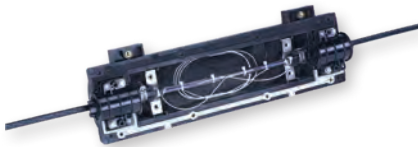
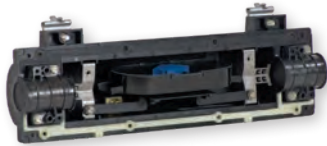
SEALED CLOSURE FULL CONVERSION KITS (SINGLE AXIS CABLE ENTRY)

DESCRIPTION	AFL NO.
3 Port Drop Grommet (LG-150/250)	FC000655
Dual Express Grommets for LG-350	FC000337
Quad Express Grommets for LG-350	FC000421
Single Cable Grommet Kit, Drop Port	FC000628
4 Port Drop Grommet (LG-350 / LG-350-AC)	FC000422
LG-350 Express Single Cable Grommet Kit	FC000726
LG-350 Drop Single Cable Grommet Kit	FC000727

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771
Rural Utilities Service (RUS)	515

Contact AFL for further details.



In-line Repair Closure (IRC) for repair of flat or round drop cables

Features

- Accommodates cables to 0.70" O.D for splicing and grounding/bonding
- Incorporates the Peel and Seal Grommet System, fully sealing the closure
- Includes removable, integral central splicing module and individual cable retention clamps
- Requires only a common can wrench for installation

LightGuard® 55 Sealed Fiber Optic Splice Closure

Designed with versatility in mind, the LightGuard (LG) 55 sealed closure from AFL offers a variety of solutions including repair and distribution splicing, grounding for Fiber-in-the-Loop applications, and for use as an isolation gap with armored cables. This closure accepts stranded loose tube or ribbon fiber cables in either armored or dielectric configurations and can be utilized in a butt or in-line configuration.

The LG-55 closure incorporates a unique cable clamp design sealing the cable, allowing both of the cover halves to be removed without disturbing the contents. In addition, AFL's Peel & Seal Grommet System™ is incorporated to ensure a tight fit on various cable diameters, fully sealing the closure and protecting the fiber while eliminating cumbersome tape and washers—making installation fast and easy.

Specifications

PARAMETER	VALUE
Splice Capacity (Max.)—Single, Mass, Mechanical	24, n/a, 24
Number of Splice Trays (Max.)—Single, Mass, Mechanical*	1, n/a, 1
Cable Entrance Configuration	Butt or In-line
Cable Sizes (Min. O.D. - Max. O.D.) Included Grommets Single in. (mm) Double Express Port Only in. (mm)	(2) Express Ports 0.40" - 0.70" (10.0 - 25.4) 0.26" - 0.44" (6.6 - 11.2)
Additional Grommets Quad Express Port Only in. (mm)	0.26" - 0.38" (6.6 - 9.7)
Dimensions—(L x D) in. (mm)	14.0" x 4.0" (343.0 x 101.6)
Weight—lbs. (kg)	3.0 (1.36)

Ordering Information

DESCRIPTION	MODEL NO.	AFL NO.
LG-55 FC000034-PS Fiber Optic Splice Closure—Stores up to 32 single fusion, includes 2 single cable grommets and 1 dual cable grommet kit for sealing/retention and 2 ground terminals. Splice tray and hanger brackets included. Not included: Cable Grounding Kits	LG55-U-1	FC000034-PS
LL-2425 Single Splice Tray—Stores (32) single fusion splices. Maximum of 1 trays in the LG55. Tray Included.	LL-2425	FC000053
LG-350 Single Grommet Kit (Min. 0.40" - Max. 1.00") For use in LG-55 on Express Port side.	LG-350 Exp Single Kit	FC000726
LG-350 Dual Grommet Kit (Min. 0.26" - Max. 0.44") For use in LG-55 on Express Port side.	LG-350 Exp Dual Kit	FC000337
LG-350 Quad Grommet Kit (Min. 0.26" - Max. 0.38") For use in LG-55 on Express Port side.	LG-350 Exp Quad Kit	FC000421
LG-55 Grommet Kit (1) 3 flat drop grommet (flat drop 0.31" or round cable up to 0.25") and (1) dual grommet (Min. 0.26" - Max. 0.44").	LG-55 Drop Kit	FC000807
Cable Grounding Kit (pack of 5)—Clamp-On Ground Cable Only	CGK-5	FC001091
*Mechanical Splice Kit. Includes 10 pieces of VHB tape. Used in all splice trays. Each piece holds 12 splices.	VHB Tape	FA000089



LightGuard® 55-SC Sealed Fiber Optic Splice Closure

AFL's LightGuard (LG) 55-SC sealed closure retains all the features of the LG-55, but includes a unique patching system that utilizes pre-terminated SC fiber assemblies or field-installable connectors such as the FASTConnect® SC.

An innovative solution that can be used to facilitate a link between traffic control cabinets and entrance cables, the LG-55-SC closure allows for rapid restoration and minimal damage to a fiber optic cable should an impact disable the cabinet. A breakable tie wrap secures the pre-connectorized cable to one side of the closure (traffic control cabinet), while the main entrance cable is secured with a more rugged cable clamp, allowing the system to separate during a damaging impact.

Features

- Durable cover assembly that provides protection for all internal components and acts as an interface/anchor to the cable clamps
- Unique cable clamp seal to anchor the cable to the cover assembly
- Movable sheath retention bracket keeps cable bends at a minimum
- Accommodates up to four SC/UPC connectors
- Utilizes AFL's Peel & Seal Grommet System™, ensuring a tight fit on various cable diameters while eliminating cumbersome tape and washers
- Requires only a common can wrench for installation

Specifications

PARAMETER	VALUE
Cable Sizes (Min. O.D. - Max. O.D.)	0.4" - 0.7"
Maximum Cable Entry	2 ports (one each end)
Dimensions - (L x D) in. (mm)	14" x 4" (356.0 mm x 1022.0 mm)

Ordering Information

DESCRIPTION	MODEL NO.	AFL NO.
The LG-55-SC allows for 4 SC connections to be installed. A FASTConnect or FUSEConnect, field installable connectors would be used for the connections. The field side cable is held with a tie-wrap while the signal side is secured to the closure with a hose clamp. This allows for a break-out should a vehicle make contact with a traffic box leaving the signal side cable intact.	LG-55-SC	FC000481-PS
Dual Cable Entry Port Kit – Allows two cables to enter closure from each cable port.	Dual Cable Entry Port Kit	FC000062
Quad Cable Entry Port Kits – Allows 4 cables to enter closure from each cable port	Quad Cable Entry Port Kit	FC000421
Cable Grounding Harness Kit – Includes (5) Clamp-On 9.5" long ground wires AWG #6 conductor	CGK-5	FC001091



LightGuard® 150 Sealed Fiber Optic Splice Closure

The LightGuard (LG) 150 is a sealed dome closure designed for small count fiber splicing (up to 48 single or 192 mass) in a butt configuration. Utilized in aerial or underground environments where a sealed closure is required, the LG-150 is ideal for express or ring applications and requires only a common can wrench for installation.

Features

- Supports stranded loose tube or ribbon fiber cables in either armored or dielectric configurations
- Installation and re-entry requires only a common can wrench
- Fully sealed to protect fiber and splices ensuring longevity
- Fully kitted with all parts to install five cables
- Designed and tested to Telcordia® GR-771 requirements
- Rural Utilities Service (RUS) Listed

Specifications

PARAMETER	VALUE	
Splice Capacity (Max.)—Single, Mass, Mechanical	48, 192, 48	
Number of Splice Trays (Max.)—Single, Mass, Mechanical*	4, 3, 4	
Cable Entrance Configuration	Butt	
Cables	5	
Cable Sizes (Min. O.D. - Max. O.D.) Included Grommets	(2) Express Ports	(3) Drop Ports
Single in. (mm)	0.26" - 0.62" (6.6 - 15.7)	0.26" - 0.62" (6.6 - 15.7)
Additional Grommets		
(3) Flat Drop Port Only in. (mm)	n/a	0.19" x 0.34" (4.8 x 8.6) or 0.25" round (6.4)
Dimensions—(L x D) in. (mm)	18.25" x 8.75" (463.6 x 222.3)	
Weight—lbs. (kg)	10.5 (4.76)	

LightGuard® 150 Sealed Fiber Optic Splice Closure

Ordering Information

DESCRIPTION	AFL NO.
LG-150-U-0 Fiber Optic Splice Closure—Stores 48 single fusion or 192 mass fusion, includes (5) cable kits for sealing/retention and (2) ground terminals with removable bond. Not included: Splice Trays, Cable Grounding Kits or Hanger Brackets	FC000001-PS
LL-2450 Single Splice Tray—Stores (12) single fusion splices. Maximum of 4 trays in the LG150	91957-00
LL-4850 Mass Splice Tray—Stores (8) mass fusion splices (96 F). Maximum of 4 trays in the LG-150	91958-00
LL-1248 Universal Splice Tray—Stores (12) single fusion splices or (8) mass fusion splices (96 F), or *Mechanical. Max. of 4 trays in the LG-150	911221-00-00
LG-150/250 Single Grommet Kit (Min. 0.26" - Max. 0.62")	FC000704
LG-150/250 3 Flat Drop Grommet Kit (standard flat drop 0.31" or round cable up to 0.25")	FC000655
Universal Aerial Strand Hanger Kit—For use with LG-150/250/350	FC000006
Extended Offset Strand Hanger Kit—For use with LG-150/250/350	FC000208
Pole or Wall Mount Bracket—For use with LG-150/250/350	LGBR-30
OPGW Dual Cable Bracket Kit for use only when installing closure on OPGW cable—For use with LG-150/250/350	FC000683
OPGW Quad Cable Bracket Kit—For use with LG-150/250	FC000746
1x6 Fiber Router Kit with furcation tubes	FC000070
CGK-5 Cable Grounding Kit (pack of 5)—Clamp-On Ground Cable Only	FC001091
*Mechanical Splice Kit. Includes 10 pieces of VHB tape. Used in all splice trays. Each piece holds 12 splices.	FA000089
O-Ring and Lock Ring Kit—For use with LG-150/250	FC000771

* See Accessory Specifications.
See Splice Tray Specifications.

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771
Rural Utilities Service (RUS)	Listed

Contact AFL for further details.



LightGuard® 250 Sealed Fiber Optic Splice Closure

The LightGuard (LG) 250 is a sealed dome closure designed for medium count fiber splicing (up to 144 single or 432 mass) in a butt configuration. Utilized in aerial or underground environments where a sealed closure is required, the LG-250 is ideal for express or ring applications and requires only a common can wrench for installation.

Features

- Supports stranded loose tube or ribbon fiber cables in either armored or dielectric configurations
- Installation and re-entry requires only a common can wrench
- Fully sealed to protect fiber and splices ensuring longevity
- Fully kitted with all parts to install five cables

Specifications

PARAMETER	VALUE	
Splice Capacity (Max.)—Single, Mass, Mechanical	144, 432, 48	
Number of Splice Trays (Max.)—Single, Mass, Mechanical*	4, 3, 4	
Cable Entrance Configuration	Butt	
Cables	5	
Cable Sizes (Min. O.D. - Max. O.D.)		
Included Grommets Single in. (mm)	(2) Express Ports 0.26" - 0.62" (6.6 - 15.7)	(3) Drop Ports 0.26" - 0.62" (6.6 - 15.7)
Additional Grommets (3) Flat Drop Port Only in. (mm)	n/a	0.19" x 0.34" (4.8 x 8.6) or 0.25" round (6.4)
Dimensions—(L x D) in. (mm)	19.0" x 8.75" (463.6 x 222.3)	
Weight—lbs. (kg)	10.5 (4.76)	

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LightGuard® 250 Sealed Fiber Optic Splice Closure

Ordering Information

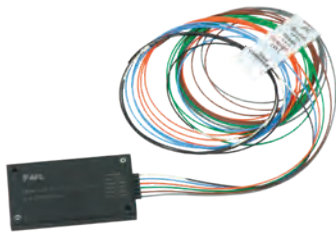
DESCRIPTION	AFL NO.
LG-250-U-0 Fiber Optic Splice Closure—Stores 144 single fusion or 432 mass fusion, includes (5) cable kits for sealing/retention and (2) ground terminals with removable bond. Not included: Splice Trays, Cable Grounding Kits or Hanger Brackets	FC000002-PS
LL-2400 Single Splice Tray—Stores (24) single fusion splices. Maximum of 4 trays in the LG-250.	91710-06
LL-2448 Universal Splice Tray—Stores (24) single fusion or (4) mass fusion splices (48 F). Maximum of 3 trays in the LG-250	911289-00-02
LL-4848 Mass Splice Tray—Stores (12) mass fusion splices (144 F). Maximum of 3 trays in the LG-250	911437-00-02
LL-2448-48S Single Splice Tray—Stores (48) single fusion splices. Maximum of 3 trays in the LG-250	FA000045
LG-150/250 Single Grommet Kit (Min. 0.26" - Max. 0.62")	FC000704
LG-150/250 3 Flat Drop Grommet Kit (standard flat drop 0.31" or round cable up to 0.25")	FC000655
Universal Aerial Strand Hanger Kit—For use with LG-150/250/350	FC000006
Extended Offset Strand Hanger Kit—For use with LG-150/250/350	FC000208
PWK Pole or Wall Mount Bracket—For use with LG-150/250/350	LGBR-30
OPGW Dual Cable Bracket Kit—For use with LG-150/250/350	FC000683
OPGW Quad Cable Bracket Kit—For use with LG-150/250	FC000746
1x6 Fiber Router Kit with furcation tubes	FC000070
CGK-5 Cable Grounding Kit (pack of 5)—Clamp-On Ground Cable Only	FC001091
*Mechanical Splice Kit. Includes 10 pieces of VHB tape. Used in all splice trays. Each piece holds 12 splices.	FA000089
O-Ring and Lock Ring Kit—For use with LG-150/2	FC000771

* See Accessory Specifications.
See Splice Tray Specifications.

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771
Rural Utilities Service (RUS)	Listed

Contact AFL for further details.



CWDM 4-Channel Mini Module



CWDM 8-Channel Mini Module

Thin Film Filter (TFF) Compact Series CWDM

AFL's TFF compact series CWDM modules deliver reliable performance and flexibility in every network application – from cellular backhaul and metro Ethernet to access and security. With its reduced package size, this new outside plant CWDM module has added flexibility, making deployment options more convenient.

This CWDM series is based on proven Thin Film Filter technology, offering low insertion loss and high thermal stability over the entire outside plant operating temperature range. Numerous configurations are available to meet unique needs and support new or existing network architectures. Typical options include a variety of configurations (mux, demux, and balanced), upgrade ports (1310, C-Band, and others), test/monitoring ports and multiple termination options.

Features

- Low insertion loss
- Compact size
- High thermal stability

Applications

- CWDM systems
- Metro Ethernet / access networks
- Cellular backhaul networks

Specifications

PARAMETER	UNIT	WITHOUT UPGRADE PORT		WITH 1310 NM UPGRADE PORT	
		4 Channel	8 Channel	4 Channel	8 Channel
Operating Wavelength	nm	1471~1611			
Channel Spacing	nm	20			
Center Wavelength	nm	Customer specified			
Pass Band	nm	± 6.5			
1310 Upgrade Port Pass Band	nm	—		1270~1350	
1310 Upgrade Port Insertion Loss	dB	—		1.0	
CWDM Channel Insertion Loss	dB	≤ 2.0	≤ 2.5	≤ 2.6	≤ 3.4
CWDM Adjacent Channel Isolation	dB	≥ 30			
CWDM Non-adjacent Channel Isolation	dB	≥ 45			
PDL	dB	≤ 0.2			
PMD	ps	≤ 0.1		≤ 0.25	
Return Loss	dB	≥ 45			
Directivity	dB	≥ 50			
Maximum Input Power	mW	≤ 300			
Package Size	Mm	60 (l) x 35 (w) x 6 (d)		70 (l) x 45 (w) x 9 (d)	

* Actual optical specifications will vary based on product configuration

1. Higher and lower channel counts available

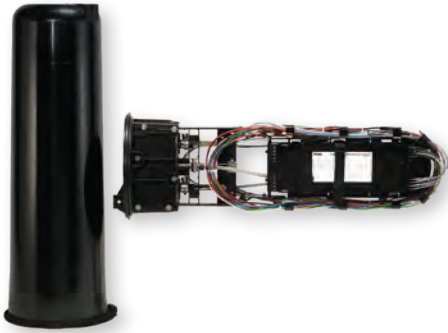
Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
Telcordia	GR-1221-CORE	Cable
RoHS	6/6 Compliant	Cable

Temperature Specifications

TEMPERATURE RANGE	
Operation Temperature	-40°C ~ to +85°C

Contact AFL for further details.



LightGuard® 350 Sealed Fiber Optic Splice Closure

The LightGuard (LG) 350 is a sealed dome closure designed for large count fiber splicing (up to 480 single or 1152 mass) in a butt configuration. Utilized in aerial or underground environments where a sealed closure is required, the LG-350 is ideal for express, ring or long haul applications and requires only a common can wrench for installation.

Features

- Supports stranded loose tube or ribbon fiber cables in either armored or dielectric configurations
- Installation and re-entry requires only a common can wrench
- Fully sealed to protect fiber and splices ensuring longevity
- Fully kitted with all parts to install five cables

Specifications

PARAMETER	VALUE	
Splice Capacity (Max.)—Single, Mass, Mechanical	480, 1152, 108	
Number of Splice Trays (Max.)—Single, Mass, Mechanical*	12, 8, 8	
Cable Entrance Configuration	Butt	
Cables	5 to 11	
Cable Sizes (Min. O.D. - Max. O.D.)	(2) Express Ports	(3) Drop Ports
Included Grommets	0.40" - 1.00"	0.26" - 0.80"
Single in. (mm)	(10.0 - 25.4)	(6.6 - 20.0)
Additional Grommets	0.26" - 0.44"	
Dual Express Port Only in. (mm)	(6.6 - 11.2)	
Quad Express Port Only in. (mm)	0.26" - 0.38"	
	(6.6 - 9.7)	
(4) Flat Drop Port Only in. (mm)		0.19" x 0.34"
		(4.8 x 8.6) or
		0.25" round (6.4)
Dimensions—(L x D) in. (mm)	28.0" x 10.0" (710.0 x 254.0)	
Weight - lbs. (kg)	16 (7.26)	

continued
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LightGuard® 350 Sealed Fiber Optic Splice Closure

Ordering Information

DESCRIPTION	AFL NO.
LG-350-U-0 Fiber Optic Splice Closure – Stores 480 single fusion or 1152 mass fusion, includes (5) cable kits for sealing/retention and (2) ground terminals with removable bond. Not included: Splice Trays, Cable Grounding Kits or Hanger Brackets	FC000009-PS
LL-2400 Single Splice Tray – Stores (24) single fusion splices. Maximum of 12 trays in the LG-350	91710-06
LL-2448 Universal Splice Tray – Stores (24) single fusion or (4) mass fusion splices (48 F). Maximum of 8 trays in the LG-350	911289-00-02
LL-4848 Mass Splice Tray – Stores (12) mass fusion splices (144 F). Maximum of 8 trays in the LG-350	911437-00-02
LL-2448-48S Single Splice Tray – Stores (48) single fusion splices. Maximum of 8 trays in the LG-350	FA000045
LL-4896 Universal Splice Tray – Stores (96) single fusion splices or (24) mass fusion splices (288 F). Maximum of 5 trays in the LG-350	911676-00-02
LL-4896-R Mass Splice Tray – Stores (24) mass fusion splices (288 F). Maximum of 5 trays in the LG-350	FA000022
LL-4896-L Single Splice Tray – Stores (96) single fusion splices. Maximum of 5 trays in the LG-350	FA000023
LL-7644 Universal Splice Tray – Stores (60) single fusion or (288) mass fusion splices or a combination of both in an easy-to-use, deep splice tray. For use with LG-350SD	FA000044
LL-7060 Splice Tray – Stores (60) single fusion splices in an easy-to-use, deep splice tray – For use in LG-350	FA000042
LL-7144 Splice Tray – Stores (288) mass fusion splices in an easy-to-use, deep splice tray – For use in LG-350	FA000043
LG-350 Single Grommet Kit (Min. 0.40" - Max. 1.00") – For use in LG-350/AC/SD on Express Port side	FC000726
LG-350 Dual Grommet Kit (Min. 0.26" - Max. 0.44") – For use in LG-350/AC/SD on Express Port side	FC000337
LG-350 Quad Grommet Kit (Min. 0.26" - Max. 0.38") – For use in LG-350/AC/SD on Express Port side	FC000421
LG-350 Single Grommet Kit (Min. 0.26" - Max. 0.80") – For use in LG-350/AC/SD on Drop Port side	FC000727
LG-350 Drop 4 Flat Drop Grommet Kit – For use with standard flat drop cable and round cable up to 0.25" O.D.	FC000422
Universal Aerial Strand Hanger Kit – For use with LG-150/250/350	FC000006
Extended Offset Strand Hanger Kit – For use with LG-150/250/350	FC000208
PWK Pole or Wall Mount Bracket – For use with LG-150/250/350	LGBR-30
OPGW Dual Cable Bracket Kit – For use with LG-150/250/350	FC000683
OPGW Quad Cable Bracket Kit for use when installing Sealed Closures – For use with LG-350	FC000747
1x6 Fiber Router Kit with furcation tubes	FC000070
CGK-5Cable Grounding Kit (pack of 5) – Clamp-On Ground Cable Only	FC001091
*Mechanical Splice Kit. Includes 10 pieces of VHB tape. Used in all splice trays. Each piece holds 12 splices.	FA000089
O-Ring and Lock Ring Kit – For use with LG-350/350AC/SD	FC000775

* See Accessory Specifications. See Splice Tray Specifications.
Micro Duct Grommets available. Please call Customer Service for details.

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771
Rural Utilities Service (RUS)	Listed

Contact AFL for further details.



LightGuard® 350-AC Drop Access Sealed Fiber Optic Splice Closure

The LightGuard (LG) 350-AC is a sealed dome closure designed for medium count fiber splicing (up to 144 single or 432 mass) in a butt configuration where space may be limited. Utilized in aerial or underground environments where a sealed closure is required, the LG-350-AC is designed for “drop access” applications providing access for up to 12 drops. The LG-350-AC is ideal for Fiber-to-the-Home installations in small hand-hole application and requires only a common can wrench for installation.

Features

- Less than 20" overall length; ideal for small hand-holes
- Supports stranded loose tube or ribbon fiber cables in either armored or dielectric configurations
- Installation and re-entry requires only a common can wrench
- Fully sealed to protect fiber and splices ensuring longevity
- Fully kitted with all parts to install two cables and up to 12 drops

Specifications

PARAMETER	VALUE	
Splice Capacity (Max.)—Single, Mass, Mechanical	144, 432, 48	
Number of Splice Trays (Max.) - Single , Mass, Mechanical*	4, 3, 4	
Cable Entrance Configuration	Butt	
Cables	2 to 8 Express with up to 12 Drop	
Cable Sizes (Min. O.D. - Max. O.D.)	(2) Express Ports	(3) Drop Ports
Included Grommets	0.40" - 1.00"	(4 port) 0.26" - 0.80"
Single in. (mm)	(10.0 - 25.4)	
(4) Flat Drop Only in. (mm)		(6.6 - 20.0)
Additional Grommets		
Dual Express Port Only in. (mm)	0.26" - 0.44"	
	(6.6 - 11.2)	
Quad Express Port Only in. (mm)	0.26" - 0.38"	
	(6.6 - 9.7)	
(4) Flat Drop Port Only in. (mm)		0.19" x 0.34"
		(4.8 x 8.6) or
		0.25" round (6.4)
Dimensions - (L x D) in. (mm)	19.8" x 10.0" (503.0 x 254.0)	
Weight - lbs. (kg)	12.0 (5.44)	

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LightGuard® 350-AC Drop Access Sealed Fiber Optic Splice Closure

Ordering Information

DESCRIPTION	AFL NO.
LG-350-AC Fiber Optic Splice Closure—Stores 144 single fusion or 432 mass fusion, includes (2) Express cable kits and (12) Drop cable kits for sealing/retention and (2) ground terminals with removable bond. Included: (1) LL-4808L Splice Tray Not included: Cable Grounding Kits, or Hanger Brackets	FC000412
LL-4808L-R Universal Splice Tray—Stores (36) single fusion splices or (12) mass fusion splices (144 F). Maximum of 4 trays in the LG-350-AC.	FA000037
LL-4808-R Mass Splice Tray—Stores (12) mass fusion splices (144 F). Maximum of 4 trays in the LG-350-AC	FA000020
LL-4808-L Single Splice Tray—Stores (36) single fusion splices. Maximum of 4 trays in the LG-350-AC	FA000021
LG-350 Single Grommet Kit (Min. 0.40" - Max. 1.00")—For use in LG-55/LG-350/LG-350-AC on Express Port side	FC000726
LG-350 Dual Grommet Kit (Min. 0.26" - Max. 0.44")—For use in LG-55/LG-350/LG-350-AC on Express Port side	FC000337
LG-350 Quad Grommet Kit (Min. 0.26" - Max. 0.38")—For use in LG-55/LG-350/LG-350-AC on Express Port side	FC000421
LG-350 Single Grommet Kit (Min. 0.26" - Max. 0.80")—For use in LG-350/AC/SD on Drop Port side	FC000727
LG-350 Drop 4 Flat Drop Grommet Kit—For use with standard flat drop cable and round cable up to 0.25" O.D.	FC000422
Universal Aerial Strand Hanger Kit—For use with LG-150/250/350	FC000006
Extended Offset Strand Hanger Kit—For use with LG-150/250/350	FC000208
PWK Pole or Wall Mount Bracket—For use with LG-150/250/350	LGBR-30
OPGW Dual Cable Bracket Kit—For use with LG-150/250/350	FC000683
1x6 Fiber Router Kit with furcation tubes	FC000070
CGK-5 Cable Grounding Kit (pack of 5)—Clamp-On Ground Cable Only	FC001091
*Mechanical Splice Kit. Includes 10 pieces of VHB tape. Used in all splice trays. Each piece holds 12 splices.	FA000089
LG-350 O-Ring and Lock Ring Kit—For use with LG-350/AC/SD	FC000775

* See Accessory Specifications.
See Splice Tray Specifications.

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771
Rural Utilities Service (RUS)	Listed

Contact AFL for further details.



LightGuard® 350XL Sealed Fiber Optic Splice Closure

The LightGuard (LG) 350XL is a sealed dome closure designed for large count fiber splicing (up to 864 single or 2592 mass) in a butt configuration. Utilized in aerial or underground environments where a sealed closure is required, the LG-350XL is ideal for high fiber count splicing and requires only a common can wrench for installation. A Phillips head screw is used to secure the tray support to the basket.

Features

- Supports stranded loose tube or ribbon fiber cables in either armored or dielectric configurations
- Installation and re-entry requires only a common can wrench
- Fully sealed to protect fiber and splices ensuring longevity
- Fully kitted with all parts to install five cables
- Accommodates up to 7 cables
- Oversized basket allows multiple configurations of slack storage
- O-Ring and Locking Ring for increased protection

Specifications

PARAMETER	VALUE	
Splice Capacity (Max.)—Single, Mass, Mechanical	864, 2592, 288	
Number of Splice Trays (Max.)—Single, Mass, Mechanical*	9, 9, 9	
Cable Entrance Configuration	Butt	
Cables	5 to 7	
Cable Sizes (Min. O.D. - Max. O.D.)	(2) Express Ports	(3) Drop Ports
Included Grommets	0.40" - 1.18"	0.30" - 1.08"
Single in. (mm)	(10.0 - 30.0)	(7.6 - 27.4)
Additional Grommets	0.38" - 0.56"	
Dual Exp. Port Only in. (mm)	(9.7 - 14.2)	
Dimensions - (L x D) in. (mm)	31.0" x 12.00" (788.5 x 305.0)	
Weight - lbs. (kg)	25.0 (11.3)	

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LightGuard® 350XL Sealed Fiber Optic Splice Closure

Ordering Information

DESCRIPTION	AFL NO.
LG-350XL-U-0 Fiber Optic Splice Closure – Stores 864 single fusion or 2592 mass fusion, includes (5) cable kits for sealing/retention and (2) ground terminals with removable bond. Not included: Splice Trays, Cable Grounding Kits or Hanger Brackets	FC000010-PS
LL-4896 Universal Splice Tray – Stores (96) single fusion splices or (24) mass fusion splices (288 F), *Mechanical. Max. of 9 trays in the LG-350XL	911676-00-02
LL-4896-R Mass Splice Tray – Stores (24) mass fusion splices (288 F). Max. of 9 trays in the LG-350XL	FA000022
LL-4896-L Single Splice Tray – Stores (96) single fusion splices. Max. of 9 trays in the LG-350XL	FA000023
LG-350XL Single Grommet Kit (Min. 0.40" - Max. 1.18") – For use in LG-350XL on Express Port side	FC000870
LG-350XL Dual Grommet Kit (Min. 0.38" - Max. 0.56") – For use in LG-350XL on Express Port side	FC000688
LG-350XL Single Grommet Kit (Min. 0.30" - Max. 1.08") – For use in LG-350XL on Drop Port side	FC000871
LG-350XL Drop 4 Flat Drop Grommet Kit – For use with standard flat drop cable and round cable up to 0.25" O.D.	FC001713
Strand Mount Hanger Bracket – For use with LG-350XL in strand or vault mounting	912215-00-00
1x6 Fiber Router Kit with furcation tubes	FC000070
CGK-5 Cable Grounding Kit (pack of 5) – Clamp-On Ground Cable Only	FC001091
*Mechanical Splice Kit. Includes 10 pieces of VHB tape. Used in all splice trays. Each piece holds 12 splices.	FA000089
O-Ring and Lock Ring Kit – For use with LG-350XL	FC001328
Transition tubing 16.25" long – Used to transport ribbon to the splice trays. (20) per kit	FC001372

* See LL-4896 Splice Tray Specifications.

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771
Rural Utilities Service (RUS)	Listed

Contact AFL for further details.

LightGuard® Sealed Splice Closure Accessories



Dual Express Grommets for LG-350XL

Used on the express side of the LG-350XL closure for installing additional branches. Use the drop ports for the express cable while the express ports may be used to introduce small branch cables. Minimum cable diameter is 0.380" - 0.560".

Ordering Information

DESCRIPTION	AFL NO.
Dual Express Grommets for LG-350XL	FC000688



Dual and Quad Express Grommets for LG-350

Used on the express side of the LG-350 closure for installing additional branches. Use the drop ports for the express cable while the express ports may be used to introduce small branch cables. A 4-drop flat grommet may be used if drops are also required. Cable diameter for dual grommets is 0.26" - 0.44"; for quad, 0.24" - 0.382".

Ordering Information

DESCRIPTION	AFL NO.
Dual Express Grommets for LG-350	FC000337
Quad Express Grommets for LG-350	FC000421



4-Port Flat Drop Grommet Kit for LG-350/LG-350-AC

Used with the LG-350 and LG-350-AC Sealed Closures. Allows for quick addition of drop cables as required. Simply replace the drop port grommets with this grommet kit and install standard flat drop cable or round cable up to 0.25" in diameter.

Ordering Information

DESCRIPTION	AFL NO.
4-Port Flat Drop Grommet Kit for LG-350/LG-350-AC	FC000422



Single Cable and 3-Port Flat Drop Grommet Kit for LG-150/LG-250

Used with the LG-150 and LG-250 Sealed Closures. Allows for quick addition of drop cables as required. Simply replace the drop port grommets with this grommet kit. Both closures will accept standard flat drop cable or round cable up to 0.250" in diameter.

Ordering Information

DESCRIPTION	AFL NO.
Single Cable Grommet Kit for the LG-150/LG-250	FC000704
3-Port Flat Drop Grommet Kit for the LG-150/LG-250	FC000655

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LightGuard® Sealed Splice Closure Accessories (cont.)



Single Cable Grommet Kits for LG-350-AC and LG-350

Used with the LG-350-AC when a branch cable is required with the drop cables. May also be used for with the LG-350 as replacement grommets. Simply remove the flat drop grommet and replace with the single cable grommets.

Ordering Information

DESCRIPTION	AFL NO.
Single Cable Grommet Kit, Drop Port for LG-350-AC	FC000628
Express Single Cable Grommet Kit for LG-350	FC000726
Drop Single Cable Grommet Kit for LG-350	FC000727



OPGW Cable Bracket for LG-150/LG-250/LG-350

Attaches to the outer grounding studs of the LG-150/LG-250 or LG-350 Sealed Closures. Stainless steel hose clamps secure the OPGW cable to the bracket preventing twisting or movement.

Ordering Information

DESCRIPTION	AFL NO.
OPGW Cable Bracket for the LG-150/LG-250/LG-350 for 2 cables.	FC000683
OPGW Cable Bracket Kit for use when installing Sealed Closures (LG-150/LG-250) to 4 OPGW Cables.	FC000746
OPGW Cable Bracket Kit for use when installing Sealed Closures (LG-350) to 4 OPGW Cables.	FC000747



Pole/Wall Mount Bracket for LG-150/LG-250/LG-350

Used with the LG-150, LG-250, LG-350 and LG-350-AC to secure the closures onto poles or walls in a vertical orientation. Slots on the brackets allow for strapping onto steel or cement poles.

Ordering Information

DESCRIPTION	AFL NO.
Pole/Wall Mount Bracket for LG-150/LG-250/LG-350/LG-350-AC	FC000592



Universal Aerial Bracket and Extended Offset Bracket

Used with the LG-150, LG-250, LG-350 and LG-350-AC for mounting on aerial or messengers.

Ordering Information

DESCRIPTION	AFL NO.
Universal Aerial Bracket for LG-150/LG-250/LG-350/LG-350-AC	FC000006
Extended Offset Bracket	FC000208

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LightGuard® Sealed Splice Closure Accessories (cont.)



Strand Mount Hanger Bracket for LG-350XL

Used with the LG-350XL.

Ordering Information

DESCRIPTION	AFL NO.
Strand Mount Hanger Bracket – For use with LG-350XL	912215-00-00

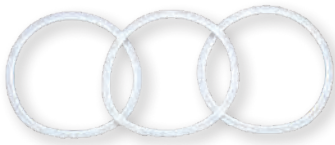


Cable Ground Kits

Used with the LG-150, LG-250 and LG-350.

Ordering Information

DESCRIPTION	AFL NO.
Cable Grounding Kit – Includes harness and hose clamp. One kit needed per cable entry. For use with LG-150/250/350.	FC000003
Cable Grounding Harness Kit – Includes (4) 8" ground harnesses constructed of #6 AWG conductor	FC000024
Cable Grounding Kit (pack of 5) – Includes harness and hose clamp. For use with LG-150/250/350.	FC000040

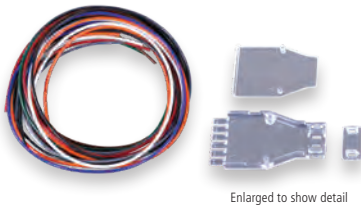


O-Ring Replacement Kits

Used with the LG-150, LG-250, LG-350 and LG-350XL.

Ordering Information

DESCRIPTION	AFL NO.
O-Ring Replacement Kit – For use with LG-150/250	FC000004
O-Ring Replacement Kit – For use with LG-300XL	FC000016
O-Ring Replacement Kit – For use with LG-350.	912231-00-00



1x6 Cable Router Kit

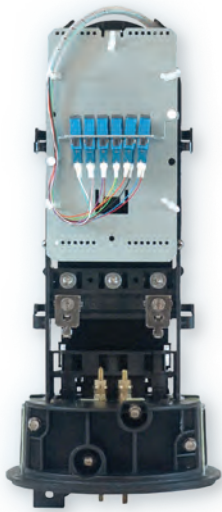
Used with the LG-150, LG-250, LG-350 and LG-350-AC.

Ordering Information

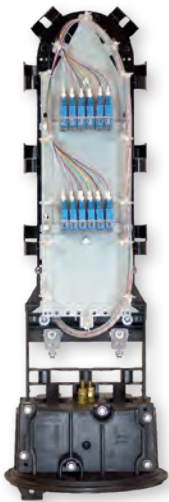
DESCRIPTION	AFL NO.
1X6 Cable Router Kit	FC000070

LightLink Fiber Optic Terminal Adapters for Sealed Fiber Optic Splice Closures

The LightLink Access Solution (LLAS) Terminal Adapters provide the interconnect and/or demarcation of optical fibers for Fiber-to-the-Node (FTTN), Fiber-to-the-Home (FTTH), Fiber-to-the-Premise (FTTP) and Fiber-to-the-Curb (FTTC) applications. The adapter plates are designed to be used in conjunction with AFL Sealed Fiber Optic Splice Closures and convert the standard closure design into an FTTX or demarcation type fiber optic splice closure. The adapter plates provide mounting positions ranging from six to 24 SC-style bulkheads (depending on the model). The interconnection and routing of 900 μm SC pigtails with pre-connectorized SC drop cables is managed through routing rings on the terminal adapter. Three versions are available and are matched to the LG-150, LG-250 and LG-350 series sealed fiber optic splice closures.



LLAS-200-12SC



LLAS-300-24SC

Ordering Information

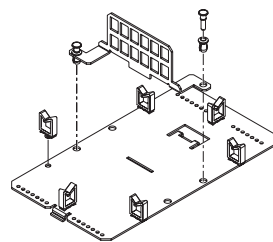
DESCRIPTION	MODEL NO.	AFL NO.
Terminal Adapter for LG-150/250 Sealed Splice Closure	LLAS-200-12SC	FC000068
Terminal Adapter for LG-350 Sealed Splice Closure	LLAS-300-24SC	FC000069

Blank bulkhead adapter plate and routing rings are included. SC bulkheads, SC pigtails (900 μm) and SC pre-connectorized drop cable may be ordered separately.

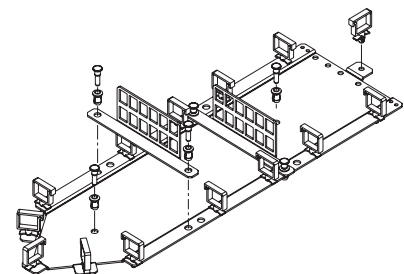
Accessories Ordering

DESCRIPTION	AFL NO.
(1) Small Flange SC/UPC Bulkhead adapter (Blue)	CS013274
(1) Small Flange SC/APC Bulkhead adapter (Green)	CS013083
(1) Pigtail - SC/UPC Connector with (1) meter 900μm fiber	C146507-0001
(1) Pigtail - SC/APC Connector with (1) meter 900μm fiber	C203278-0001

LLAS-200-12SC



LLAS-300-24SC





LightGuard® Aerial Weathertight Fiber Optic Splice Closures

The AFL family of Aerial Weathertight Splice Closures is designed to provide a cost-effective solution for your aerial splicing needs. Quality engineering reduces the installation time, training and complexity associated with fiber splicing in the field. The closures have all been designed to be installed without the need for special tools, heat, adhesives, drills or any powered equipment. Durable and easy to install, these closures will improve productivity, reduce labor expenses and last the life of the plant.

Features

- Individual, patented, self-sizing cable grommets and strength member tie downs provide for cable additions without disturbing those previously installed
- Unique tongue-in-groove closure seal and back-to-back grommet design provides for a weathertight and insect seal
- Closures are re-enterable without the need for any re-entry kits and require only a common can wrench for installation

Specifications

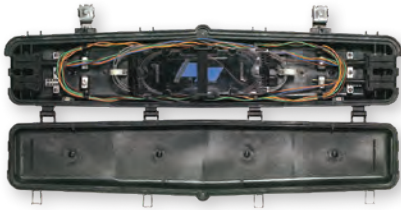
PARAMETER	LG-410-U-0	LG-420-U-0	LG-500-U-0	LG-600-U-0
Splice Capacity (Max.) – Single, Mass, Mechanical	144, 432, 36	12, 48, 12	144, 432, 36	384, 1152, 96
Splice Tray Capacity – Single, Mass	4, 2	n/a, n/a	4, 2	12, 8, 8
Cable Ports	4-8	4-6	4-8	6 (3 per end)
Cable Entrance	In-line, Butt	In-line (taut sheath)	In-line, Butt	In-line, Butt
Cable Sizes (O.D.)	4 @ 0.3-0.82" Up to 8 with Dual Grommet Kits 4 @ 0.27-0.53" 4 @ 0.38-0.70"	4 @ 0.3-0.82" Up to 6 with Dual Grommet Kits 2 @ 0.27-0.53" 2 @ 0.38-0.70"	4 @ 0.3-0.82" Up to 8 with Dual Grommet Kits 4 @ 0.27-0.53" 4 @ 0.38-0.70"	6 @ 0.44 - 1.0" Up to 12 with Dual Grommet Kits 6 @ 0.4-0.6" 6 @ 0.7-0.9"
CLOSURE TEST ^{1,2}				
- Cable Retention (100 lbs.)	Passed	Passed	Passed	Passed
- Impact Resistance (0-40 °C)	Passed	Passed	Passed	Passed
- Chemical Resistance	Passed	Passed	Passed	Passed
- Cable Flexing	Passed	Passed	Passed	Passed
- Dust (Weather Tightness)	Passed	Passed	Passed	Passed
- Driving Rain	Passed	Passed	Passed	Passed
- Rodent Test	Passed	Passed	Passed	Passed
Dimensions (L x W x D) in. (cm)	36.00 x 8.00 x 4.00 (91.44 x 20.32 x 10.16)	36.00 x 8.00 x 4.00 (91.44 x 20.32 x 10.16)	27.00 x 8.25 x 4.00 (68.58 x 20.96 x 10.16)	27.00 x 11.25 x 7.50 (68.58 x 28.58 x 19.05)
Weight lbs. (kg)	8.5 (3.86)	8.5 (3.86)	6.4 (2.90)	18 (8.16)

NOTES: 1. Tested to Telcordia GR-771-Core and Aerial Strand requirements
2. Not all Telcordia tests are listed due to space constraints; All closures are designed and tested to appropriate aerial test requirements

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771
Rural Utilities Service (RUS)	Listed

Contact AFL for further details.



LightGuard® 410 Aerial Weathertight Fiber Optic Splice Closure

The LightGuard (LG) 410 Aerial Weathertight Fiber Optic Splice Closure is designed for medium count fiber splicing (up to 144 single or 432 mass) in a butt or in-line configuration. Utilized in aerial applications, the LG-410 provides additional fiber bundle storage with its extended length design and requires only a common can wrench for installation.

Features

- Four individual, self-sizing grommeted cable ports (expandable to eight cable entrances)
- Patented tongue-in-groove cover seal system
- Installation and re-entry only require a common can wrench
- Cable retention clamps provide pullout
- UV-resistant engineered thermoplastic

Specifications

PARAMETER	VALUE
Splice Capacity (Max.) – Single, Mass, Mechanical	144/432/36
Number of Splice Trays (Max.) – Single, Mass, Mechanical*	4, 3, 4
Cable Entrance Configuration	Butt or in-line
Cables	4 to 8
Cable Sizes (Min. O.D. - Max. O.D.) Included Grommets Single in. (mm) Additional Grommets Dual Grommet in. (mm)	(4) Cable Ports 4 @ 0.38" - 0.82" (7.6 - 20.8) Sm: 0.27" - 0.53" (6.9 - 13.5) Lg: 0.38" - 0.70" (9.5 - 17.8)
6-port Multi-Drop Grommet in. (mm)	0.20" - 0.37" (5.1 - 9.4)
Dimensions – (L x D) in. (mm)	36.00" x 8.0" x 4.0" (914.0 x 203.0 x 102.0)
Weight – lbs. (kg)	8.5 (3.81)

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LightGuard® 410 Aerial Weathertight Fiber Optic Splice Closure

Ordering Information

DESCRIPTION	MODEL NO.	AFL NO.
LG-410 Aerial Weathertight Fiber Optic Splice Closure – Stores 144 single fusion or 432 mass fusion, includes (4) cable kits for sealing/retention and (2) ground terminals with removable bond, and hanger brackets. Not included: Splice Trays or Cable Grounding Kits	LG-410-U-0	FC000022
LL-2400 Single Splice Tray – Stores (24) single fusion splices. Maximum of 4 trays in the LG-410.	LL-2400	91710-06
LL-2448 Universal Splice Tray – Stores (24) single fusion or (4) mass fusion splices (48 F). Maximum of 3 trays in the LG-410.	LL-2448	911289-00-02
LL-4848 Mass Splice Tray – Stores (12) mass fusion splices (144 F). Maximum of 3 trays in the LG-410.	LL-4848	911437-00-02
LL-2448-48S Single Splice Tray – Stores (48) single fusion splices. Maximum of 3 trays in the LG-410.	LL-2448-48S	FA000045
Small Single Grommet Kit (10 pc grommet only) – (Min 0.38" - Max 0.82")	Small Single Grommet Kit (10)	911496-00-00
Small Dual Grommet Kit – Includes: (2) small dual grommets and hardware (Min 0.27" - Max 0.53" and Min 0.38" - Max 0.70")	Small Dual Grommet Kit	911386-00-01
Small Dual Grommet Kit (10 pc grommet only) – (Min 0.27" - Max 0.53" and Min 0.38" - Max 0.70")	Small Dual Grommet Kit (10)	911495-00-00
Small 6-Port Drop Cable Kit – 2 grommets with tie wrap and foam Allows six cable entries (Min 0.20" - Max 0.365" and flat drop)	Small 6 Port Drop Kit	FC000573
Large Single Grommet Kit with retention hardware (Min 0.44" - Max 1.04")	Large Single Grommet Kit	FC000623
Small 6-Port Drop Cable Kit (10 pc grommet only) (Min 0.20" - Max 0.365" and flat drop)	Small Drop Grommet Kit (10)	FC000644
Large Single Grommet Kit (10 pc grommet only) (Min 0.44" - Max 1.04")	Large Single Grommet Kit (10)	91918-00
Large Dual Grommet Expansion Kit—Includes: (2) Dual grommets and hardware (Min .40"-Max .70" and Min 0.60" - Max 0.90")	Large Dual Grommet Kit	911406-00-00
Large 6 Port Drop Cable Kit—2 Grommets with retention bracket. Allows six cable entries (Min 0.23" - Max 0.48" and flat drop)	Large 6 Port Drop Kit	FC000352
Adjustable Aerial Hanger Kit Bracket Kit (included with closure)	Adjustable Hanger LG-400/500/600	911497-00-00
Extended Offset Aerial Hanger Kit LG-400/500/600	Offset Hanger LG-400/500/600	91990-00
Retention hardware for additional cables or replacement hardware—LG-400/500/600 (no grommets)	Cable Retention Kit LG-400\500\600	FC000356
Closure Extension Kit - Used to join multiple closures for extended sheath openings required to repair cable sheath and damaged fibers	Closure Extension Kit LG-400/500/600	911499-00-00
1x6 Fiber Router Kit with furcation tubes.	1x6 Fiber Router	FC000070
Cable Grounding Kit (pack of 5)—Clamp-On Ground Cable Only	CGK-5	FC001091
*Mechanical Splice Kit. Includes 10 pieces of VHB tape. Used in all splice trays. Each piece holds 12 splices.	VHB Tape	FA000089

* See Accessory Specifications. See Splice Tray Specifications.

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771
Rural Utilities Service (RUS)	Listed

Contact AFL for further details.



LightGuard® 420 Aerial Weathertight Fiber Optic Splice Closure

The LightGuard (LG) 420 Aerial Weathertight Fiber Optic Splice Closure is designed for taut sheath (no slack) splicing (up to 24 single or 48 mass) in an in-line configuration. Utilized in aerial applications, the LG-420 is ideal for repairing cable sheath or fibers, providing mid-span access and requires only a common can wrench for installation.

Features

- Four individual, self-sizing grommeted cable ports (expandable to eight cable entrances)
- Taut Sheath splice module accommodates up to 12 fusion splices
- Protective channel allowing taut fibers or bundles to pass through the closure
- Patented tongue-in-groove cover seal system
- Installation and re-entry only require a common can wrench
- Cable retention clamps provide pullout
- UV-resistant engineered thermoplastic

Specifications

PARAMETER	VALUE
Splice Capacity (Max.) – Single, Mass, Mechanical	24, 48, 12
Number of Splice Trays (Max.) – Single, Mass, Mechanical*	Splice chips for 24F single fusion splice (incl.)
Cable Entrance Configuration	In-line (taut sheath)
Cables	4 to 8
Cable Sizes (Min. O.D. - Max. O.D.) Included Grommets Single in. (mm) Additional Grommets Dual Grommet in. (mm)	(4) Cable Ports 4 @ 0.38" - 0.82" (7.6 - 20.8) Sm: 0.27" - 0.53" (6.9 - 13.5) Lg: 0.38" - 0.70" (9.5 - 17.8)
6-port Multi-Drop Grommet in. (mm)	0.20" - 0.37" (5.1 - 9.4)
Dimensions – (L x D) in. (mm)	36.0" x 8.0" x 4.0" (914.0 x 203.0 x 102.0)
Weight – lbs. (kg)	8.5 (3.81)

continued
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LightGuard® 420 Aerial Weathertight Fiber Optic Splice Closure

Ordering Information

DESCRIPTION	MODEL NO.	AFL NO.
LG-420 Aerial Weathertight Fiber Optic Splice Closure – Stores 12 single fusion or 48 mass fusion, includes (4) cable kits for sealing/retention and (2) ground terminals with removable bond, splice chips and hanger brackets. Not included: Cable Grounding Kits	LG-420-U-0	FC000023
Small Single Grommet Kit (10 pc grommet only) (Min 0.38" - Max 0.82")	Small Single Grommet Kit (10)	911496-00-00
Small Dual Grommet Kit – Includes: (2) small dual grommets and hardware (Min 0.27" - Max 0.53" and Min 0.38 - Max 0.70")	Small Dual Grommet Kit	911386-00-01
Small Dual Grommet Kit (10 pc grommet only) (Min 0.27" - Max 0.53" and Min 0.38 - Max 0.70")	Small Dual Grommet Kit (10)	911495-00-00
Small 6-Port Drop Cable Kit – 2 grommets with tie wrap and foam. Allows six cable entries (Min 0.20" - Max 0.365" and flat drop)	Small 6 Port Drop Kit	FC000644
Adjustable Aerial Hanger Kit Bracket Kit (included with closure)	Adjustable Hanger LG-400/500/600	911497-00-00
Extended Offset Aerial Hanger Kit LG-400/500/600	Offset Hanger LG-400/500/600	91990-00
Retention hardware for additional cables or replacement hardware – LG-400/500/600 (no grommets)	Cable Retention Kit LG-400/500/600	FC000356
Closure Extension Kit – Used to join multiple closures for extended sheath openings required to repair cable sheath and damaged fibers	Closure Extension Kit LG-400/500/600	911499-00-00
1x6 Fiber Router Kit with furcation tubes	1x6 Fiber Router	FC000070
Cable Grounding Kit (pack of 5) – Clamp-On Ground Cable Only	CGK-5	FC001091
*Mechanical Splice Kit. Includes 10 pieces of VHB tape. Used in all splice trays. Each piece holds 12 splices.	VHB Tape	FA000089

* See Accessory Specifications. See Splice Tray Specifications.

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771
Rural Utilities Service (RUS)	Listed

Contact AFL for further details.



LightGuard® 420 FTTx Aerial Weathertight Fiber Optic Splice Closure

The LightGuard (LG) 420 FTTx Aerial Weathertight Fiber Optic Splice Closure is designed for taut sheath (no slack) splicing (up to 32 single) in an in-line configuration. Utilized in aerial applications, the LG-420-FTTx is ideal for FTTx access networks by providing access for up to 12 drop cables and 16 connections, requiring only a common can wrench for installation.

Features

- Four individual, self-sizing grommeted cable ports:
 - 2 express ports
 - 2 multi-drop ports
- 12 drop cables and 16 connections
- Special multi-drop grommet and cable retention
- Special lock-out interior enclosure
- Patented tongue-in-groove cover seal system
- Installation and re-entry only require a common can wrench
- Cable retention clamps provide pullout
- UV resistant engineered thermoplastic

Specifications

PARAMETER	VALUE
Splice Capacity (Max.) – Single, Mass, Mechanical	32, n/a, 12
Number of Splice Trays (Max.) – Single, Mass, Mechanical*	1, n/a, 1
Cable Entrance Configuration	In-line (taut sheath)
Cables	2 to 4 Express with up to 12 Drop
Cable Sizes (Min. O.D. - Max. O.D.) Included Grommets	(4) Cable Ports
Single in. (mm)	2 @ 0.38" - 0.82" (7.6 - 20.8)
6-port Multi-Drop Grommet in. (mm)	2 (6 port) @ 0.20" - 0.37" (5.1 - 9.4)
Additional Grommets	
Dual Grommet in. (mm)	Sm: 0.27" - 0.53" (6.9 - 13.5) Lg: 0.38" - 0.70" (9.5 - 17.8)
6-port Multi-Drop Grommet in. (mm)	0.20" - 0.37" (5.1 - 9.4)
Dimensions – (L x D) in. (mm)	36.0" x 8.0" x 4.0" (914.0 x 203.0 x 102.0)
Weight – lbs. (kg)	8.5 (3.81)

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LightGuard® 420 FTTx Aerial Weathertight Fiber Optic Splice Closure

Ordering Information

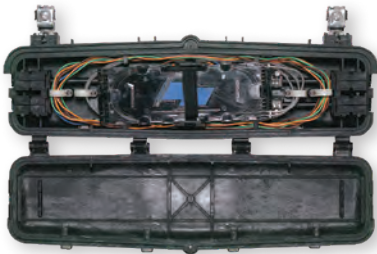
DESCRIPTION	MODEL NO.	AFL NO.
The AFL LightGuard (LG) 420 FTTx Aerial Weathertight Fiber Optic Splice Closures are designed to allow taut sheath (no slack) or conventional splicing in aerial applications such as FTTx access networks. The LG-420 FTTx provides access for 1 to 16 connections and up to 12 subscriber drops and requires only a common can wrench for installation. Includes: Hanger Brackets and Splice Tray. Not included: Cable Grounding Kits.	LG-420-U-FTTx	FC000099
LL-2425 Single Splice Tray – Stores (32) single fusion splices. Maximum of 1 tray in the LG-420-FTTx.	LL-2425	FC000053
Small Single Grommet Kit of (10 pc grommet only) – (Min .38" - Max .82")	Small Single Grommet Kit (10)	911496-00-00
Small Dual Grommet Kit – Includes: (2) small dual grommets and hardware (Min .27" - Max .53" and Min .38" - Max .70")	Small Dual Grommet Kit	911386-00-01
Small Dual Grommet Kit (10 pc grommet only) – (Min .27" - Max .53" and Min .38" - Max .70")	Small Dual Grommet Kit (10)	911495-00-00
Small 6-Port Drop Cable Kit – 2 grommets with tie wrap and foam. Allows six cable entries (Min 0.20" - Max 0.365" and flat drop)	Small 6 Port Drop Kit	FC000644
Adjustable Aerial Hanger Kit Bracket Kit (included with closure)	Adjustable Hanger LG-400/500/600	911497-00-00
Extended Offset Aerial Hanger Kit LG-400/500/600	Offset Hanger LG-400/500/600	91990-00
Retention hardware for additional cables or replacement hardware – LG-400/500/600 (no grommets)	Cable Retention Kit LG-400/500/600	FC000356
Closure Extension Kit – Used to join multiple closures for extended sheath openings required to repair cable sheath and damaged fibers	Closure Extension Kit LG-400/500/600	911499-00-00
1x6 Fiber Router Kit with furcation tubes.	1x6 Fiber Router	FC000070
Cable Grounding Kit (pack of 5) – Clamp-On Ground Cable Only	CGK-5	FC001091
*Mechanical Splice Kit. Includes 10 pieces of VHB tape. Used in all splice trays. Each piece holds 12 splices.	VHB Tape	FA000089

* See Accessory Specifications. See Splice Tray Specifications.

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771
Rural Utilities Service (RUS)	Listed

Contact AFL for further details.



LightGuard® 500 Aerial Weathertight Fiber Optic Splice Closure

The LightGuard (LG) 500 Aerial Weathertight Fiber Optic Splice Closure is designed for medium count fiber splicing (up to 144 single or 432 mass) in a butt or in-line configuration. Utilized in aerial applications, the LG-500 is ideal for congested aerial construction due to its compact design and requires only a common can wrench for installation.

Features

- Four individual, self-sizing grommeted cable ports (expandable up to eight cable entrances)
- Patented tongue-in-groove cover seal system
- Installation and re-entry only require a common can wrench
- Cable retention clamps provide pullout
- UV resistant engineered thermoplastic

Specifications

PARAMETER	VALUE
Splice Capacity (Max.) – Single, Mass, Mechanical	144, 432, 36
Number of Splice Trays (Max.) – Single, Mass, Mechanical*	4, 3, 4
Cable Entrance Configuration	Butt or in-line
Cables	4 to 8
Cable Sizes (Min. O.D. - Max. O.D.) Included Grommets Single in. (mm) Additional Grommets Dual Grommet in. (mm)	(4) Cable Ports 4 @ 0.38" - 0.82" (7.6 - 20.8) Sm: 0.27" - 0.53" (6.9 - 13.5) Lg: 0.38" - 0.70" (9.5 - 17.8)
6-port Multi-Drop Grommet in. (mm)	0.20" - 0.37" (5.1 - 9.4)
Dimensions – (L x D) in. (mm)	27.0" x 8.3" x 4.0" (686.0 x 210.0 x 102.0)
Weight – lbs. (kg)	6.4 (2.90)

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LightGuard® 500 Aerial Weathertight Fiber Optic Splice Closure

Ordering Information

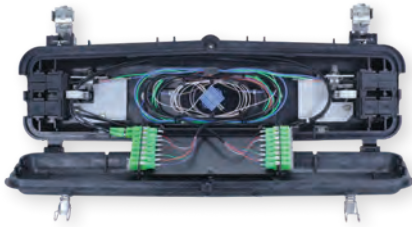
DESCRIPTION	MODEL NO.	AFL NO.
LG-500 Aerial Weathertight Fiber Optic Splice Closure – Stores 144 single fusion or 432 mass fusion, includes (4) cable kits for sealing/retention and (2) ground terminals with removable bond, and hanger brackets. Not included: Splice Trays or Cable Grounding Kits	LG-500-U-0	FC000026
LL-2400 Single Splice Tray – Stores (24) single fusion splices. Maximum of 4 trays in the LG-500.	LL-2400	91710-06
LL-2448 Universal Splice Tray – Stores (24) single fusion or (4) mass fusion splices (48 F) , *Mechanical. Maximum of 3 trays in the LG-500.	LL-2448	911289-00-02
LL-4848 Mass Splice Tray – Stores (12) mass fusion splices (144 F). Maximum of 3 trays in the LG-500.	LL-4848	911437-00-02
LL-2448-48S Single Splice Tray – Stores (48) single fusion splices. Maximum of 3 trays in the LG-500.	LL-2448-48S	FA000045
Small Single Grommet Kit (10 pc grommet only) – (Min 0.38" - Max 0.82")	Small Single Grommet Kit (10)	911496-00-00
Small Dual Grommet Kit – Includes: (2) small dual grommets and hardware (Min 0.27" - Max 0.53" and Min 0.38" - Max 0.70")	Small Dual Grommet Kit	911386-00-01
Small 6-Port Drop Cable Kit – 2 grommets with tie wrap and foam. Allows six cable entries. (Min 0.20" - Max 0.365" and flat drop)	Small 6 Port Drop Kit	FC000573
Adjustable Aerial Hanger Kit Bracket Kit (included with closure)	Adjustable Hanger LG-400/500/600	911497-00-00
Extended Offset Aerial Hanger Kit for LG-400/500/600	Offset Hanger LG-400/500/600	91990-00
Retention hardware for additional cables or replacement hardware – LG-400/500/600 (no grommets)	Cable Retention Kit LG 400/500/600	FC000356
Closure Extension Kit – Used to join multiple closures for extended sheath openings required to repair cable sheath and damaged fibers	Closure Extension Kit LG-400/500/600	911499-00-00
1x6 Fiber Router Kit with furcation tubes.	1x6 Fiber Router	FC000070
Cable Grounding Kit (pack of 5) – Clamp -On Ground Cable Only	CGK-5	FC001091
*Mechanical Splice Kit. Includes 10 pieces of VHB tape. Used in all splice trays. Each piece holds 12 splices.	VHB Tape	FA000089

* See Accessory Specifications. See Splice Tray Specifications.

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771
Rural Utilities Service (RUS)	Listed

Contact AFL for further details.



LightGuard® 500 FTTx Aerial Weathertight Fiber Optic Splice Closures

The LightGuard (LG) 500 FTTx Aerial Weathertight Fiber Optic Splice Closure is designed for small count fiber splicing (up to 32 single or 48 mass) in a butt or in-line configuration. Utilized in aerial applications, the LG-500-FTTx is ideal for FTTx access networks by providing cable entry and connectivity for up to 12 drop cables and 16 connections, requiring only a common can wrench for installation.

Features

- Four individual, self-sizing grommets cable ports:
 - 2 express ports
 - 2 multi-drop ports
- 12 drop cables and 16 connections
- Special multi-drop grommet and cable retention
- Special lock-out interior enclosure
- Patented tongue-in-groove cover seal system
- Installation and re-entry only require a common can wrench
- Cable retention clamps provide pullout
- UV resistant engineered thermoplastic

Specifications

PARAMETER	VALUE
Splice Capacity (Max.) – Single, Mass, Mechanical	32, 48, 12
Number of Splice Trays (Max.) – Single, Mass, Mechanical*	1, 1, 1
Cable Entrance Configuration	Butt or in-line
Cables	2 to 4 Express with up to 12 Drop
Cable Sizes (Min. O.D. - Max. O.D.) Included Grommets	(4) Cable Ports
Single in. (mm)	4 @ 0.38" - 0.82" (7.6 - 20.8)
6-port Multi-Drop Grommet in. (mm)	2 (6 port) @ 0.20" - 0.37" (5.1 - 9.4)
Additional Grommets	
Dual Grommet in. (mm)	Sm: 0.27" - 0.53" (6.9 - 13.5)
	Lg: 0.38" - 0.70" (9.5 - 17.8)
6-port Multi-Drop Grommet in. (mm)	0.20" - 0.37" (5.1 - 9.4)
Dimensions – (L x D) in. (mm)	27.0" x 8.3" x 4.0" (686.0 x 210.0 x 100.0)
Weight – lbs. (kg)	10.1 (4.58)

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LightGuard® 500 FTTx Aerial Weathertight Fiber Optic Splice Closure

Ordering Information

DESCRIPTION	MODEL NO.	AFL NO.
LG-500-FTTx Aerial Weathertight Fiber Optic Splice Closure – Stores 32 single fusion or 48 mass fusion, includes (4) cable kits for sealing/retention and (2) ground terminals with removable bond, (1) splice tray, and hanger brackets. Not included: Cable Grounding Kits, SCAPC Adapters	LG-500-FTTx	FC000899
LL-2425 Single Splice Tray – Stores (32) single fusion splices. Maximum of 1 tray in the LG-500-FTTx.	LL-2425	FC000053
Small Single Grommet Kit of (10 pc grommet only) – (Min 0.38" - Max 0.82")	Small Single Grommet Kit (10)	911496-00-00
Small Dual Grommet Kit – Includes: (2) small dual grommets and hardware (Min 0.27" - Max 0.53" and Min 0.38" - Max 0.70")	Small Dual Grommet Kit	911386-00-01
Small Dual Grommet Kit (10 pc grommet only) – (Min 0.27" - Max 0.53" and Min 0.38" - Max 0.70")	Small Dual Grommet Kit (10)	911495-00-00
Small 6-Port Drop Cable Kit – 2 grommets with tie wrap and foam tape. Allows six cable entries. (Min 0.20" - Max 0.37" and flat drop)	Small 6 Port Drop Kit	FC000573
Adjustable Aerial Hanger Kit Bracket Kit (included with closure)	Adjustable Hanger LG-400/500/600	911497-00-00
Extended Offset Aerial Hanger Kit LG-400/500/600	Offset Hanger LG-400/500/600	91990-00
Retention hardware for additional cables or replacement hardware – LG-400/500/600 (no grommets)	Cable Retention Kit LG-400/500/600	FC000356
Closure Extension Kit – Used to join multiple closures for extended sheath openings required to repair cable sheath and damaged fibers	Closure Extension Kit LG-400/500/600	911499-00-00
1x6 Fiber Router Kit with furcation tubes	1x6 Fiber Router	FC000070
Cable Grounding Kit (pack of 5) – Clamp -On Ground Cable Only	CGK-5	FC001091
Mechanical Splice Kit*. Includes 10 pieces of VHB tape. Used in all splice trays. Each piece holds 12 splices.	VHB Tape	FA000089
Single-mode SC Simplex Adapter, Flangeless, Green	SC/APC Adapter	CS009394
SC/APC 900 μm Pigtail, 1.5 Meter Length	ASC, XXX, JH, 001, Q, 001.5, White	CS012973C-001.5

* See Accessory Specifications. See Splice Tray Specifications.

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771
Rural Utilities Service (RUS)	Listed

Contact AFL for further details.



LightGuard® 600 Aerial Weathertight Fiber Optic Splice Closure

The LightGuard (LG) 600 Aerial Weathertight Fiber Optic Splice Closure is designed for high count fiber splicing (up to 384 single or 1152 mass) in a butt or in-line configuration. Utilized in aerial applications, the LG-600 is an ideal cost-effective solution for high fiber count splicing and requires only a common can wrench for installation.

Features

- Six individual, self-sizing grommets cable ports (expandable to 12 cable entrances)
- Patented tongue-in-groove cover seal system
- Installation and re-entry only require a common can wrench
- Integrated grounding clamp through aerial hangers
- Cable retention clamps provide pullout
- UV resistant engineered thermoplastic

Specifications

PARAMETER	VALUE
Splice Capacity (Max.) – Single, Mass, Mechanical	384, 1152, 36
Number of Splice Trays (Max.) – Single, Mass, Mechanical*	12, 8, 8
Cable Entrance Configuration	Butt or in-line
Cables	6 to 24
Cable Sizes (Min. O.D. - Max. O.D.) Included Grommets Single in. (mm)	(6) Cable Ports 0.44" - 1.00" (11.2 - 25.4)
Additional Grommets Dual Grommet in. (mm)	Sm: 0.40" - 0.70" (10.0 - 17.8) Lg: 0.60" - 0.90" (15.3 - 22.9)
6-port Multi-Drop Grommet in. (mm)	0.30" - 0.48" (7.6 - 17.8)
Dimensions – (L x D) in. (mm)	27.0" x 11.3" x 7.5" (690.0 x 286.0 x 190.5)
Weight – lbs. (kg)	18.0 (8.16)

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LightGuard® 600 Aerial Weathertight Fiber Optic Splice Closure

Ordering Information

DESCRIPTION	MODEL NO.	AFL NO.
LG-600 Aerial Weathertight Fiber Optic Splice Closure – Stores 384 single fusion or 1152 mass fusion, includes (4) cable kits for sealing/retention and (2) ground terminals with removable bond and hanger brackets. Not included: Splice Trays or Cable Grounding Kits	LG-600-U-0	FC000029
LL-2400 Single Splice Tray – Stores (24) single fusion splices. Maximum of 12 trays in the LG-600.	LL-2400	91710-06
LL-2448 Universal Splice Tray – Stores (24) single fusion or (4) mass fusion splices (48 F). Maximum of 8 trays in the LG-600, *Mechanical	LL-2448	911289-00-02
LL-4848 Mass Splice Tray – Stores (12) mass fusion splices (144 F). Maximum of 8 trays in the LG-600.	LL-4848	911437-00-02
LL-2448-48S Single Splice Tray – Stores (48) single fusion splices. Maximum of 8 trays in the LG-600.	LL-2448-48S	FA000045
Large Single Grommet Kit with retention hardware (Min 0.44" - Max 1.00")	Large Single Grommet Kit	FC000623
Large Single Grommet Kit (10 pc grommet only) – (Min 0.44" - Max 1.00")	Large Single Grommet Kit (10)	91918-00
Large Dual Grommet Expansion Kit – Includes: (2) Dual grommets and hardware (Min 0.40" - Max 0.70" and Min 0.60" - Max 0.90")	Large Dual Grommet Kit	911406-00-00
Large 6 Port Drop Cable Kit – 2 Grommets with retention bracket. Allows six cable entries. (Min 0.23" - Max 0.48" and flat drop)	Large 6 Port Drop Kit	FC000352
Adjustable Aerial Hanger Kit Bracket Kit (included with closure)	Adjustable Hanger LG-400/500/600	911497-00-00
Extended Offset Aerial Hanger Kit LG-400/500/600	Offset Hanger LG-400/500/600	91990-00
SC 6-pack bracket kit for LG-600	Bracket Kit (6-pack SC) LG-600	FM001294
Retention hardware for additional cables or replacement hardware – LG-400/500/600 (no grommets)	Cable Retention Kit LG-400/500/600	FC000356
Closure Extension Kit – Used to join multiple closures for extended sheath openings required to repair cable sheath and damaged fibers	Closure Extension Kit LG-400/500/600	911499-00-00
1x6 Fiber Router Kit with furcation tubes	1x6 Fiber Router	FC000070
Cable Grounding Kit (pack of 5) – Clamp -On Ground Cable Only	CGK-5	FC001091
*Mechanical Splice Kit. Includes 10 pieces of VHB tape. Used in all splice trays. Each piece holds 12 splices.	VHB Tape	FA000089

* See Accessory Specifications. See Splice Tray Specifications.

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771
Rural Utilities Service (RUS)	Listed

Contact AFL for further details.

LightGuard® 600 FTTx Aerial Weathertight Fiber Optic Splice Closure

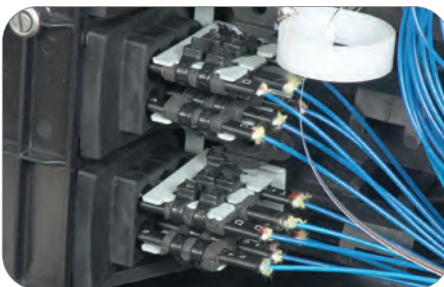
The LightGuard (LG) 600 FTTx Aerial Weathertight Fiber Optic Splice Closure is designed for small count fiber splicing (up to 48 single or 48 mass) in a butt or in-line configuration. Utilized in aerial applications, the LG-600-FTTx is ideal for express slack look fiber access splicing by providing cable entry and connectivity for up to 24 subscriber drops and requires only a common can wrench for installation.

Features

- Six individual, self-sizing grommets cable ports:
 - 2 express ports
 - 4 multi-drop ports
- Up to 12 adapters using the LG-600 expansion kit and SC 6-pack adapter brackets
- Special multi-drop grommets and cable retention
- Integrated aerial splicing work tray
- Patented tongue-in-groove cover seal system
- Installation and re-entry only require a common can wrench
- Integrated grounding clamp through aerial hangers
- Cable retention clamps provide pullout
- UV resistant engineered thermoplastic

Specifications

PARAMETER	VALUE
Splice Capacity (Max.) – Single, Mass, Mechanical	24, 48, 24
Number of Splice Trays (Max.) – Single, Mass, Mechanical*	2, 2, 2
Cable Entrance Configuration	Butt or in-line
Cables	2 to 4 Express with up to 24 Drops
Cable Sizes (Min. O.D. - Max. O.D.) Included Grommets	(6) Cable Ports 2 @ 0.44" - 1.00" (11.2 - 25.4) 4 @ 0.30" - 0.48" (76 - 17.8)
Single in. (mm)	
6-port Multi-Drop Grommet in. (mm)	
Additional Grommets	
Dual Grommet in. (mm)	Sm: 0.40" - 0.70" (10.0 - 17.8) Lg: 0.60" - 0.90" (15.3 - 22.9)
Dimensions – (L x D) in. (mm)	27.00" x 11.25" x 7.50" (690.0 x 286.0 x 190.5)
Weight – lbs. (kg)	18.0 (8.16)



Cable entrance



Grommet bracket

continued
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LightGuard® 600 FTTx Aerial Weathertight Fiber Optic Splice Closure

Ordering Information

DESCRIPTION	MODEL NO.	AFL NO.
LG-600-FTTx Aerial Weathertight Fiber Optic Splice Closure – Stores 24 single fusion or 48 mass fusion, includes (6) cable kits for sealing/retention and (2) ground terminals with removable bond, (2) splice tray, and hanger brackets. Not included: Cable Grounding Kits	LG600-FTTx	FC000291
LL-2450 Single Splice Tray – Stores (12) single fusion splices. Maximum of (2) trays in the LG-600-FTTx.	LL-2450	91957-00
LL-4850 Mass Splice Tray – Stores (8) mass fusion splices (96F). Maximum of (2) trays in the LG-600-FTTx.	LL-4850	91958-00
LL-1248 Universal Splice Tray – Stores (12) single fusion splices or (8) mass fusion splices (96F), *Mechanical. Maximum of 2 trays in the LG-600FTTx.	LL-1248	911221-00-00
Large Single Grommet Kit with retention hardware (Min 0.44" - Max 1.00")	Large Single Grommet Kit	FC000623
Large Single Grommet Kit (10 pc grommet only) – (Min 0.44" - Max 1.00")	Large Single Grommet Kit (10)	91918-00
Adjustable Aerial Hanger Kit Bracket Kit (included with closure)	Adjustable Hanger LG-400/500/600	911497-00-00
Extended Offset Aerial Hanger Kit – LG-400/500/600	Offset Hanger LG-400/500/600	91990-00
Retention hardware for additional cables or replacement hardware – LG/400/500/600 (no grommets)	Cable Retention Kit LG-400/500/600	FC000356
Closure Extension Kit – Used to join multiple closures for extended sheath openings required to repair cable sheath and damaged fibers	Closure Extension Kit LG-400/500/600	911499-00-00
1x6 Fiber Router Kit with furcation tubes	1x6 Fiber Router	FC000070
Cable Grounding Kit (pack of 5) – Clamp-On Ground Cable Only	CGK-5	FC001091
*Mechanical Splice Kit. Includes 10 pieces of VHB tape. Used in all splice trays. Each piece holds 12 splices.	VHB Tape	FA000089
LG-600 FTTx Expansion Kit – Includes (1) Stacker Module, (1) SC-6-Pack Bracket. Allows use of standard splice trays.	LG-600 FTTx Expansion Kit	FC000620

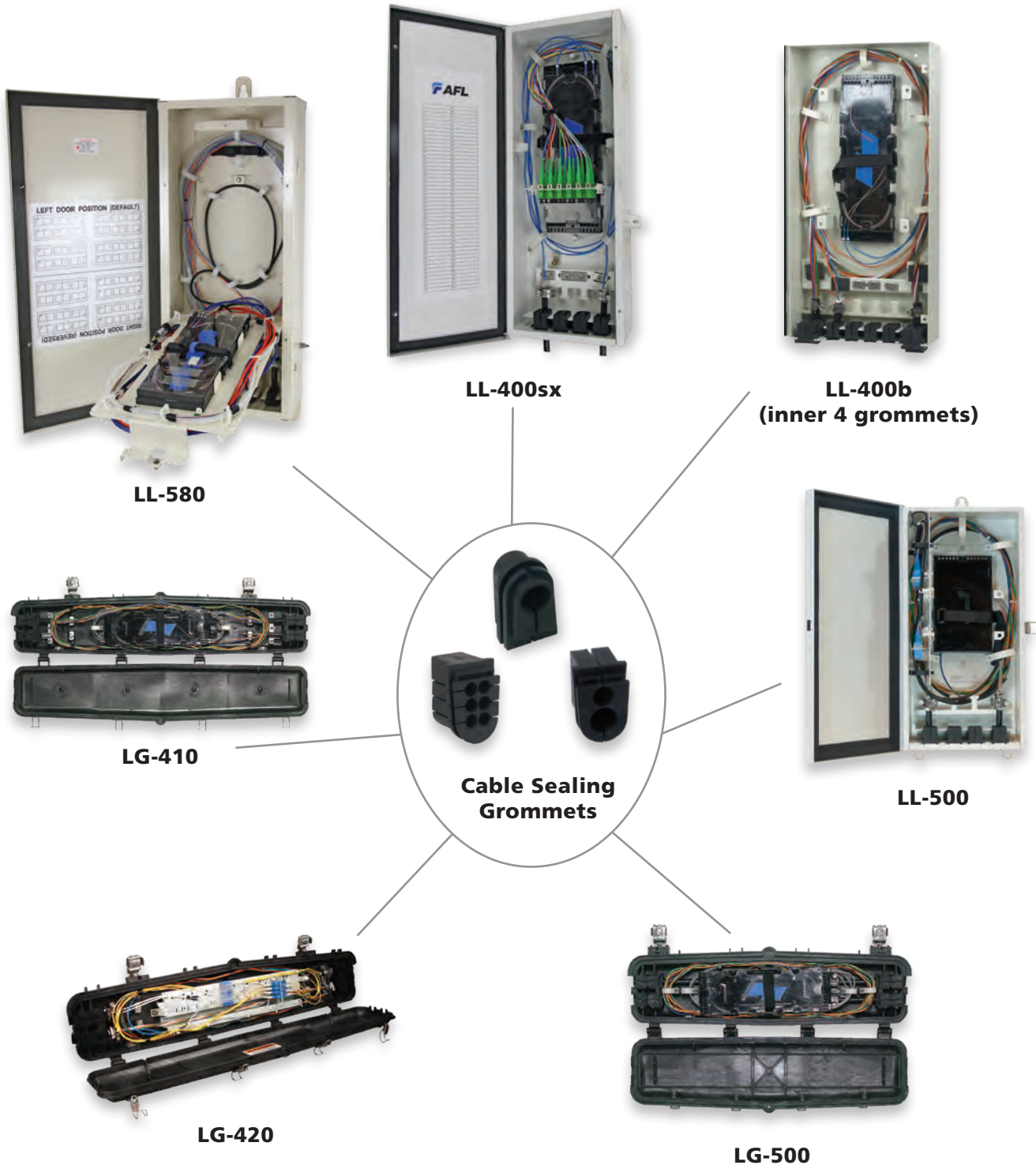
* See Accessory Specifications. See Splice Tray Specifications.

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771
Rural Utilities Service (RUS)	Listed

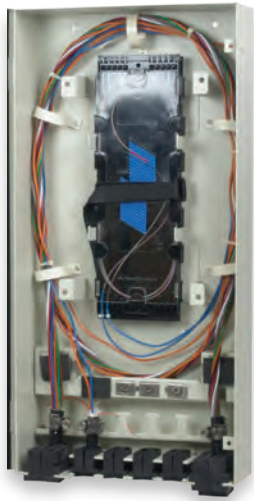
Contact AFL for further details.

Interchangeable Grommets for Fiber Optic Splice Closures and Fiber Enclosures

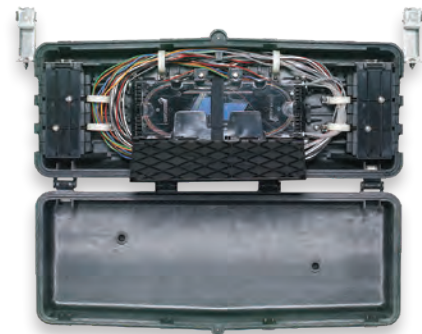


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Interchangeable Large Grommets for Fiber Optic Splice Closures and Fiber Enclosures



LL-400b
(outer 2 grommets)

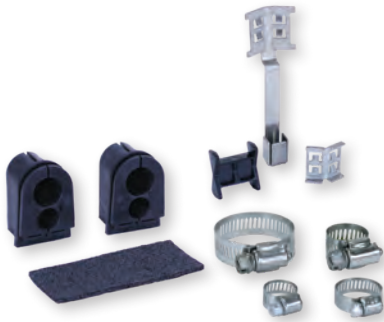


LG-600



**Cable Sealing
Grommets**

LightGuard® Aerial Splice Closure Accessories



Dual-port Grommet Kit



Multi-port Grommet Kit

Dual- and Multi-port Grommet Kits for LG-400/LG-500/LG-600

For use with the LG-600 Aerial Weathertight Closure. Remove the single-port grommet set from the closure and replace with the multi-port grommet set when drops are required. Retention hardware included.

Ordering Information

DESCRIPTION	AFL NO.
Dual-port Grommet Kit for LG-400/LG-500 Diameter for large port is 0.375" - 0.65"; small port, 0.27" - 0.5"	911386-00-01
Dual Grommet Expansion Kit - Includes: (2) Dual Grommets, (1) CSM retention clamp, cable retention clamp and cable spacer	911406-00-00
Dual Grommet Replacement Kit - Includes: (10) Dual Grommets for the LG-400 Series Closures. Diameter for large port is 0.375" - 0.65"; small port, 0.27" - 0.5"	911495-00-00
Grommet Replacement Kit, Kit - Includes: (10) Standard (single port) Grommets for the LG-400 Series Closures. Diameter from 0.3" - 0.82"	911496-00-00
Grommet Replacement Kit - Includes: (10) LG-600 Grommets Diameter from 0.5" - 1.0"	91918-00
Multi-port Grommet Kit for LG-400/LG-500. Diameter up to 0.365"	FC000573
Multi-port Grommet Kit for LG-600. Diameter from 0.67" to 0.475"	FC000352

Single-port Grommet Kit for LG-600 FTTx

For use with the LG-600 Aerial Weathertight Closure. Remove the multi-port grommet set from the closure and replace with the single-port grommet set when installing a branch cable. Hardware included.

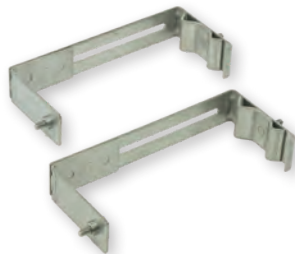


Ordering Information

DESCRIPTION	AFL NO.
Single-port Grommet Kit for LG-600 FTTx	FC000623
Single Cable Entry Grommet Kit LG-600 Hardware	FC000356

Adjustable Aerial Hanger Brackets

For use with all Aerial Weathertight Closures (LG-410, LG-420, LG-420 FTTx, LG-500, LG-600 and LG-600 FTTx). This pair of hanger brackets is shipped from the factory with all weathertight closures. Purchase separately for closures installed over existing utilities.

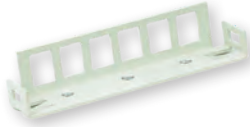


Ordering Information

DESCRIPTION	AFL NO.
Adjustable Aerial Hanger Brackets	911497-00-00

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LightGuard® Aerial Splice Closure Accessories (cont.)

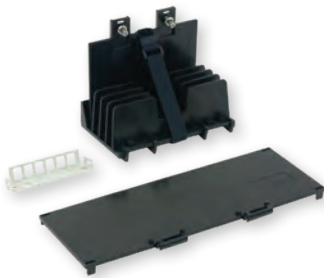


SC 6-Pack Bracket for LG-600

Installs at each end of the stacker module in the LG-600. Allows up to (12) SC connectors or (24) LC connectors (using duplex connectors) to be installed in the closure. Snaps in place or use self-tapping screws to secure.

Ordering Information

DESCRIPTION	AFL NO.
SC 6-Pack Bracket Kit for LG-600	FM001294
SC 6-Pack Adapter Bracket	FM001212



Expansion Kit for LG-600 FTTx

Expansion kit includes a Stacker Tray Module and one LG-600 SC-6-Pack Bracket to allow for up to six SC connections or 12 LC duplex connections. An additional bracket may be used to increase connectivity to 12 SC or 24 LC connections using duplex adapters. Allows increasing splices with LL-2400, LL-2448 and LL-2448-48S splice trays.

Ordering Information

DESCRIPTION	AFL NO.
Expansion Kit for LG-600 FTTx	FC000620



Cable Grounding Harness

For use with all Aerial Weathertight Closures (LG-410, LG-420, LG-420 FTTx, LG-500, LG-600 and LG-600 FTTx).

Ordering Information

DESCRIPTION	AFL NO.
Cable Grounding Harness - Includes: (4) Harness 8" #6 AWG	FC000024



Aerial Hanger Kits

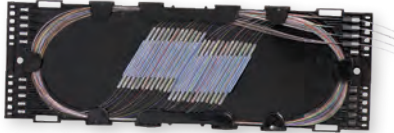
For use with all Aerial Weathertight Closures (LG-410, LG-420, LG-420 FTTx, LG-500, LG-600 and LG-600 FTTx).

Ordering Information

DESCRIPTION	AFL NO.
Extended Aerial Hanger Kit	911497-00-00
Extended Offset Aerial Hanger Kit	91990-00

LightLink Fiber Optic Splice Trays

AFL's LightLink series of Fiber Optic Splice Trays offers a variety of unique and flexible splice and storage possibilities. They are available in industry standard configurations (single, mass).



Features

- In-line or butt splice capability (see model descriptions)
- Pre-formed radiuses maintain bend requirements
- Interlocking base and cover provides tray stability without the use of a bolt
- Extended finger guides easily store and route loose fiber or ribbon

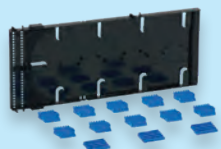
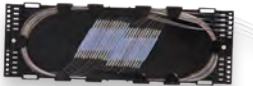



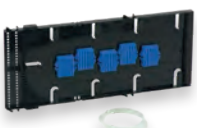
Ordering Information—Splice Trays for Sealed Fiber Optic Splice Closures

DESCRIPTION	MODEL NO.	AFL NO.	LG-55-U	LG-150-U	LG-250-U	LG-350-U	LG-350-20-WTC	LG-350-27-WTC
Single Fuse: 32 Mass Fuse: N/A 6.300" (L) x 2.730" (W) x 0.829" (H) 	LL-2425	FC000053	Max trays: 1 Single: 32 Mass: N/A	N/A	N/A	N/A	N/A	N/A
Single Fuse: 12 Mass Fuse: N/A 7.139" (L) x 4.294" (W) x 0.370" (H) 	LL-2450	91957-00	N/A	Max Trays: 4 Single: 48 Mass: N/A	N/A	N/A	N/A	N/A
Single Fuse: N/A Mass Fuse: 8 (96 fiber) 7.139" (L) x 4.294" (W) x 0.370" (H) 	LL-4850	91958-00	N/A	Max Trays: 4 Single: N/A Mass: 32 (384 fiber)	N/A	N/A	N/A	N/A
Single Fuse: 12 Mass Fuse: 8 (96 fiber) 7.139" (L) x 4.294" (W) x 0.370" (H) 	LL-1248	911221-00-00	N/A	Max Trays: 4 Single: 48 Mass: 48 (384 fiber)	N/A	N/A	N/A	N/A
Single Fuse: 24 Mass Fuse: N/A 12.542" (L) x 4.042" (W) x 0.390" (H) 	LL-2400	91710-06	N/A	N/A	Max Trays: 5 Single: 120 Mass: N/A	Max Trays: 13 Single: 312 Mass: N/A	N/A	N/A

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LightLink Fiber Optic Splice Trays (cont.)

Ordering Information—Splice Trays for Sealed Fiber Optic Splice Closures

DESCRIPTION	MODEL NO.	AFL NO.	LG-250-U	LG-350-U	LG-350-AC	LG-350XL-U	LG-350-20-WTC	LG-350-27-WTC
Single Fuse: 60 Mass Fuse: 12 (144 fiber) 12.000" (L) x 5.125" (W) x 0.485" (H)  *Note: Contains enough splice holders for 24 mass splices (288 fibers) when using AFL Wrapping Tube Cable.	LL-7644	FA000044	N/A	Max Trays: 6 Single: 360 Mass: 72 (864 fiber)	N/A	N/A	N/A	Max Trays: 3 Single: 180 Mass: 72 (864 fiber)
Single Fuse: 24 Mass Fuse: 4 (48 fiber) 12.542" (L) x 4.270" (W) x 0.531" (H) 	LL-2448	911289-00-02	Max Trays: 3 Single: 72 Mass: 12 (144 fiber) Mechanical: 36	Max Trays: 8 Single: 192 Mass: 32 (384 fiber) Mechanical: 96	N/A	N/A	N/A	N/A
Single Fuse: 48 Mass Fuse: N/A 12.542" (L) x 4.270" (W) x 0.531" (H) 	LL-2448-48S	FA000045	Max Trays: 3 Single: 144 Mass: N/A	Max Trays: 8 Single: 384 Mass: N/A	N/A	N/A	N/A	N/A
Single Fuse: N/A Mass Fuse: 12 (144 fiber) 12.542" (L) x 4.270" (W) x 0.531" (H) 	LL-4848	911437-00-02	Max Trays: 3 Single: N/A Mass: 36 (432 fiber)	Max Trays: 8 Single: N/A Mass: 96 (1152 fiber)	N/A	N/A	N/A	N/A
Single Fuse: 96 Mass Fuse: 24 (288 fiber) 15.950" (L) x 4.875" (W) x 0.485" (H) 	LL-4896	911676-00-02	N/A	Max Trays: 5 Single: 480 Mass: 120 (1440 fiber)	N/A	Max Trays: 9 Single: 864 Mass: 216 (2592 fiber)	N/A	N/A
Single Fuse: 60 Mass Fuse: N/A 12.000" (L) x 5.125" (W) x 0.485" (H) 	LL-7060	FA000042	N/A	Max Trays: 6 Single: 360 Mass: N/A	N/A	N/A	N/A	Max Trays: 3 Single: 180 Mass: N/A

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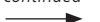
Splice Trays

LightLink Fiber Optic Splice Trays (cont.)

Ordering Information – Splice Trays for LG-350 and LG-350XL-U Sealed Fiber Optic Splice Closures

DESCRIPTION	MODEL NO.	AFL NO.	LG-350-U	LG-350-AC	LG-350XL-U	LG-350-20-WTC	LG-350-27-WTC
Single Fuse: N/A Mass Fuse: 12 (144 fiber) 12.000" (L) x 5.125" (W) x 0.485" (H) 	LL-7144	FA000043	Max Trays: 6 Single: 360 Mass: 72 (864 fiber)	N/A	N/A	N/A	Max Trays: 3 Single: 180 Mass: 72 (864 fiber)
Single Fuse: 36 Mass Fuse: 12 (144 fiber) 8.125" (L) x 4.875" (W) x 0.485" (H) 	LL-4808L-R	FA000037	N/A	Max Trays: 4 Single: 144 Mass: 48 (576 fiber)	N/A	Max Trays: 4 Single: 144 Mass: 48 (576 fiber)	N/A
Single Fuse: N/A Mass Fuse: 12 (144 fiber) 8.125" (L) x 4.875" (W) x 0.485" (H) 	LL-4808 R	FA000020	N/A	Max Trays: 4 Single: N/A Mass: 48 (576 fiber)	N/A	Max Trays: 4 Single: N/A Mass: 48 (576 fiber)	N/A
Single Fuse: 36 Mass Fuse: N/A 8.125" (L) x 4.875" (W) x 0.485" (H) 	LL-4808 L	FA000021	N/A	Max Trays: 4 Single: 144 Mass: N/A	N/A	Max Trays: 4 Single: 144 Mass: N/A	N/A
Single Fuse: N/A Mass Fuse: 24 (288 fiber) 15.950" (L) x 4.875" (W) x 0.485" (H) 	LL-4896 R	FA000022	Max Trays: 5 Single: N/A Mass: 120 (1440 fiber)	N/A	Max Trays: 9 Single: N/A Mass: 216 (2592 fiber)	N/A	N/A
Single Fuse: 96 Mass Fuse: N/A 15.950" (L) x 4.875" (W) x 0.485" (H) 	LL-4896 L	FA000023	Max Trays: 5 Single: 480 Mass: N/A	N/A	Max Trays: 9 Single: 864 Mass: N/A	N/A	Max Trays: 3 Single: 180 Mass: N/A

continued



LightLink Fiber Optic Splice Trays (cont.)

Ordering Information – Splice Trays for Aerial Weathertight Fiber Optic Splice Closures

DESCRIPTION	MODEL NO.	AFL NO.	LG-410-U	LG-420-U FTTx	LG-500-U	LG-500-U FTTx
Single Fuse: 24 Mass Fuse: N/A 12.542" (L) x 4.042" (W) x 0.390" (H) 	LL-2400	91710-06	Max Trays: 4 Single: 96 Mass: N/A	N/A	Max Trays: 4 Single: 96 Mass: N/A	N/A
Single Fuse: 32 Mass Fuse: N/A 6.300" (L) x 2.730" (W) x 0.829" (H) 	LL-2425	FC000053	N/A	Max Trays: 1 Single: 32 Mass: N/A	N/A	Max Trays: 1 Single: 32 Mass: N/A
Single Fuse: 24 Mass Fuse: 4 (48 fiber) 12.542" (L) x 4.270" (W) x 0.531" (H) 	LL-2448	911289-00-02	Max Trays: 3 Single: 72 Mass: 12 (144 fiber) Mechanical: 36	N/A	Max Trays: 3 Single: 72 Mass: 12 (144 fiber) Mechanical: 36	N/A
Single Fuse: 12 Mass Fuse: N/A 7.139" (L) x 4.294" (W) x 0.370" (H) 	LL-2450	91957-00	N/A	N/A	N/A	N/A
Single Fuse: N/A Mass Fuse: 12 (144 fiber) 12.542" (L) x 4.270" (W) x 0.531" (H) 	LL-4848	911437-00-02	Max Trays: 3 Single: N/A Mass: 36 (432 fiber)	N/A	Max Trays: 3 Single: N/A Mass: 36 (432 fiber)	N/A
Single Fuse: N/A Mass Fuse: 8 (96 fiber) 7.139" (L) x 4.294" (W) x 0.370" (H) 	LL-4850	91958-00	N/A	N/A	N/A	N/A
Single Fuse: 12 Mass Fuse: 8 (96 fiber) 7.139" (L) x 4.294" (W) x 0.370" (H) 	LL-1248	911221-00-00	N/A	N/A	N/A	N/A

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Splice Trays

LightLink Fiber Optic Splice Trays (cont.)


Ordering Information – Splice Trays for Aerial Weathertight Fiber Optic Splice Closures

DESCRIPTION	MODEL NO.	AFL NO.	LG-500-U-FTTx-ISO	LG-600-U	LG-600-FTTx	LG-600-U-FTTx-ISO
Single Fuse: 24 Mass Fuse: N/A 12.542" (L) x 4.042" (W) x 0.390" (H) 	LL-2400	91710-06	N/A	Max Trays: 12 Single: 288 Mass: N/A	Max Trays: 2 Single: 48 Mass: N/A	N/A
Single Fuse: 32 Mass Fuse: N/A 6.300" (L) x 2.730" (W) x 0.829" (H) 	LL-2425	FC000053	N/A	N/A	N/A	N/A
Single Fuse: 24 Mass Fuse: 4 (48 fiber) 12.542" (L) x 4.270" (W) x 0.531" (H) 	LL-2448	911289-00-02	N/A	Max Trays: 8 Single: 192 Mass: 32 (384 fiber) Mechanical: 12	N/A	N/A
Single Fuse: 12 Mass Fuse: N/A 7.139" (L) x 4.294" (W) x 0.370" (H) 	LL-2450	91957-00	Max Trays: 1 Single: 12 Mass: N/A	N/A	N/A	Max Trays: 2 Single: 24 Mass: N/A
Single Fuse: N/A Mass Fuse: 12 (144 fiber) 12.542" (L) x 4.270" (W) x 0.531" (H) 	LL-4848	911437-00-02	N/A	Max Trays: 8 Single: N/A Mass: 96 (1152 fiber)	N/A	N/A
Single Fuse: N/A Mass Fuse: 8 (96 fiber) 7.139" (L) x 4.294" (W) x 0.370" (H) 	LL-4850	91958-00	Max Trays: 1 Single: N/A Mass: 8 (96 fiber)	N/A	N/A	Max Trays: 2 Single: N/A Mass: 16 (192 fiber)
Single Fuse: 12 Mass Fuse: 8 (96) 7.139" (L) x 4.294" (W) x 0.370" (H) 	LL-1248	911221-00-00	Max Trays: 1 Single: 12 Mass: 8 (96 fiber)	N/A	N/A	Max Trays: 2 Single: 24 Mass: 16 (192 fiber)

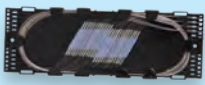



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LightLink Fiber Optic Splice Trays (cont.)

Ordering information – Splice Trays for Aerial Weathertight Fiber Optic Splice Closures

DESCRIPTION	MODEL NO.	AFL NO.	LG-410-U	LG-500-U	LG-600-U
Single Fuse: N/A Mass Fuse: 4 (48 fiber) 12.542" (L) x 4.270" (W) x 0.531" (H) 	LL-4800	91711-07	Max Trays: 3 Single: N/A Mass: 12 (144 fiber)	Max Trays: 3 Single: N/A Mass: 12 (144 fiber)	Max Trays: 8 Single: N/A Mass: 32 (384 fiber)

Ordering Information—Splice Trays for Fiber Optic Enclosures

DESCRIPTION	MODEL NO.	AFL NO.	LL-400B WITH INTERCONNECT	LL-400B WITHOUT INTERCONNECT	LL-400SX WITH 2 LGX® PLATES	LL-400SX WITHOUT LGX PLATES
Single Fuse: 24 Mass Fuse: 4 (48 fiber) Mechanical : 12 12.542" (L) x 4.270" (W) x 0.531" (H) 	LL-2448	911289-00-02	Max Trays: 4 Single: 96 Mass: 16 (192 fiber) Mechanical: 48	Max Trays: 6 Single: 144 Mass: 24 (288 fiber) Mechanical: 72	Max Trays: 3 Single: 72 Mass: 12 (144 fiber) Mechanical: 36	Max Trays: 9 Single: 216 Mass: 36 (432 fiber) Mechanical: 108
Single Fuse: 48 Mass Fuse: N/A 12.542" (L) x 4.270" (W) x 0.531" (H) 	LL-2448-48S	FA000045	Max Trays: 4 Single: 192 Mass: N/A	Max Trays: 6 Single: 288 Mass: N/A	Max Trays: 3 Single: 144 Mass: N/A	Max Trays: 9 Single: 432 Mass: N/A
Single Fuse: N/A Mass Fuse: 12 (144 fiber) 12.542" (L) x 4.270" (W) x 0.531" (H) 	LL-4848	911437-00-02	Max Trays: 4 Single: N/A Mass: 48 (576 fiber)	Max Trays: 6 Single: N/A Mass: 72 (864 fiber)	Max Trays: 3 Single: N/A Mass: 36 (432 fiber)	Max Trays: 9 Single: N/A Mass: 108 (1296 fiber)
Single Fuse: N/A Mass Fuse: 4 (48 fiber) 12.542" (L) x 4.270" (W) x 0.531" (H) 	LL-4800	91711-07	Max Trays: 4 Single: N/A Mass: 16 (192 fiber)	Max Trays: 6 Single: N/A Mass: 24 (288 fiber)	Max Trays: 3 Single: N/A Mass: 12 (144 fiber)	Max Trays: 9 Single: N/A Mass: 108 (1296 fiber)

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Splice Trays

LightLink Fiber Optic Splice Trays (cont.)

Ordering Information—Splice Trays for Fiber Optic Enclosures

DESCRIPTION	MODEL NO.	AFL NO.	LL-500	LL-580
Single Fuse: N/A Mass Fuse: 12 (144 fiber) 12.000" (L) x 5.125" (W) 0.485" (H) 	LL-7144	FA000043	N/A	Max Trays: 2 Single: N/A Mass: 24 (288 fiber)
Single Fuse: 60 Mass Fuse: 12 (144) 12.000" (L) x 5.125" (W) 0.485" (H) 	LL-7644	FA000044	N/A	Max Trays: 2 Single: 120 Mass: 24 (288 fiber)
Single Fuse: 12 Mass Fuse: N/A 7.139" (L) x 4.294" (W) x 0.370" (H) 	LL-2450	91957-00	Max Trays: 5 Single: 60 Mass: N/A	N/A
Single Fuse: N/A Mass Fuse: 8 (96 fiber) 7.139" (L) x 4.294" (W) x 0.370" (H) 	LL-4850	91958-00	Max Trays: 3 Single: N/A Mass: 24 (288 fiber)	N/A
Single Fuse: 36 Mass Fuse: 12 (144 fiber) 8.125" (L) x 4.875" (W) x 0.485" (H) 	LL-4808L-R	FA000037	N/A	Max Trays: 2 Single: 72 Mass: 24 (288 fiber)

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LightLink Fiber Optic Splice Trays (cont.)

Ordering Information – Splice Tray for Splicing Cabinets and Shelves

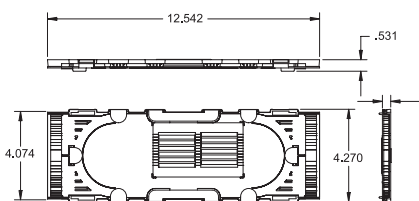
DESCRIPTION	MODEL NO.	AFL NO.
Telescoping Splice Tray - Stores up to 48 single fusion sleeves or 12 mass fusion sleeves (144 fibers). For use in the following products: LL-300, LL-288/576, LL-720/1440, OTSS-SYS1, OSS-SYS2 and OSS-SYS1	STF-48	911442-00-00
FTTx Splice Tray - Stores up to 2 single fusion sleeves. For use in the following products: ONT-760XL, ONT-3000 and CG-1500	—	DM000445
Bare Fiber Splice Tray - Stores up to 24 single fusion fibers without sleeves. For use in the following products: Any product that accepts the LL-2400 splice tray	—	C184190

Ordering Information—Splice Tray Accessories

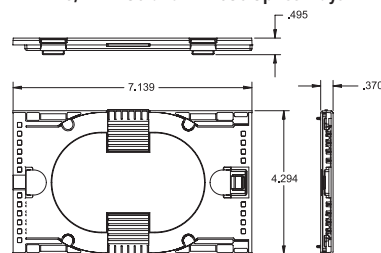
DESCRIPTION	AFL NO.
FP-40 Splice Protection Sleeves, 40 mm length (1000 box/100 pack)	S015916
FP-60 Splice Protection Sleeves, 60 mm length (1000 box/100 pack)	S015915
Single Fusion Splice Chip - 6 splices per chip. (10 pcs. per kit)	FA000034
Single Fusion Splice Chip - 12 splices per chip. (10 pcs. per kit)	FC000657
Single Fusion Splice Chip - 24 splices per chip. (10 pcs. per kit)	91745-02
Mass Fusion Splice Chip - 4 splices per chip. (10 pcs. per kit)	FA000088
Mechanical Fusion Splice Tape (10 pcs. per kit)	FA000089
Core Tube Cable Fiber Router for routing fiber up to 8 directions. For all central core tube sizes.	FC000008
Loose Tube or Ribbon Router for routing fiber up to 6 directions. For all Loose Tube and up to 12 fiber Ribbon.	FC000070

Dimensions

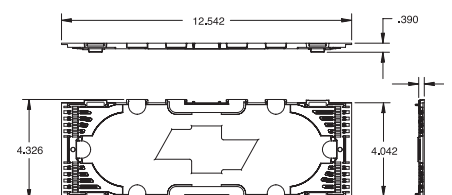
LL-2448 and LL-4848 Splice Trays



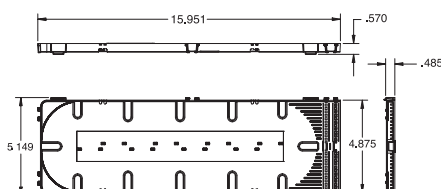
LL-1248, LL-2450 and LL-4850 Splice Trays



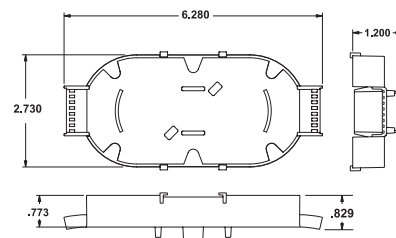
LL-2400 Splice Tray



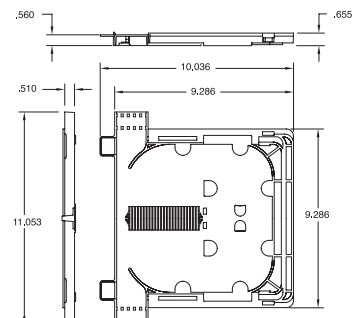
LL-4896 Splice Tray



LL-2425 Splice Tray



OEE Splice Tray



Splice Trays



AFL TITAN RTD Multiport Terminal



AFL TRIDENT Hardened Connector

AFL TITAN RTD® FTTx System

The AFL TITAN RTD Multiport is a factory terminated OSP fiber terminal designed for quick and easy subscriber connections anywhere in the OSP network when used in conjunction with AFL TRIDENT® Hardened Fiber Optic Connectors. The sealed and rugged design of both the AFL TITAN RTD Multiport and AFL TRIDENT connector allow for long term reliability when installed anywhere in the network—underground, in pedestals, on poles, or on aerial strand or ADSS cables.

The preterminated AFL TITAN RTD Multiport Terminal is available with a variety of cable stub options. Dielectric or toneable flat drop cables are available for underground or short span self-support applications while ADSS cable stubs are available for longer span self-support applications*. Round armored cables are available for rodent protection in aerial or direct buried applications. Lastly, a pushable/air-jettable MicroDrop cable is available for microduct jetting applications.

The multiple stub options allow for flexibility when engineering the network and consolidation of multiple terminal stubs into one centralized splice point. The terminal is outfitted with four, six, eight or twelve AFL TRIDENT connector ports. The AFL TITAN RTD Multiport and AFL TRIDENT Hardened Fiber Optic Connector are designed and tested to Telcordia GR-771 and Telcordia GR-3120, respectively.

Lengths less than 350 feet ship coiled in low-profile boxes. Lengths more than 350 feet ship on a 33" corrugated plastic reel inside a cardboard box.

Features

- AFL TRIDENT Hardened Connector ports for speedy customer connections
- Stubbed with a large variety of cable options including flat drop*, ADSS*, pushable/air-jettable MicroDrop, or armored drop.
- Factory sealed for deployment in up to 10 feet of water head, but re-enterable for connector repair
- Pole and swing arm mountable; aerial mounting bracket available for strand mount
- Low profile design—4 and 6 port fit into 6" pedestals

Multiport Terminal Specifications

PARAMETER		VALUE
Dimensions (L x W x H)	4- and 6-port	12.4" x 4.9" x 3.0" 315 mm x 125 mm x 76 mm
	8- and 12-port	15.5" x 6.1" x 3.8" 394 mm x 195 mm x 96 mm
Weight	4- and 6-port	1.5 lb (0.7 kg)
	8- and 12-port	2.5 lb (1.1 kg)

AFL TRIDENT Hardened Connector Specifications

PARAMETER	VALUE
Insertion Loss, Maximum	0.50 dB
Insertion Loss, Typical	0.15 dB
Reflection	≤ -65 dB
Operating Temperature	-40°C to +75°C

Qualifications

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771, GR-3120

*Refer to "AFL TITAN/TRIDENT Sag and Tension Guide" Applications Engineering Note for guidance on allowable span lengths for various stub options

AFL TITAN RTD® FTTx System



Pedestal Mount Application



AFL TITAN RTD / AFL TRIDENT® Interface

Ordering Information

RTD	12	XXX	DD	0050	F	
	Ports	Cable End	Cable Type	Tail Length	UOM	Reel
	04 = 4-port 06 = 6-port 08 = 8-port 12 = 12-port	XXX = Pigtail	DD = Dielectric Flat Drop TD = Toneable Flat Drop AD = TITAN ADSS Cable PD = Pushable MicroDrop AN = Armored Drop	*4 digits Example: 0050-F for 50 feet	F = Feet M = Meter	Blank = Standard cable-first payout R = Reversed reel, terminal-first payout

AFL TITAN RTD Accessories

DESCRIPTION	AFL NO.	IMAGE
Strand Mount Bracket Kit	FC001365	
AFL TRIDENT to SC/APC Adapter—for field replacement or jumper referencing	FC001366	
AFL TRIDENT to SC/APC Test Jumper (1 meter)	CS013775-0001	
One-Click® Cleaner SC (500 cleans)	8500-05-0001MZ	
TITAN RTD Multiport Handhole Hanging Bracket Kit, 4/6 Port	FC001474	
TITAN RTD Multiport Handhole Hanging Bracket Kit, 8/12 Port	FC001475	



AFL TRIDENT® Hardened Drop Cables

AFL TRIDENT factory-terminated drop cables are the final piece of the AFL TITAN RTD® FTTx System. The quarter-turn latching and sealing mechanism of the AFL TRIDENT connector provides quick and easy “plug and play” connections to AFL TITAN RTD multiport terminals, enabling lighting fast service subscriber connections with outstanding long term reliability. The connector/adapter interface is keyed to ensure proper alignment of the 2.5 mm APC ferrule. Once the connector is keyed and inserted, locking and sealing is provided with a “BNC-like” quarter-turn of the connector coupling. Drops are available with one or both ends terminated (either both ends AFL TRIDENT or hybrid—one end AFL TRIDENT and one end standard SC). Drop cables are available in one, two, or four fibers (flat drop only).



Features

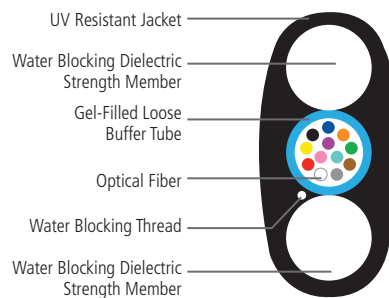
- AFL TRIDENT Hardened Connector ports for speedy customer connections
- Factory terminated on:
 - 250 µm outdoor or 900 µm indoor/outdoor flat drop cable
 - 250 µm armored drop
 - 900 µm pushable/air-jettable MicroDrop
- Flat drop is aerial self-support capable

Qualifications

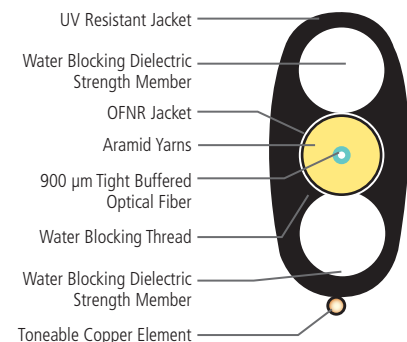
GOVERNING BODY	STANDARD CODE
Telcordia	GR-3120

Cable Components

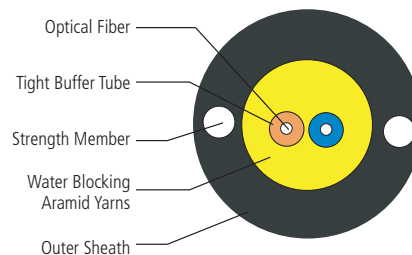
Dielectric OSP



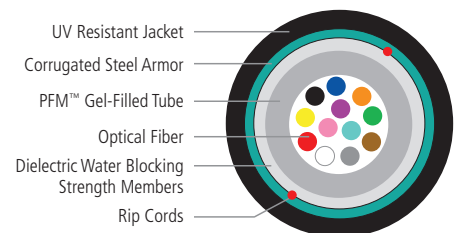
Toneable Indoor/Outdoor



MicroDrop



Armored Drop



AFL TRIDENT® Hardened Drop Cables

Cable Specifications (Flat Drop Cable Only)

Max Span Length at 1% Sag	
NESC Light	550 ft (168 m)
NESC Medium	275 ft (84 m)
NESC Heavy	150 ft (46 m)

AFL TRIDENT Hardened Connector Specifications

PARAMETER	VALUE
Insertion Loss, Maximum	0.50 dB
Insertion Loss, Typical	0.15 dB
Reflection	≤ -65 dB
Operating Temperature	-40°C to +75°C
Retention Force	25 lbs (111 N)
Dust Cap Pulling Eye Tension	100 lbs (444 N)*

*One fiber only. Two or four fiber drops should not be pulled by the dust cap pulling eye.

Ordering Information

TASC	XXX	TD	001	Q	0100	F
Outside End Connector	Inside End Connector	Cable Type	Fiber Count	Fiber Type	Cable Length	UOM
XXX = No connector TASC = Trident ASC = Angle SC	XXX = No connector TASC = Trident ASC = Angle SC	DD = Dielectric Flat Drop TD = Toneable Flat Drop KTD = Toneable Indoor/Outdoor Flat Drop KDD = Dielectric Indoor/Outdoor Flat Drop AN = Armored Drop PD = Pushable MicroDrop	001 002 004	Q = Single-mode ITU-T G.652.D Z = Single-mode ITU-T G.657.A2 BIF (for I/O flat drop)	*4 digits Example: 0100F for 100 feet	F = Feet M = Meter



Bluetooth®

90S+

Fujikura 90S+ Fusion Splicer

The Fujikura 90S+ core alignment fusion splicer solves common problems seen in the field—from splicing poor quality legacy fiber to automated equipment maintenance and upkeep. The Fujikura 90S+ can be use in multiple field splicing applications including bend-insensitive fibers in drop cables, long-haul terrestrial and submarine LEAF® fibers, loose buffer fiber, splice-on connectors, and the list goes on. The speed and accuracy of the 90S+ make it suitable for certain production and specialty environments where high output, tight packaging, and low loss requirements are required.

Regardless of your scenario, the Fujikura 90S+ is designed to keep you in the field with an extended battery life of 300 splice and heat cycles. With its multiple automated and easy-to-use features, the 90S+ alleviates the need for traditional operation tasks such as frequent arc calibrations, cleaver blade rotations, cleaver usage tracking, and manual splicing operations. A redesigned work tray, cooling tray, and optional cable clamp make the 90S+ kit more versatile than its predecessors in adapting to varying work conditions and environments.

When splicing loose buffer fiber, additional sheath clamps are not needed. The standard universal sheath clamp now handles both loose and tight buffer fibers. The new Active Fusion Control (AFC) technology improves splice losses for fibers that possess a poor cleave angle. Combined with Active Blade Management between the splicer and cleaver, the Fujikura 90S+ contains a robust set of splicing features that will reduce the likelihood of poor splice installations or repairs.



In Work Tray



Wind Protector Open

Features

- Cleaver tracking and upkeep with wireless communication
- Improved real-time arc control for fibers with poor cleave angles
- Automated wind protector, sheath clamps and splice operation
- Loose and tight buffer with same sheath clamp
- Lithium-ion battery with 300 splices/shrinks per charge
- PC software and 90S+ manual downloaded from splicer
- Multi-function transit case with integrated workstation

Applications

- Distribution fiber repair
- Long-haul network installation
- Field termination with splice-on connectors
- Access network installation
- Fanout kits, pigtailed and splice cassettes
- OSP cable installation and repair
- Optical modules – splitters, couplers, MUXs, EDFAs and attenuators

STOCK ITEM

Fujikura 90S+ Fusion Splicer

Ordering Information

DESCRIPTION	AFL NO.
90S+ Fusion Splicer (machine only) Includes: ADC-20 AC Adapter, ACC-14 AC Cord, BTR-15 Battery, ELCT2-16B Spare Electrodes (pair), Sheath Clamps, SP-03 Fiber Holder Set Plates, USB-01 Cable, Alcohol Dispenser, Screwdriver, Splicer Carrying Strap, Quick Reference Guide, TS-03 Tripod Screw, Work Tray J-Plate, SS03 single fiber stripper, CC39 Transit Case with Carrying Strap and Two Year Warranty	S017519
90S+ Fusion Splicer Kit (with cleaver) Includes: CT50 Cleaver, ADC-20 AC Adapter, ACC-14 AC Cord, BTR-15 Battery, ELCT2-16B Spare Electrodes (pair), Sheath Clamps, SP-03 Fiber Holder Set Plates, USB-01 Cable, Alcohol Dispenser, Screwdriver, Splicer Carrying Strap, Quick Reference Guide, TS-03 Tripod Screw, Work Tray J-Plate, SS03 single fiber stripper, CC39 Transit Case with Carrying Strap and Two Year Warranty	S017521
90S+ Fusion Splicer without Bluetooth (machine only) Includes: ADC-20 AC Adapter, BTR-15 Battery, ACC-14 AC Cord, ELCT2-16B Spare Electrodes (pair), Sheath Clamps, SP-03 Fiber Holder Set Plates, USB-01 Cable, Alcohol Dispenser, Screwdriver, Splicer Carrying Strap, Quick Reference Guide, TS-03 Tripod Screw, Work Tray J-Plate, SS03 Single Fiber Stripper, CC39 Transit Case with Carrying Strap and Two Year Warranty	S017520
One Year Extended Warranty	S012996
Two Year Extended Warranty	S013000

Recommended Products for the 90S+

DESCRIPTION	AFL NO.
Cleavers	
CT08 Cleaver	S017004
CT50 Cleaver	S017030
Fiber Holders (pair)	
FH-70-250 (250 μm coated fiber)	S017111
FH-70-900 (900 μm jacketed fiber)	S017113
FH-70-160 (160 μm coated fiber)	S017095
FH-70-200 (200 μm coated fiber)	S017711
FH-60-LT900 (Loose buffer 900 μm fiber)	S015181
FUSEConnect® Accessories	
FH-FC-20 (900 μm within 2.0 mm sheathing) (each)	S014696
FH-FC-30 (900 μm within 3.0 mm sheathing) (pair)	S014695
FH-FC-900 (900 μm cable) (each)	S014697
CLAMP-FC-2000 (pair)	S014705
CLAMP-FC-3000 (single holder)	S014704
Power Supply Options and Equipment	
ADC-20 AC Adapter	S017513
ACC-14 AC Power Cord	S014536
BTR-15 Battery	S017512
DCC-20 Power Cord (connects AC Adapter to cigarette lighter socket)	S017527
DCC-21 Power Cord (connects AC Adapter to power source via alligator clips)	S017528

DESCRIPTION	AFL NO.
Miscellaneous	
SS03 Single fiber stripper (3 hole)	S017098
SS01 Single fiber stripper (1 hole)	S017099
ELCT2-16B Electrodes	S017103
SP-03 Fiber Holder Set Plates	S017518
S90 Universal Sheath Clamps	S017696
Portable Tripod Workstation (see product profile for more detail)	S014773
ASW-02 Splicing Workstation (see product profile for more detail)	S010532
WT-09R Work Tray Right	S017515
WT-09L Work Tray Left	S017516
JP-09 Work Tray J-Plate	S017517
JP-10 J-Plate (Cooling tray attaches to splicer)	S017522
JP-10-FC J-Plate with Fiber Clamps	S017523
TS-03 Tripod Screw (90 Series)	S017524
ST-02 Fusion Splicer Strap	S017525
CLAMP-DC-12 (Drop cable clamp for work tray)	S017550
USB-01 Cable	S014777
CC39 Transit Case	S017514
Splicer V-Groove Cleaning Kit	S014397



Fiber Holders

- Wide range of sizes for various applications
- Loose & Tight Buffer options available



Portal Tripod Work Station

- Sturdy work tray supports the splicer, cleaver and accessories
- Tripod supports a load capacity of up to eleven pounds



V-Groove Cleaning Kit

- Removes environmental contamination from the v-groove of the splicer
- Maintains performance and ensures fiber alignment

Fujikura 90S+ Fusion Splicer

Specifications

PARAMETER		VALUE
Fiber Alignment Method		Active core alignment
Fiber Count Can Be Spliced		Single fiber
Applicable Fiber	Fiber Type	Single-mode optical fiber Multimode optical fiber
	Cladding Diameter	80 to 150 μm
Applicable Coating	Sheath Clamp	Coating dia.: Max. 3,000 μm Cleave length: 5 to 16 mm
	Splice Loss	ITU-T G.652: Avg. 0.02 dB ITU-T G.651: Avg. 0.01 dB ITU-T G.653: Avg. 0.04 dB ITU-T G.654: Avg. 0.04 dB ITU-T G.655: Avg. 0.04 dB ITU-T G.657: Avg. 0.02 dB
Fiber Splice Performance	Splice Time	SM FAST mode: Avg. 8 to 10 sec. SMAUTO mode: Avg. 11 to 13 sec. AUTO mode: Avg. 14 to 16 sec.
	Sleeve Type	Heat-shrinkable sleeve
Applicable Protection Sleeve	Sleeve Length	Max. 66 mm
	Sleeve Dia.	Max. 6.0 mm before shrinking
Sleeve Heat Performance	Heat Time	60 mm slim mode: Avg. 9 to 10 sec. 60 mm mode: Avg. 13 to 15 sec.
Fiber Tensile Test Force		Approx. 2.0 N
Electrode Life		Approx. 5,000 splices
Physical Description	Dimensions W	Approx. 170 mm without projection
	Dimensions D	Approx. 173 mm without projection
	Dimensions H	Approx. 150 mm without projection
	Weight	Approx. 2.8 kg including battery
Environmental Condition	Temperature	Operate: -10 to 50°C Storage: -40 to 80°C
	Humidity	Operate: 0 to 95% RH non-condensing Storage: 0 to 95% RH non-condensing
	Altitude	Max. 5,000 m
AC Adaptor	Input	AC100 to 240 V, 50/60 Hz, Max. 1.5 A
Battery Pack	Type	Rechargeable Lithium Ion
	Output	Approx. DC14.4V / 6,380 mAh
	Capacity	Approx. 300 splice and heat cycles
	Temperature	Recharge: 0 to 30°C Storage: -20 to 30°C
	Battery Life	Approx. 500 recharge cycles
Display	Recharge Time	Approx. 5-8 hours from empty
	LCD Monitor	TFT 5 inches with touch screen
Illumination	Magnification	200 to 320x
	V-Grooves	LED lamp
Interface	PC	USB2.0 Mini B type
	External Led Lamp	USB2.0 A type, Approx. DC5V, 500 mA
	Ribbon Stripper	Mini DIN 6 pin, DC12V, Max. 1A
	Wireless	Bluetooth 4.1 LE
Data Storage	Splice Mode	100 splice modes
	Heat Mode	30 heat modes
	Splice Result	20,000 splices
	Splice Image	100 images
Screw Hole For Tripod		1/4-20 UNC
Other Features	Automatic Functions	Splice mode select by fiber type analysis
		Discharge power calibration
		Wind protector: open/close
		Sheath clamp: open
		Heater lid: open/close
Reference Guide	Sheath Clamp	Heater clamp: open/close
		Video and PDF file stored in splicer
		Easy sleeve positioning clamp
Electrode		Replaceable without tool



Bluetooth®

Fujikura 41S+ Fusion Splicer

The Fujikura 41S+ is a fully ruggedized, two camera, active cladding alignment fusion splicer. Enabled by Warm Splice Imaging (WSI), the 41S+ can determine the alignment of the fiber cores by observing the splice during the heating process. This delivers splice loss estimates with a greater level of accuracy than those based on cladding only alignment. Active Blade Management (ABM) via Bluetooth® connection with the CT50 Fiber Cleaver tracks usage and enables automated blade rotation as needed, mitigating fiber reurns. The new Active Fusion Control (AFC) technology further reduces reurns by improving splice losses for fibers with poor cleave angles. With the combination of ABM and AFC, the Fujikura 41S+ contains a robust set of splicing features that will reduce the likelihood of poor splice installations or repairs.

A 6-second splice time and 25-second shrink time offers unmatched speed and productivity, while an easy-to-use touchscreen monitor provides simple and intuitive menu navigation. Interchangeable sheath clamps or fiber holders provide versatility for user preference, and compatibility with splice-on connectors. The extended-life battery is rated for up to 200 splice and heat cycles. Long-life electrodes provide 5,000 splices and help minimize downtime for replacement and stabilization. The large 5" monitor provides a crystal-clear image, even in the brightest sunlight. Software updates are accomplished via the internet allowing users to quickly update their software as new splice programs become available.

Backed by the best service team in the industry, the Fujikura 41S+ is the ideal splicer to use when portability, ruggedness, and reliability are needed for splicing applications.



Workstation in Transit Case



Workstation on Transit Case

Features

- Warm Splice Imaging (WSI) loss estimation technology
- Improved real-time arc control for fibers with poor cleave angles
- Bluetooth enabled cleaver management
- Two camera, active cladding alignment
- 5" touchscreen monitor
- Interchangeable sheath clamps and fiber holders
- Fully ruggedized for shock, moisture and dust resistance
- Extended-life electrodes, 5,000 splices, exchangeable without tools

Ordering Information

DESCRIPTION	AFL NO.
Fujikura 41S+ Fusion Splicer Includes: Fujikura 41S+ Fusion Splicer, S31A Sheath clamps (installed), FH-70-250 Fiber Holders (pair), FH-70-900 Fiber Holders (pair), SP-01 Set Plates, ADC-19A AC Adapter, BTR-11A Battery Pack (installed), ACC-09 Power Cord, ELCT2-16B Spare Electrodes (pair), Screwdriver, Operation Manual on CD, Quick Reference Guide, SS-03 Single Fiber Stripper and CC-36 Transit Case	S017090
Fujikura 41S+ Fusion Splicer Kit with CT50 Cleaver Includes: Fujikura 41S+ Fusion Splicer, CT50 Cleaver, S31A Sheath clamps (installed), FH-70-250 Fiber Holders (pair), FH-70-900 Fiber Holders (pair), SP-01 Set Plates, ADC-19A AC Adapter, BTR-11A Battery Pack (installed), ACC-09 Power Cord, ELCT2-16B Spare Electrodes (pair), Screwdriver, Operation Manual on CD, Quick Reference Guide, SS-03 Single Fiber Stripper and CC-36 Transit Case	S017091
One Year Extended Warranty	S012996
Two Year Extended Warranty	S013000

Fujikura 41S+ Fusion Splicer

Recommended Accessories

DESCRIPTION	AFL NO.
Cleavers	
CT50 Cleaver	S017030
CT08 Cleaver	S017004
Fiber Holders	
FH-70-250 Fiber Holder (pair)	S017111
FH-70-900 Fiber Holder (pair)	S017113
FH-60-LT900 Fiber Holder (pair)	S015181
Batteries	
BTR-11A Battery Pack	S017354
FUSEConnect® Accessories	
FH-FC-20 (900 µm within 2.0 mm sheathing) (each)	S014696
FH-FC-30 (900 µm within 3.0 mm sheathing) (pair)	S014695
FH-FC-900 (900 µm cable) (each)	S014697
CLAMP-FC-2000 (pair)	S014705
CLAMP-FC-3000 (single holder)	S014704

DESCRIPTION	AFL NO.
Miscellaneous	
CLAMP-S31A Sheath Clamps	S017100
CLAMP-S31B Sheath Clamps for loose buffer 900 µm	S017101
SP-01 Set Plate (pair)	S017106
ELCT2-16B Electrodes	S017103
ADC-19A AC Adapter	S017104
ACC-09 Power Cord	S014390
CC-36 Transit Case	S017105
USB Cable	S014777
Splicer V-Groove Cleaning Kit	S014397
SS03 Single Fiber Stripper (3 hole)	S017098
SS01 Single Fiber Stripper (1 hole)	S017099

Fujikura 41S+ Fusion Splicer

Specifications

PARAMETER		VALUE
Fiber alignment method		Active cladding alignment
Fiber count can be spliced		Single fiber
Applicable optical fiber	Fiber type	Single mode optical fiber Multi mode optical fiber
	Cladding dia.	Approx. 125 μm
Applicable coating	Sheath clamp	Coating dia. : Max. 3000 μm Cleave length : 5 to 16 mm
	Splice loss	ITU-T G.652 : Avg. 0.03 dB ITU-T G.651 : Avg. 0.01 dB ITU-T G.653 : Avg. 0.05 dB ITU-T G.655 : Avg. 0.05 dB ITU-T G.657 : Avg. 0.03 dB
Fiber splice performance	Splicing time	SM FAST mode : Avg. 6 sec. AUTO mode : Avg. 9 sec.
	Sleeve type	Heat shrinkable sleeve
Applicable protection sleeve	Sleeve length	Max. 66 mm
	Sleeve dia.	Max. 6 mm before shrinking
	Heat time	60 mm mode : Avg. 26sec.
Sleeve heat performance	Heat time	60 mm mode : Avg. 26sec.
Fiber tensile test force		Approx. 2.0 N
Electrode life		Approx. 5,000 splices
Physical description	Dimensions W	Approx. 131 mm without projection
	Dimensions D	Approx. 201 mm without projection
	Dimensions H	Approx. 79 mm without projection
	Weight	Approx. 1.3 kg including battery
Environmental condition	Temperature	Operate : -10 to 50°C Storage : -40 to 80°C
	Humidity	Operate : 0 to 95% non-condensing Storage : 0 to 95% non-condensing
	Altitude	Max. 5,000m
AC adaptor	Input	AC 100 to 240V, 50/60Hz, Max. 1A
	Type	Rechargeable Lithium Ion
	Output	Approx. DC 14.4V, 3360mA
Battery pack	Capacity	Approx. 200 splice and heat cycles
	Temperature	Recharge : 0 to 40°C Storage : -20 to 30°C
	Battery life	Approx. 500 recharge cycles
Display	LCD monitor	TFT 5.0 inches with touch screen
	Magnification	132 to 300x
Illumination	V-grooves	LED lamp
Interface	PC	USB2.0 MINI B type
	Wireless	Bluetooth® 4.1 LE
Data storage	Splice mode	100 splice modes
	Heat mode	30 heat modes
	Splice result	10,000 results
	Fiber image	100 images
Screw hole for tripod		1/4-20UNC
Other features	Automatic functions	Fiber heat calibration
	Sheath clamp	Easy sleeve positioning
	Loss Estimate	Warm splice image estimation
	Electrode	Tool less replaceable electrode



Bluetooth®

90R

Fujikura 90R Fusion Splicer

The Fujikura 90R is the mass fusion splicer workhorse of the splicing world. As data demand continues to rise, the solution to handle the increased traffic is to increase fiber counts. As a result, fiber counts being utilized in enterprise data centers, campus, and metro networks have grown enough to make single fiber splicing too costly and timely. High density cabling made possible by SpiderWeb Ribbon® (SWR®) and others like it are spurring ribbon splicing activity in places that have traditionally used loose fiber. The 90R is the answer to these changes in splicing demand. With automated splice start, tube heater, wind protector, cleave tracking, and blade rotations for up to 2 cleavers at a time, this splicer frees up operator time for other fiber preparation steps. New to the 90R, you can keep your splicer in the field longer with field replaceable V-grooves. When V-grooves can no longer be cleaned after extended use, or are accidentally damaged, you can resume splicing in minutes by installing the spare set included with your 90R kit. Put our 90R to the test by contacting us to see its capabilities first-hand, 1-800-235-3423.



In Work Tray

Features

- Cleave tracking and upkeep with wireless communication
- Automated wind protector, tube heater and splice operation
- User replaceable v-grooves
- 200 μm and 250 μm SWR universal ribbon prep accessories
- Graphical User Interface with 5.0" Touchscreen
- PC software and 90R manual downloaded from splicer
- Multi-function transit case with integrated workstation

Applications

- Data Center cable installation
- High fiber count metro and campus networks
- Long-haul network installs and repair
- Trunk cable repair with Splice-on MPOs
- Ribbon splicing high density cables with 200 μm loose fiber



Wind Protector Open

Fujikura 90R Fusion Splicer


Ordering Information

DESCRIPTION	AFL NO.
90R Fusion Splicer (machine only) Includes: BTR-15 Battery, ADC-20 AC Adapter, ACC-14 AC Cord, ELCT2-16B Spare Electrodes (pair) with spare V-Grooves (VG12-01), FH-70-12 Fiber Holders (pair), USB Cable, Alcohol Dispenser, Splicer Carrying Strap, Quick Reference Guide, TS-03 Tripod Screw, Video Instruction Manual, Work Tray, CC-39 Transit Case with Carrying Strap and Two Year Warranty	S017509
90R Fusion Splicer Kit (with cleaver & thermal stripper) Includes: BTR-15 Battery, CT50 Cleaver, RS03 Stripper, ADC-20 AC Adapter, ACC-14 AC Cord, ELCT2-16B Spare Electrodes (pair) with spare V-Grooves (VG12-01), FH-70-12 Fiber Holders (pair), USB Cable, Alcohol Dispenser, Splicer Carrying Strap, Quick Reference Guide, TS-03 Tripod Screw, Video Instruction Manual, CC-39 Transit Case with Carrying Strap and Two Year Warranty	S017511
90R Fusion Splicer without Bluetooth (machine only) Includes: BTR-15 Battery, ADC-20 AC Adapter, ACC-14 AC Cord, ELCT2-16B Spare Electrodes (pair) with spare V-Grooves (VG12-01), FH-70-12 Fiber Holders (pair), USB Cable, Alcohol Dispenser, Splicer Carrying Strap, Quick Reference Guide, TS-03 Tripod Screw, Video Instruction Manual, CC-39 Transit Case with Carrying Strap and Two Year Warranty	S017540
90R Fusion Splicer Kit without Bluetooth (with cleaver & thermal stripper) Includes: BTR-15 Battery, CT50 Cleaver, RS01 Stripper, ADC-20 AC Adapter, ACC-14 AC Cord, ELCT2-16B Spare Electrodes (pair) with spare V-Grooves (VG12-01), FH-70-12 Fiber Holders (pair), USB Cable, Alcohol Dispenser, Splicer Carrying Strap, Quick Reference Guide, TS-03 Tripod Screw, Video Instruction Manual, CC-39 Transit Case with Carrying Strap and Two Year Warranty	S017510
One Year Extended Warranty	S012996
Two Year Extended Warranty	S013000

Recommended Products for the 90R


DESCRIPTION	AFL NO.
Cleavers and Strippers	
CT50 Cleaver	S017030
RS01 Thermal Stripper	S016815
RS02 Thermal Stripper	S016816
RS03 Thermal Stripper	S016817
Fiber Holders (pair)	
FH-70-2	S017114
FH-70-4	S017115
FH-70-6	S017116
FH-70-8	S017117
FH-70-10	S017118
FH-70-12	S017119
FH-70-12PC (pitch conversion holder for 200 µm loose fibers)	S017464
FH-70-12-200 (200 µm pitch ribbons)	S017681
FH-70-16	S017533
FH-70-250 (250 µm coated single fiber)	S017111
FH-70-900 (900 µm jacketed single fiber)	S017113
FH-60-LT900 (Loose buffer 900 µm fiber)	S015181
FUSEConnect® Accessories	
FH-FC-20 (900 µm within 2.0 mm sheathing) (each)	S014696
FH-FC-30 (900 µm within 3.0 mm sheathing) (pair)	S014695
FH-FC-900 (900 µm cable) (each)	S014697
CLAMP-FC-2000 (pair)	S014705
Batteries and Power Cords	
ADC-20 AC Adapter	S017513
BTR-15 Battery	S017512
DCC-11 splicer to ribbon stripper power cord	S013852
DCC-20 Power Cord	S017527
Connects ADC-20 to cigarette lighter socket	
DCC-21 Power Cord	S017528
Connects ADC-20 to power source via alligator clips	
ACC-14 AC Power Cord	S014536

DESCRIPTION	AFL NO.
Miscellaneous	
SS01 Single fiber stripper (1 hole)	S017099
ELCT2-16B Electrodes	S017103
Portable Tripod Workstation (see product profile for more detail)	S014773
ASW-02 Splicing Workstation (see product profile for more detail)	S010532
WT-09R Work Tray Right	S017515
WT-09L Work Tray Left	S017516
JP-09 Work Tray J-Plate	S017517
JP-10 J-Plate (Cooling tray attaches to splicer)	S017522
JP-10-FC J-Plate with Fiber Clamps	S017523
TS-03 Tripod Screw (90 Series)	S017524
ST-02 Fusion Splicer Strap	S017525
CLAMP-DC-12 (Drop Cable clamp on work tray)	S017550
FST-12 Fiber Separation Tool	S014012
FAT-04 Fiber Arrangement Tool	S010212
RT-02 Fiber Arrangement Tool	S017465
VG12-01 12 fiber V-groove	S017548
VG12-01-200 12 fiber V-groove (200µm pitch ribbons)	S017680
VG04-01 4 fiber V-groove	S017551
VG08-01 Spare 8 fiber V-grooves	S017508
VG16-01 16 fiber V-groove	S017552
FAA-03A Ribbon Forming Adhesive (4 oz. bottle)	S008720
FAA-03A Ribbon Forming Adhesive (0.5 liter bottle)	S008622
CC-39 Transit Case	S017514
Splicer V-Groove Cleaning Kit	S014397



Fiber Arrangement Tool

- Features an easy-to-use fiber arrangement method utilizing linear travel
- Includes a spare paste applicator



V-Groove Cleaning Kit

- Removes environmental contamination from the v-groove of the splicer
- Maintains performance and ensures fiber alignment

Fujikura 90R Fusion Splicer

Specifications

PARAMETER	VALUE	
Fiber Alignment Method	Self cladding alignment with melting surface tension	
Fiber Count Can Be Spliced	Up to 16 fiber ribbon	
Applicable Fiber	Fiber Type	Single mode optical fiber Multi mode optical fiber
	Cladding Dia.	Approx. 125 μm
Applicable Coating	Fiber Holder	Coating shape. : Refer to fiber holder options Cleave length : 10 mm
	Splice Loss	ITU-T G.652 : Avg. 0.05 dB ITU-T G.651 : Avg. 0.02 dB ITU-T G.653 : Avg. 0.08 dB ITU-T G.655 : Avg. 0.08 dB ITU-T G.657 : Avg. 0.05 dB
Fiber Splice Performance	Splice Time	SM FAST mode : Avg. 14 to 15 sec. SM AUTO mode : Avg. 19 to 20 sec.
	Sleeve Type	Heat-shrinkable sleeve
Applicable Protection Sleeve	Sleeve Length	Max. 66 mm
	Sleeve Dia.	Max. 6.0 mm before shrinking
Sleeve Heat Performance	Heat Time	40 mm FP-05 mode : Avg. 38 to 40 sec. 40 mm FP-04T mode : Avg. 17 to 19 sec. Single 60 mm mode: Avg. 13 to 15 sec.
		Fiber Tensile Test Force
Electrode Life	Approx. 1,500 splices	
Physical Description	Dimensions W	Approx.170 mm without projection
	Dimensions D	Approx.173 mm without projection
	Dimensions H	Approx.150 mm without projection
	Weight	Approx. 2.6 kg including battery
Environmental Condition	Temperature	Operate : -10 to 50°C Storage : -40 to 80°C
	Humidity	Operate : 0 to 95% RH non-condensing Storage : 0 to 95% RH non-condensing
	Altitude	Max. 3,700 m
Ac Adaptor	Input	AC100 to 240 V, 50/60 Hz, Max. 1.5 A
Battery Pack	Type	Rechargeable Lithium Ion
	Output	Approx. DC14.4V / 6,380 mAh
	Capacity	Approx. 165 splice and heat cycles
	Temperature	Recharge : 0 to 30°C Storage : -20 to 30°C
	Battery Life	Approx. 500 recharge cycles
	Recharge Time	Approx. 5 – 8 hours from empty
Display	LCD Monitor	TFT 5 inches with touch screen
	Magnification	Approx. 20X : 12 Ribbon to 60X : Single
Illumination	V-Grooves	LED lamp
Interface	PC	USB2.0 Mini B type
	External Led Lamp	USB2.0 A type, Approx. DC5V, 500 mA
	Ribbon Stripper	Mini DIN 6 pin, DC12V, Max. 1A
	Wireless	Bluetooth 4.1 LE
Data Storage	Splice Mode	100 splice modes
	Heat Mode	30 heat modes
	Splice Result	10,000 splices
	Splice Image	100 images
Screw Hole For Tripod		1/4-20 UNC
Other Features	Automatic Functions	Splice mode select by fiber type analysis
		Discharge power calibration
		Wind protector : open/close
		Sheath clamp : open
	Heater lid : open/close	
Heater clamp : open/close		
Reference Guide	Video and PDF file stored in splicer	
Electrode	Replaceable without tool	



12R (with Cleaver for scale)



Workstation in Transit Case



Workstation on Transit Case



Fujikura 12R Kit

Fujikura 12R Fusion Splicer

The Fujikura 12R is the world's smallest, lightest and most portable fusion splicer available today. Despite its incredibly small size, this ruggedized, full-featured unit offers unmatched versatility for splicing in the most challenging environments. The innovative transit case and work tray provide multiple options for the best utilization of available work space while the long life battery provides power for up to 100 splice cycles which include application of the splice protection sleeve.

The Fujikura 12R incorporates features typically found only in more expensive models. The large 4.5" monitor provides a crystal clear image, even in the brightest sunlight, for evaluating splice quality. The electrode life has been extended to 1,500 splices, minimizing downtime for replacement and stabilization. Software updates are accomplished via the internet allowing users to quickly update their software as new splice programs become available. The fully ruggedized chassis provides for shock, dust and moisture protection while the two camera observation system provides for accurate fiber alignment and loss estimation calculations. The Fujikura 12R is also fully compatible with the FUSEConnect® line of fusion installable connectors.

Backed by the best service team in the industry, the Fujikura 12R is the ideal splicer to use when portability, ruggedness, versatility and reliability are needed for your splicing application.

Features

- World's smallest splicer at 4.76"W x 6.38"D x 2.24"H
- Fully ruggedized for shock, moisture and dust resistance
- Transit case converts to easy to use workstation
- Dual camera, fixed v-groove alignment technology
- Extended life electrodes
- Long life battery (100 splices/shrinks per charge)

Ordering Information

DESCRIPTION	AFL NO.
Fujikura 12R Fusion Splicer Includes: ADC-19 AC Adapter, BTR-10 Battery Pack (installed), FH-70-4 Fiber Holders (Pair), ACC-09 Power Cord, ELCT2-12 Spare Electrodes (Pair), Operation Manual on CD, Quick Reference Guide, AP-01 Alcohol Container, SD01 Screwdriver and CC-29 Transit Case	S015571
Fujikura 12R Fusion Splicer Kit Includes: CT50 Cleaver, ADC-19 AC Adapter, BTR-10 Battery Pack (installed), FH-70-4 Fiber Holders (Pair) FH-70-250 Fiber Holders (Pair), FH-70-900 Fiber Holders (Pair), ACC-09 Power Cord, RS03 Thermal Stripper, ELCT2-12 Spare Electrodes (Pair), Operation Manual on CD, Quick Reference Guide, AP-01 Alcohol Container, SD01 Screwdriver and CC-29 Transit Case	S015667

Fujikura 12R Fusion Splicer

Recommended Accessories for the 12R

DESCRIPTION	AFL NO.
Cleavers & Strippers	
CT50	S017030
RS03 Thermal Stripper	S016817
Fiber Holders	
FH-70-2	S017114
FH-70-4	S017115
FH-70-250 (250 µm coated single fiber)	S017111
FH-70-900 (900 µm jacketed single fiber)	S017113
FH-60-LT900 (900 µm loose buffer tube)	S015181
FUSEConnect™ Accessories	
FH-FC-20 (900 µm within 2.0 mm sheathing) (each)	S014696
FH-FC-30 (900 µm within 3.0 mm sheathing) (pair)	S014695
FH-FC-900 (900 µm cable) (each)	S014697
CLAMP-FC-2000 (pair)	S014705
CLAMP-FC-3000 (single holder)	S014704

DESCRIPTION	AFL NO.
Batteries	
BTR-10 Battery Pack	S015527
Miscellaneous	
Worktable Set	S015817
TS-01 Tripod Screw	S015895
ELCT2-12 Electrodes	S014028
ADC-19 AC Adapter	S015523
ACC-09 Power Cord	S014390
AP-01 Alcohol Container	S015525
SD-01 Screwdriver	S015526
CC-29 Transit Case	S015524
Splicer V-Groove Cleaning Kit	S014397

Specifications

PARAMETER	VALUE
Model	Fujikura 12R Fusion Splicer
Applicable Fibers	Single-mode (G.652 & G.657), Multimode (G.651), DS (G.653), NZDS (G.655)
Fiber Count	Single to 4-fiber ribbon
Cladding Diameter	125 µm
Coating Diameter	250 µm and 900 µm
Fiber Cleave Length	10 mm
Typical Average Splice Loss	0.05 dB (SM), 0.02 dB (MM), 0.08 dB (DS) and 0.08 dB (NZDS)
Splice Time	Typical 20 sec with SM
Arc Calibration Method	Automatic, real-time by using results of previous splice when in AUTO mode, manual arc calibration function available
Splicing Modes	Total 100 splice modes
Splice Loss Estimate	Based upon dual camera cladding alignment data
Storage of Splice Result	Last 2,000 splices
Fiber Display	4.5 inch TFT color LCD with X or Y view or both X and Y view simultaneously
Magnification	66X magnification in X or Y view; 33X magnification in X and Y view
Viewing Method	2 axis CMOS camera
Operating Condition	0 to 3,660 m above sea level (single fiber), 0 to 95% RH non-dew, -10 to 50°C respectively
Mechanical Proof Test	1.96 to 2.25 N
Tube Heater	30 heating modes
Tube Heater Time	Typical 30 sec with FP-03 (60 mm) and FP-04 sleeves
Protection Sleeve Length	60 mm, 40 mm, micro
Splice/Heat with Battery	Typical 100 cycles with BTR-10
Electrode Life	1,500 splices
Power Supply	Auto select from 100V to 240V with AC adapter, 14.8 V DC with installed battery
Terminals	USB 2.0
Wind Protection	Maximum wind velocity of 15 m/s. (34 mph)
Dimensions	121W x 162D x 57H (mm) / 4.76 W x 6.38 D x 2.24 H (inches)
Weight with Battery	776 g / 1.71 lbs.



Shown in CC-34 Carrying Case



CT08 Fiber Cleaver

The CT08 cleaver is an extremely rugged, durable, and easy to use single fiber cleaver. Ideal for FTTH applications, the CT08 provides unmatched levels of impact resistance and also eliminates the requirement for tools during blade rotation. A thumbwheel on the bottom of the cleaver is utilized for blade rotation, and the blade position indicator has been relocated to enable quick and easy viewing. The top clamp opens to a position past vertical allowing for easy viewing, cleaning, and adjustment of the cleave length. The blade is retracted automatically when opening the top clamp and is activated upon closing, making this a true one-step cleaver. The cleaver blade and fiber clamping mechanism is extremely easy to replace in the field. A manual scrap collector is included.

Features

- Dedicated for single fiber cleaving
- Ruggedized design withstands extreme shock levels
- Tool free blade rotation
- Simple one-step operation
- Blade and clamp/anvil assembly are field serviceable

Specifications

ITEM		VALUE
Applicable Fiber	Fiber type	Single mode optical fiber Multi mode optical fiber
	Fiber count	Single fiber
	Cladding dia.	Approx. 125 μm
Applicable Coating	Fiber plate	AD-50 : Max. 3 mm coating diameter
	Fiber holder	Coating shape. : Refer to splicer fiber holder options
Cleave Length	Fiber plate	AD-50 [CD = coating diameter] CD= 250 μm or less : 5 to 20 mm 250 μm < CD < 1000 μm : 10 to 20 mm 1000 μm < CD < 3 mm : 14 to 20 mm
	Fiber holder	Approx. 10mm
Cleave Angle	Single fiber	Avg. 0.3 to 0.9 degrees
Blade Life		Approx. 48,000 fiber cleaves
Physical description	Dimensions W	Approx. 120 mm when closing the lever
	Dimensions D	Approx. 95 mm when closing the lever
	Dimensions H	Approx. 58 mm when closing the lever
	Weight	Approx. 185 g
Environmental condition	Temperature	Operate : -10 to 50°C Storage : -40 to 80°C
	Humidity	Operate : 0 to 95% non-condensing Storage : 0 to 95% non-condensing
Screw hole for tripod		1/4-20UNC
Other features	Blade rotation	Manual rotation dial
	Replaceable parts	Blade Clamp arm

CT08 Fiber Cleaver

Ordering Information

DESCRIPTION	APPLICATION	FIBER HANDLING SYSTEM	CLEAVE LENGTH	AFL NO.
CT08 Includes: AD-50 Adapter Plate, CC-34 Carrying Case, Hex Wrench, Scrap Collector and Instruction Manual	Single Fibers: 160 to 900 µm coating, 125 µm cladding	Purchased separately FH-70-250 FH-70-900	See Specifications Table on previous page	S017004

Accessories

DESCRIPTION	AFL NO.
AD-50 Single Fiber Adapter Plate	S017010
AD-10-M24 Fiber Plate	S017335
SPA-CT08-10 Spacer	S017011
CC-34 Transit Case	S017012
CB-07 Replacement Blade for CT08 Cleaver	S017013
ARM-CT08-01 Replacement Arm Set	S017014
SC-CT08-01 Side Cover	S017015
BRW-CT08-01 Blade Rotary Wheel	S017110
FDB-04 Fiber Dust Box	S017120



Bluetooth



Shown in CC-37 Carrying Case

Features

- Motorized blade rotation
- Bluetooth communication
- Shock resistant
- Simple one-step operation
- 60,000 cleave blade life
- Field serviceable



CT50 Fiber Cleaver

The CT50 features automated blade rotation, unprecedented durability, and simplistic maintenance unseen with any other cleaver. Paired with a Bluetooth enabled Fujikura splicer, cleaver blade positions can be automatically advanced when needed based on cleave count or cleave quality. If automated rotation is not desired, the blade position can be advanced at the touch of a button, no tools required. The easy to read blade position indicator clearly displays the selected position. The Bluetooth® feature, along with simplified mechanical operation, increases overall productivity and reliability. The fiber clamp opens beyond 90 degrees and readies the blade for cleaving in the same motion. This allows easy viewing of the distance scale used to gauge cleave length. The 16-position blade yields 60,000 single-fiber cleaves, or 5,000 12-fiber ribbon cleaves. The built-in scrap collector conveniently stores fiber shards until they can be safely discarded.

The CT50 is an industry first cleaver ruggedized to withstand severe shock, including drops up to 30 inches. If needed, the CT50 is field serviceable with all precision components easily replaced in the field.

Specifications

ITEM		VALUE
Applicable Fiber	Fiber type	Single-mode optical fiber
	Fiber count	Multimode optical fiber
	Cladding dia.	Single up to 16 fibers
Applicable Coating	Fiber plate	Approx. 125 μm
	Fiber holder	AD-10-M24 : Max. 900 μm coating diameter AD-50 : Max. 3mm coating diameter
Cleave Length	Fiber plate	Coating shape. : Refer to splicer fiber holder options
	Fiber holder	AD-10-M24 : 5 to 20 mm for CD ≤ 250 μm AD-50 [CD = coating diameter] CD= 250μm or less : 5 to 20 mm 250 μm < CD < 1000μm : 10 to 20 mm 1000 μm < CD < 3 mm : 14 to 20 mm
Cleave Angle	Single fiber	Approx. 10 mm
	Fiber ribbon	Avg. 0.3 to 0.9 degrees
Blade Life		Avg. 0.3 to 1.2 degrees
Physical description	Dimensions W	Approx. 60,000 fiber cleaves
	Dimensions D	Approx. 120 mm when closing the lever
	Dimensions H	Approx. 95 mm when closing the lever
	Weight	Approx. 58 mm when closing the lever
Environmental condition	Temperature	Approx. 305 g including battery and AD-10-M24
	Humidity	Operate : -10 to 50°C Storage : -40 to 80°C
Battery		Operate : 0 to 95% non-condensing Storage : 0 to 95% non-condensing
Wireless interface		2 pieces of LR03/AAA dry battery
Screw hole for tripod		Bluetooth 4.1 LE
Other features	Blade rotation	1/4-20UNC
	Replaceable parts	Motorized rotation
		Manual rotation dial
		Blade
		Clamp arm

Continued >

CT50 Fiber Cleaver

Ordering Information

DESCRIPTION	APPLICATION	FIBER HANDLING SYSTEM	CLEAVE LENGTH	AFL NO.
CT50	Single or Ribbon Fiber	AD-10-M24 adapter plate for single fibers or fiber holders for ribbons	See Specifications table on previous page	S017030

Accessories

DESCRIPTION	AFL NO.
CB-08 Replacement Blade	S017076
FDB-05 Scrap Collector Box	S017121
AD-50 Adapter Plate	S017010
AD-10-M24 Fiber Plate	S017335
ARM-CT50-01 Replacement Arm Set	S017122
BRW-CT08-01 Blade Rotary Wheel	S017110
SC-CT50-01 Side Cover	S017108
CC-37 Transit Case	S017077
SPA-CT-08-10 Spacer	S017011
FDB-05 Fiber Dust Box	S017121

Splice+ is a smartphone application that works in cooperation with Fujikura's splicers, cleavers and ribbon fiber strippers which have Bluetooth capability.

Get the **Splice+** app at the Apple App store or at Google Play.





Thermal Strippers

The RS01, RS02, RS03 and RS03-80 Thermal Strippers provide superior stripping performance for both single and multi-fiber stripping. The fast heating time of 3 seconds speeds productivity. The ergonomic design, combined with the low level of force needed for stripping, makes the RS series comfortable and easy to use for high fiber count applications. The strippers are also capable of stripping 200 µm coated fibers and ribbons. An audible beep and illuminated LED signal indicate that the proper heating temperature has been reached. A temperature selection switch permits easy field optimization for different fibers or operating conditions. These strippers accept all Fujikura field and factory style fiber holders.

Bluetooth® capabilities on the RS02 and RS03 models provide a convenient way to program the stripper for user preferences via an Android or iOS smartphone app. The RS03 model includes a powerful Lithium-Ion battery that delivers enough power for 600 stripping cycles. The RS03-80 is offered for stripping 80 µm cladding fiber applications.

For those situations and locations where Bluetooth-enabled devices are not permitted, the RS01 model is available with all of the features of the RS02 model but without the Bluetooth technology.

Features

- 3 Second heating time with beep and LED notification
- Low pulling force needed for stripping
- Stripping capability for 200 µm coated fibers and ribbons
- Ergonomic design
- Bluetooth capable for wireless connection with smartphones (RS02, RS03 and RS03-80)
- High capacity battery provides approximately 600 stripping cycles (RS03 and RS03-80)

Ordering Information

DESCRIPTION	AFL NO.
Strippers	
RS01 Thermal Stripper Includes: RS01 Thermal Stripper, DCC-11 and Instruction manual	S016815
RS02 Thermal Stripper Includes: RS02 Thermal Stripper, DCC-11, HEX-01 Hex Wrench, BRS-02 Brush and Instruction manual	S016816
RS03 Thermal Stripper Includes: RS03 Thermal Stripper, BTR-12 Battery Pack, ADC-09A AC Adapter for RS Series Thermal Strippers, ACC-02 AC Power Cord (for ADC-09A), HEX-01 Hex Wrench, BRS-02 Brush and Instruction manual	S016817
RS03-80 Thermal Stripper Includes: RS03-80 Thermal Stripper, BTR-12 Battery Pack, ADC-09A AC Adapter for RS Series Thermal Strippers, ACC-02 AC Power Cord (for ADC-09A), HEX-01 Hex Wrench, BRS-02 Brush and Instruction manual	S016842
POWER SUPPLY	
ADC-09A AC Adapter (RS01/RS02/RS03)	S016820
ACC-09 Power cord	S014390
BTR-12 Battery (RS03)	S016832
Miscellaneous	
SPA-RS02-08 SPACER	S016818

Thermal Strippers

Specifications

MODEL	RS01	RS02	RS03	RS03-80
Applicable optical fiber	Glass optical fibers, capillary			
Fiber count	1 to 16			Single
Cladding diameter	125 µm			80 µm
Coating diameter		200 to 400 µm		150 to 250 µm
Stripping length	Up to 35 mm			
Typical heating time	3 sec. 5 sec. at Eco mode			
Heating temperature	85° - 140°C			
Fiber holder	All FH-40, FH-50, FH-60, FH-70, and FH-100 series fiber holders (except FH-50-250 and FH-50-900)			
Wireless connectivity	N/A	Bluetooth®4.1 LE*1 OS:Android 5.0 or above , iOS 8.0 or above (iPhone6 or above)		
Dimensions	155.5 (W) × 48.7 (D) × 32.5 (H) mm		155.5 (W) × 48.7 (D) × 36.8 (H) mm	
Weight	185 g		265 g (with Battery)	
Power supply	AC Adaptor Input: 100 to 240V, 50/60 Hz, Max – 0.58 A Output: Approx. DC 12 V, Max 2A DC External Supply: DC10 to 17V, Max – 1A		AC Adaptor Input: 100 to 240V, 50/60 Hz, Max – 0.58 A Output: Approx. DC 12 V, Max 2 A DC External Supply: DC10 to 17 V, Max – 1 A BTR-12 Battery: DC7.2 V, 1840 mAh (Rechargeable Lithium Ion)	
Battery capacity	N/A		Approx. 600 strips with Eco mode	
Recharge Time			Approx. 2 hr from empty	
Battery Life			Approx. 500 recharge cycles	
Operating conditions	Temperature: -10 to 50°C, Humidity: 0 to 95% RH (Non-condensing)			
Storage conditions	Temperature: -20 to 60°C, Humidity: 0 to 95% RH (Non-condensing)			

Splice Protection Sleeves

AFL offers a wide selection of fiber protection sleeves to meet any application. The FP series is the industry standard for durable and lasting protection of single fiber splices in field installations, while the FP-04(T) and FP-05 provide the same durable protection for 8 and 12 fiber ribbon respectively.

The FPS01 and FPS04 series are specially designed for optical components, where small packaging is a priority. These micro sleeves provide the known reliability of Fujikura sleeves in the smallest possible lengths. This easy and cost effective method is a great alternative to recoating. The FPS01 and FPS04 series offer a wide range of options to accommodate various coating sizes, and are manufactured in a variety of lengths. This gives great flexibility in designing optical modules.

Standard Sleeves: Dimensions & Applicable Fiber

SLEEVES FOR SINGLE FIBERS 250 MICRONS TO 900 MICRONS

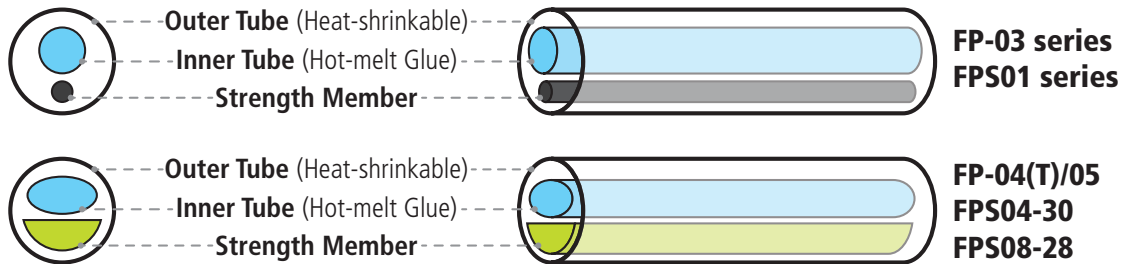
DESCRIPTION	SLEEVE LENGTH	FIBER CLEAVE LENGTH	SLEEVE DIAMETER AFTER SHRINK	PACKAGING	AFL NO.
FP-60	60 mm	16 mm	3.1 mm (max.)	1000 Box/100 Pack	S015915
FP-40	40 mm	10 mm	3.1 mm (max.)	1000 Box/100 Pack	S015916

SLEEVES FOR UP TO 250 MICRON COATED RIBBON

DESCRIPTION	FIBER COUNT	SLEEVE LENGTH	FIBER CLEAVE LENGTH	SLEEVE DIAMETER AFTER SHRINK	PACKAGING	AFL NO.
FP-04(T)	Up to 8 fibers	40 mm	10 mm	4.0 mm (max.)	250 Box/25 Pack	S002105
FP-05	Up to 12 fibers	40 mm	10 mm	4.5 X 4.0 mm (max.)	250 Box/5 Pack	S003027
FP-05-28	Up to 12 fibers	28 mm	10 mm	4.5 mm (max.)	250 Box/25 Pack	S014720
FPS04-30	Up to 4 fibers	30 mm	10 mm	2.4 mm (max.)	1,000 Box/25 Pack	S010848
FPS08-28	Up to 8 fibers	28 mm	10 mm </td <td>3.3 X 2.7 mm (max.)</td> <td>500 Box/25 Pack</td> <td>S013560</td>	3.3 X 2.7 mm (max.)	500 Box/25 Pack	S013560
FPS24-40	Up to 24 fibers	40 mm	10 mm	8.0 X 4.0 mm (max.)	200 Box/5 Pack	S013004

Specifications

PARAMETER	DESCRIPTION	VALUE
Outer tube	FP-60/40/03 series	Polyolefin based on Polyethylene
	FPS-04(T) / FP-05	Ethylene-Vinyl Acetate
Inner Tube	ALL	Ethylene-Vinyl Acetate
Strength member	FP-60/40/03 series	Stainless steel
	FP-04(T) / FP-05	Heat-resistant glass
Operation condition (after shrink)		-10 to 50°C, 0 to 95% RH (Non dew)
Storage condition (before shrink)		-40 to 60°C, Non dew



Splice Protection Sleeves

Micro Sleeves: Dimensions & Applicable Fiber

FPS01-400 SERIES FOR SINGLE FIBERS UP TO 400 MICRON FIBER

DESCRIPTION	SLEEVE LENGTH	FIBER CLEAVE LENGTH	SLEEVE DIAMETER AFTER SHRINK	PACKAGING	AFL NO.
FPS01-400-12	12 mm	4 mm	1.5 mm	50 Pack	S014088
FPS01-400-15	15 mm	5 mm	1.5 mm	50 Pack	S012668
FPS01-400-20	20 mm	8 mm	1.5 mm	50 Pack	S012672
FPS01-400-25	25 mm	10 mm	1.5 mm	50 Pack	S012676
FPS01-400-34	34 mm	15 mm	1.5 mm	50 Pack	S012680
FPS01-400-40	40 mm	16 mm	1.5 mm	1,250 Box	S011914

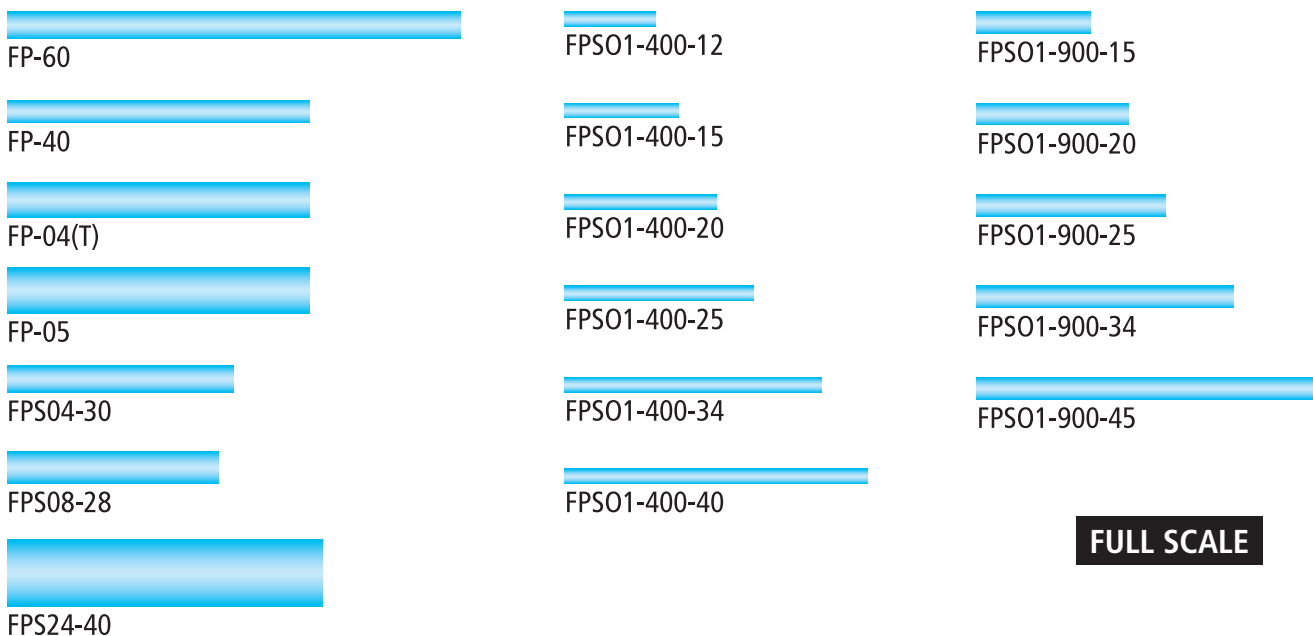
FPS01-900 SERIES FOR SINGLE FIBERS UP TO 900 MICRON FIBER

DESCRIPTION	SLEEVE LENGTH	FIBER CLEAVE LENGTH	SLEEVE DIAMETER AFTER SHRINK	PACKAGING	AFL NO.
FPS01-900-15	15 mm	4 mm	2.3 mm	50 Pack	S012684
FPS01-900-20	20 mm	6 mm	2.3 mm	50 Pack	S012688
FPS01-900-25	25 mm	6 mm	2.3 mm	50 Pack	S011954
FPS01-900-34	34 mm	13 mm	2.3 mm	50 Pack	S012692
FPS01-900-45	45 mm	16 mm	2.3 mm	50 Pack	S012696

Specifications

PARAMETER	DESCRIPTION	VALUE
Outer tube	FPS01 series / FPS04-30 / FPS08-28 / FPS24-40	Polyolefin based on Polyethylene
Inner Tube	ALL	Ethylene-Vinyl Acetate
Strength member	FPS01 series	Stainless steel
	FPS04-30 / FPS08-28 / FPS24-40	Heat-resistant glass
Operation condition (after shrink)		-10 to 50°C, 0 to 95% RH (Non dew)
Storage condition (before shrink)		-40 to 60°C, Non dew

Type Variations





RT-02



RT-02 with FH-70-12PC

RT-02 Ribbonizing Tool

The RT-02 is the latest ribbonizing tool from Fujikura, and the first universal ribbonizing tool on the market suitable for forming a temporary ribbon from loose 200 μm or 250 μm fibers. This is also the first tool that features a glue-less process for ribbonizing and splicing 12 fiber ribbons. This saves time and money by eliminating operating inefficiencies such as cure time and contamination of splicing equipment. Simply choose the applicable fiber holder in conjunction with the RT-02 to ribbonize 200 μm or 250 μm fibers. With this tool, you can now realize the benefits of mass fusion splicing when installing the latest generation of loose fiber micro cables.

Features

- No glue required
- 200 μm and 250 μm compatible
- Loading with color code sequence not required
- Fibers load directly into fiber holder
- Left and right fiber holder color codes printed on tool

Applications

- Ribbonizing 200 μm and 250 μm loose fibers
- 200 μm and 250 μm MPO termination
- Mass fusion splicing loose fiber cables

Ordering Information

DESCRIPTION	AFL NO.
RT-02 (tool only)	S017465
FH-70-12PC (pair of pitch conversion holders for 200 μm loose fibers)	S017464
FH-70-12 (pair – standard 12F ribbon holders)	S017119



FST-12 Fiber Separation Tool

The FST-12 Fiber Separation Tool is used to quickly, accurately and reliably split ribbons into sub-groups or individual fibers. The ergonomic FST-12 design enables safe and reliable, one-handed operation for use in diverse fiber deployment environments, such as aerial and remote-site applications.

Features and Benefits

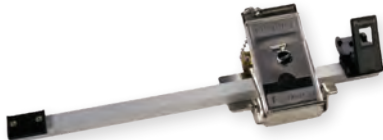
- Enables separation of groups of fibers or single fibers and is not limited to only even-numbered groupings.
- One-handed operation allows the operator’s other hand to guide and control the ribbon at all times, minimizing the potential for accidental damage to the fibers or ribbon.
- Hand-held method eliminates the need to utilize valuable work surface space for operation and is the ideal solution for remote-site and aerial operations such as bucket truck or ladder-sling applications.
- Performing two overlapping separations of the ribbon allows any single fiber or any sub-group of fibers to be extracted from the ribbon, even in mid-span taut-sheath operations where minimal ribbon length is available.
- Standard tool designed for fiber counts up to 12-fiber ribbon.

Specifications

PARAMETER	VALUE
Ribbon Thickness	250 to 360 micron
Ribbon Width	3.2 mm (12-fiber)
Fiber Pitch	250 micron
Fiber Coating Material	UV cured resin
Separation Ratios: 12-fiber Ribbon	1:11, 2:10, 3:9, 4:8, 5:7, 6:6
Environmental Conditions: Operating Temperature	-10° to 50°C, 0 to 95% RH (non-dew)
Storage Temperature	-40° to +80°C, 0 to 95% RH (non-dew)
Dimensions	160L x 126W x 30H (mm) 6.30L x 4.96 x 1.18 (in)
Weight	220 g / 7.76 oz.

Ordering Information

DESCRIPTION	AFL NO.
FST-12 Fiber Separation Tool Includes: 12-fiber ribbon jaw set, instructional manual and color coded quick reference guide	S014012



FAT-04

Fiber Arrangement Tool

The FAT-04 features an easy-to-use fiber arrangement method utilizing linear travel. The FAT-04 includes a spare paste applicator to allow ribbon making to continue even if one of the paste applicators needs cleaning.

Ordering Information

DESCRIPTION	AFL NO.
FAT-04 Fiber Arrangement Tool*	S010212
SP-1 Foam Pads for FAT-04 (One set = 5 sheets of 25 pads each)	S009016
Paste Applicator Blocks for FAT-04 (2 pieces)	S010952

* FAT-04 includes 4 oz. FAA-03A ribbon forming adhesive, paste applicator blocks, cleaning swabs, CL-02 clips and SP-1 foam pads



FAA-03A

Ribbon Forming Adhesive

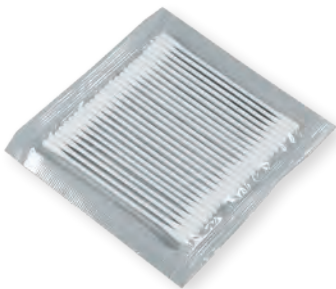
A key advantage of our fiber arrangement tool is the use of the ribbon forming adhesive. Ribbons formed with this adhesive have excellent stripability, especially compared to ribbonizing methods using tape. Unlike tape methods, the paste does not “gum-up” the stripping tool and cause broken fibers. The paste holds the stripped coating residue into a single piece of debris that is easily cleaned from the stripper. If needed, the ribbon can be easily separated into individual fibers using alcohol.

Ordering Information

DESCRIPTION	AFL NO.
FAA-03A ribbon-forming adhesive (0.5 liter bottle)	S008622
FAA-03A ribbon-forming adhesive (4 oz. dispensing bottle)	S008720



Splicer V-groove Cleaning Refill Kit



CS-1 Cotton Swabs

Splicer V-groove Cleaning Kit

Today's splicing equipment is fast, efficient, and requires minimal maintenance due to advances in splicing technology. However, contamination in the V-groove of the splicer is still a primary source of trouble for the splicing technician. This is especially problematic when splicing with a fixed V-groove fusion splicer. Environmental contamination, such as dust, dirt and fiber coating debris, as well as the silica deposits generated during the fusion process eventually find their way to the surface of the v-groove. This contamination will offset the fibers and degrade performance. To help control this problem, a disciplined cleaning regimen and specific tooling is required to ensure the splice is right the first time.

To solve cleaning needs, AFL offers the Splicer V-groove Cleaning Kit. This product integrates eight components into an affordable and effective inspection and cleaning solution for any fusion splicer. Small and lightweight, it fits easily into the Fujikura splicer transit case or it can be carried separately in its own carrying case.

Kit Includes

- Scrubber Brush with stiff tapered nylon bristles
- Sweeper Brush with soft nylon bristles
- Eye Loupe with 3X to 12X magnification
- LED Pen Light with momentary or constant on switching
- Cleaning Fluid that is nonflammable and environmentally safe
- Lint-free Cotton Swabs
- Instruction Sheet with illustrations
- Canvas Carrying Case

Refill Kit Includes

To replenish the consumables within the kit, AFL provides a refill kit that includes the following components:

- One can of FCC2 Cleaning Fluid
- One Scrubber Brush
- One Sweeper Brush
- Ten packs CS-1 Cotton Swabs (250 swabs)

Ordering Information

DESCRIPTION	AFL NO.
Splicer V-groove Cleaning Kit	S014397
Splicer V-groove Cleaning Refill Kit	S014416
CS-1 Cotton Swabs (pack of 25 swabs)	S003719



Portable Tripod Workstation Kit
(splicer and cleaver not included)



Cleaver mount assembly swings into and out of the work space



Portable Work Tray showing the four mounting positions of the cleaver mount assembly (delivered as shown)

Portable Tripod Workstation

As splicing requirements have migrated from aerial to ground level locations, a sturdy splicing workstation with the ability to adjust for uneven ground surfaces has been missing from the splicing marketplace. That problem is solved with AFL's Portable Tripod Workstation – the critical missing link in splicing productivity.

The Portable Tripod Workstation offers both a sturdy work tray to support the splicer, cleaver and accessories, and a tripod to support the work tray. The two can be purchased together as a kit or separately for those users who prefer to use their own tripod or mounting mechanism.

The work tray incorporates a unique cleaver mounting system that offers flexibility and convenience for the user. The cleaver mounting arm pivots into and out of the work space, as needed, and securely captures the CT50, CT-20 and CT-04 style cleavers. The base of the cleaver mounting assembly can be moved to any one of four positions on the tray to accommodate user preferences.

The tripod is solidly constructed but lightweight, weighing less than six pounds, and collapses to a length of only twenty-five inches. The telescoping legs offer flexible height adjustments from thirteen inches to sixty-one inches and the leg angle can be increased for unusual surfaces.

Features

- Sturdy work tray supports the splicer, cleaver and accessories
- Tripod supports a load capacity of up to eleven pounds
- Independent telescoping tripod legs support uneven work surfaces
- Leveraged handles securely lock work tray into position
- Cleaver mount assembly swings cleaver into and out of the work space
- Optional cleaver mounting positions accommodate user preferences
- Compatible with all FSM-17, FSM-18, FSM-50, FSM-60 and 12/19/70 series models

Ordering Information

DESCRIPTION	AFL NO.
Portable Tripod Workstation Kit – Includes: Tripod with pan head and quick release platform (make and model of tripod may change without notice), portable work tray with cleaver mount assembly and canvas carrying case	S014773
Portable Work Tray – Includes: Portable work tray with cleaver mount assembly and canvas carrying case	S014753
Tripod – Includes: Tripod with pan head and quick release platform (make and model of tripod may change without notice)	S014751

Optional Accessories

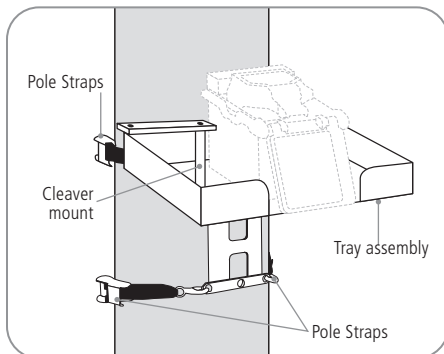
DESCRIPTION	AFL NO.
TS-01 TRIPOD SCREW (required for 12S & 12R models)	S015895



Splicing Workstation

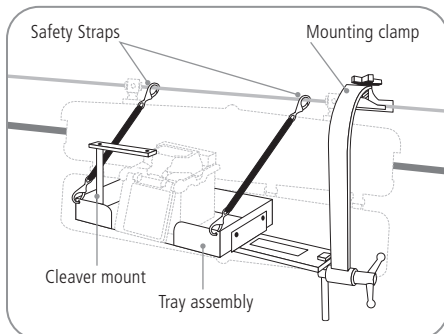


Aerial mounting system



Pole Mounting System

**Illustration for reference only.*



Aerial Mounting System

**Illustration for reference only.*

ASW-02 Splicing Workstation

The ASW-02 Splicing Workstation can be used with a fusion splicer and cleaver in aerial or terrestrial splicing applications. The ASW-02 provides a stable work surface and secure mounting of the splicer and cleaver to prevent accidental drops and equipment damage in challenging splicing locations.

The ASW-02 Splicing Workstation consists of the work tray, a convenient pivoting cleaver mounting arm, a post for attachment to bucket or ladder mounting accessories, a tripod mount, and dual safety straps. An aerial mounting system is available for direct attachment of the workstation to a telephone pole, or for suspending the workstation from an aerial cable strand. The strand mounting system is fully adjustable to provide for optimal location of the workstation when minimal slack fiber is available, such as in a taut-sheath cable access scenario.

In the aerial environment, the safety straps may be secured to the cable strand to provide security and aid with workstation position adjustment. The safety straps are also used to secure the workstation to the pole, and may be used to raise or lower the workstation.

Features

- Provides direct to pole mounting as well as direct adjustable attachment to aerial strand
- Mounting post provided for attachment to bucket and ladder mounting accessories (utilizing any popular copper splicer-head mounting rigs)
- Tripod mount allows for placement in tight FTTH splicing applications
- Includes cable tie locations to secure cables during splicing
- Optimized to simplify taut sheath splicing applications
- Cleaver mount securely captures cleaver and allows operator to rotate it in and out of the workspace as needed
- Matte finish minimizes glare
- Compatible with all FSM-17, FSM-18, FSM-50, FSM-60 and 19/70 series models

Ordering Information

DESCRIPTION	AFL NO.
ASW-02 Splicing Workstation (Full kit with aerial mounting system) Includes aerial mounting system to provide strand and pole mounting capability, a post for attachment to bucket or ladder mount accessories and a receptacle for tripod mounting and safety straps	S010532
ASW-02 Splicing Workstation (Without aerial mounting system) Includes a post for attachment to bucket or ladder mount accessories and a receptacle for tripod mounting	S013620

FlexScan® FS300 Quad OTDR

Be ready for anything with this all-in-one solution



Features

- Multimode and Single-mode OTDR, including PON test
- SmartAuto® 1-button automated testing for fast results
- Pocket-sized, weighs less than 1 pound, 12-hour battery
- LinkMap® color-coded icons for easy troubleshooting
- Integrated Source, Power Meter and VFL
- Robust reporting including Print-to-PDF
- Available with field-replaceable connector

Applications

- OTDR and insertion loss test and reporting
- Fast, accurate Pt-to-Pt and PON verification and troubleshooting
- Locate faults exceeding industry or user pass/fail thresholds
- Visually pinpoint location of macrobends or breaks

AFL's FlexScan FS300 Quad OTDR is an all-in-one solution for detecting, identifying, locating and resolving single-mode and multimode optical network issues. It is designed for both novice and expert technicians working in a range of environments from data centers to fiber-to-the-home, as well as local and wide area networks. The FlexScan FS300 automates test setup, shortens test time and simplifies results interpretation, improving efficiency and reducing costs.

All-in-one test capability: The FlexScan FS300 includes an integrated VFL, power meter and light source. It can be easily paired to AFL's award-winning FOCIS family of inspection scopes for single-fiber and/or MPO and OptiTip® multifiber inspection, ensuring technicians have everything they need to locate and resolve optical network issues.

Performance-packed: With SmartAuto automated multi-pulse acquisition, 37 dB dynamic range and best-in-class dead zones, FlexScan Quad OTDRs test multimode and single-mode networks – including FTTH PONs and POLANs up to 1:64 split ratio – while still detecting and measuring events <2 meters apart.

User-friendly: The FS300 enables both expert and novice technicians to quickly and accurately detect, locate, identify and measure optical network components and faults. It applies industry-standard or user-set pass/fail criteria and displays results using LinkMap color-coded icons that immediately show the health of the network.

Pocket-sized: The FlexScan FS300's small form factor still delivers 12-hour battery operation plus a large, bright, indoor/outdoor, 5-inch 800 x 480 touchscreen display that doesn't need a stylus.

Multiple Reporting Options: Reports can be generated directly from the unit using Print-to-PDF feature or files can be transferred wirelessly or uploaded via USB to the included Windows® compatible TRM® 3.0 Test Results Manager software.

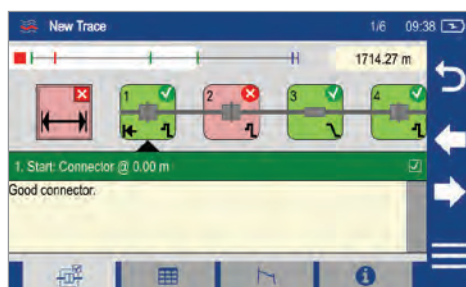
Field-replaceable connector: With AFL's optional field-replaceable connector, avoid expensive service repairs to replace connectors damaged due to poor cleaning practices and/or normal wear-and-tear.

FlexScan® FS300 Quad OTDR



Dramatically Reduces Test Time

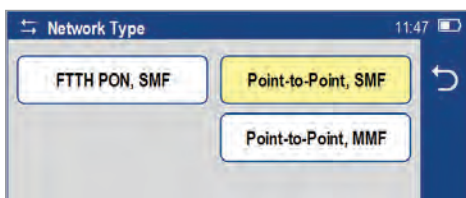
In SmartAuto mode, FlexScan OTDRs automatically analyze and test the network using a variety of network-optimized settings to precisely locate, characterize and identify network events with one button push. Loss and reflectance are measured for connectors, splices, splitters and macro-bends. FlexScan even checks for live fiber and verifies OTDR launch quality before initiating a test.



Simplifies Network Troubleshooting

LinkMap® color-coded icons enable even novice users to easily and accurately troubleshoot optical networks. LinkMap clearly identifies fiber start, end, connectors, splices, PON splitters, and macro-bends.

A LinkMap Summary provides end-to-end link length, loss and ORL. Loss and reflectance of detected events is compared to industry-standard or user-defined pass/fail thresholds and displayed with clear pass/fail indications. Users can instantly toggle between LinkMap and Trace views.



Multimode and Single-mode plus PON Testing in One OTDR

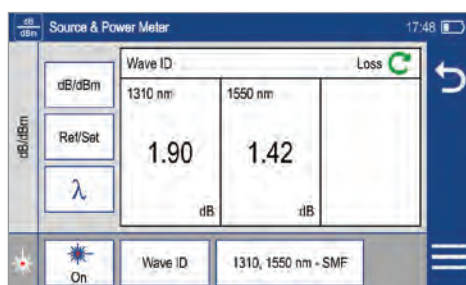
FlexScan Quad OTDRs are the ideal test tool for verifying and/or maintaining both single-mode and multimode networks. Unlike most Quad OTDRs, FS300 OTDRs test both point-to-point networks and FTTH PONs/Passive Optical LANs (POLANs).



Connectivity

FlexScan OTDRs easily pair with AFL's ward-winning FOCIS® family of connector inspection probes for fast, easy single-fiber and/or multi-fiber connector end-face inspection. Images and pass/fail results can be transferred to the FlexScan for display and/or archiving with OTDR results.

FlexScan results can be transferred wirelessly via the free FlexScan App to a smart device for real-time reporting using the included Windows-based TRM® 3.0 Test Results Manager software. Monitoring test results in real-time can detect mistakes while the tech is still in the field, preventing future truck rolls.



OTDR, OLTS, and VFL Testing with a Single Tool

FlexScan optionally includes a Wave ID optical light source (OLS) and optical power meter (OPM). With Wave ID, the OPM auto-synchronizes to a single or multi-wavelength Wave ID optical signal transmitted by an AFL light source. The OPM reports detected wavelengths and measures power and loss at each wavelength, saving significant test time and eliminating setup errors.

The integrated Visual Fault Locator's eye-safe red laser enables users to visually pinpoint the location of macro-bends and fiber breaks often found in splice closures and fiber cabinets.

FlexScan® FS300 Quad OTDR

Specifications^a

OTDR	MULTIMODE	SINGLE-MODE
Emitter Type	Laser	
Safety Class ^b	Class I	
Fiber Type	Multimode; compatible with OM1-OM5	Single-mode; compatible with all G.65x
Wavelengths ^c	850/1300 ±20 nm	1310/1550 ±20 nm
Network Type	Point-to-point	Point-to-point & PON up to 1:64
Connector Type	User-specified APC or UPC ferrule with interchangeable UCI adapters	
Dynamic Range ^d	≥29/29 dB @ 850/1300 nm	≥37/36 dB @ 1310/1550 nm
Event Dead Zone ^e	≤0.8 m @ 850/1300 nm typical	≤0.8 m @ 1310/1550 nm typical
Attenuation Dead Zone ^f	≤3.0 m	≤3.5 m
PON Dead Zone ^g	Not applicable	≤25 m
Pulse Widths	3, 5, 10, 20, 30, 50, 100, 200, 300, 500 ns; 1 μs	3, 5, 10, 20, 30, 50, 100, 200, 300, 500 ns; 1, 2, 3, 5, 10, 20 μs
Range Settings	250 m to 30 km	250 m to 240 km
Data Points	Up to 300,000	
Data Spacing	≥5 cm to ≤16 m	
Group Index of Refraction	1.3000 to 1.7000	
Distance Uncertainty	±(1 + 0.0025% x distance + data point spacing) m	
Linearity	±0.03 dB/dB	
Loss Resolution	0.001 dB	
Reflectance Range	850 nm: -20 to -58 dB; 1300 nm: -20 to -63 dB	1310/1550 nm: -20 to -65 dB
Reflectance Resolution	0.01 dB	
Reflectance Accuracy	±2 dB	
ORL Range	20 to 60 dB	
ORL Resolution	0.01 dB	
ORL Accuracy	±2 dB over range 30 to 55 dB; ±4 dB over range 20-30 dB and 55-60 dB	
Trace File Format	.SOR, Telcordia SR-4731 Issue 2	
OTDR Results Storage	Internal or external USB memory	
Internal Storage	Minimum 4 GB internal non-volatile memory (App SW + >5000 traces typical)	
Internal Launch Fiber	≥30 m internal MM launch fiber	≥50 m internal SM launch fiber
OTDR Modes	Supports SmartAuto, Expert, Real-Time for PON & point-to-point networks	
Real-time Refresh Rate	1 to 4 Hz	
Live Fiber Protection	No OTDR damage when connected to live fiber delivering ≤ +18 dBm at wavelength(s) in range 825 to 1675 nm	
Live Fiber Detection	Reports live fiber with input signal ≥ -35 dBm for wavelength(s) in range 825 to 1675 nm	

Notes:

- All specifications valid at 25 °C unless otherwise specified.
- FDA 21 CFR 1040.10 & 1040.11, IEC 60825-1: 2014.
- Measured with laser in CW mode at 23 °C ±3 °C.
- SNR=1, longest range and pulse width, 3 minute averaging.
- Maximum distance between two points 1.5 dB down each side of a reflective peak caused by an event with a -45 dB (or smaller) reflectance. Test pulse width is 3 or 5 ns.
- Maximum distance from the start of a trace spike caused by an event with a -45 dB (or smaller) reflectance, to the point where the trace returns to and stays within ±0.5 dB of backscatter. Test pulse width is 3 or 5 ns.
- Recovery to within 0.5 dB of backscatter after 1:16 splitter (≤13 dB loss) using 100 ns pulse width.

FlexScan® FS300 Quad OTDR

Specifications^a

OPM - OPTICAL POWER METER (P1 Option)	
Calibrated Wavelengths	850, 1300, 1310, 1490, 1550, 1625, 1650 nm
Detector Type	InGaAs PIN, 2 mm diameter
Measurement Range	+3 to -70 dBm (+3 to -65 dBm @ 850 nm)
Tone Auto-Detect	270 Hz, 330 Hz, 1 kHz, 2 kHz
Tone Detect Range	+3 to -50 dBm @1300, 1310, 1550 nm; +3 to -40 dBm @850 nm;
Wave ID	Auto-synchronizes & measures 1, 2 or 3 wavelengths
Wave ID Range	+3 to -50 dBm @1300, 1310, 1550 nm; +3 to -40 dBm @850 nm
Accuracy	±5% @ -10 dBm
Linearity	±0.1 dB (-3 to -40 dBm); ±0.25 dB (-40 to -70 dBm)
Resolution	0.01 dB
Measurement Units	Power in dBm, nW, µW, mW; Loss in dB

OLS - OPTICAL LIGHT SOURCE (P1 Option)	
Wavelengths	850/1300/1310/1550 nm
Emitter Type	Laser
Safety Class	Class I ^b
Launch Condition	Controlled Launch at 850 nm (comparable to encircled flux on OM4 fiber)
Center λ (CW Mode)	±20 nm
Spectral Width	5 nm maximum (FWHM, CW Mode)
Internal Modulation	270 Hz, 330 Hz, 1 kHz, 2 kHz, CW, Wave ID
SM Output Stability	Short-term ^c : ±0.1 dB; Long-term ^d : ±0.05 dB
MM Output Stability	Short-term ^e : ±0.20 dB; Long-term ^f : ±0.15 dB
Output Power	1310/1550 nm: -7 dBm ±1.5 dB (CW, G.652.C/D) 1300 nm: -7 dBm ±1.5 dB (CW, 50 µm MMF) 850 nm: 0 dBm ±1.5 dB (CW, 50 µm MMF)

VFL - VISUAL FAULT LOCATOR	
Emitter Type	Laser, Class IIIa / Class 3R ^b
Wavelength	635 nm ±10 nm
Output Power	1.5 mW (~+2 dBm ±0.5 dB) into SMF-28
Modes	CW and 1 Hz flashing

Notes:

- a. All specifications valid at 25 °C unless otherwise specified.
- b. FDA 21 CFR 1040.10 and 1040.11, and IEC 60825-1:2014.
- c. Typical maximum deviation over 15 minute after 15 minute warm-up.
- d. Typical maximum deviation over 8 hours after 1 hour warm-up.
- e. 15 minutes after 30 minutes warm-up.
- f. 8 hours after 1 hour warm-up.

GENERAL	
Size (in boot)	98 x 175 x 52.5 mm
Weight	0.8 kg
Operating Temperature	-10 °C to +50 °C, 0 to 95% RH (non-condensing)
Storage Temperature	-30 °C to +70 °C, 0 to 95% RH (non-condensing, battery removed) -20 °C to +60 °C, 0 to 95% RH (non-condensing, battery installed)
Power	Rechargeable Lithium polymer battery; AC adapter
AC Adapter	100-240 VAC, 50-60 Hz input; 5VDC, 2A output
Battery Life (OTDR)	≥12 hours, Telcordia test conditions, 4 hours recharge
Display	5-inch color LCD, 800 x 480 pixels, backlit
Shock and Vibration	GR-196-CORE, drop test, 0.75 m (30 in.), 6 planes
Dust Protection	GR-196-CORE, rubber dust caps for all ports
OTDR/OLS Ports	MM: UPC; SM: UPC or APC; includes tool-free, interchangeable SC adapters
OPM and VFL Ports	Universal, 2.5 mm adapter (SC, FC, ST); others available
USB Ports	USB host port; micro-USB function port
Bluetooth Interface	W1 option; compatible with Windows PC and Android
WiFi Interface	W1 option; compatible with IEEE 802.11 / WLAN
CE Safety	Compliant with EN61010-1
CE EMI/RFI	EN55011, EN61326-1, GR-196-CORE 4.5.1
RoHS	Compliant with RoHS directive 2011/65/EU

OTDRs and Troubleshooters

FlexScan® FS300 Quad OTDR

FlexScan FS300 models are available in five kit configurations: Basic, PLUS, PRO, BIPM, and MPO. All kits include FS300 with AC charger, battery, carry strap, SC/2.5 mm connector adapters, TRM® 3.0, quick reference user guide, and carry case.

Ordering Information

FS300-325 Basic, Plus, PRO, BIPM kits Order Entry: **FS300-325-[KIT]-[Pn]-[Wn]-[C]-[CC]-[LNG]-[AC]-[SMFR]-[MMFR]-[TIP]**

FS300-325 MPO kits (SMF and MMF) Order Entry: **FS300-325-[MKIT]-P1-[Wn]-[LNG]-[AC]-[MPOC]** where:

[KIT]	FS300 FlexScan Kit Configuration
BAS	Includes: FS300, soft case, TRM® 3.0 Basic, USB cable ^a
PLUS	Includes: BAS kit plus 150 m SMF & MMF Fiber Rings, One-Click Cleaner, upgrade to TRM 3.0 Advanced, user-selected soft or hard carry case
PRO	Includes: PLUS kit plus FOCIS Flex with two user-selected adapter tips
BIPM	Includes: PRO kit plus OFI-BIPMe

[MKIT]	FS300-325 MPO Kit Configuration
SMPO	SMF MPO test kit; Includes SMF MPO switch, launch cables, carry case
MMPO	MMF MPO test kit; Includes MMF MPO switch, launch cables, carry case

[PN]	OPTICAL LIGHT SOURCE (OLS) and Optical Power Meter (OPM)
P0	No OLS, no OPM
P1	850/1300 MM; 1310/1550 SM Source and Power Meter

[WN]	Bluetooth/WiFi Configuration
W0	No Bluetooth or WiFi
W1^b	Includes WiFi and Bluetooth

[C]	OTDR / Source Connector Type
A	APC (recommended)
U	UPC

[CC] ^c	Carry Case Option
S1	Standard soft case for FlexScan, Fiber Rings, FOCIS Flex, accessories (Basic, PLUS, PRO kits only)
S2	Large soft case for FlexScan, Fiber Rings, FOCIS Flex, OFI-BIPMe, accessories (PLUS, PRO, BIPM kits only)
H1	Hard carry case (PLUS, PRO, BIPM Kits only)

[LNG]	Language
ENG	English
CHS	Chinese Simp.
CHT	Chinese Trad.
CZE	Czech
DEU	German
DNK	Danish

[LNG]	Language
FIN	Finnish
FRA	French
ITA	Italian
JPN	Japanese
KOR	Korean
NOR	Norwegian

[LNG]	Language
POL	Polish
POR	Portuguese
SPA	Spanish
TUR	Turkish
VNM	Vietnamese

[AC]	Destination Country	AC Plugs
US	USA	2-pin, US
EU	European Union	2-pin, EU
UK	United Kingdom	3-pin, UK
CN	China, Australia	2-pin, SAA

Notes:

- Results can be transferred from FlexScan to TRM® 3.0 using USB cable, or performed wirelessly (W1 option) after downloading FlexScan App from 'Google play' or 'App Store'.
- FlexScans equipped with Bluetooth option (W1) support Bluetooth transfer of results via FlexScan App for remote reporting using TRM 3.0.
- Basic kit always ships with S1 (Standard Soft Case); MPO kit always ships with MPO-specific soft case.

[SMFR]	150 m SMF Fiber Ring
Absent	N/A in Basic kits
USC/USC	FR-SMF-150-USC-USC
USC/UFC	FR-SMF-150-USC-UFC
USC/ULC	FR-SMF-150-USC-ULC
USC/UST	FR-SMF-150-USC-UST
USC/ASC	FR-SMF-150-USC-ASC
USC/AFC	FR-SMF-150-USC-AFC
USC/ALC	FR-SMF-150-USC-ALC
USC/UE2	FR-SMF-150-USC-UE2
ASC/UFC	FR-SMF-150-ASC-UFC
ASC/ULC	FR-SMF-150-ASC-ULC
ASC/UST	FR-SMF-150-ASC-UST
ASC/ASC	FR-SMF-150-ASC-ASC
ASC/AFC	FR-SMF-150-ASC-AFC
ASC/ALC	FR-SMF-150-ASC-ALC
ASC/AE2	FR-SMF-150-ASC-AE2

[MMFR]	150 m OM1 (62.5 μm) Fiber Ring
Absent	N/A in Basic kits
USC/UST1	FR-OM1-150-USC-UST
USC/USC1	FR-OM1-150-USC-USC
USC/ULC1	FR-OM1-150-USC-ULC
USC/UFC1	FR-OM1-150-USC-UFC

[MMFR]	150 m OM2 (50 μm) Fiber Ring
Absent	N/A in Basic kits
USC/UST2	FR-OM2-150-USC-UST
USC/USC2	FR-OM2-150-USC-USC
USC/ULC2	FR-OM2-150-USC-ULC
USC/UFC2	FR-OM2-150-USC-UFC

[MMFR]	150 m OM3/4/5-compatible Fiber Ring
Absent	N/A in Basic kits
USC/UST3	FR-OM3-150-USC-UST
USC/USC3	FR-OM3-150-USC-USC
USC/ULC3	FR-OM3-150-USC-ULC
USC/UFC3	FR-OM3-150-USC-UFC

[TIP]	FOCIS Flex Tips and Cleaning (PRO only)
Blank	Option not available in Basic and PLUS kits
SC	SC-UPC bulkhead tip, 2.5 mm UPC ferrule tip, 2.5 mm One-Click
FC	FC-UPC bulkhead tip, 2.5 mm UPC ferrule tip, 2.5 mm One-Click
LC	LC-UPC bulkhead tip, 1.25 mm UPC ferrule tip, 1.25 mm One-Click
ASC	SC-APC bulkhead tip, 2.5 mm APC ferrule tip, 2.5 mm One-Click
AFC	FC-APC bulkhead tip, 2.5 mm APC ferrule tip, 2.5 mm One-Click
ALC	LC-APC bulkhead tip, 1.25 mm APC ferrule tip, 1.25 mm One-Click

[MPOC]	MPO Launch Cable Network Connector
F	Female (unpinned)
M	Male (pinned)

FlexScan® FS300 Quad OTDR

Ordering Information (continued)

Accessories

DESCRIPTION	AFL NO.
FlexScan wrist strap	1400-05-0230PZ
FlexScan neck strap, 36"	1400-05-0231PZ
AC charger 100-240 VAC to 5 VDC	4050-00-0931PR
Soft carry case for FS300 with FOCIS, OFI, and Fiber Ring	1400-01-0167PZ
Soft carry case for FS300-325 MPO kits	1400-20-0001PZ
Soft carry case for FS300 with FOCIS, and Fiber Ring	1400-20-0002PZ
Hard carry case for FS300 kits with FOCIS, OFI, and Fiber Ring	1400-01-0177PZ
FS300 extended temperature replacement battery	3900-06-0902MR
Vehicle charger, 12VDC to 5VDC @2A	4050-00-0033MR
Cable, USB-micro B, 5 pin, 6'	6000-00-0031MR
5V USB charging cable (1.5 m), type A to barrel (0.9 X 3.2 X 9 mm)	6000-00-0034PR
One-Clicks, fluid, wipes, etc. See www.AFLglobal.com	Cleaning Supplies

Field-Replaceable OTDR Connector (Optical Port Ferrule Saver)

Protect your OTDR ports from damage due to mating with dirty or damaged launch cables or patch cords or normal wear-and-tear. Equip your FlexScan FS300 with a field-replaceable connector, which installs in seconds and accepts AFL's tool-free interchangeable SC, LC, FC and ST connector adapters.

Replace damaged connectors in the field: When normal wear-and-tear or poor cleaning practices damage the port saver's end-face, replace it in seconds without having to return the OTDR to a service center for an expensive and time-consuming repair.

DESCRIPTION	AFL NO.
Field-replaceable connector; APC female to APC male	2900-58-0001MR
Field-replaceable connector; APC female to UPC male	2900-58-0002MR
Field-replaceable connector; UPC female to APC male	2900-58-0003MR
Field-replaceable connector; UPC female to UPC male	2900-58-0004MR

Connector Adapters


CONNECTOR ADAPTER	AFL NO.		
	OTDR/OLS PORT	OPM PORT	VFL PORT
FC	2900-50-0002MR	2900-52-0001MR	N/A
SC	2900-50-0003MR	2900-52-0002MR	N/A
ST	2900-50-0004MR	2900-52-0003MR	N/A
LC	2900-50-0006MR	2900-52-0004MR	N/A
SC/APC	2900-50-0011MR	N/A	N/A
2.5 mm Universal	N/A	2900-52-0005MR	2900-50-0007MR
1.25 mm Universal	N/A	2900-52-0006MR	2900-50-0010MR

FlexScan® FS300 Quad OTDR

Test Management and Reporting Software


DESCRIPTION	AFL NO.
TRM® 3.0 with Basic License (OTDR Trace/OLTS Viewer, Batch Editor and Reports), USB delivery (included with all FS300 kits)	TRM3-BASIC
TRM 3.0 upgrade from Basic to Advanced License, USB delivery	TRM3-UPGRADE
TRM 3.0 upgrade from Basic to Advanced License, email delivery	TRM3-UP-EMAIL
FlexScan App (Android Google play)	Free Download

Recommended Products



FOCIS Flex and FOCIS Lightning (Multi-Fiber) Connector Inspection

- Self-contained, tether-free, hand-held inspection solution
- Auto-focus and auto-centering for fast, easy inspection
- IEC, IPC and user-defined pass/fail analysis
- FOCIS Lightning: extremely fast multi-fiber auto-analysis for datacom and telecom inspection applications



OFI-BIPMe Optical Fiber Identifier

- World class signal sensitivity
- Trigger lock, positive stop for optimum detection
- Integrated optical power meter option

Qualifications

CATEGORY	REGULATION/STANDARD	QUALIFICATION
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety/EMC/EMI	IEC	Compliant to IEC 61010-1 for safety requirements for electrical equipment
	EN	Compliant to EN 61010-1 for safety requirements for electrical equipment
	IEC	Compliant to IEC 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
	Telcordia	Compliant to GR-196-CORE 4.5.1 for requirements on electromagnetic interference
	FCC	Compliant to code of federal regulations FCC 47 CFR 15 on unlicensed transmissions
	FDA	Compliant to code of federal regulations FDA 21 CFR 1040.10 and 1040.11 on laser products
RoHS	IEC	Compliant to IEC 60825-1 for safety of laser products
	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)
Test Method	TIA	Compliant to TIA-568.3-D for test and measurement requirements for premises optical fiber cabling and components
	IEC	Compliant to IEC 11801 for test and measurement requirements for optical fiber cabling for use within premises
	AS/NZS	Compliant to AS/NZS 3080 for test and measurement requirements for optical fiber cabling for use within premises
	TIA	Compliant to TIA-526-7 for test procedures for installed optical fiber cable plant
	TIA	Compliant to TIA-526-14 for test procedures for installed optical fiber cable plant
	IEC	Compliant to IEC 14763-3 for systems and methods for the inspection and testing of installed optical fiber cabling
	AS/NZS	Compliant to AS/NZS 14763.3 for systems and methods for the inspection and testing of installed optical fiber cabling
	IEC	Compliant to IEC 61280-4-1 for test procedures for installed optical fiber cable plant
Generic Requirement	IEC	Compliant to IEC 61280-4-2 for test procedures for installed optical fiber cable plant
	Telcordia	Compliant to GR-196-CORE for generic requirements for OTDR-type equipment
	Telcordia	Compliant to SR-4731 Issue 2 for OTDR data format
	IEC	Compliant to IEC 61746-1 for requirements on calibration of OTDR

Contact Sales@AFLglobal.com to schedule a demonstration or learn how to buy.

Visit www.AFLglobal.com/Test to learn more about FlexScan FS300 OTDR.

International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts

FlexScan® FS200 Single-mode OTDR

Pocket-sized, Performance-packed, User-friendly, and Affordable



Features

- Flexpress® mode completes OTDR tests in <5 seconds
- Test up to 1:64 PON with 25 m PON dead zone
- Easy to understand LinkMap® results with pass/fail indications
- Single, dual or triple wavelength single-mode
- Single port for in- and out-of-service OTDR tests
- Integrated source, power meter, VFL (visual fault locator)
- Integrated MPO Switch control via USB
- Rugged, lightweight, hand-held for field use
- Available with field-replaceable Port Saver connector

Applications

- PON or point-to-point network verification or troubleshooting
- OTDR testing plus insertion loss and power measurements
- Locate faults exceeding industry or user pass/fail thresholds
- Visually pinpoint location of macro-bends or breaks

AFL's FlexScan FS200 OTDR is an all-in-one solution for detecting, identifying, locating, and resolving single-mode optical network issues. It is designed for both novice and expert technicians working in a range of environments, from FTTH PON to point-to-point networks. It applies industry-standard or user-set pass/fail criteria and displays results using LinkMap color-coded icons to show the health of the network. FlexScans automate test setup, shorten test time, and simplify results interpretation improving efficiency and reducing costs.

All-in-one test capability: The FlexScan FS200 includes an integrated VFL, power meter, and light source. It can be easily paired to AFL's award-winning FOCIS family of inspection scopes, ensuring technicians have everything they need to locate and quickly resolve optical network issues.

Performance-packed: With SmartAuto multi-pulse acquisition, up to 37 dB dynamic range, and best-in-class 25 m PON dead zone, FlexScan FS200 PON OTDRs test FTTH PONs up to 1:64 while still detecting and measuring events only meters apart.

Fast! Flexpress mode completes dual-wavelength tests in <5 seconds – 10 x faster than conventional OTDRs! For multi-fiber testing, FS200s automatically control AFL's MFS Multi-Fiber Switch (12-fiber MPO switch) to further reduce multi-fiber test time.

Pocket-sized: At 3.5 x 6 x 1.75 in. (86 x 160 x 43 mm) and less than one pound (0.4 kg), FlexScan FS200 OTDRs truly fit in your pocket, yet still provide a large, bright indoor/outdoor touchscreen display, and all-day operation.

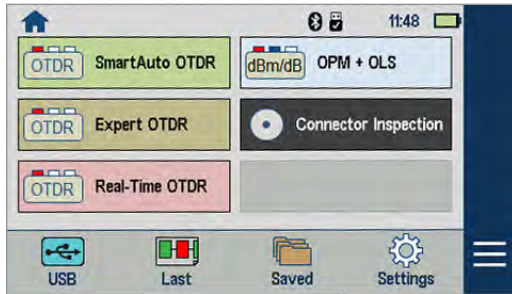
Multiple sharing and reporting options: Results can be stored internally, saved to a USB, or wirelessly uploaded via the free FlexScan App for real-time reporting using the included TRM® 3.0 Test Results Manager software.

Convenient cost-saving kits: Bundle the FlexScan FS200 with your choice of launch cable, FOCIS Flex connector inspection probe and tips, and/or AFL's universal optical fiber identifier (OFI-BIPMe) for significant cost-savings!

PON-optimized FTTH-PRO kits combine FS200-303/304 with a FOCIS Flex Inspection probe, 4 adapter tips, and launch cables for both SC/APC and LC/APC networks.

Field-replaceable Port Saver connector: With AFL's optional field-replaceable Port Saver, avoid expensive service repairs to replace connectors damaged due to poor cleaning practices and/or normal wear-and-tear.

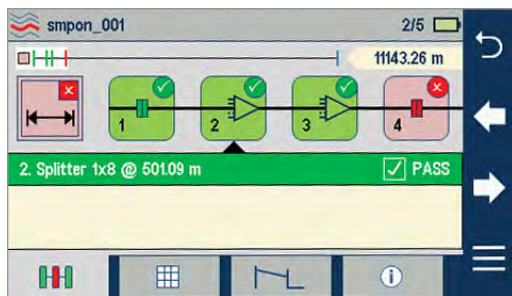
FlexScan® FS200 Single-mode OTDR



Dramatically Reduces Test Time

In SmartAuto mode, FlexScan OTDRs automatically analyze and test the network using a variety of network-optimized settings to precisely locate, characterize and identify network events with one button push. Loss and reflectance are measured for connectors, splices, splitters and macro-bends. FlexScan even checks for live fiber and verifies OTDR launch quality before initiating a test.

FlexScan's Flexpress mode completes dual-wavelength tests in seconds, reducing test time by 10x compared to conventional OTDRs. For multi-fiber testing, FlexScan's automatically control AFL's MPO Switch, testing 12 fibers at the touch of a single button.



Simplifies Network Troubleshooting

LinkMap with pass/fail enables even novice users to easily and accurately troubleshoot optical networks. LinkMap presents an icon-based view of the tested network clearly identifying fiber start, end, connectors, splices, PON splitters, and macro-bends.

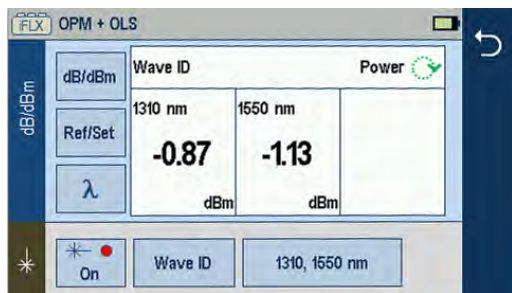
A LinkMap summary provides end-to-end link length, loss and ORL. Loss and reflectance are displayed with clear pass/fail indications. Users can instantly toggle between LinkMap and Trace views.



Connectivity

FlexScan OTDRs easily pair with AFL's ward-winning FOCIS® family of connector inspection probes for fast, easy single-fiber and/or multi-fiber connector end-face inspection.

FlexScan results can then be transferred wirelessly via the free FlexScan App to a smart device for real-time reporting using the included Test Results Manager (TRM 3.0) PC-based software. This real-time monitoring can help avoid mistakes in the field that will require future truck rolls.



OTDR, OLTS, and VFL Testing with a Single Tool

FlexScan optionally includes a Wave ID optical light source (OLS) and optical power meter (OPM). With Wave ID, the OPM auto-synchronizes to a single or multi-wavelength Wave ID optical signal transmitted by an AFL light source. The OPM reports detected wavelengths and measures power and loss at each wavelength, saving significant test time and eliminating setup errors.

The integrated VFL's eye-safe red laser enables users to visually pinpoint the location of macro-bends and fiber breaks often found in splice closures and fiber cabinets.

FlexScan® FS200 Single-mode OTDR

FlexScan OTDRs are available with 1310/1550/1625, 1310/1550/1650, 1310/1550, and 1550 or 1650 nm only wavelengths. The 1310 and 1550 nm versions are available with integrated optical light source (OLS), optical power meter (OPM), visual fault locator (VFL) and Bluetooth/WiFi.

Specifications^a

MODEL: FS200-XXX	-50	-60	-100	-300	-303	-304
OTDR						
Emitter Type	Laser					
Safety Class ^b	Class I					
Fiber Type	Single-mode					
Wavelengths (nm)	1550	1650	1310/ 1550	1310/ 1550	1310/ 1550/ 1625	1310/ 1550/ 1650
Center λ Tolerance ^c	1310/1550/1650: ± 20 nm; 1625 +30/-5 nm					
Dynamic Range ^d (dB)	28	37	32/30	37/36	37/36/37	37/36/37
Event Dead Zone ^e (m)	1.0	0.8	0.8	0.8	0.8	0.8
Atten. Dead Zone ^f (m)	6.0	3.5	3.6	3.5	3.5	3.5
PON Dead Zone ^g (m)	N/A	30	N/A	25/25	25/25/30	25/25/30
Pulse Widths	3, 5, 10, 20, 30, 50, 100, 200, 300, 500 ns; 1, 2, 3, 10 μs; 20 μs (FS200-300/300/304 only)					
Range Settings	250 m to 240 km					
Data Points	Up to 300,000 (Expert mode .SOR file)					
Data Spacing	5 cm to 16 m					
Index of Refraction	1.3000 to 1.7000					
Distance Uncertainty	±(1 + 0.003% x distance + data point spacing) m					
Linearity (dB/dB)	±0.05					
Trace File Format	Telcordia SR-4731 Issue 2 compatible .SOR					
Trace Storage Medium	4 GB internal memory (> 5000 traces typical); External USB memory stick					
Data Transfer to PC	USB cable or Bluetooth® (option)					
OTDR Modes	SmartAuto, Expert, Real-time					
Flexpress Fast Test	FS200-300/303/304					
Display Modes	LinkMap Summary, LinkMap Events, Trace					
Refresh Rate	Up to 4 Hz (Real-time mode)					
Live Fiber Protection	No OTDR damage with input power ≤ +15 dBm for wavelength(s) in range 1260 to 1675 nm					
Live Fiber Detection	Reports live fiber with input signal ≥ -35 dBm for wavelength(s) in range 1260 to 1675 nm					
PON Filter Isolation	>50 dB for 1260 nm ≤ wavelength ≤ 1600 nm					
Live PON OTDR Test	1625 or 1650 nm using filtered detector					

Notes:

- All specifications valid at 25 °C unless otherwise specified.
- FDA 21 CFR 1040.10 & 1040.11, IEC 60825-1: 2014.
- Using 10 ns pulse width.
- SNR=1, longest range and pulse width, 3-minute averaging.
- Maximum distance between two points 1.5 dB down each side of a reflective peak caused by an event with reflectance ≤ -45 dB using 3 or 5 ns pulse.
- Maximum distance from the start of a trace spike caused by an event with a -45 dB (or smaller) reflectance, to the point where the trace returns to and stays within ±0.5 dB of backscatter. Test pulse width is 3 or 5 ns.
- Recovery to within 0.5 dB of backscatter after 1:16 splitter (≤13 dB loss) using 100 ns pulse width.
- Max temperature while charging is +45 °C.

MODEL: FS200-XXX	-50	-60	-100	-300	-303	-304
VISUAL FAULT LOCATOR (VFL)						
Emitter Type	Visible red laser, 650 ±20 nm					
Safety Class ^b	Class II					
Output Power	0.8 mW into single-mode fiber (-1 dBm ±0.5 dB)					
Modes	CW, 2 Hz flashing					
OPTICAL LASER SOURCE - OLS (Optional)						
Emitter Type	Laser					
Safety Class ^b	Class I					
Fiber Type	Single-mode					
Wavelengths (nm)	1550	N/A	1310/ 1550	1310/ 1550	1310/ 1550	1310/ 1550
Center λ Tolerance	±20 nm (CW mode)					
Spectral Width (FWHM)	5 nm (maximum)					
Internal Modulation	270 Hz, 330 Hz, 1 kHz, 2 kHz, CW, Wave ID					
Wave ID	Compatible with AFL OPM/OLS					
Output Power Stability	≤ ±0.1 dB (15 minutes); ≤ ±0.15 dB (8 hours)					
Output Power	-3 dBm ±1.5 dB					
OPTICAL POWER METER -OPM (Optional)						
Calibrated Wavelengths	1310, 1490, 1550, 1625, 1650 nm					
Detector Type	InGaAs, 1 mm diameter					
Measurement Range	+23 to -50 dBm					
Tone Detect Range	+3 to -35 dBm					
Accuracy	±0.25 dB					
Resolution	0.01 dB					
Measurement Units	dB, dBm or Watts (nW, μW, mW)					
GENERAL						
Size (in boot)	86 x 160 x 43 mm					
Weight	0.4 kg					
Operational Temperature ^h	-10 °C to +50 °C, 0 to 95 % RH (non-condensing)					
Storage Temperature	-40 °C to +70 °C, 0 to 95 % RH (non-condensing)					
Power	Rechargeable Li-Pol or AC adapter					
Battery Life	>12 hours, Telcordia test conditions					
Display	4.3 in color touchscreen LCD, 480x272, backlit					
USB Ports	1 host; 1 micro-USB function					
Bluetooth (optional)	Compatible with Windows PC, Android					

FlexScan® FS200 Single-mode OTDR

Ordering Information

All kits include a FlexScan FS200 with AC charger, battery, carry strap, SC/2.5 mm connector adapters, TRM® 3.0, USB cable, and carry case.

FS200-XXX-Basic, Plus, PRO, BIPM Kits Order Entry: **FS200-[MOD]-[KIT]-[PW]-[C]-[CC]-[LNG]-[AC]-[FR]-[TIP]**

FS200-XXX-MPO Kits Order Entry: **FS200-[MOD]-MPO-P1-W1-[C]-[LNG]-[AC]-[MPOC]**

FS200-303/304-FTTH PRO Kits Order Entry: **FS200-[MOD]-FTTH-PRO-[CC]-[LNG]-[AC]** where:

[MOD]	FS200 FlexScan OTDR Configuration
50	1550 nm only Troubleshooting OTDR
60	1650 nm filtered Live PON Troubleshooting OTDR
100	1310/1550 nm Verification and Troubleshooting OTDR
300	1310/1550 Pt-to-Pt & PON Verification and Troubleshooting OTDR
303	1310/1550/1625 Pt-to-Pt and PON Verification and Troubleshooting OTDR
304	1310/1550/1650 Pt-to-Pt and PON Verification and Troubleshooting OTDR

[KIT]	FS200 FlexScan Kit Configuration / Kit Contents
BAS	Includes: FS200, TRM 3.0 Basic, USB cable ^a , soft case
PLUS	Includes: BAS Kit plus 150 m SMF Fiber Ring, One-Click Cleaner, upgrade to TRM 3.0 Advanced, soft or hard carry case
PRO	Includes: PLUS Kit plus FOCIS Flex with two user-selected adapter tips
FTTH-PRO	Includes: BAS Kit, 150 m SC/APC & LC/APC Fiber Rings, FOCIS Flex, SC/APC & LC/APC bulkhead and ferrule adapters, SC & LC One-Click Cleaners, Port Saver, TRM 3.0 Advanced, soft or hard carry case (FS200-303/304 only)
BIPM	Includes: PRO Kit plus OFI-BIPMe
MPO	Includes: FlexScan plus MFS Multi-Fiber Switch, MPO launch cable, OTDR-to-Switch patch cord, OTDR-to-Switch USB cable

[PW]	Power Meter / Wireless Option
P0-W0	No Source, Power Meter, or Bluetooth/WiFi (FS200-50/60/100 only)
P0-W1 ^b	No Source or Power Meter; Includes Bluetooth/WiFi (FS200-300/304 only)
P1-W0	No Bluetooth/WiFi (-303/304 only); Includes Source, Power Meter
P1-W1 ^b	Includes Source, Power Meter, Bluetooth/WiFi (all models except -50)

[C]	OTDR / Source Connector Type
A	APC (recommended)
U	UPC

[CC] ^c	Carry Case Option (PLUS, PRO, FTTH-PRO, BIPM Kits)
S1	Large soft case for FS200, fiber ring, FOCIS Flex, OFI-BIPMe, accessories
S2	Medium soft case for FS200, fiber ring, FOCIS Flex, accessories
H1	Hard carry case for FS200, fiber ring, FOCIS Flex, OFI-BIPMe, accessories

[LNG]	Language
ENG	English
CHS	Chinese Simplified
CHT	Chinese Traditional
CZE	Czech
DEU	German
DNK	Danish
FIN	Finnish
FRA	French
ITA	Italian

[LNG]	Language
JPN	Japanese
KOR	Korean
NOR	Norwegian
POL	Polish
POR	Portuguese
SPA	Spanish
TUR	Turkish
VNM	Vietnamese

[AC]	Destination Country	AC Plugs
US	USA	2-pin, US
EU	European Union	2-pin, EU
UK	United Kingdom	3-pin, UK
CN	China, Australia	2-pin, SAA

[FR]	150 m SMF Fiber Ring
Absent	N/A in Basic Kits
USC/USC	FR-SMF-150-USC-USC
USC/UFC	FR-SMF-150-USC-UFC
USC/ULC	FR-SMF-150-USC-ULC
USC/UST	FR-SMF-150-USC-UST
USC/ASC	FR-SMF-150-USC-ASC
USC/AFC	FR-SMF-150-USC-AFC
USC/ALC	FR-SMF-150-USC-ALC
USC/UE2	FR-SMF-150-USC-UE2
ASC/UFC	FR-SMF-150-ASC-UFC
ASC/ULC	FR-SMF-150-ASC-ULC
ASC/UST	FR-SMF-150-ASC-UST
ASC/ASC	FR-SMF-150-ASC-ASC
ASC/AFC	FR-SMF-150-ASC-AFC
ASC/ALC	FR-SMF-150-ASC-ALC
ASC/AE2	FR-SMF-150-ASC-AE2

[TIP]	FOCIS Flex Tips and Cleaning (PRO only)
Blank	Option not available in Basic & PLUS Kits
SC	SC-UPC bulkhead tip, 2.5 mm UPC ferrule tip, 2.5 mm cleaning
FC	FC-UPC bulkhead tip, 2.5 mm UPC ferrule tip, 2.5 mm cleaning
LC	LC-UPC bulkhead tip, 1.25 mm UPC ferrule tip, 1.25 mm cleaning
ASC	SC-APC bulkhead tip, 2.5 mm APC ferrule tip, 2.5 mm cleaning
AFC	FC-APC bulkhead tip, 2.5 mm APC ferrule tip, 2.5 mm cleaning
ALC	LC-APC bulkhead tip, 1.25 mm APC ferrule tip, 1.25 mm cleaning

[MPOC]	MPO Launch Cable Network Connector
F	Female (unpinned) to Female (unpinned)
M	Female (unpinned) to Male (pinned)

Notes:

- Results can be transferred from FlexScan OTDR to TRM® 3.0 using USB cable, or performed wirelessly (W1 option) after downloading free FlexScan App. The FlexScan App is available as a free download from 'Google play' or 'App Store'.
- FlexScans equipped with Bluetooth option (W1) support Bluetooth transfer of results via FlexScan App for remote reporting using TRM 3.0.
- Basic Kit always ships with S2 (Medium Soft Case); MPO Kit always ships with MPO-specific soft case.

FlexScan® FS200 Single-mode OTDR

Ordering Information

Accessories

DESCRIPTION	AFL NO.
FlexScan wrist strap	1400-05-0230PZ
FlexScan neck strap, 36"	1400-05-0231PZ
AC charger 100-240 VAC to 5 VDC	4050-00-0931PR
Soft carry case for FS200 kits with FOCIS Flex and Fiber Ring	1400-01-0111PZ
Soft carry case for FS200 kits with FOCIS Flex, OFI-BIPMe and Fiber Ring	1400-01-0128PZ
Hard carry case for FS200 kits with FOCIS Flex, OFI-BIPMe and Fiber Ring	1400-01-0134PZ
Vehicle charger, 12VDC to 5VDC @2A	4050-00-0033MR
Cable, USB-micro B, 5 pin, 6'	6000-00-0031MR
5V USB charging cable (1.5 m), type A to barrel (0.9 X 3.2 X 9 mm)	6000-00-0034PR
One-Clicks, fluid, wipes, etc. See www.AFLglobal.com	Cleaning Supplies

Field-Replaceable OTDR Connector (Optical Ferrule Port Saver)

Protect your OTDR ports from damage due to mating with dirty or damaged launch cables or patch cords or normal wear-and-tear. Equip your FlexScan FS200 with a field-replaceable connector, which installs in seconds and accepts AFL's tool-free interchangeable SC, LC, FC and ST connector adapters.

Replace damaged connectors in the field: When normal wear-and-tear or poor cleaning practices damage the port saver's end-face, replace it in seconds without having to return the OTDR to a service center for an expensive and time-consuming repair.

DESCRIPTION	AFL NO.
FlexScan-facing APC female to APC male field-replaceable Port Saver connector	2900-58-0001MR
FlexScan-facing APC female to UPC male field-replaceable Port Saver connector	2900-58-0002MR
FlexScan-facing UPC female to APC male field-replaceable Port Saver connector	2900-58-0003MR
FlexScan-facing UPC female to UPC male field-replaceable Port Saver connector	2900-58-0004MR

Connector Adapters


CONNECTOR ADAPTER	AFL NO.		
	OTDR/OLS PORT	OPM PORT	VFL PORT
FC	2900-50-0002MR	2900-52-0001MR	N/A
SC	2900-50-0003MR	2900-52-0002MR	N/A
ST	2900-50-0004MR	2900-52-0003MR	N/A
LC	2900-50-0006MR	2900-52-0004MR	N/A
SC/APC	2900-50-0011MR	2900-52-0002MR	N/A
2.5 mm Universal	N/A	2900-52-0005MR	2900-50-0007MR
1.25 mm Universal	N/A	2900-52-0006MR	2900-50-0010MR

FlexScan® FS200 Single-mode OTDR

Test Management and Reporting Software


DESCRIPTION	AFL NO.
TRM 3.0 with Basic License (OTDR Trace/OLTS Viewer, Batch Editor and Reports), USB delivery (included with all FS200 kits)	TRM3-BASIC
TRM 3.0 upgrade from Basic to Advanced License, USB delivery	TRM3-UPGRADE
TRM 3.0 upgrade from Basic to Advanced License, email delivery	TRM3-UP-EMAIL
FlexScan App (Android Google play)	Free Download

Recommended Products



FOCIS Flex and FOCIS Lightning (Multi-Fiber) Connector Inspection

- Self-contained, tether-free, hand-held inspection solution
- Auto-focus and auto-centering for fast, easy inspection
- IEC, IPC and user-defined pass/fail analysis
- FOCIS Lightning: extremely fast multi-fiber auto-analysis for datacom and telecom inspection applications



OFI-BIPMe Optical Fiber Identifier

- Works on all fiber types including BIF
- Trigger lock, positive stop for optimum detection
- Integrated optical power meter

Qualifications

CATEGORY	REGULATION/STANDARD	QUALIFICATION
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety/EMC/EMI	IEC	Compliant to IEC 61010-1 for safety requirements for electrical equipment
	EN	Compliant to EN 61010-1 for safety requirements for electrical equipment
	IEC	Compliant to IEC 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
	Telcordia	Compliant to GR-196-CORE 4.5.1 for requirements on electromagnetic interference
	FCC	Compliant to code of federal regulations FCC 47 CFR 15 on unlicensed transmissions
	FDA	Compliant to code of federal regulations FDA 21 CFR 1040.10 and 1040.11 on laser products
RoHS	IEC	Compliant to IEC 60825-1 for safety of laser products
	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)
Test Method	TIA	Compliant to TIA-568.3-D for test and measurement requirements for premises optical fiber cabling and components
	IEC	Compliant to IEC 11801 for test and measurement requirements for optical fiber cabling for use within premises
	AS/NZS	Compliant to AS/NZS 3080 for test and measurement requirements for optical fiber cabling for use within premises
	TIA	Compliant to TIA-526-7 for test procedures for installed optical fiber cable plant
	TIA	Compliant to TIA-526-14 for test procedures for installed optical fiber cable plant
	IEC	Compliant to IEC 14763-3 for systems and methods for the inspection and testing of installed optical fiber cabling
	AS/NZS	Compliant to AS/NZS 14763.3 for systems and methods for the inspection and testing of installed optical fiber cabling
	IEC	Compliant to IEC 61280-4-1 for test procedures for installed optical fiber cable plant
	IEC	Compliant to IEC 61280-4-2 for test procedures for installed optical fiber cable plant
Generic Requirement	Telcordia	Compliant to GR-196-CORE for generic requirements for OTDR-type equipment
	Telcordia	Compliant to SR-4731 Issue 2 for OTDR data format
	IEC	Compliant to IEC 61746-1 for requirements on calibration of OTDR

Contact Sales@AFLglobal.com to schedule a demonstration or learn how to buy.

Visit www.AFLglobal.com/Test to learn more about FlexScan FS200 OTDR.

International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts

OTDR Fiber Rings



Features

- Compact, rugged, lightweight
- 150, 500, and 1000 m lengths standard
- Available with a variety of connector styles
- Compact! Fits easily in OTDR cases or kits

Applications

- Use to test link loss with an OTDR
- For use as OTDR launch cable
- For use as OTDR receive cable
- Measure insertion loss and reflectance of near- and far-end connections

Fiber Rings are often a necessity when testing with an OTDR or Optical Troubleshooter. A launch cable, which connects the OTDR or Optical Troubleshooter to the link under test, reveals the insertion loss and reflectance of the near-end connection. A receive cable, which connects to the far-end of the link, reveals the insertion loss and reflectance of the far-end connection. Launch and receive test cables can range from 150 m to 1 km (or longer) in length. Because very long test cables are impractical to transport and use, AFL offers coiled lengths of 50 μm multimode, 62.5 μm multimode, or single-mode fiber packaged in compact rings.

Fiber Rings of 150 m of fiber are ideal for premises fiber network test applications. Fiber Rings of 500 m and 1 km of single-mode fiber are designed for broadband, long haul fiber network test applications.

OTDR Fiber Rings

Fiber Rings Part Number Order Entry

Single Fiber (SM or MM) Fiber Rings

AFL NO. = FR-FFF-LLLL-CC1-CC2, where:

FR = Fiber Ring (single fiber)

FFF = Fiber Type

SMF= Single-mode (G.652)

BIF = Bend Insensitive (G.657)

OM1 = 62.5 μm multimode

OM2 = 50 μm multimode

OM3 = 50 μm laser optimized

OM4 = 50 μm laser optimized

LLLL = Fiber Length (meters)

150 = 150 m (492 ft)

500 = 500 m (1640 ft)

1000 = 1000 m (3280 ft)

CC1 = Connector Configuration OTDR end (see below)

CC2 = Connector Configuration Network end (see below)

MPO-terminated Multi-Fiber (SM or MM) Fiber Rings

AFL NO. = FRM1-FF-LLLL-P-MC1-MC2, where:

FRM1 = MPO-terminated 12-fiber fiber ring

FF = Fiber Type

S2 = Standard single-mode (G.652)

M4 = OM4 50 μm laser optimized

LLLL = Fiber Length (meters)

61 = 61 m (200 ft)

P = Polarity

A = Type A polarity (straight through, fiber 1 to fiber 1)

B = Type B polarity (fiber 1 to fiber 12)

MC1, MC2 = MPO Connector (OTDR end and Network end, respectively)

AF = APC, female (unpinned)

AM = APC, male (pinned)

UF = UPC, female (unpinned)

UM = UPC, male (pinned)

Supported Single Fiber Single-mode Fiber Ring Configurations

CONNECTOR TYPE		STANDARD SMF FIBER RINGS		SPECIAL ORDER SMF FIBER RINGS ^a	
ID	DESCRIPTION	CC1	CC2	CC1	CC2
USC	SC/UPC	◆	◆		
ASC	SC/APC	◆	◆		
ULC	LC/UPC		◆	◆	◆
ALC	LC/APC		◆	◆	◆
UFC	FC/UPC		◆	◆	◆
AFC	FC/APC		◆	◆	◆
UST	ST/UPC		◆	◆	◆
UE2	E2000/UPC		Special Order ^a		◆
AE2	E2000/APC		Special Order ^a		◆
OTA	OptiTap APC		Special Order ^a		
TRD	TRIDENT APC		Special Order ^a		

Supported Single Fiber Multimode Fiber Ring Configurations

CONNECTOR TYPE		STANDARD SMF FIBER RINGS		SPECIAL ORDER SMF FIBER RINGS ^a	
ID	DESCRIPTION	CC1	CC2	CC1	CC2
USC	SC/UPC	◆	◆		
ULC	LC/UPC		◆	◆	◆
UFC	FC/UPC		◆	◆	◆
UST	ST/UPC		◆	◆	◆
UE2	E2000/UPC		Special Order ^a		

OTDR Fiber Rings

Ordering Information

Standard SMF Fiber Rings

DESCRIPTION	AFL NO.
Fiber Ring, 150 m, G.652 SMF, CC1-CC2	FR-SMF-150-CC1-CC2
Fiber Ring, 500 m, G.652 SMF, CC1-CC2	FR-SMF-500-CC1-CC2
Fiber Ring, 1000 m, G.652 SMF, CC1-CC2	FR-SMF-1000-CC1-CC2

Special Order SMF Fiber Rings^a

DESCRIPTION	AFL NO.
Fiber Ring, 150 m, G.652 SMF, CC1-CC2	FR-SMF-150-CC1-CC2
Fiber Ring, 500 m, G.652 SMF, CC1-CC2	FR-SMF-500-CC1-CC2
Fiber Ring, 1000 m, G.652 SMF, CC1-CC2	FR-SMF-1000-CC1-CC2
Fiber Ring, 150 m, G.657.A2 BIF, CC1-CC2	FR-BIF-150-CC1-CC2
Fiber Ring, 500 m, G.657.A2 BIF, CC1-CC2	FR-BIF-500-CC1-CC2
Fiber Ring, 1000 m, G.657.A2 BIF, CC1-CC2	FR-BIF-1000-CC1-CC2

Standard OM1, OM2, OM3, OM4 Multimode Fiber Rings

DESCRIPTION	AFL NO.
Fiber Ring, 150 m, OM1 (62.5 mm) MMF, CC1-CC2	FR-OM1-150-CC1-CC2
Fiber Ring, 150 m, OM2 (50 mm) MMF, CC1-CC2	FR-OM2-150-CC1-CC2
Fiber Ring, 150 m, OM3 (50 mm laser-optimized) MMF, CC1-CC2	FR-OM3-150-CC1-CC2
Fiber Ring, 150 m, OM4 (50 mm laser-optimized) MMF, CC1-CC2	FR-OM4-150-CC1-CC2

Special Order OM1, OM2, OM3, OM4 Multimode Fiber Rings^a

DESCRIPTION	AFL NO.
Fiber Ring, 150 m, OM1 (62.5 mm) MMF, CC1-CC2	FR-OM1-150-CC1-CC2
Fiber Ring, 150 m, OM2 (50 mm) MMF, CC1-CC2	FR-OM2-150-CC1-CC2
Fiber Ring, 150 m, OM3 (50 mm laser-optimized) MMF, CC1-CC2	FR-OM3-150-CC1-CC2
Fiber Ring, 150 m, OM4 (50 mm laser-optimized) MMF, CC1-CC2	FR-OM4-150-CC1-CC2

Standard MPO-terminated Multi-fiber Single-mode and Multimode Fiber Rings^b

DESCRIPTION	AFL NO.
MPO Fiber Ring, 61 m (200 ft), G.652 SMF, Type A, APC unpinned to APC unpinned	FRM1-S2-61-A-AF-AF
MPO Fiber Ring, 61 m (200 ft), G.652 SMF, Type A, APC unpinned to APC pinned	FRM1-S2-61-A-AF-AM
MPO Fiber Ring, 61 m (200 ft), OM4 MMF, Type A, UPC unpinned to UPC unpinned	FRM1-M4-61-A-UF-UF
MPO Fiber Ring, 61 m (200 ft), OM4 MMF, Type A, UPC unpinned to UPC pinned	FRM1-M4-61-A-UF-UM

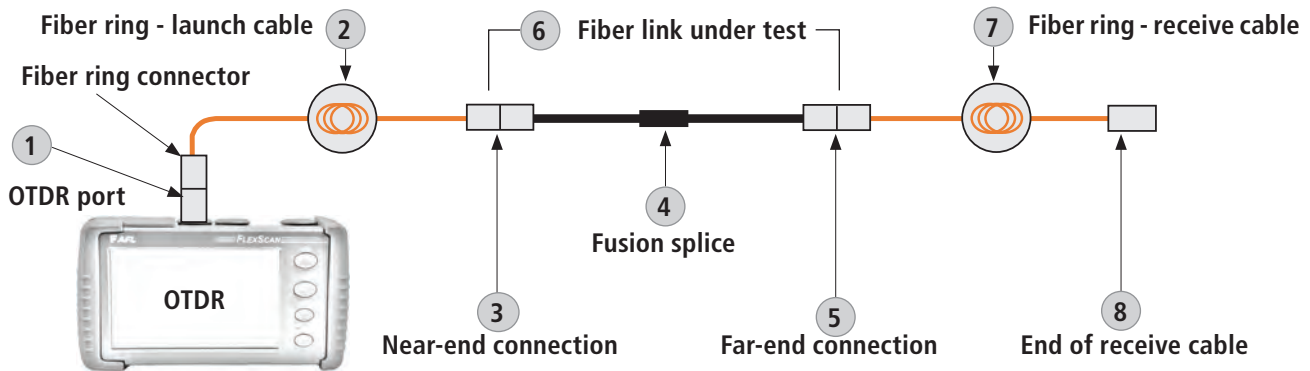
Notes:

- a. Contact AFL for special order fiber rings. Not all combinations of lengths and connectors are supported.
- b. Contact AFL for other special order configurations of MPO-terminated multi-fiber single-mode or multimode fiber rings.

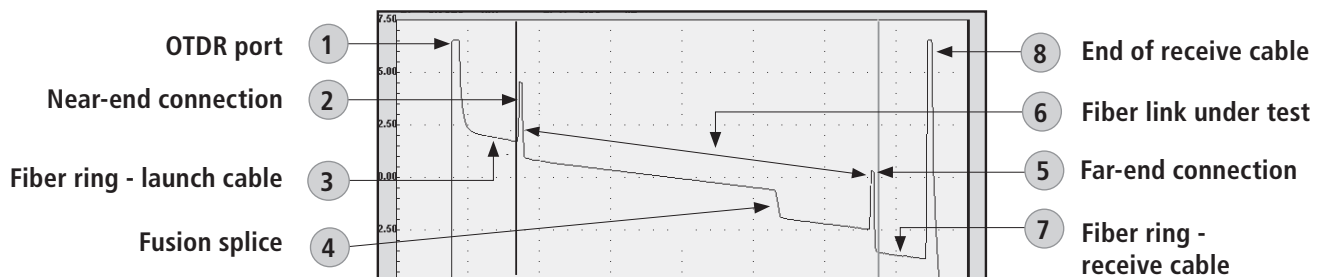
OTDR Fiber Rings

How to Generate a Baseline Trace Using Fiber Rings

- Use the Fiber Ring as a launch cable. Connect the Fiber Ring between your OTDR and the fiber link under test. This will allow you to measure the loss of the near-end connection.
- Use the Fiber Ring as a receive cable. Connect the Fiber Ring to the far-end connector of your fiber link under test. This will allow you to measure the loss of the far-end connection.
- By using Fiber Rings as both launch and receive cables, as shown in the diagram below, you can measure total insertion loss of the fiber link under test under test.




Example OTDR Test Configuration with Launch and Receive Cables




OTDR Trace Made using Launch and Receive Cables

Recommended Products



FlexScan® FS300 (quad) and FS200 (single-mode) OTDRs

- SmartAuto® 1-button automated testing for fast results
- LinkMap® color-coded icons for easy troubleshooting
- FlexPress® mode (FS200) completes OTDR test in <5 seconds!
- Integrated Source, Power Meter and VFL



FlexScan® TS100 FTTH PON Troubleshooter

- Locate faults in <3 seconds with the press of a button
- Displays link length, loss, ORL, and pass/fail results
- Single-ended test reduces time and cost
- Rugged, lightweight, hand-held for field use

Contact Sales@AFLglobal.com to schedule a demonstration or learn how to buy.

Visit www.AFLglobal.com/Test to learn more about Fiber Rings.

International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts

FOCIS Flex – Fiber Optic Connector Inspection System

Easy, Fast, Compact, Tether-free

U.S. Patent 9,217,688



Features

- 1-button to auto-focus, center, capture, analyze, and save
- IEC, IPC, and user-defined pass/fail analysis
- Untethered, compact, hand-held inspection
- Use independently or pair with OTDR
- Save 10K results internally or share via WiFi or USB

Applications

- Inspect connectors on patch cords or in bulkhead adapters
- Optical network installation, troubleshooting, and maintenance
- Inspect MPO/MTP multi-fiber connectors
- Assure critical fiber infrastructure performs properly
- Keep fiber connections working at optimal performance levels
- Verify proper connector cleaning practices are being used

FOCIS Flex makes connector inspection simple, fast, and convenient. With the press of a single button, FOCIS Flex auto-focuses, captures and centers the end-face image, applies Pass/Fail rules, displays image and Pass/Fail results, saves results internally and/or wirelessly transfers data to a paired FlexScan OTDR or a smart device. It is fast, small, and easy to use to enable 100% connector inspection.

Independent, untethered operation: With rechargeable battery and integrated display, FOCIS Flex can be used independently without requiring an external OTDR or display unit.

Optional pairing with FlexScan OTDR or smart devices: Captured images and Pass/Fail results can be immediately displayed and easily saved on either paired FlexScan OTDR or a smart device equipped with the AFL's free FOCIS Flex App. This capability enables inspection results to be included in reporting and archiving.

Save results internally or externally: FOCIS Flex internally stores up to 10,000 results using file-naming capabilities similar to those of the FlexScan OTDR. A micro-USB port supports fast upload of internally stored results to PC and ensures your FOCIS Flex software can be updated to the latest features and supported languages.

Wide range of adapter tips: Interchangeable adapter tips support connector inspection for a wide range of both single-fiber and multi-fiber patchcords and bulkhead-mounted connectors having either PC or APC polished end-faces.

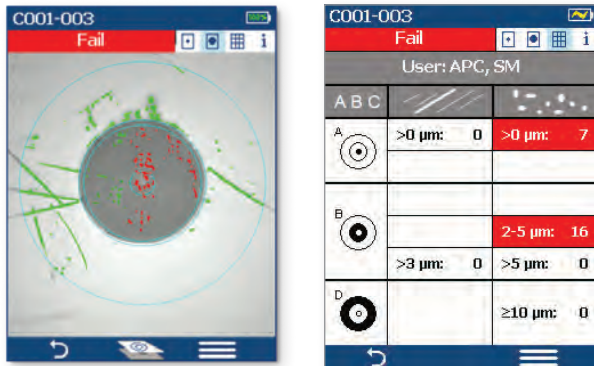
Bundled kits for significant savings: FOCIS Flex is available in kits that include a Basic license for Test Result Manager (TRM® 3.0), user-selected adapter tips and cleaning supplies, and a soft carry case.

Easy reporting and archiving: Included Test Result Manager (TRM 3.0) provides data processing and reporting locally via a PC. The FOCIS Flex mobile App is available for free download from Google play or App Store for sharing data with smart devices.

FOCIS Flex – Fiber Optic Connector Inspection System

Easy, Fast, Compact, Tether-free

U.S. Patent 9,217,688



Pass/Fail results in seconds: With the press of a single button, FOCIS Flex auto-focuses, captures and centers the end-face image, applies Pass/Fail rules, displays image and Pass/Fail results. Captured Pass/Fail results are easily viewed in either Image or Table view.

Image view shows end-face image with Pass/Fail region overlay, failing scratches/defects highlighted in red, and passing scratches/defects highlighted in green.

Table view shows analysis rule applied to determine Pass/Fail, analysis Zone IDs (A, B, C, D), scratch analysis results for each zone, and defect analysis results for each zone.

Specifications ^a

OPTICAL PERFORMANCE	
Field of View (viewed on FOCIS Flex)	Live: 710 x 860 μm; Captured, Zoomed Out: 560 x 600 μm; Captured, Partially Zoomed In: 360 x 390 μm; Captured, Fully Zoomed In: 180 x 195 μm
Field of View (Viewed on a PC)	Stored, Zoomed Out: 700 x 525 μm; Stored, Fully Zoomed In: 240 x 180 μm
Manual Detection Capability (minimum)	0.25 μm
Auto Analysis Resolution	<1.0 μm
Captured Image Size (Pixels)	648 x 480 VGA; Images stored internally in three .JPG files, one at each FOV
OPERATING FEATURES	
Focus	Auto-focus and manual focus
Centering	Auto-centering after capture
Pass/Fail Analysis	IEC 61300-3-35 (2015), IPC and user-defined criteria
Image Capture and File Storage Capacity	10,000 files
File Format (Image and Pass/Fail Results)	jpg, gif
Bluetooth Characteristics	SPP to FlexScan and FlexTester OTDRs; IAP to iOS devices
USB Characteristics	USB 1.1 mass storage device
Supported Languages	English, Chinese Simplified, Chinese Traditional, Finnish, French, German, Italian, Japanese, Korean, Polish, Russian, Spanish, Turkish
PHYSICAL AND POWER CHARACTERISTICS	
Display size, type, resolution	2.4", TFT, 240 x 320 with brightness control
Battery Type	NiMH, user replaceable
Battery Operating Time (typical)	8 hours (60 tests in 20 minutes each hour; auto-off enabled)
Recharge Time	<4.5 hours
Power Save Features	Auto-off (disabled, 2, 5, 10 minutes)
AC Charger voltage, frequency, current	100-240 V, 50/60 Hz, 5VDC, 2A
Size	47 x 37 x 183 mm (1.8 x 1.5 x 7.2 in)
Weight	240 g (0.5 lb)
ENVIRONMENTAL CHARACTERISTICS	
Operating Temperature	0 to +50 °C
Storage Temperature	-40 to +70 °C
Relative Humidity	95%, non-condensing
Transit and shock	2G vibration, 30G shock

Notes:

a. All specifications valid at 23°C ±2°C (73.4°F ±3.6°F).

FOCIS Flex – Fiber Optic Connector Inspection System

Easy, Fast, Compact, Tether-free

U.S. Patent 9,217,688

FlexScan OTDR PRO and BIPM Kits with FOCIS Flex

PRO Kits include the following items:

- FlexScan with accessories (AC charger, carry strap, SC/2.5 mm connector adapters, TRM® 3.0 Advanced Test Results Manager, carry case)
- FOCIS Flex Fiber Optic Connector Inspection System with accessories (AC charger, USB cable, soft carry case/holster)
- Two user-selected adapter tips and one user-selected One-Click Cleaner
- 150 m Fiber Ring (launch cable) with user-specified connectors

Complete kits expand on PRO Kits by adding bend insensitive fiber identifier with optional power meter (OFI-BIPM).

See FlexScan data sheet for FlexScan PRO and Complete Kit ordering information.

FOCIS Flex Adapter Tips (Contact AFL for adapter tips for other connector types)

DESCRIPTION	AFL NO.
SC-UPC bulkhead adapter tip	FFLX-01-SC
FC-UPC bulkhead adapter tip	FFLX-01-FC
ST-UPC bulkhead adapter tip	FFLX-01-ST
LC-UPC bulkhead adapter tip	FFLX-01-LC
Universal 2.5 mm, UPC ferrule adapter tip	FFLX-01-U25
Universal 1.25 mm, UPC ferrule adapter tip	FFLX-01-U125
SC-APC bulkhead adapter tip	FFLX-4S-ASC
FC-APC bulkhead adapter tip	FFLX-4S-AFC
LC-APC bulkhead adapter tip	FFLX-4S-ALC
Universal 2.5 mm, APC ferrule adapter tip	FFLX-01-A25
Universal 1.25 mm, APC ferrule adapter tip	FFLX-01-A125
FOCIS Flex adapter extension tube, straight, 46 mm	FFLX-01-EXTS46
FOCIS Flex adapter extension tube, straight, 80 mm:	FFLX-01-EXTS80
E2000 PC/UPC bulkhead adapter tip	FFLX-4S-E2K
E2000 APC bulkhead adapter tip	FFLX-4S-E2KA
Tip for SC/APC (OptiTap®) bulkhead adapter	FFLX-4S-OTA
Tip for OptiTip® APC ferrule and bulkhead adapter	DFS1-01-0013MR
MTP/PC ferrule & bulkhead adapter extended tip kit (base plus MTP/PC front end tip)	DFS1-00-0037MR
MTP/PC and MTP/APC ferrule & bulkhead adapter extended tip kit (base, MTP/PC, MTP/APC front end tips)	DFS1-00-0042MR
MTP/APC ferrule and bulkhead adapter extended tip kit (base plus MTP/APC front end tip)	DFS1-01-0010MR

Ordering Information

DESCRIPTION	AFL NO.
FOCIS Flex Kit, soft carry case/holster, USB cable, AC charger, TRM® 3.0 reporting software, reference guide, no tips	FOCIS-FLX-P4XN
FOCIS Flex Kit, soft carry case/holster, USB cable, AC charger, TRM 3.0 reporting software, reference guide, 2 user-selected UPC adapter tips (ferrule and bulkhead), user-selected One-Click cleaner	FOCIS-FLX-P4XU
FOCIS Flex Kit, soft carry case/holster, USB cable, AC charger, TRM 3.0 reporting software, reference guide, 2 user-selected APC adapter tips (ferrule and bulkhead), user-selected One-Click cleaner	FOCIS-FLX-P4XA
FOCIS Flex Kit, soft carry case/holster, USB cable, AC charger, TRM 3.0 reporting software, reference guide, user-selected UPC adapter tips (ferrule and bulkhead), 2 user-selected APC adapter tips (ferrule and bulkhead), user-selected One-Click cleaner	FOCIS-FLX-P4XUA

FOCIS Flex – Fiber Optic Connector Inspection System


Easy, Fast, Compact, Tether-free

U.S. Patent 9,217,688

Test Management and Reporting Software


DESCRIPTION	AFL NO.
TRM 3.0 with Basic License, USB delivery (included with all FOCIS Flex kits)	TRM3-BASIC
TRM 3.0 upgrade from Basic to Advanced License, USB delivery	TRM3-UPGRADE
TRM 3.0 upgrade from Basic to Advanced License, email delivery	TRM3-UP-EMAIL
FOCIS Flex App (Google play or App Store)	Free Download

Recommended Products



FlexScan® FS300 (quad) and FS200 (single-mode) OTDRs

- SmartAuto® 1-button automated testing for fast results
- LinkMap® color-coded icons for easy troubleshooting
- FleXpress® mode (FS200) completes OTDR test in <5 seconds!
- Integrated Source, Power Meter and VFL



OFI-BIPM Optical Fiber Identifier

- World class signal sensitivity
- Trigger lock, positive stop for optimum detection
- Integrated optical power meter option

Qualifications

CATEGORY	REGULATION/STANDARD	QUALIFICATION
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety /EMC /EMI	IEC	Compliant to IEC 61010-1 for safety requirements for electrical equipment
	EN	Compliant to EN 61010-1 for safety requirements for electrical equipment
	IEC	Compliant to IEC 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
	FCC	Compliant to code of federal regulations FCC 47 CFR 15 on unlicensed transmissions
	FDA	Compliant to code of federal regulations FDA 21 CFR 1040.10 and 1040.11 on laser products
RoHS	IEC	Compliant to IEC 60825-1 for safety of laser products
	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)
Test Method	IEC	Compliant to IEC 61300-3-35 for visual inspection of fiber optic connectors and fiber-stub transceivers
	IPC	Compliant to IPC-8497-1 for cleaning methods and contamination assessment for optical assembly

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International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts.

FOCIS Lightning® Multi-Fiber Optic Connector Inspection System



Features

- Self-contained, tether-free, compact, hand-held inspection solution
- Auto-focus and auto-centering for fast, easy inspection
- Stores 10k images or easily shares data via USB or optional WiFi connectivity
- IEC, IPC, AT&T, and user-defined auto-analysis
- Wide variety of adapter tips for MPO and single-fiber connector types

Applications

- Inspect multi-fiber and single-fiber connectors and adapters
- Data center optical network installation, turn-up, and troubleshooting
- Verification proper connector cleaning practices
- Pairs with OTDR for comprehensive reporting

FOCIS Lightning is a compact self-contained inspection probe that captures and displays the entire MPO end-face image in less than two seconds. One button provides auto-focusing, centering, and pass/fail analysis at the connector and individual fiber level. It can complete a 24-fiber MPO inspection task in less than 15 seconds. Results can be easily shared via USB, WiFi, and Bluetooth®.

Pass/Fail results in seconds: FOCIS Lightning was designed to quickly inspect multi-fiber connectors and bulkheads, such as MPO and MTP®, including multi-row varieties. It can perform industry standard and user-defined end-face cleanliness analysis at a rate of about 1 second per fiber - the fastest in the Industry.

Internal storage and multiple export options: FOCIS Lightning can store 10,000 connector level and individual fiber images, analysis, overlays, and zones tables locally and provides optional WiFi and Bluetooth wireless links for archiving and reporting. The AFL FOCIS App (iOS and Android) provides a comprehensive and user-friendly feature set as well as connectivity with AFL's cloud-based aeRos® workflow automation platform.

Untethered operation: With rechargeable battery and integrated 2.4" TFT color LCD screen, FOCIS Lightning can be used independently.

Multi-fiber front-end adapter tips: Multi-fiber front-end adapter tips support single row and multi-row MT connector inspection for a wide range of patch cords and bulkhead-mounted connectors having either PC/UPC or APC polished end-faces. The probe snout includes a key which in combination with a slot on the adapter tips ensures that adapter tips never loosen during use, under any circumstances.

FOCIS Lightning® Multi-Fiber Optic Connector Inspection System

Specifications^a

OPTICAL PORT PARAMETERS	SPECIFICATION
Field of View (FOV; viewed on FOCIS Lightning)	Multi-fibers Live: 1960 x 4670 µm and 980 x 2335 µm Multi-fibers Captured, Overview: 1960 x 4338 µm Multi-fibers Captured, Details: 130 x 130 µm Single fiber Live: 890 x 1075 µm and 445 x 537 µm Single fiber Captured Zoomed Out: 684 x 742 µm Single fiber Captured, Partially Zoomed In: 456 x 492 µm Single fiber Captured, Fully Zoomed In: 228 x 246 µm
Field of View (FOV; viewed on a PC)	Multi-fibers Captured, Overview: 1960 x 4670 µm Multi-fibers Captured, Details: 130 x 130 µm Single fiber Captured, Zoomed Out: 525 x 700 µm Single fiber Captured, Partially Zoomed In: 355 x 475 µm Single fiber Captured, Zoomed In: 175 x 235 µm
Manual Detection Capability (minimum)	0.25 µm
Auto Analysis Resolution	<1.0 µm
Internally Stored Image Size (pixels)	Multi-fibers: 640 x 480 VGA; images stored internally in N+1 .JPG files, one in Overview screen and N each in Fiber Details screen Single fiber: 640 x 480 VGA; images stored internally in three .JPG files, one at each FOV
Bluetooth Image and Overlay	2 x QVGA (320 x 240; image + overlay) to AFL test instruments (SPP) 1 x VGA (640 x 480) file to Apple iOS devices (IAP / MFi)
Maximum No Damage Live Fiber Power Level	+20 dBm; image cannot be viewed if fiber is live
Focus Methods and Speeds	Auto-focus (≤3 sec) and manual focus
Centering	Auto-centering (<1 sec)
Zoom in Live Mode	1x and 2x modes
Image Capture with Pass/Fail Analysis	IEC 61300-3-35 (2015), AT&T TP-76461, IPC-8497-1, user-set criteria Capture SF <1 sec, MF <2 sec; Analysis <0.15 sec per fiber
Results Storage (Image and Pass/Fail Results)	Yes
File Format	JPG, GIF
File Storage Capacity	10,000 files
OPERATING FEATURES	
WiFi Characteristics (Wireless Models Only!)	IEEE 802.11 bng
Bluetooth Characteristics (Wireless Models Only!)	IAP (iPod accessory protocol), SPP 0 x 1101
USB Characteristics	USB 2.0 mass storage device
Supported Languages	English, Chinese Simplified, Chinese Traditional, Finnish, French, German, Italian, Japanese, Korean, Polish, Russian, Spanish, Turkish
ENVIRONMENT PARAMETERS	
Storage Temperature	-40 °C to +70 °C
Operating Temperature	0 °C to +50 °C
Relative Humidity	0 to 95% RH
Vibration Limits	2G (transportation)
Transit Drop (without soft case)	300 mm (12 inches, all sides, dust cover installed)
Transit Drop (with soft case)	460 mm (18 inches, all sides, dust cover installed)

Notes:

- All specifications valid at 23°C ±2°C (73.4°F ±3.6°F).
- Operating conditions: 60 tests in 20 minutes, then auto-off; repeat each hour.
- Trademarks are the property of their respective owners.

FOCIS Lightning® Multi-Fiber Optic Connector Inspection System

Specifications^a

PHYSICAL AND POWER CHARACTERISTICS	
Display Size, Type, Resolution	2.4", color TFT, backlit, 240 x 320 with brightness control
Battery Type	NiMH, user replaceable
Operating Time (typical)	6 hours ^b ; 3 hours continuous
Power Save Features	Auto-off (disabled, 2, 5, 10 min)
Recharge Time	≤4 hours
Low-Battery Warning	Alerts when ≤15 minutes battery operation remains
AC Charger Voltage, Frequency, Current	100-240VAC, 50/60Hz, 5VDC, 2A
Charger Jack	3.2 mm, center positive
Size	47 x 37 x 190 mm (1.8 x 1.5 x 7.7 in)
Weight	280 g (0.62 lb)
Safety & Compliance Certifications	UL, CE, FCC

Ordering Information

DESCRIPTION	AFL NO.
FOCIS Lightning Kit, soft carry case, AC charger, with no tips or One-Click® cleaner	FOCIS-LTNG-N
FOCIS Lightning Kit, soft carry case, AC charger, (1) UPC ferrule and bulkhead adapter tip, (2) One-Click MPO cleaners	FOCIS-LTNG-U
FOCIS Lightning Kit, soft carry case, AC charger, (1) APC ferrule and bulkhead adapter tip, (2) One-Click MPO cleaners	FOCIS-LTNG-A
FOCIS Lightning Kit, soft carry case, AC charger, (1) UPC and (1) APC ferrule and bulkhead adapter tips, (2) One-Click MPO cleaners	FOCIS-LTNG-UA
FOCIS Lightning Kit, soft carry case, AC charger, (1) UPC and (1) APC ferrule and bulkhead adapter tips, (2) One-Click MPO cleaners, single fiber adapter	FOCIS-LTNG-UAS
FOCIS Lightning No Wireless Kit, soft carry case, AC charger, with no tips or One-Click cleaner	FOCIS-LTNG-NW-N
FOCIS Lightning No Wireless Kit, soft carry case, AC charger, (1) UPC ferrule and bulkhead adapter tip, (2) One-Click MPO cleaners	FOCIS-LTNG-NW-U
FOCIS Lightning No Wireless Kit, soft carry case, AC charger, (1) APC ferrule and bulkhead adapter tip, (2) One-Click MPO cleaners	FOCIS-LTNG-NW-A
FOCIS Lightning No Wireless Kit, soft carry case, AC charger, (1) UPC and (1) APC ferrule and bulkhead adapter tips, (2) One-Click MPO cleaners	FOCIS-LTNG-NW-UA

FOCIS Lightning Adapter Tips and Accessories

DESCRIPTION	TIP ID	AFL NO.
Adapter tip for MPO-12/24 APC bulkhead (with key)	M12A	FLTNG-01-M12A
Adapter tip for MPO-12/24 UPC bulkhead (with key)	M12U	FLTNG-01-M12U
Adapter tip for MPO-16/32 UPC bulkhead (with key)	M16U	FLTNG-01-M16U
Universal adapter tip for MPO-12/16/24/32 APC bulkhead (partial key)	MPA	FLTNG-01-MPA
Universal adapter tip for MPO-12/16/24/32 UPC bulkhead (partial key)	MPU	FLTNG-01-MPU
Adapter tip for MPO-12/16/24/32 UPC bulkhead (no key)	MPOU	FLTNG-01-MPOU
Adapter Tip for MPO-12/16/24/32 APC connector (with key)	MAC	FLTNG-01-MAC
Adapter Tip for MPO-12/16/24/32 UPC connector (with key)	MUC	FLTNG-01-MUC
Adapter Tip for OptiTip male (pinned) connector	OPTM	FLTNG-01-OPTM
Adapter Tip for OptiTip female (unpinned) connector	OPTF	FLTNG-01-OPTF
Coupler for most 'FFLX' single fiber connector adapter tips	SFA	FLTNG-01-SFA
Extended adapter tip for LC-APC bulkhead	ALCM	FLTNG-01-ALCM
Extended adapter tip for LC-UPC bulkhead	ULCM	FLTNG-01-ULCM
MPO extender barrel	MPE	FLTNG-01-MPE

Notes:


- All specifications valid at 23°C ±2°C (73.4°F ±3.6°F).
- Operating conditions: 60 tests in 20 minutes, then auto-off; repeat each hour.

FOCIS Lightning® Multi-Fiber Optic Connector Inspection System

Test Management and Reporting Software


DESCRIPTION	AFL NO.
FOCIS Flex App (Google play or App Store)	Free Download

Recommended Products



FlexScan® FS300 (quad) and FS200 (single-mode) OTDRs

- SmartAuto® 1-button automated testing for fast results
- LinkMap® color-coded icons for easy troubleshooting
- FleXpress® mode (FS200) completes OTDR test in <5 seconds!
- Integrated Source, Power Meter and VFL



One-Click® Cleaner MPO / MPO-16

- Ideal for Data Centers and high density optical networks
- Designed to work on MTP®/MPO multi-fiber connectors
- Cleans connectors on jumpers and in adapters

Qualifications

CATEGORY	REGULATION/STANDARD	QUALIFICATION
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety /EMC /EMI	IEC	Compliant to IEC 61010-1 for safety requirements for electrical equipment
	EN	Compliant to EN 61010-1 for safety requirements for electrical equipment
	IEC	Compliant to IEC 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
	FCC	Compliant to code of federal regulations FCC 47 CFR 15 on unlicensed transmissions
RoHS	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)
Test Method	IEC	Compliant to IEC 61300-3-35 for visual inspection of fiber optic connectors and fiber-stub transceivers
	IPC	Compliant to IPC-8497-1 for cleaning methods and contamination assessment for optical assembly

Contact Sales@AFLglobal.com to schedule a demonstration or learn how to buy.

Visit www.AFLglobal.com/Test to learn more about FOCIS Lightning.

International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts.

FOCIS Duel® Fiber Optic Connector Inspection System



Features

- Self-contained, tether-free, compact, hand-held inspection solution
- Auto-focus (both ports) and auto-centering (Port 1) for fast, easy inspection
- Industry standard and user-defined inspection (Port 1)
- Broad range of adapter tips including MPO/MTP
- Rechargeable, field-replaceable NiMH battery lasts more than 8 hours
- Snout and adapter tip slots eliminate loosening during normal operation
- Fast 1X/2X zoom toggle

Applications

- Inspect connectors on bulkhead adapters (Port 1) and patch cords (Port 2) without swapping adapter tips
- Optimal tool for optical network installation, turn-up, troubleshooting and maintenance
- Verification that proper connector cleaning practices are being used

FOCIS Duel is an ultra-compact dual-port inspection scope for fiber optic connectors that uses liquid lens technology for fast auto-focus, centering and Pass/Fail analysis on two ports. This enables users to inspect both connectors in a mated connection without having to change adapter tips.

Inspect, store, and report: The FOCIS Duel can perform IEC, IPC, AT&T and user-defined end-face cleanliness analysis and store Port 1 images and reports locally. The AFL FOCIS App (iOS and Android) provides a comprehensive and user-friendly feature set as well as connectivity with AFL's cloud-based aeRos® workflow automation platform.

Pass / fail results in seconds: With the press of a single button, Port 1 of the FOCIS Duel auto-focuses, captures, centers, and analyzes the end-face image to industry standard IEC 61300-3-35 (2015), IPC, AT&T, and user-defined criteria.

Untethered operation: With rechargeable battery and integrated 2.4" color TFT LCD screen, FOCIS Duel can be used independently.

Wide range of adapter tips: Port 1 – Interchangeable adapter tips support single and multi-fiber connector inspection for a wide range of patch cords and bulkhead-mounted connectors having either PC/UPC or APC polished end-faces. A key on the probe snout combined with a slot on the adapter tips assures that adapter tips never loosen during use, under any circumstances. Quad-slotted APC adapter tips ensure the screen is visible in any use case. Port 2 – A slot on the adapter tips combined with a keyed snout eliminates loosening during normal use. Port 2 adapter tips are available for all common connector types – Universal 1.25 mm and 2.5 mm, SC, and LC in both UPC and APC polish types.

Complete kit: Inspection kits include AC charger, carry strap, two user-selected adapter tips (optionally), and soft carry case.

FOCIS Duel® Fiber Optic Connector Inspection System

Specifications ^a

FIRST PORT (Port 1) PARAMETERS	SPECIFICATION
Field of View (FOV; viewed on FOCIS Duel)	Live: 710 x 860 µm; Captured, Zoomed Out: 560 x 600 µm; Captured, Partially Zoomed In: 360 x 390 µm; Captured, Fully Zoomed In: 180 x 195 µm
Field of View (FOV; viewed on a PC)	Captured, Zoomed Out: 525 x 700 µm; Captured, Partially Zoomed In: 355 x 475 µm; Captured, Zoomed In: 175 x 235 µm
Manual Detection Capability (minimum)	0.25 µm
Auto Analysis Resolution	<1.0 µm
Internally Stored Image Size (pixels)	640 x 480 VGA; images stored internally in three .JPG files, one at each FOV
Bluetooth Image and Overlay	2 x QVGA (320 x 240; image + overlay) to AFL test instruments (SPP) 1 x VGA (640 x 480) file to Apple iOS devices (IAP / MFi)
Maximum No Damage Live Fiber Power Level	+20 dBm; Image cannot be viewed if fiber is live
Focus Methods and Speeds	Auto-focus (≤3 sec) and manual focus
Centering	Auto-centering (<1 sec)
Zoom in Live Mode	1x and 2x modes
Image Capture with Pass/Fail Analysis	IEC 61300-3-35 (2015), AT&T TP-76461, IPC-8497-1, user-set criteria
Results Storage (Image and Pass/Fail Results)	Yes
File Format	JPG, GIF, Port 1 only
File Storage Capacity	10,000 files
SECOND PORT (Port 2) PARAMETERS	
Field of View (FOV; Viewed on FOCIS Duel)	Live: 365 x 440 µm and 183 x 220 µm
Manual Detection Capability (minimum)	0.25 µm
Maximum No Damage Live Fiber Power Level	+20 dBm; Image cannot be viewed if fiber is live
Zoom in Live Mode	1x and 2x modes
Focus Methods and Speeds	Auto-focus (≤3 sec) and manual focus
OPERATING FEATURES	
Bluetooth Characteristics	IAP (iPod accessory protocol), SPP 0 x 1101
USB Characteristics	USB 2.0 mass storage device
Supported Languages	English, Chinese Simplified, Chinese Traditional, Finnish, French, German, Italian, Japanese, Korean, Polish, Russian, Spanish, Turkish
ENVIRONMENT PARAMETERS	
Storage Temperature	-40°C to +70°C
Operating Temperature	0°C to +50°C
Relative Humidity	0 to 95% RH
Vibration Limits	2G (transportation)
Transit Drop (without soft case)	300 mm (12 inches, all sides, dust cover installed)
Transit Drop (with soft case)	460 mm (18 inches, all sides, dust cover installed)

Notes:

- All specifications valid at 23°C ±2°C (73.4°F ±3.6°F).
- Operating conditions: 60 tests in 20 minutes, then auto-off; repeat each hour.

FOCIS Duel® Fiber Optic Connector Inspection System

Specifications ^a

PHYSICAL AND POWER CHARACTERISTICS	
Display Size, Type, Resolution	2.4", color TFT, backlit, 240 x 320 with brightness control
Battery Type	NiMH, user replaceable
Operating Time (typical)	8 hours ^b ; 3 hours continuous
Power Save Features	Auto-off (disabled, 2, 5, 10 min)
Recharge Time	≤4 hours
Low-Battery Warning	Alerts when ≤15 minutes battery operation remains
AC Charger Voltage, Frequency, Current	100-240VAC, 50/60Hz, 5VDC, 2A
Charger Jack	3.2 mm, center positive
Size	47 x 37 x 175 mm (1.8 x 1.5 x 6.8 in)
Weight	280 g (0.62 lb)
Safety & Compliance Certifications	UL, CE, FCC

Notes:

- a. All specifications valid at 23°C ±2°C (73.4°F ±3.6°F).
- b. Operating conditions: 60 tests in 20 minutes, then auto-off; repeat each hour.

Ordering Information

DESCRIPTION	AFL NO.
FOCIS Duel Kit, soft carry case, AC charger, with no tips or One-Click® cleaner	FOCIS-DUEL-N
FOCIS Duel Kit, soft carry case, AC charger, user-selected: (2) UPC ferrule & bulkhead adapter tips, and (1) One-Click cleaner	FOCIS-DUEL-U
FOCIS Duel Kit, soft carry case, AC charger, user-selected: (2) APC ferrule & bulkhead adapter tips, and (1) One-Click cleaner	FOCIS-DUEL-A
FOCIS Duel Kit, soft carry case, AC charger, user-selected: (2) UPC and (2) APC ferrule & bulkhead adapter tips, and (1) One-Click cleaner	FOCIS-DUEL-UA

FOCIS Duel Adapter Tips


PORT USAGE	DESCRIPTION	TIP ID	AFL NO.
1	SC-APC bulkhead adapter tip, quad-slotted	XASC	FFLX-4S-ASC
1	FC-APC bulkhead adapter tip, quad-slotted	XAFC	FFLX-4S-AFC
1	LC-APC bulkhead adapter tip, quad-slotted	XALC	FFLX-4S-ALC
2	LC-UPC ferrule adapter tip, single-slotted female "click-in"	SULC	FDUO-01-ULC
2	LC-APC ferrule adapter tip, single-slotted female "click-in"	SALC	FDUO-01-ALC
2	SC-UPC ferrule adapter tip, single-slotted female "click-in"	SUSC	FDUO-01-USC
2	SC-APC ferrule adapter tip, single-slotted female "click-in"	SASC	FDUO-01-ASC
2	Universal 1.25 mm UPC ferrule adapter tip, single-slotted	U1	FDUO-01-U125
2	Universal 1.25 mm APC ferrule adapter tip, single-slotted	A1	FDUO-01-A125
2	Universal 2.5 mm UPC ferrule adapter tip, single-slotted	U2	FDUO-01-U25
2	Universal 2.5 mm APC ferrule adapter tip, single-slotted	A2	FDUO-01-A25

FOCIS Duel® Fiber Optic Connector Inspection System

Test Management and Reporting Software


DESCRIPTION	AFL NO.
TRM 3.0 with Basic License, USB delivery (included with all FOCIS Duel kits)	TRM3-BASIC
TRM 3.0 upgrade from Basic to Advanced License, USB delivery	TRM3-UPGRADE
TRM 3.0 upgrade from Basic to Advanced License, email delivery	TRM3-UP-EMAIL
FOCIS Flex App (Google play or App Store)	Free Download

Recommended Products



FlexScan® FS300 (quad) and FS200 (single-mode) OTDRs

- SmartAuto® 1-button automated testing for fast results
- LinkMap® color-coded icons for easy troubleshooting
- Flexpress® mode (FS200) completes OTDR test in <5 seconds!
- Integrated Source, Power Meter and VFL



OFI-BIPM Optical Fiber Identifier

- World class signal sensitivity
- Trigger lock, positive stop for optimum detection
- Integrated optical power meter option

Qualifications

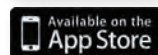
CATEGORY	REGULATION/STANDARD	QUALIFICATION
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety /EMC /EMI	IEC	Compliant to IEC 61010-1 for safety requirements for electrical equipment
	EN	Compliant to EN 61010-1 for safety requirements for electrical equipment
	IEC	Compliant to IEC 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
RoHS	FCC	Compliant to code of federal regulations FCC 47 CFR 15 on unlicensed transmissions
	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)
Test Method	IEC	Compliant to IEC 61300-3-35 for visual inspection of fiber optic connectors and fiber-stub transceivers
	IPC	Compliant to IPC-8497-1 for cleaning methods and contamination assessment for optical assembly

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International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts.

FOCIS WiFi[®] Fiber Optic Connector Inspection System



Features

- Trim, lightweight, ergonomic and highly productive tool
- App-based automatic and manual focus; auto-centering after image capture
- One button workflow using rapid LED feedback on probe
- Multi-color LED on probe for fast pass/fail user inspection feedback
- Pairs with an iOS or Android smart device or the aeRos[®] cloud-based workflow management platform
- IEC, IPC, AT&T and user-defined pass/fail analysis when paired with a smart device
- Wide range of adapter tips including MPO/MTP multi-fiber connectors and bulkheads
- Over 8 hours operation with rechargeable Li-Ion battery

Applications

- Inspection of connectors on patch cords or in bulkhead adapters
- Installation, troubleshooting and maintenance of fiber network
- Inspection of multi-fiber connectors including MPO16 and MXC[®]
- Critical fiber infrastructure performance assurance
- Verification of proper connector cleaning methods of procedure

FOCIS WiFi is an ergonomic Fiber Optic Connector Inspection System that, when paired with an iOS or Android smart device, provides fast and accurate IEC/IPC/AT&T compliant and user-defined pass/fail end-face cleanliness analysis. Free of charge iOS and Android companion apps support a comprehensive and user-friendly feature set.

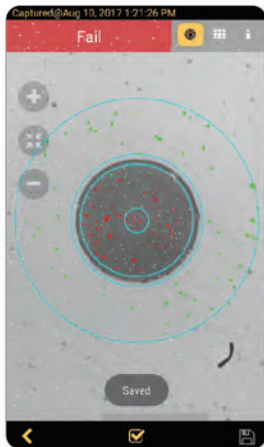
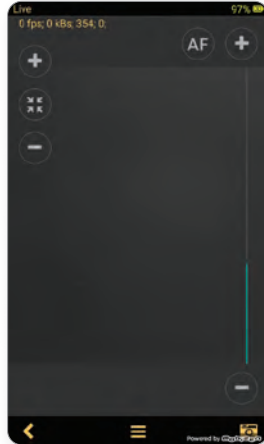
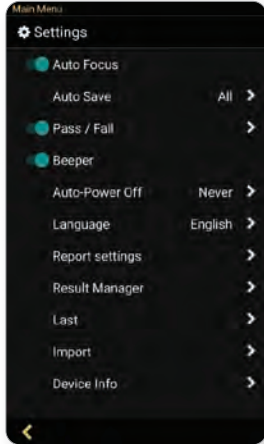
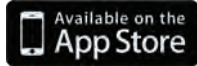
Pass/fail results in seconds: With the press of a single button, FOCIS WiFi auto-focuses, captures, centers and analyzes the end-face image to industry standard IEC 61300-3-35 (2015), IPC-8497-1, AT&T TP-76461 and user-defined criteria.

Untethered operation: App-based report generator with results/reports transferable to the aeRos cloud. With rechargeable battery and convenient pass/fail LED feedback, FOCIS WiFi can be used semi-independently.

Wide range of adapter tips: Interchangeable adapter tips support single and multi-fiber connector inspection for a wide range of patch cords and bulkhead-mounted connectors having either PC/UPC or APC polished end-faces.

FOCIS WiFi[®] Fiber Optic Connector Inspection System

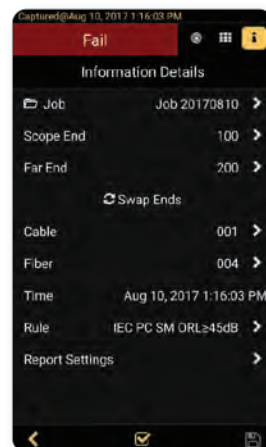
Fiber Inspection



Smart Device Apps: FOCIS WiFi

Features

- Live image video streaming
- Auto-focus and auto centering
- IEC, IPC, industry standard, and user-defined inspection rules
- Pinch-to-zoom fiber end-face images
- Report generation
- Multi-language Graphical User Interface (GUI)
- Day/time stamped job saving



FOCIS WiFi2® Fiber Optic Connector Inspection System

Specifications^a

OPTICAL PERFORMANCE	
Field of View (FOV) ^b	Live and Captured: 612 x 460 µm;
Manual Detection Capability (minimum)	0.25 µm
Auto Analysis Resolution	<1.0 µm
Stored ^c Image Size	2592 x 1944 (5M) pixels
End-face Illumination	Coaxial blue LED 476 nm
Maximum No Damage Live Fiber Power Level	+20 dBm (Image cannot be viewed if fiber is live)
OPERATING FEATURES	
WiFi Characteristics	IEEE 802.11bng
Focus	Auto-focus (≤3 sec) and manual focus
Centering	Auto-centering (<1 sec)
Button Functionality	Power On/Off (>3 secs); Capture/Analysis/Auto-save/Live
Main LED Functionality	Blue = Power On, Green = Pass, Red = Fail, White = No Fiber
Magnification ^b	Variable from 80X to 700X, in Live and Capture modes
Applications Compatibility	Android ≥4.0.3, iOS ≥8.1
Image Capture with Pass/Fail Analysis ^c	IEC 61300-3-35 (2015), AT&T TP-76461, IPC-8497-1, user-set criteria
Image File Format	JPEG, GIF
Image & Pass/Fail Results Storage ^c	Yes
File Storage Capacity ^c	Unlimited
Result Manager ^c	Storage, rename, delete, transfer
Reporting ^c	Built-in fillable PDF reporter
Supported Languages ^c	English, French, German, Japanese, Korean, Russian, Spanish
PHYSICAL AND POWER CHARACTERISTICS	
Battery Type	Li-Ion, non-replaceable by user
Maximum Charger Current Draw	1.2A, battery charge current + device consumption current
Operating Time (typical)	60 hours ^d ; 8 hours continuous
Recharge Time	≤4 hours
Low-Battery Warning	Viewed on smart device
Charging LED Status; viewed on smart device	Red = Charging, Green = Fully Charged, Blinking Red/Green = Battery Fault
Power Save Features (Controlled by App)	Probe Auto-Off – disabled, 5, 10, 30, 60 minutes; Probe WiFi Not Connected – 5 minutes
AC Charger Voltage, Frequency, Current	100-240VAC, 50/60Hz, 5VDC, 2A
Charger Jack	0.9 x 3.2 mm barrel, center (tip) positive
Size (Max Diameter x Length)	Ø 40 x 226 mm (Ø 1.6 x 8.9 in)
Weight	150 g (5.3 oz)
ENVIRONMENTAL CHARACTERISTICS	
Operating Temperature	0 to +50 °C; 95% RH, non-condensing
Storage Temperature	-40 to +70 °C; 95% RH, non-condensing

Notes:

- a. All specifications valid at 23°C ±2°C (73.4°F ±3.6°F).
- b. Viewed on Smart Device.
- c. In iOS & Android Apps.
- d. Operating conditions: 60 tests in 20 minutes, then auto-off; Repeat each hour

Ordering Information

DESCRIPTION	AFL NO.
FOCIS WiFi2 Kit, soft carry case, AC charger, with NO tips or One-Click cleaner	FOCIS-WIFI2-N
FOCIS WiFi2 Kit, soft carry case, AC charger, user-selected: (2) UPC ferrule & bulkhead adapter tips and (1) One-Click cleaner	FOCIS-WIFI2-U
FOCIS WiFi2 Kit, FOCIS WiFi2, soft carry case, AC charger, user-selected: (2) APC ferrule & bulkhead adapter tips and (1) One-Click cleaner	FOCIS-WIFI2-A
FOCIS WiFi2 Kit, soft carry case, AC charger, user-selected: (2) UPC and (2) APC ferrule & bulkhead adapter tips and (1) One-Click cleaner	FOCIS-WIFI2-UA

FOCIS WiFi2® Fiber Optic Connector Inspection System

Recommended Products



FS300



FS200

FlexScan® FS300 (quad) and FS200 (single-mode) OTDRs

- SmartAuto® 1-button automated testing for fast results
- LinkMap® color-coded icons for easy troubleshooting
- Flexpress® mode (FS200) completes OTDR test in <5 seconds!
- Integrated Source, Power Meter and VFL



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- World class signal sensitivity
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	IPC	Compliant to IPC-8497-1 for cleaning methods and contamination assessment for optical assembly

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Visit www.AFLglobal.com/Test to learn more about FOCIS WiFi2

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DFS1 Digital FiberScope



Features

- One-handed ergonomic design
- 400x magnification
- Fast, easy focus and display capture
- Video output via USB port to user PC
- Powered from USB; no batteries required
- Extensive selection of adapter tips

Applications

- Optical connector and bulkhead adapter inspection
- Generate installation inspection records

The DFS1 Digital FiberScope provides magnified video inspection of optical fiber connector end-faces. The ergonomically designed hand-held unit illuminates fiber end-faces and displays magnified images via USB port to a PC running AFL SimpleView Fiber inspection software, or to legacy AFL M-series OTDRs, C-series OTDRs and Certification Testers. SimpleView software displays, labels and stores captured images as part of connector installation and/or maintenance records on the user's PC.

Easy to use: A large adjustment knob provides easy focusing using real-time view. Once focused, a conveniently located trigger button signals the attached display device to capture the image for analysis and archiving. The scope's ergonomic shape and control locations support comfortable, single-handed operation.

No Batteries: The DFS1 is powered through the USB port, eliminating the need for an additional battery or AC power supplies.

Safe for eyes: Electronic video inspection eliminates all danger of eye damage from active (lit) fibers carrying either visible or infrared wavelengths.

Versatile: An extensive assortment of adapters supports inspection of a wide range of optical jumper cable connector ferrules and bulkhead adapters. Bulkhead adapter tips are available in multiple lengths as well as 60° angle. Connector adapters are available for PC, UPC or APC polished ferrules in 1.25 mm, 2.5 mm and other diameters. The DFS1 is available in three different kits which provide either PC/ UPC adapters, APC adapters or no adapters.

Includes free software: AFL SimpleView™ Fiber Inspection Software is an application, which permits the DFS1 Digital FiberScope to be used with Windows® computers. AFL SimpleView software displays a live, high-resolution video image of the end-face of an optical fiber on the PC's display. SimpleView software is a free download www.AFLglobal.com.

DFS1 Digital FiberScope

Specifications ^a

VALUE	PARAMETERS
Magnification	400X
Field of View	~400 µm x 300 µm
Resolution	0.5 µm detectable
Operating Temperature	0°C to 50°C
Storage Temperature	-20°C to 70°C
Focus	Manual adjustment, 2 mm max travel
Dimensions	35 mm diameter x 175 mm length (without tip)
Weight	200 g
Light Source	Blue LED
Power Supply	USB port of M-series OTDRs or C-series OTDRs and Certification Testers

Note:

a. All specifications valid at 23°C ±2°C (73.4°F ±3.6°F) unless otherwise specified.

Ordering Information

The DFS1 is available in three different kits, which provide PC/UPC adapters, APC adapters, or no adapters. Each DFS1 kit includes: DFS1 Digital FiberScope, 6-compartment adapter tips storage box, FiberScope software update for M series OTDRs, quick reference guide and soft carry case.

AFL NO.	DESCRIPTION	CONTAINS (EA.)										
		DFS1	ONE-CLICK CLEANERS		ADAPTER TIPS							
					MALE				FEMALE			
					PC		APC		PC		APC	
SC, ST, FC	MU/LC	2.5 MM	1.25 MM	2.5 MM	SC, FC	LC	SC, FC	SC				
DFS-00-04XU	DFS1 PC/UPC Kit	1	1	1	1	1			1	1		
DFS-00-04XA	DFS1 APC Kit	1	1					1			1	1
DFS-00-04XN	DFS1 kit without adapters	1										

DFS1 Accessories

DESCRIPTION	AFL NO.
Soft carry case for DFS1 Digital FiberScope and adapters	DFS1-04-0001MZ
6-compartment adapter tip storage box	1400-01-0093MZ
11-compartment adapter tip storage box	1400-01-0094MZ
Digital FiberScope display software update for M series OTDR	DFS1-001-00
One-Click Cleaner SC, ST, FC	8500-05-0001MZ
One-Click Cleaner MU/LC	8500-05-0002MZ
2-year Service Plan for DFS1 kits - Includes free repair or replace, if your DFS1 kit is found defective.	SP2-DFS1-04X

DFS1 Digital FiberScope

DFS1 Adapter Tips

The following table identifies commonly required adapter tips. Please consult the factory for additional adapter tips and prices.

DESCRIPTION	AFL NO.
PC FERRULE CONNECTOR ADAPTER TIPS	
Universal 1.25 mm tip for PC ferrule connector	DFS1-00-0001MR
Universal 2.5 mm tip for PC ferrule connector	DFS1-00-0002MR
Universal 2.0 mm tip for PC ferrule connector	DFS1-00-0005MR
Slim 1.6 mm tip for PC ferrule (termini)	DFS1-00-0006MR
Slim 1.25 mm probe tip for LuxCis and termini	DFS1-00-0038MR
Slim 2.5 mm PC ferrule tip for ELIO and termini	DFS1-00-0039MR
Tip for ELIO 1.25 mm ferrule connector	DFS1-00-0008MR
SC/PC AND FC/PC BULKHEAD ADAPTER TIPS	
Tip for SC/PC and FC/PC bulkhead adapter	DFS1-00-0003MR
Medium extended tip for SC/PC and FC/PC bulkhead adapter	DFS1-00-0011MR
Long extended tip for SC/PC and FC/PC bulkhead adapter	DFS1-00-0012MR
60° angled tip for SC/PC bulkhead adapter	DFS1-00-0040MR
ST/PC BULKHEAD ADAPTER TIPS	
Tip for ST/PC bulkhead adapter	DFS1-00-0014MR
Short extended tip for ST/PC bulkhead adapter	DFS1-00-0015MR
Medium extended tip for ST/PC bulkhead adapter	DFS1-00-0016MR
Long extended tip for ST/PC bulkhead adapter	DFS1-00-0017MR
60° angled tip for ST/PC bulkhead adapter	DFS1-00-0018MR
LC/PC BULKHEAD ADAPTER TIPS	
Tip for LC/PC bulkhead adapter	DFS1-00-0004MR
Medium extended tip for LC/PC bulkhead adapter	DFS1-00-0020MR
Long extended tip for LC/PC bulkhead adapter	DFS1-00-0021MR
60° angled tip for LC/PC bulkhead adapter	DFS1-00-0022MR
Short (~60 mm) extended tip for LC PC/UPC bulkhead adapter	DFS1-00-0059MR
LC/UPC female style adapter tip	DFS1-00-0062MR
MU/PC BULKHEAD ADAPTER TIPS	
Tip for MU/PC bulkhead adapter	DFS1-00-0026MR
Long extended tip for E2000/PC bulkhead adapter	DFS1-00-0025MR
MTPMPO MULTI-FIBER ADAPTER TIPS (FERRULE & BULKHEAD)	
Multi-row base for MTP/PC ferrule and bulkhead adapter extended tip	DFS1-00-0060MR
MPO/MTP Adapter Tips	
Adapter tip for MPO-12 PC bulkhead; Requires single- or multi-row base	DFS1-00-0041MR
Adapter tip for MPO16 PC bulkhead; Requires single- or multi-row base	DFS1-00-0058MR
Adapter tip for MPO-12 PC connector ferrule; Requires single- or multi-row base	DFS1-00-0061MR
Adapter tip for MPO-12 APC bulkhead; Requires single- or multi-row base	DFS1-01-0012MR
Adapter tip for MPO-16 APC bulkhead; Requires single- or multi-row base	DFS1-01-0015MR
Adapter tip for MPO-12 APC connector ferrule; Requires single- or multi-row base	DFS1-01-0017MR
MPO/MTP Adapter Kits - include Base plus Adapter Tip(s)	
Single-row base plus extended MPO-12 PC bulkhead adapter tip	DFS1-00-0037MR
Single-row base plus MTP plus MTPA (MPO-12 PC and MPO-12 APC) bulkhead adapter tips	DFS1-00-0042MR
Multi-row base plus MTP (MPO-12 PC) bulkhead adapter tip	DFS1-00-0050MR
Single-row base plus MTPA (MPO-12 APC) bulkhead adapter tip	DFS1-01-0010MR
MISCELLANEOUS PC BULKHEAD ADAPTER TIPS	
Universal 60 degrees angled extended adapter tip	DFS1-00-0056MR
LEMO 2.0 mm bulkhead	DFS1-00-0031MR

DFS1 Digital FiberScope

DFS1 Adapter Tips

DESCRIPTION	AFL NO.
2.0 mm termini bulkhead	DFS1-00-0033MR
1.6 mm termini bulkhead	DFS1-00-0034MR
ELIO 1.25 mm bulkhead	DFS1-00-0036MR
SMA 905 bulkhead	DFS1-00-0046MR
TFOCA II ferrule and bulkhead adapter guide only	DFS1-00-0048MR
TFOCA II ferrule and bulkhead adapter tip only	DFS1-00-0049MR
Adapter for Viavi/Westover tips, for DFS1 and FOCIS Flex inspection probe	DFS1-00-0057MR
APC TIPS	
Universal 1.25 mm tip for APC ferrule connector	DFS1-01-0001MR
Universal 2.5 mm tip for APC ferrule connector	DFS1-01-0002MR
Tip for SC/APC and FC/APC bulkhead adapter	DFS1-01-0003MR
Tip for SC/APC bulkhead adapter	DFS1-01-0011MR
Tip for LC/APC bulkhead adapter	DFS1-01-0004MR
Short extended tip for SC/APC bulkhead adapter	DFS1-01-0005MR
60° angled tip for SC/APC bulkhead adapter	DFS1-01-0006MR
SC/APC (OptiTap®) bulkhead	DFS1-01-0007MR
Tip for LX.5/APC bulkhead adapter	DFS1-01-0009MR
Single-row base with OptiTip® APC bulkhead and connector ferrule adapter tips	DFS1-01-0013MR
Short (~60 mm) extended tip for LC/APC bulkhead	DFS1-01-0014MR
LC/APC female style	DFS1-01-0016MR

Qualifications

CATEGORY	REGULATION/STANDARD	QUALIFICATION
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety /EMC /EMI	IEC	Compliant to IEC 61010-1 for safety requirements for electrical equipment
	EN	Compliant to EN 61010-1 for safety requirements for electrical equipment
	IEC	Compliant to IEC 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
	FCC	Compliant to code of federal regulations FCC 47 CFR 15 on unlicensed transmissions
RoHS	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)

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ROGUE® OLTS Certifier

Measure insertion loss, return loss and length on multimode and single-mode fiber optic networks



Features

- Bi-directional testing on up to 2 fibers at once
- Pass/Fail certification to ISO/IEC/TIA/IEEE and custom test limits
- Automatic dual-wavelength identification (Wave ID)
- Test cord reference wizard and built-in encircled flux compliance
- Integrated power meter and visual fault identifier
- 12-fiber MPO certification with optional Multi-fiber switch (MFS)
- Reporting with TRM® PC software and optional cloud-based workflow integration with aeRos®

Applications

- Certify Tier 1 networks to industry standards
- Test LAN structured cabling and data center networks with single fiber (LC, SC, FC, ST) and multi-fiber (MTP/MPO) connectivity
- Test access, metro and core networks
- Document network installations

AFL's ROGUE OLTS Certifier measures insertion loss, return loss, and length bi-directionally to industry standards on both multimode and single-mode networks. ROGUE OLTS Certifier is offered as a matched pair of units, with each unit featuring 4 test ports. Two of the ports combine a light source and power meter to enable bi-directional testing on single or dual fibers. The other two ports are a dedicated power meter and a visual fault identifier (VFI) to help troubleshoot networks.

ROGUE OLTS Certifier is available in two models: an intelligent base (iB1) model with an integrated display and compact base (cB1) model that requires a paired smart device. Both models, depending on the chosen configuration, can provide either single-fiber testing on quad SM/MM wavelengths (850/1300/1310/1550 nm) or single and dual-fiber testing at 1310/1550 nm.

ROGUE OLTS Certifier can also be connected to AFL's Multi-Fiber Switch (MFS) for certifying both 8- and 12-fiber MPO terminated cables bi-directionally to IEEE 40 and 100G test limits. An optional MFS add-on kit contains two Multi-Fiber Switches for either multimode or single-mode testing. The MFS communicates to ROGUE OLTS Certifier via a 30 cm test cord connected to the optical test port.

All ROGUE OLTS Certifier kits include a basic license for Test Result Manager (TRM® 3.0) providing data processing and reporting locally via a PC. The optional aeRos® Pro test management software provides cloud-based workflow integration to remotely build projects, assign jobs, collect results, track progress and generate reports.

The mobile App, TURBO, which is used on the paired smart devices required for cB1 models, is available for free download from Google Play.



ROGUE® OLTS Certifier

Specifications^a

OLTS	MULTIMODE	SINGLE-MODE
Emitter Type	LED	Laser
Wavelengths	850 ±30 nm; 1300 ±20 nm	1310, 1550 ±20 nm
Safety Class	Class I FDA 21 CFR 1040.10 and 1040.11, IEC EN60825-1: 2007-03	
Detector Type	InGaAs	InGaAs
Launch Condition	Encircled Flux Compliant ^b	N/A
Length Measurement Range	5 km	200 km (SMF28e)
Power Measurement Range	+3 to -60 dBm	+3 to -60 dBm
Output Power	-24/-23 dBm, 62.5/50 µm	-3 dBm, 9 µm
Stability ^c	±0.1 dB over 1 hour ±0.15 dB over 8 hours	±0.1 dB over 1 hour ±0.15 dB over 8 hours
Wave ID Transmit	Yes	Yes
Tone Generation	330 Hz, 1 kHz, 2 kHz	330 Hz, 1 kHz, 2 kHz
Input Connector	Interchangeable connector adapter (LC standard, SC, ST, FC optional)	

OPTICAL POWER METER (OPM)	
Calibrated Wavelengths	850, 1300, 1310, 1490, 1550, 1625, 1650 nm
Detector Type	InGaAs PIN, 2 mm diameter
Measurement Range	+3 to -70 dBm
Wave ID	Automatically synchronizes and measures 1, 2 or 3 λ Wave ID combinations
Range	+3 to -40 dBm @ 850 nm; +3 to -50 dBm @ 1300, 1310, 1550 nm
Tone Detect	Auto-detects 270, 330 Hz; 1, 2 kHz tones;
Accuracy	±5% @-10 dBm
Linearity	±0.1 dB (-3 to -40 dBm); ±0.25 dB (-40 to -50 dBm)
Measurement Units	Power in dBm, nW, µW, mW; Loss in dB; 0.01 dB resolution

VISUAL FAULT LOCATOR (VFL)	
Emitter Type	Visible red laser, 650 ±20 nm
Safety Class	Class II FDA 21 CFR 1040.10 and 1040.11, IEC EN60825-1: 2007-03
Output Power (nominal)	0.8 mW into single-mode fiber
Modes	CW and 2 Hz flashing

GENERAL	cB1	iB1
Size	23 x 11 x 7 cm (8.8 x 4.3 x 2.8 in)	23.5 x 13.3 x 7.6 cm (9.25 x 5.25 x 3.0 in)
Weight	1.3 kg (2.9 lb)	1.56 kg (3.46 lb)
Operating Temperature	-10 °C to +50 °C, 0 to 90 % RH (non-condensing)	-10 °C to +50 °C, 0 to 90 % RH (non-condensing)
Storage Temperature	-20 °C to +60 °C, 0 to 90 % RH (non-condensing)	-20 °C to +60 °C, 0 to 90 % RH (non-condensing)
Power	Rechargeable Li-Ion or AC power adapter	Rechargeable Li-Ion or AC power adapter
Battery Life	>8 hours continuous testing	>8 hours continuous testing

Notes:

- All specifications valid at 23°C ±2°C (73.4°F ±3.6°F) unless otherwise specified.
- TIA-526-14-B, ISO/IEC 14763-3 and IEC 61280-4-1.
- After 15 minutes warm-up.

ROGUE® OLTS Certifier

Ordering Information

Each ROGUE OLTS Certifier kit includes two (2) of each: ROGUE cB1 or iB1 Base, kit-specific ROGUE Modules, battery, AC charger, carry strap, carry case. Each ROGUE OLTS Certifier kit includes (1) One-Click Cleaner SC/2.5 mm, (1) One-Click Cleaner LC/1.25 mm, switchable test port adapters and test accessories.

DESCRIPTION	CONTAINS (two of each)	AFL NO.
ROGUE OLTS Certifier kit with cB1 Base, Quad SM/MM	ROGUE cB1 Base, Quad SM/MM Module, battery, AC charger, adjustable carry strap, carry case	RGK-CERT01
ROGUE OLTS Certifier kit with cB1 Base, Dual SM ports	ROGUE cB1 Base, Dual Ports SM Module, battery, AC charger, adjustable carry strap, carry case	RGK-CERT03
ROGUE OLTS Certifier kit with iB1 Base, Quad SM/MM	ROGUE iB1 Base, Quad SM/MM Module, battery, AC charger, adjustable carry strap, carry case	RGK-CERT01B1
ROGUE OLTS Certifier kit with iB1 Base, Dual SM ports	ROGUE iB1 Base, Dual Ports SM Module, battery, AC charger, adjustable carry strap, carry case	RGK-CERT03B1

ROGUE Hardware and Accessories

DESCRIPTION	AFL NO.
ROGUE OLTS with cB1 Base; contains ROGUE cB1 Base, Dual Ports SM Module, battery, AC charger, adjustable carry strap	RGK-OLTS03
ROGUE OLTS with iB1 Base; contains ROGUE iB1 Base, Dual Ports SM Module, battery, AC charger, adjustable carry strap	RGK-OLTS03B1
ROGUE cB1, Compact Base; contains ROGUE cB1 Base, battery, AC charger, adjustable carry strap	RG-C01
ROGUE iB1, Intelligent Base; contains ROGUE iB1 Base, battery, AC charger, adjustable carry strap	RG-B01
ROGUE OLTS Certifier Quad Module; contains Quad Module; test port adapters: (2) SC for OLS port, SC and LC for OPM port	RG-1100-Q01
ROGUE OLTS Certifier SM Module; contains SM Module; test port adapters (2) SC for OLS port, SC and LC for OPM port	RG-1100-S01-D
ROGUE cB1 Base Kickstand	RGA-STND-01
ROGUE Kit Carry Case	RGA-CASE-01
ORL Referencing Mandrel	5400-00-0200
Adjustable Carry Strap	RGA-STRAP-01
AC charger for cB1 Base	4050-00-0132PR
AC charger for iB1 Base	4050-00-0918PR
Reference cable, SC/UPC-LC/UPC, SMF28E/E+, 2 m	8700-00-0081
Reference cable, SC/APC-LC/UPC, SMF, 2 m	8700-00-0050
Reference grade cable, SC/UPC-LC/UPC, MMF, 50 µm, OM4, 2 mm, Red, 2 m	8700-04-0007MR



ROGUE OLTS Certifier kit with iB1 Bases



ROGUE OLTS Certifier kit with cB1 Bases and required smart devices (optional purchase)

ROGUE® OLTS Certifier

ROGUE OLTS Certifier Adapters

DESCRIPTION	TEST PORT USAGE	AFL NO.
FC	OLS	2900-50-0002MR
SC	OLS	2900-50-0003MR
ST	OLS	2900-50-0004MR
LC	OLS	2900-50-0006MR
FC	OPM	2900-52-0001MR
SC	OPM	2900-52-0002MR

DESCRIPTION	TEST PORT USAGE	AFL NO.
ST	OPM	2900-52-0003MR
LC	OPM	2900-52-0004MR
2.5 mm Universal	OPM	2900-52-0005MR
1.25 mm Universal	OPM	2900-52-0006MR
2.5 mm Universal	VFL	2900-50-0007MR
1.25 mm Universal	VFL	2900-50-0010MR

Recommended Products



Multi-Fiber Switch

- Converts a single port module into a multi-fiber MPO tester
- Dual wavelength, single-mode or multimode
- 12F MPO port for connection to MPO cable under test



Cloud-based Test Management and Reporting

- Seamless interaction with Android™ applications
- Run reports at the push of a button

Qualifications

CATEGORY	REGULATION/STANDARD	QUALIFICATION
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety /EMC /EMI	IEC	Compliant to IEC 61010-1 for safety requirements for electrical equipment
	EN	Compliant to EN 61010-1 for safety requirements for electrical equipment
	IEC	Compliant to IEC 61325-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 61325-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
	FCC	Compliant to code of federal regulations FCC 47 CFR 15 on unlicensed transmissions
	FDA	Compliant to code of federal regulations FDA 21 CFR 1040.10 and 1040.11 on laser products
	IEC	Compliant to IEC 60825-1 for safety of laser products
RoHS	EU	Compliant to EU regulations Directive 2011/65/EU on RoHS 2
	EU	Compliant to EU regulations Directive 2015/863 on RoHS 3
Test Method	TIA	Compliant to TIA-568.3-D for test and measurement requirements for premises optical fiber cabling and components
	IEC	Compliant to IEC 11801 for test and measurement requirements for optical fiber cabling for use within premises
	EN	Compliant to EN 50173 for test and measurement requirements for optical fiber cabling for use within premises
	AS/NZS	Compliant to AS/NZS 3080 for test and measurement requirements for optical fiber cabling for use within premises
	TIA	Compliant to TIA-526-7 for test procedures for installed optical fiber cable plant
	TIA	Compliant to TIA-526-14 for test procedures for installed optical fiber cable plant
	IEC	Compliant to IEC 14763-3 for systems and methods for the inspection and testing of installed optical fiber cabling
	AS/NZS	Compliant to AS/NZS 14763.3 for systems and methods for the inspection and testing of installed optical fiber cabling
	IEC	Compliant to IEC 61280-4-1 for test procedures for installed optical fiber cable plant
	IEC	Compliant to IEC 61280-4-2 for test procedures for installed optical fiber cable plant

Contact Sales@AFLglobal.com to schedule a demonstration or learn how to buy.

Visit www.AFLglobal.com/Test to learn more about ROGUE OLTS Certifier.

International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts

Multi-Fiber Switch



Multi-fiber Switch paired with ROGUE

Features

- Stand-alone operation as well as pairing with other testers including OTDRs and OLTS
- 12-fiber switching capability
- Dual wavelength, single-mode or multimode
- Rechargeable battery with USB port charging/communication

Applications

- Converts a single port tester into a multi-fiber tester utilizing your existing OLTS, OTDR, and VFL test equipment
- Efficiently test 12-fiber links without disconnecting/reconnecting
- Bi-directional testing without moving cables
- Certify MPO links to industry standards including base 8 applications

The density demands of today’s networks are driving more demand for multi-fiber connectivity. As the adoption of multi-fiber connectors becomes more prevalent in data centers, the ability to test these types of connections accurately and quickly has become even more critical.

AFL’s Multi-Fiber Switch enables the testing of MPO/MTP®-terminated cables. The switch allows you to utilize a single piece of test equipment to verify some or all of the fibers in a multi-fiber connector in a single test, saving you both time and money.

AFL’s Multi-Fiber Switch is compatible with your AFL FlexScan FS200 and FS300 series OTDRs and ROGUE® OLTS Certification equipment. The switch can be manually configured or remotely controlled via USB from both FlexScan OTDRs and ROGUE OLTS.

Specifications^a

OPTICAL		
Wavelength	1310/1550 nm, SM dual-wavelength	850/1300 nm, MM dual-wavelength
Insertion Loss	2.8 dB typ. – 3.3 dB max.	1.8 dB typ. – 2.3 dB max.
Optical Return Loss (ORL)	50 dB min.	—
Fiber Length	4.4 ± 0.5 m	
Optical Length Uniformity	± 0.15 m	
GENERAL		
Power	Li-Ion battery or USB interface	
Battery Life	1000 hours continuous operation	
Weight	0.3 kg (0.66 lb)	
Dimensions	12.9 x 6.9 x 3.1 cm (5.1 x 2.7 x 1.2 in)	
Operating Temperature	-20 °C to +60 °C, 0 to 90 % RH (non-condensing)	
Storage Temperature	-20 °C to +70 °C, 0 to 90 % RH (non-condensing)	

Notes:

a. All specifications valid at 23 °C ±2 °C (73.4 °F ±3.6 °F) unless otherwise specified.

Multi-Fiber Switch

Ordering Information

DESCRIPTION	AFL NO.
Multi-fiber Switch, 12 fibers SM, APC-SC, MPO fiber ring (non-pinned), soft case	MFS-12-SM-ASC-FR
Multi-fiber Switch, 12 fibers SM, APC-SC, soft case	MFS-12-SM-ASC
Multi-fiber Switch, 12 fibers SM, UPC-SC, soft case	MFS-12-SM-USC
Multi-fiber Switch, 12 fibers MM, UPC-SC, soft case	MFS-12-MM-USC

ROGUE MFS Certification Add-on Kits

Each Multi-Fiber Switch Certification Add-on kit include (2) Multi-Fiber Switches, (2) 6 in. USB-USB mini cables, (2) key up / key down MPO-MPO mating adapters, (2) MFS carry holsters, (1) One-Click Cleaner MPO, (2) MFS kit carry cases, test cords and mating adapters (see table below).


ADD-ON KIT	CONTAINS (ea.)			AFL NO.
	12F MFS SWITCH	REFERENCE TEST CORDS		
		SC-SC, 0.3 (m)	12F MPO-MPO, 2 (m)	
SM, SC/UPC-MPO/APC	(2) SM, SC/UPC-MPO/APC	(2) SM	(2) SM, type A unpinned; (2) SM, type A pinned/unpinned; (1) SM, type B unpinned	MPO-SM-CERT-ADD
MM, SC/UPC-MPO/UPC	(2) MM, SC/UPC-MPO/UPC	(2) MM	(2) OM4, type A unpinned; (2) OM4, type A pinned/unpinned; (1) OM4, type B unpinned	MPO-MM-CERT-ADD

MFS Multi-Fiber Switch OTDR Add-on Kit

Single-mode and multimode Multi-Fiber Switches (MFS) are available to accelerate OTDR testing of MPO-connectorized, multi-fiber cables. OTDR MFS Add-on Kits include (1) MFS with MPO connector, (1) single-fiber Fiber Ring to connect OTDR to the switch, plus (1) MPO Fiber Ring.


CONTAINS (ea.)			AFL NO.
12F MFS SWITCH	FIBER RING	MPO FIBER RING	
MFS-12-SM-ASC, SM, SC/APC-MPO/APC pinned	SM, 150 m, SC-ASC or ASC-ASC (depending on OTDR connector)	12F, 61m, MPO/APC-unpinned to MPO; Select pinned or unpinned network MPO connector	MPO-SM-OTDR-ADD
MFS-12-MM-USC, MM, SC/UPC-MPO/UPC pinned	OM3/4/5-compatible, SC-SC, 150 m	12F, 61m, MPO-unpinned to MPO; Select pinned or unpinned network MPO connector	MPO-MM-OTDR-ADD

Recommended Products



ROGUE® OLTS Certifier

- Bi-directional testing on up to 2 fibers at once
- Pass/Fail certification to ISO/IEC/TIA/IEEE and custom test limits
- Automatic dual-wavelength identification (Wave ID)



FlexScan® FS300 (quad) and FS200 (single-mode) OTDRs

- SmartAuto® 1-button automated testing for fast results
- LinkMap® color-coded icons for easy troubleshooting
- Flexpress® mode (FS200) completes OTDR test in <5 seconds!
- Integrated Source, Power Meter and VFL

Qualifications

CATEGORY	REGULATION/STANDARD	QUALIFICATION
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety	EN	Compliant to EN 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
RoHS	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)

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Optical Loss Test Kits



SMLP5-5 Kit

Features

- Rugged, dependable, and backed by industry-best 5-year warranty
- Wave ID tests up to three wavelengths simultaneously - slashing test time
- Field-swappable connector adapters for maximum flexibility
- Long battery life from globally available AA batteries

Applications

- Certify multimode and single-mode links per TIA/EIA standards
- Passive Optical Networks (PON) testing
- Certification report generation with TRM® 2.0 software
- Fiber identification for splicing and continuity checking

Optical Loss Test Sets (OLTS) provide the most accurate method for determining the total loss of a link. AFL’s OLTS have been an industry favorite for over 30 years with more than 100,000 units shipped. Leading service providers and enterprise customers rely on AFL’s OLTS for their ruggedness, reliability, and best-in-the-industry 5-year warranty.

An OLTS test is performed with a light source on one end of the fiber sending a continuous wave at specific wavelength(s) and a power meter on the opposite end measuring the light received. The loss measured is compared to the loss budget, which is usually calculated prior to installation, and reflects the industry standards used to ensure that the link can meet its application requirements.

OLTS are mainly used to certify multimode and single-mode links, test Passive Optical Networks (PONs), identify fibers before splicing, and to ensure network continuity.

Designed for use in outside plant environments: AFL OLTS are extremely rugged and withstand one-meter drops, have splash resistant controls that are easy to use with gloves on, and the field-swappable connector adapters provide flexibility and access for cleaning optical ports at time of test.

Test faster with fewer errors: AFL’s Wave ID increases test speed by performing simultaneous multi-wavelength testing that cuts loss measurement time in half or more. AFL’s automatic wavelength identification eliminates setup errors and simplifies coordination between users at opposite ends of fiber.

Optical Loss Test Kits

Specifications^a

OPTICAL SPECIFICATIONS - POWER METERS			
MODEL	OPM5-4D	OPM5-3D, OPM4-3D	OPM5-2D
Calibrated Wavelengths	850, 980, 1300, 1310, 1490, 1550, 1625 nm	850, 1300, 1310, 1490, 1550, 1625 nm	850, 1300, 1310, 1490, 1550 nm
Detector Type	Filtered InGaAs	InGaAs	Germanium (Ge)
Measurement Range	+26 to -50 dBm	+10 to -75 dBm	+6 to -60 dBm
Tone Detect Range	+6 to -30 dBm +6 to -25 dBm for 850 nm	+10 to -50 dBm +10 to -45 dBm for 850 nm	+6 to -50 dBm +6 to -45 dBm for 850 nm
Wavelength ID Range	+6 to -30 dBm +6 to -25 dBm for 850 nm	+10 to -50 dBm +10 to -45 dBm for 850 nm	+6 to -50 dBm +6 to -45 dBm for 850 nm
Accuracy	±0.1 dB (typical); ±0.25 dB		
Resolution	0.01 dB		
Measurement Units	dB, dBm, μW		

OPTICAL SPECIFICATIONS: OLS7 MODELS			
MODEL	OLS7-FTTH (Single Port)		
Wavelength (±20 nm)	1310 nm	1490 nm	1550 nm
Spectral Width	5 nm	3 nm	5 nm
Emitter Type	Laser		
Safety Class	Class I FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2007-03		
Output Power	-5 dBm (typical), 9/125 fiber		
Output Stability	±0.05 dB over 1 hour (after 15 minutes warm-up) ±0.1 dB over 8 hours (after 15 minutes warm-up)		
Tone Output	270 Hz, 330 Hz, 1 kHz, 2 kHz		

OPTICAL SPECIFICATIONS: OLS4, OLS2-DUAL & OLS1-DUAL MODELS						
MODEL	OLS4 (MM Optical Port)		OLS4 (SM Optical Port)		OLS2-DUAL (Single Port)	
Wavelength	850 ±30 nm	1300 +30/-20 nm	1310 ±20 nm	1550 ±20 nm	1310 ±20 nm	1550 ±20 nm
Spectral Width	45 nm (typ)	120 nm (typ)	5 nm (max)	5 nm (max)	5 nm (max)	
Emitter Type	LED		Laser		Laser	
Safety Class	Class I FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2007-03					
Output Power	>-20 dBm, 62.5 μm multimode ^b		0 dBm, 9 μm single-mode		0 dBm, 9 μm single-mode ^c	
Output Stability	±0.1 dB over 8 hours (after 5 minutes warm-up)		±0.05 dB over 1 hour (after 15 minutes warm-up) ±0.1 dB over 8 hours (after 15 minutes warm-up)			
Tone Output	N/A		2 kHz		270 Hz, 330 Hz, 1 kHz, 2 kHz	

GENERAL SPECIFICATIONS: ALL OPM AND OLS MODELS	
Available Adapters	SC FC, ST, LC
Power	2 AA batteries
Operating Temperature	-10 °C to 50 °C, 90 % RH (non-condensing)
Storage Temperature	-30 °C to 60 °C, 90 % RH (non-condensing)
Size (H x W x D)	14.0 x 8.1 x 3.8 cm (5.5 x 3.2 x 1.5 in)
Weight	0.29 kg (0.65 lb)

Notes:

- All specifications valid at 25°C unless otherwise specified.
- May be used to test 50 or 62.5 μm fiber with supplied mandrels.
- Output power will be approximately 3 dB less if a 50 μm mandrel-wrapped jumper is used instead of a 62.5 μm mandrel-wrapped jumper.
- Adjustable 2 dB.

Optical Loss Test Kits

Ordering Information

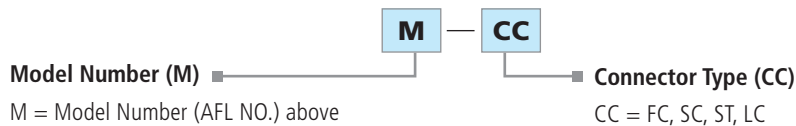
Test kits include light source, power meter, protective rubber boots, AA batteries, adapter caps, and carry case.

AFL NO.	POWER METER	LIGHT SOURCE	FIBER TYPE	LOSS MEASUREMENTS (nm)					DYNAMIC RANGE (dB)	TRM® 2.0 PC REPORTING
				850	1300	1310	1490	1550		
SLP5-6	OPM5-3D	OLS2-DUAL	SM			◆		◆	70 ^b	◆
SLP5-FTTH	OPM5-4D	OLS7-FTTH	SM			◆	◆	◆	45 ^b	◆
SMLP5-5	OPM5-2D	OLS4	MM SM	◆	◆	◆		◆	40 @ 850/1300 nm ^a 60 @ 1310/1550 nm ^b	◆

Notes:

- a. On 62.5/125 µm multimode fiber.
- b. On 9/125 µm single-mode fiber.

Part Number – Connector Specification



Examples: SMLP5-5-SC => (SMLP5-5 Test Kit with SC adapters)

Accessories

DESCRIPTION	AFL NO.
LIGHT SOURCE CONNECTOR ADAPTERS	
FC connector adapter	2900-50-0002MR
SC connector adapter	2900-50-0003MR
ST connector adapter	2900-50-0004MR
LC connector adapter	2900-50-0006MR
POWER METER CONNECTOR ADAPTERS	
FC connector adapter	8800-00-0200
SC connector adapter	8800-00-0209
ST connector adapter	8800-00-0202
LC connector adapter	8800-00-0225
ENCIRCLED FLUX (EF) MODE CONTROLLER	
FC to FC, 50/125 µm	8700-06-0001MR
FC to FC, 2.5/125 µm	8700-06-0002MR
SC to SC, 50/125 µm	8700-06-0003MR
SC to SC, 62.5/125 µm	8700-06-0004MR
SC to LC, 50/125 µm	8700-06-0005MR
SC to LC, 62.5/125 µm	8700-06-0006MR
MULTIMODE TEST CORDS (50/125 µm – 2 meters)	
FC/FC	8700-00-0093
SC/ST	8700-00-0064
SC/SC	8700-00-0065
LC/LC	8700-00-0082

DESCRIPTION	AFL NO.
SINGLE-MODE TEST CORDS (9/125 µm – 2 meters)	
FC/FC	8700-00-0005
FC/ST	8700-00-0016
ST/ST	8700-00-0017
SC/SC	8700-00-0018
FC/SC	8700-00-0021
SC/ST	8700-00-0022
SC/LC	8700-00-0046
FC/LC	8700-00-0071
LC/LC	8700-00-0097
MATING ADAPTERS (Bulkheads)	
FC/FC	8400-00-0004MR
SC/SC	8400-00-0045MR
ST/ST	8400-00-0020
LC/LC	8400-00-0075
CLEANING SUPPLIES	
One-Click Cleaner SC/ST/FC	8500-05-0001MZ
One-Click Cleaner LC	8500-05-0002MZ
Cletop –SB Cassette Cleaner	8500-10-0016MZ
Cletop –SB Refill Cartridge	8500-10-00017MZ

Optical Loss Test Kits

Test Management and Reporting Software

DESCRIPTION	AFL NO.
TRM® 2.0 with Basic License (OTDR Trace/OLTS Viewer, Batch Editor and Reports), USB delivery	TRM-00-0900PR

Recommended Products



OFI-BIPM Optical Fiber Identifier

- World class signal sensitivity
- Trigger lock, positive stop for optimum detection
- Integrated optical power meter option



One-Click® Cleaners

- Patented single-action
- Variety of sizes and types
- Low cost per clean

Qualifications

CATEGORY	REGULATION/STANDARD	QUALIFICATION
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety/EMC/EMI	IEC	Compliant to IEC 61010-1 for safety requirements for electrical equipment
	EN	Compliant to EN 61010-1 for safety requirements for electrical equipment
	IEC	Compliant to IEC 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
	FDA	Compliant to code of federal regulations FDA 21 CFR 1040.10 and 1040.11 on laser products
	IEC	Compliant to IEC 60825-1 for safety of laser products
RoHS	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)
Test Method	TIA	Compliant to TIA-568.3-D for test and measurement requirements for premises optical fiber cabling and components*
	IEC	Compliant to IEC 11801 for test and measurement requirements for optical fiber cabling for use within premises*
	EN	Compliant to EN 50173 for test and measurement requirements for optical fiber cabling for use within premises*
	AS/NZS	Compliant to AS/NZS 3080 for test and measurement requirements for optical fiber cabling for use within premises*
	TIA	Compliant to TIA-526-7 for test procedures for installed optical fiber cable plant
	TIA	Compliant to TIA-526-14 for test procedures for installed optical fiber cable plant*
	IEC	Compliant to IEC 14763-3 for systems and methods for the inspection and testing of installed optical fiber cabling*
	AS/NZS	Compliant to AS/NZS 14763.3 for systems and methods for the inspection and testing of installed optical fiber cabling*
	IEC	Compliant to IEC 61280-4-1 for test procedures for installed optical fiber cable plant*
	IEC	Compliant to IEC 61280-4-2 for test procedures for installed optical fiber cable plant
Generic Requirement	IEC	Compliant to IEC 61315 for requirements on calibration of fibre-optic power meters

* A complementary encircled flux mode conditioner may be needed to comply with encircled flux launch conditions for testing multimode optical fiber cabling and components

Contact Sales@AFLglobal.com to schedule a demonstration or learn how to buy.

Visit www.AFLglobal.com/Test to learn more about OLTS kits.

International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts

OLS Series Light Sources



OLS7 Optical Laser Source

Features

- Rugged, dependable, and backed by industry-best 5-year warranty
- Generates up to three Wave ID wavelengths simultaneously - slashing test time
- Field-swappable connector adapters for maximum flexibility
- Long battery life from globally available AA batteries

Applications

- Certify multimode and single-mode links per TIA/EIA standards
- Link loss measurements
- Pair with power meters, OTDRs or OFIs for testing
- Fiber identification for splicing and continuity checking

AFL is a trusted supplier of optical testing equipment with more than 30 years of experience and tens of thousands of units in use in the field. AFL’s full range of light sources are used for testing single-mode and/or multimode fiber networks. Sources with wave ID can transmit two or more wavelengths simultaneously – decreasing test time and reducing user errors when paired with AFL wave ID power meters.

Designed for the real world: AFL’s light sources were designed to meet the demands of the outside plant environment. They withstand the one-meter drop and have splash resistant controls that are easy to use, even with gloves on.

Flexible and efficient: A range of field-swappable output adapters enables access for cleaning optical ports and supports multiple connector styles. The efficient design provides long test time from globally available AA batteries. External power adapter available for extended testing or lab situations.

Reduce test time and errors: Wave ID (Triple, Dual, or Single) decreases test time while reducing technician errors and CW mode provides continuous output (no encoding).

Supported output modes: Test Tone (2000, 1000, 330, 270 Hz) for use in fiber identification with AFL brand power meters, OTDRs (with fiber end access) or Optical Fiber Identifier (OFI) products for non-intrusive, mid-span testing.

OLS Series Light Sources

OLS Series Models and Applications

MODEL	MM / SM	WAVELENGTHS (nm)	APPLICATIONS
OLS1-Dual	MM	850, 1300	Ethernet, Token Ring, and FDDI Fiber Links
OLS2-Dual	SM	1310, 1550	SM Networks, LAN/WAN Testing
OLS4	MM / SM	850, 1300 / 1310, 1550	Loss Testing of SM/MM networks
OLS7-FTTH	SM	1310, 1490, 1550	FTTH Networks
OLS7-3	SM	1310, 1550, 1625	Telecom & CATV Networks

Specifications ^{a,e}

OPTICAL SPECIFICATIONS: OLS4, OLS2-DUAL & OLS1-DUAL MODELS								
MODEL	OLS1-DUAL (Single Port ^b)		OLS2-DUAL (Single Port)		OLS4 (SM Optical Port)		OLS4 (MM Optical Port)	
Wavelength	850 ±30 nm	1300 +30/-20 nm	1310 ±20 nm	1550 ±20 nm	1310 ±20 nm	1550 ±20 nm	850 ±30 nm	1300 +30/-20 nm
Spectral Width	45 nm (typ)	120 nm (typ)	5 nm (max)		5 nm (max)	5 nm (max)	45 nm (typ)	120 nm (typ)
Emitter Type	LED		Laser		Laser		LED	
Safety Class	Class I FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2007-03							
Output Power	>-20 dBm, 62.5 μm multimode ^c		0 dBm, 9 μm single-mode ^d		0 dBm, 9 μm single-mode		>-20 dBm, 62.5 μm multimode ^c	
Output Stability	±0.1 dB over 8 hours (after 5 minutes warm-up)		±0.05 dB over 1 hour (after 15 minutes warm-up) ±0.1 dB over 8 hours (after 15 minutes warm-up)				±0.1 dB over 8 hours (after 5 minutes warm-up)	
Tone Output	N/A		270 Hz, 330 Hz, 1 kHz, 2 kHz		2 kHz		N/A	

OPTICAL SPECIFICATIONS: OLS7 MODELS						
MODEL	OLS7-FTTH (Single Port)			OLS7-3 (Single Port)		
Wavelength (±20 nm)	1310 nm	1490 nm	1550 nm	1310 nm	1550 nm	1625 nm
Spectral Width	5 nm	3 nm	5 nm	5 nm	5 nm	2 nm
Emitter Type	Laser					
Safety Class	Class I FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1: 2007-03					
Output Power	-5 dBm (typical), 9/125 fiber					
Output Stability	±0.05 dB over 1 hour (after 15 minutes warm-up) ±0.1 dB over 8 hours (after 15 minutes warm-up)					
Tone Output	270 Hz, 330 Hz, 1 kHz, 2 kHz					

GENERAL SPECIFICATIONS: ALL OLS MODELS	
Available Adapters	SC FC, ST, LC
Power	2 AA batteries, optional AC adapter
Battery Life	SM port: 72 hours typical (40 hours minimum). MM port: 30 hours typical (20 hours minimum)
Operating Temperature	-10 °C to 50 °C, 95 % RH (non-condensing)
Storage Temperature	-30 °C to 60 °C, 95 % RH (non-condensing)
Size (H x W x D)	14.0 x 8.1 x 3.8 cm (5.5 x 3.2 x 1.5 in)
Weight	0.29 kg (0.65 lb)

Notes:

- All specifications valid at 25°C unless otherwise specified.
- May be used to test 50 or 62.5 μm fiber with supplied mandrels.
- Output power will be approximately 3 dB less if a 50 μm mandrel-wrapped jumper is used instead of a 62.5 μm mandrel-wrapped jumper.
- Adjustable 2 dB.
- All OLS products come with the UPC optical port.

OLS Series Light Sources

Ordering Information

When ordering, specify connector type at the end of model number (e.g. OLS2-DUAL-SC). All OLS models include protective rubber boot, 2 AA batteries, carry case. AC adapters are available (ordered separately), see table below. Test jumpers and connector adapters are required for operation (purchased separately). Test jumpers with a variety of connector styles and fiber types and adapter caps for most common connectors may be purchased from AFL.

OUTPUT WAVELENGTHS (nm)						OUTPUT PORTS	EMITTER TYPE	WAVE ID TRANSMIT	AVAILABLE CONNECTORS	POWER	AFL NO.
850	1300	1310	1490	1550	1625						
◆	◆					1	LED	◆	FC, SC, ST, LC	(2) AA, AC	OLS1-DUAL
		◆		◆		1	Laser	◆	FC, SC, ST, LC	(2) AA, AC	OLS2-DUAL
◆	◆	◆		◆		2	LED and Laser	◆	FC, SC, ST, LC	(2) AA, AC	OLS4
		◆	◆	◆		1	Laser	◆	FC, SC, ST, LC	(2) AA, AC	OLS7-FTTH
		◆		◆	◆	1	Laser	◆	FC, SC, ST, LC	(2) AA, AC	OLS7-3

OLS Connector Adapters and AC Adapter

DESCRIPTION	AFL NO.
FC connector adapter	2900-50-0002MR
SC connector adapter	2900-50-0003MR
ST connector adapter	2900-50-0004MR
LC connector adapter	2900-50-0006MR
Universal flip-top dust cap for UCI outputs	8800-00-0072PR
100-240 VAC to 9 VDC, AC adapter	4050-00-0119PR

OLS Series Light Sources

Recommended Products



OFI-BIPM Optical Fiber Identifier

- World class signal sensitivity
- Trigger lock, positive stop for optimum detection
- Integrated optical power meter option



One-Click® Cleaners

- Patented single-action
- Variety of sizes and types
- Low cost per clean

Qualifications

CATEGORY	REGULATION/STANDARD	QUALIFICATION
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety/EMC/EMI	IEC	Compliant to IEC 61010-1 for safety requirements for electrical equipment
	EN	Compliant to EN 61010-1 for safety requirements for electrical equipment
	IEC	Compliant to IEC 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
	FDA	Compliant to code of federal regulations FDA 21 CFR 1040.10 and 1040.11 on laser products
	IEC	Compliant to IEC 60825-1 for safety of laser products
RoHS	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)
Test Method	TIA	Compliant to TIA-568.3-D for test and measurement requirements for premises optical fiber cabling and components*
	IEC	Compliant to IEC 11801 for test and measurement requirements for optical fiber cabling for use within premises*
	EN	Compliant to EN 50173 for test and measurement requirements for optical fiber cabling for use within premises*
	AS/NZS	Compliant to AS/NZS 3080 for test and measurement requirements for optical fiber cabling for use within premises*
	TIA	Compliant to TIA-526-7 for test procedures for installed optical fiber cable plant
	TIA	Compliant to TIA-526-14 for test procedures for installed optical fiber cable plant*
	IEC	Compliant to IEC 14763-3 for systems and methods for the inspection and testing of installed optical fiber cabling*
	AS/NZS	Compliant to AS/NZS 14763.3 for systems and methods for the inspection and testing of installed optical fiber cabling*
	IEC	Compliant to IEC 61280-4-1 for test procedures for installed optical fiber cable plant*
	IEC	Compliant to IEC 61280-4-2 for test procedures for installed optical fiber cable plant

* A complementary encircled flux mode conditioner may be needed to comply with encircled flux launch conditions for testing multimode optical fiber cabling and components

Contact Sales@AFLglobal.com to schedule a demonstration or learn how to buy.

Visit www.AFLglobal.com/Test to learn more about OLS series light sources.

International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts

Contractor Series Light Sources and Power Meters

5 YEAR WARRANTY

Contractor Series Light Sources and Power Meters are rugged test instruments designed with a simple user interface and backed by an industry-leading 5-year warranty. Both single-mode and multimode kit options provide tools for measuring network insertion loss, continuity checks, and fiber identification.



CSS1-MM LED Source



CSS1-SM Laser Source



CSM1 Power Meter

Features

- Palm-sized rugged, dependable tools
- Industry-leading 5-year warranty
- Cost-effective, easy to use
- Auto-off to maximize battery life on Power Meter
- Large readable in bright or dim conditions

Applications

- Link loss measurements
- Certify SM and MM links to industry standards
- Continuity check and fiber identification prior to fusion splicing

CSM1 Power Meter

- Four models provide wide wavelength and power level ranges
- Stores optical references for each calibrated wavelength
- Auto-detects Test Tones for use in fiber identification
- Optical input port accepts a variety of thread-on adapter caps

CSS1-SM Laser Source

- 1310 nm and 1550 nm LASER output from single test port
- Output port accepts UCI threaded adapters (FC, SC, ST, LC) for flexibility and access to launch fiber for cleaning and inspection

CSS1-MM LED Source

- 850 nm and 1300 nm LED output from single test port
- 50 μ m and 62.5 μ m mandrels included
- **Test Tones** (2000, 1000, 330, 270 Hz) for fiber identification
 - Use power meters when technician has fiber end access

CSM1 Sources Transmit:

- **CW** continuous wave output (DC)
- **Test Tones** (2000, 1000, 330, 270 Hz) for fiber identification
 - Use power meters when technician has fiber end access
 - Use OFI (optical fiber identifier) for mid-span testing

Contractor Series Light Sources and Power Meters

Contractor Series Models

POWER METER MODELS	CALIBRATED WAVELENGTHS (nm)	TARGET APPLICATIONS
CSM1-3	850, 1300, 1310, 1490, 1550, 1625	Single-mode Measurements
CSM1-4	850, 980, 1310, 1490, 1550, 1625	High Power Single-mode Measurements

LIGHT SOURCES MODELS	FIBER TYPE	WAVELENGTHS (nm)	TARGET APPLICATIONS
CSS1-SM	SM	1310, 1550	SM Networks, LAN/WAN Testing
CSS1-MM	MM	850, 1300	Ethernet, Token Ring, and FDDI Fiber Links

LOSS TEST KITS MODELS	FIBER TYPE	POWER METER	LIGHT SOURCE	DYNAMIC RANGE (dB)
CKS-3	SM	CSM1-3	CSS1-SM	70 @ 1310/1550 nm, on 9/125 single-mode fiber
CKM-3	MM	CSM1-3	CSS1-MM	40 @ 850/1300 nm, on 62.5/125 multimode fiber
CKSM-2	SM	CSM1-3	CSS1-SM	60 @ 1310/1550 nm, on 9/125 single-mode fiber
	MM		CSS1-MM	40 @ 850/1300 nm, on 62.5/125 multimode fiber

Specifications ^a

OPTICAL SPECIFICATIONS: CSM1 POWER METER		
MODEL	CSM1-3	CSM1-4
Calibrated Wavelengths	850, 1300, 1310, 1490, 1550, 1625 nm	850, 980, 1310, 1490, 1550, 1625 nm
Detector Type	InGaAs	Filtered InGaAs
Measurement Range	+6 to -70 dBm	+26 to -50 dBm
Tone Detect Range	+6 to -50 dBm +6 to -45 dBm for 850 nm	+6 to -30 dBm +6 to -25 dBm for 850 nm
Accuracy ^b	±0.15dB (typical), ±0.3 dB	
Resolution	0.01 dB	
Measurement Units	dB, dBm, µW	

OPTICAL SPECIFICATIONS: CSM1 LIGHT SOURCE				
MODEL	CSS1-SM (Single Port)		CSS1-MM (Single-Port)	
Wavelength	1310 nm ±20 nm	1550 nm ±20 nm	850 nm ±20 nm	1300 nm +40/-60 nm
Spectral Width (max)	5 nm	5 nm	35 nm	170 nm
Emitter Type, Safety Class	Laser, Class I FDA 21 CFR 1040.10 & 1040.11, IEC 60825-1: 2007-03		LED, Class I FDA 21 CFR 1040.10 & 1040.11, IEC 60825-1: 2007-03	
Output Power	≥0.0 dBm into 9/125 fiber		≥-20.0 dBm into 62.5/125 fiber	
Output Stability ^c	±0.05 dB over 1 hour; ±0.15 dB over 8 hours		±0.1 dB over 1 hour; ±0.15 dB over 8 hours	
Tone Output	2000, 1000, 330, 270 Hz			

GENERAL SPECIFICATIONS			
MODEL	CSM1	CSS1-SM	CSS1-MM
Output Connector	Supports Most Industry Standard Connectors	SC, FC, ST, LC	SC Fixed
Power	2 AA batteries	2 AA batteries	2 AA batteries
Battery Life	>300 hours	75 hours (typical)	30 hours (typical)
Operating Temperature	-10 °C to 50 °C, 90 % RH (non-condensing)		
Storage Temperature	-30 °C to 60 °C, 90 % RH (non-condensing)		
Size (H x W x D)	14.0 x 8.1 x 3.8 cm (5.5 x 3.2 x 1.5 in) without boot		
Weight	0.29 kg (0.65 lb) without boot		

Notes:

- All specifications at 25 °C unless otherwise specified.
- Accuracy measured at 25 °C and -10 dBm per N.I.S.T. standards.
- After typical 30 second warm up.

Contractor Series Light Sources and Power Meters

Ordering Information

Each Contractor Series Kit ships with adapter caps for all included instruments, AA alkaline batteries, user guide, and carry case with room for optional cleaning supplies (see below). Fiber mandrels (50 micron and 62.5 micron) are included with CKSM-2 and CKM-2 kits.

When purchased separately, CSM1 power meters and CSS1 light sources ship with connector adapter, AA alkaline batteries, user guide, and carry case. Fiber mandrels (50 micron and 62.5 micron) are included with CSS1-MM units.

Test jumpers are required for operation (purchased separately). Test jumpers with a variety of connector styles and fiber types and adapter caps for most common connectors may be purchased from AFL.

Models and Configurations

MODEL NUMBER	INCLUDES
CKS-3-cc (cc = FC or SC)	Single-Mode Test Kit. Available with FC or SC connectors adapters.
CKM-3	Multimode Test Kit. Available with SC connector adapters.
CKSM-2	Single-mode and Multimode Test kit. Available with SC connector adapters.
CSS1-SM-cc (c = FC, SC, ST, or LC)	Single-mode LASER Source. Available with FC, SC, ST, or LC connector adapters.
CSS1-MM	Multimode LED Source. Available with SC connector adapter..
CSM1-3-cc (cc = *)	InGaAs Detector for single-mode applications.
CSM1-4-cc (cc = *)	High Power InGaAs Detector for single-mode applications.

* For CSM1 power meters, cc = FC, SC, ST, LC, 2.5 mm, 1.25 mm. Other connector styles are available; see accessories section.

CSS1-SM Single-mode Light Source Accessories

DESCRIPTION	AFL NO.
FC UCI connector adapter	2900-50-0002MR
SC UCI connector adapter	2900-50-0003MR
ST UCI connector adapter	2900-50-0004MR
LC UCI connector adapter	2900-50-0006MR
Universal flip-top dust cap for UCI outputs	8800-00-0072PR

CSM1 Power Meter Adapter Caps

DESCRIPTION	AFL NO.
2.5 mm Universal (accepts FC, SC, and ST ferrules)	8800-00-0214
1.25 mm Universal (accepts LC and MU ferrules)	8800-00-0224
FC	8800-00-0200
SC	8800-00-0209
ST	8800-00-0202
LC simplex	8800-00-0225
E-2000	8800-00-0221
2.5 mm open Universal, Accepts SC duplex, OptiTap connector	8800-00-0219
SMA	8800-00-0203
D4	8800-00-0201
Biconic	8800-00-0204

Contractor Series Light Sources and Power Meters

Recommended Products



OFI-BIPM Optical Fiber Identifier

- World class signal sensitivity
- Trigger lock, positive stop for optimum detection
- Integrated optical power meter option



One-Click® Cleaners

- Patented single-action
- Variety of sizes and types
- Low cost per clean

Qualifications

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	EN	Compliant to EN 61010-1 for safety requirements for electrical equipment
	IEC	Compliant to IEC 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
	FDA	Compliant to code of federal regulations FDA 21 CFR 1040.10 and 1040.11 on laser products
	IEC	Compliant to IEC 60825-1 for safety of laser products
RoHS	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)
Test Method	TIA	Compliant to TIA-568.3-D for test and measurement requirements for premises optical fiber cabling and components*
	IEC	Compliant to IEC 11801 for test and measurement requirements for optical fiber cabling for use within premises*
	EN	Compliant to EN 50173 for test and measurement requirements for optical fiber cabling for use within premises*
	AS/NZS	Compliant to AS/NZS 3080 for test and measurement requirements for optical fiber cabling for use within premises*
	TIA	Compliant to TIA-526-7 for test procedures for installed optical fiber cable plant
	TIA	Compliant to TIA-526-14 for test procedures for installed optical fiber cable plant*
	IEC	Compliant to IEC 14763-3 for systems and methods for the inspection and testing of installed optical fiber cabling*
	AS/NZS	Compliant to AS/NZS 14763.3 for systems and methods for the inspection and testing of installed optical fiber cabling*
	IEC	Compliant to IEC 61280-4-1 for test procedures for installed optical fiber cable plant*
	IEC	Compliant to IEC 61280-4-2 for test procedures for installed optical fiber cable plant
Generic Requirement	IEC	Compliant to IEC 61315 for requirements on calibration of fibre-optic power meters

* A complementary encircled flux mode conditioner may be needed to comply with encircled flux launch conditions for testing multimode optical fiber cabling and components.

Contact Sales@AFLglobal.com to schedule a demonstration or learn how to buy.

Visit www.AFLglobal.com/Test to learn more about Contractor Series light sources and power meters.

International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts

OPM5 and OPM4 Optical Power Meters

5 YEAR WARRANTY



OPM5 Optical Power Meter

Features

- Rugged, dependable, and backed by industry-best 5-year warranty
- Wave ID tests up to three wavelengths simultaneously - slashing test time
- Field-swappable connector adapters for maximum flexibility
- Long battery life from globally available AA batteries

Applications

- Passive Optical Networks (PON) testing
- OPM(5/4)-4D (Filtered-InGaAs) for high power (+26 dBm) CATV broadband networks or DWDM system applications
- OPM(5/4)-3D (InGaAs) for telecommunications networks
- OPM(5/4)-2D (Ge) for premises LAN/WAN multimode or single-mode networks
- OPM4-1D (Silicon) for multimode/plastic optical fiber applications

AFL is a trusted supplier of optical testing equipment with more than 30 years of experience and tens of thousands of units in use in the field. AFL's full range of power meters are used for testing single-mode and/or multimode fiber networks. Power meters with wave ID can detect two or more wavelengths simultaneously – decreasing test time and reducing user errors when paired with AFL wave ID light sources.

Designed for the real world: AFL's power meters are designed to meet the demands of the outside plant environment. They withstand the one-meter drop test and have splash resistant controls that are easy to use, even with gloves on.

Flexible and efficient: A range of field-swappable output adapters enables access for cleaning optical ports and supports multiple connector styles. The efficient design provides long test time from globally available AA batteries. Equipped with five-minute auto-off feature to save power.

Reduce test time and errors: Wave ID (Triple, Dual, or Single) decreases test time while reducing technician errors.

Stores test results: AFL's OPM5 stores optical reference at each calibrated wavelength. This enables technicians to organize test results into multiple files and transfer stored results via USB to the included PC-based TRM[®] 2.0 software for analyzing, generating reports, and printing. Users can generate network Pass/Fail results demonstrating compliance to industry standards and illustrate headroom. Fully N.I.S.T. traceable.

OPM5 and OPM4 Optical Power Meters

Specifications ^a

OPTICAL				
MODEL	OPM5-4D, OPM4-4D	OPM5-3D, OPM4-3D	OPM5-2D, OPM4-2D	OPM4-1D
Calibrated Wavelengths	850, 980, 1300, 1310, 1490, 1550, 1625 nm	850, 1300, 1310, 1490, 1550, 1625 nm	850, 1300, 1310, 1490, 1550 nm	650, 660, 780, 850 nm
Detector Type	Filtered InGaAs	InGaAs	Germanium (Ge)	Silicon (Si)
Measurement Range	+26 to -50 dBm	+10 to -75 dBm	+6 to -60 dBm	+6 to -70 dBm
Tone Detect Range	+6 to -30 dBm +6 to -25 dBm for 850 nm	+10 to -50 dBm +10 to -45 dBm for 850 nm	+6 to -50 dBm +6 to -45 dBm for 850 nm	+6 to -45 dBm
Wavelength ID Range	+6 to -30 dBm +6 to -25 dBm for 850 nm	+10 to -50 dBm +10 to -45 dBm for 850 nm	+6 to -50 dBm +6 to -45 dBm for 850 nm	—
Accuracy ^b	±0.1 dB (typical); ±0.25 dB			
Resolution	0.01 dB			
Measurement Units	dB, dBm, µW			

GENERAL	
Power	2 x AA batteries, accepts standard mini-USB power adapter
Adapter Caps	Order with one: 1.25 mm Universal, 2.5 mm Universal, FC, SC, ST, LC. Other connector adapters available
Battery Life	300 hours
Operating Temperature	-10 °C to 50 °C, 95 % RH (non-condensing)
Storage Temperature	-30 °C to 60 °C, 95 % RH (non-condensing)
Size (H x W x D)	14.0 x 8.1 x 3.8 cm (5.5 x 3.2 x 1.5 in)
Weight	0.26 kg (0.58 lb)

Notes:

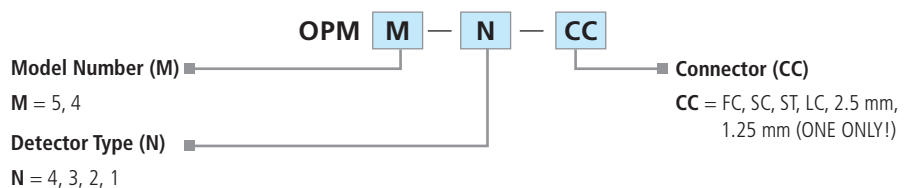
- a. All specifications valid at 25°C unless otherwise specified.
- b. Accuracy measured at 25 °C and -10 dBm per N.I.S.T. standards.

Ordering Information

All OPM models include optical power meter, 2 AA batteries, protective rubber boot, customer specified adapter cap, and carry case. OPM5 models also include TRM[®] 2.0 software (Basic License).

When placing an order, select options as follows:

- Model Number (M)
- Detector Type (N)
- Connector Configuration (CC)



MODEL	CALIBRATED WAVELENGTHS (nm)										DETECTOR TYPE	MEASUREMENT RANGE (dBm)	PC SOFTWARE
	650	660	780	850	980	1300	1310	1490	1550	1625			
OPM5-4D				◆	◆		◆	◆	◆	◆	InGaAs	+26 to -50	TRM 2.0
OPM5-3D				◆		◆	◆	◆	◆	◆	InGaAs	+10 to -75	TRM 2.0
OPM5-2D				◆		◆	◆	◆	◆		Germanium	+6 to -60	TRM 2.0
OPM4-4D				◆	◆		◆	◆	◆	◆	InGaAs	+26 to -50	
OPM4-3D				◆		◆	◆	◆	◆	◆	InGaAs	+10 to -75	
OPM4-2D				◆		◆	◆	◆	◆		Germanium	+6 to -60	
OPM4-1D	◆	◆	◆	◆							Silicon	+6 to -70	

OPM5 and OPM4 Optical Power Meters

OPM Accessories


DESCRIPTION	AFL NO.		
ADAPTER CAPS			
2.5 mm Universal (accepts FC, SC, and ST ferrules)	8800-00-0214		
1.25 mm Universal (accepts LC and MU ferrules)	8800-00-0224		
FC	8800-00-0200		
SC	8800-00-0209		
ST®	8800-00-0202		
LC simplex	8800-00-0225		
E-2000	8800-00-0221		
2.5 mm open Universal. Accepts SC duplex, OptiTap connector for measuring optical power.	8800-00-0219		
SMA	8800-00-0203		
D4	8800-00-0201		
Biconic	8800-00-0204		
USB CABLE			
USB Cable: PC (USB-A) to OPM (USB-MINI B): • Connect OPM to PC for data upload to TRM® 2.0 • External Power for OPM (when used with customer supplied USB-A power source)	OPM5 MODEL	OPM4 MODEL	6000-00-0024MR
	Connect to PC and External power	External power only	

Test Management and Reporting Software

DESCRIPTION	AFL NO.
TRM® 2.0 with Basic License (OTDR Trace/OLTS Viewer, Batch Editor and Reports), USB delivery	TRM-00-0900PR

OPM5 and OPM4 Optical Power Meters

Recommended Products



FlexScan® FS300 (quad) and FS200 (single-mode) OTDRs

- SmartAuto® 1-button automated testing for fast results
- LinkMap® color-coded icons for easy troubleshooting
- FleXpress® mode (FS200) completes OTDR test in <5 seconds!
- Integrated Source, Power Meter and VFL



Optical Light Sources

- Encircled Flux Compliant
- 5-Year Product Warranty
- Integrated LED and Laser light sources

Qualifications

CATEGORY	REGULATION/STANDARD	QUALIFICATION
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety/EMC/EMI	IEC	Compliant to IEC 61010-1 for safety requirements for electrical equipment
	EN	Compliant to EN 61010-1 for safety requirements for electrical equipment
	IEC	Compliant to IEC 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
RoHS	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)
Test Method	TIA	Compliant to TIA-568.3-D for test and measurement requirements for premises optical fiber cabling and components
	IEC	Compliant to IEC 11801 for test and measurement requirements for optical fiber cabling for use within premises
	EN	Compliant to EN 50173 for test and measurement requirements for optical fiber cabling for use within premises
	AS/NZS	Compliant to AS/NZS 3080 for test and measurement requirements for optical fiber cabling for use within premises
	TIA	Compliant to TIA-526-7 for test procedures for installed optical fiber cable plant
	TIA	Compliant to TIA-526-14 for test procedures for installed optical fiber cable plant
	IEC	Compliant to IEC 14763-3 for systems and methods for the inspection and testing of installed optical fiber cabling
	AS/NZS	Compliant to AS/NZS 14763.3 for systems and methods for the inspection and testing of installed optical fiber cabling
	IEC	Compliant to IEC 61280-4-1 for test procedures for installed optical fiber cable plant
	IEC	Compliant to IEC 61280-4-2 for test procedures for installed optical fiber cable plant
Generic Requirement	IEC	Compliant to IEC 61315 for requirements on calibration of fibre-optic power meters

Contact Sales@AFLglobal.com to schedule a demonstration or learn how to buy.

Visit www.AFLglobal.com/Test to learn more about OPM5 and OPM4 optical power meters.

International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts

MFIS Multi-Fiber Identification System



Features

- Identifies up to 12 fibers at a time
- Light-weight, rugged, and can be operated with one hand
- Optimized for use on 250 μm , 900 μm , and ribbon fiber
- Three-year calibration interval

Applications

- Multi-fiber network continuity assurance
- Fiber identification on both MFP power meter and MFI identifier
- Verify long-haul networks (up to 110 miles)
- Quickly verify FlexNap[®] network mapping

Multi-fiber network construction is time consuming, complicated, and often built by more than one contractor with mixed sets of documentation. There are guaranteed to be mislabeled and cross-connected fibers, which cost valuable time to find and fix. AFL's Multi-Fiber Identification System (MFIS) is a simple user-friendly way to verify network construction quickly and efficiently.

Rugged lightweight tools that can be operated with one hand: MFIS is a set of three tools that can be used to easily verify the fiber ID. The MFT (Multi-Fiber Trace) features 12 discrete laser sources (1550 nm single-mode) and an MTP fan-out connector. The digitally-coded light is then detected by either the MFI (Multi-Fiber Identifier), which clamps onto the fiber under test or the MFP (Multi-Fiber Power Meter), which plugs into the fiber under test.

Slash multiple fiber activations cost by up to 75% over conventional method: During service activation field technicians often run into unlabeled, mislabeled, and cross-connected fibers that can take two technicians hours to figure out - increasing cost and delaying service for customers. MFIS enables one technician to verify up to 12 fibers at a time, slashing the time it takes to activate new customers.

Ensure 100% multi-fiber network continuity: MFIS can be used to efficiently verify potentially cross-connected fibers at any point of an existing network – providing peace of mind to network managers.

MFIS Multi-Fiber Identification System

MFT Multi-Fiber Tracer Specifications^a

OPTICAL	
Wavelength	1550 ±20 nm
Spectral Width	5 nm (maximum)
Output Power	+1.75 dBm ±1 dB peak into 9/125 µm fiber @ +25 °C
GENERAL	
Power Supply	2 X 1.5 V AA alkaline batteries
Battery Life (Alkaline)	@ +25 °C: 40 hours (minimum); 50 hours (typical)
Connectors	SM: MTP/MPO-APC (unpinned) 12-fiber connector.
Size (without boot) W x L x H	96 x 145 x 35 mm (3.8 x 5.7 x 1.4 in)
Weight	307 g (0.676 lb) without boot; 458 g (1.01 lb) with boot
Operational Temperature	-20 °C to +50 °C 90 % RH (non-condensing)
Storage Temperature	-30 °C to +60 °C 90 % RH (non-condensing)

MFI Multi-Fiber Identifier Specifications^{a, b}

FIBER TYPE	PARAMETER	WAVELENGTH, SIGNAL	DETECTABLE SIGNAL RANGE
250 µm ribbon fiber, SMF28e+	Minimum data detect level (peak power, typical)	1550 nm, Data – Fiber ID	-35 dBm (typical)
	Insertion loss (typical/maximum)	1550 nm	2.5 dB/3.0 dB

OPTICAL	
Detector Type	InGaAs
Calibrated Fiber Size and Wavelength	250 µm @1550 nm (SMF-28/28E) ribbon fiber
Working Fiber Size	250 µm ribbon fiber
Data Detection Range	+2 to -35 dBm
GENERAL	
Display Type	Multi 7-segment LCD, 3 LEDs
Power Supply	2 X 1.5 V AAA, alkaline batteries
Battery Life (backlight off)	>10,000 operations ^c
Operation Temperature	-20 °C to +50 °C 90 % RH (non-condensing)
Storage Temperature	-30 °C to +60 °C 90 % RH (non-condensing)
Dimensions (H x W x D)	22 x 3.8 x 2.8 cm (8.5 x 1.5 x 1.1 in)
Weight	168 g (6 oz)

- Notes:**
- a. All specifications valid at 25 °C unless otherwise specified.
 - b. All specs are typical unless otherwise noted. Actual results can vary by several dB depending on fiber type, coating material, jacket color, jacket hardness, active fiber position, and other factors.
 - c. Operation is defined as turning unit on by taking 1 reading in a 10 second period.

MFIS Multi-Fiber Identification System

MFP Multi-Fiber Power Meter Specifications^a

OPTICAL	
Detector Type	InGaAs
Detector Size	1 mm
OPM Mode	
Calibrated Wavelength	850, 1300, 1310, 1490, 1550, 1625 nm
Measurement Range	+10 to -75 dBm
Accuracy ^b	±0.25 dB
Resolution	0.01 dB
Measurement Units	dB, dBm, µW
Fiber ID Mode ^e	
Wavelength	1550 nm
Measurement Range ^c	+10 to -35 dBm
Accuracy ^d	±0.5 dB
Resolution	0.01 dB
Measurement Units	dB, dBm, µW

GENERAL	
Power	2 x AA batteries, accepts standard mini-USB power adapter
Adapter Caps	Order with one: 1.25 mm Universal, 2.5 mm Universal, FC, SC, ST, LC. Other connector adapters available
Battery Life	300 hours
Operating Temperature	-10 °C to 50 °C, 90 % RH (non-condensing)
Storage Temperature	-30 °C to 60 °C, 90 % RH (non-condensing)
Size (H x W x D)	14.0 x 8.1 x 3.8 cm (5.5 x 3.2 x 1.5 in)
Weight	0.26 kg (0.58 lb)

Notes:

- a. All specifications valid at 25 °C unless otherwise specified.
- b. Accuracy measured at 25 °C and -10 dBm per N.I.S.T. standards.
- c. Measured using MFT (Multi-Fiber Tracer) as the light source.
- d. Accuracy measured at 25 °C with MFT (Multi-tiber Tracer).
- e. Subject to change.

Ordering Information

DESCRIPTION	AFL NO.
Multi-Fiber Identifier, no case	MF11-00-0900MR
Multi-Fiber Power Meter, no case	MFP1-12-0900MR
Multi-Fiber Tracer & Identifier with soft case	MFTI-12-BAS
Multi-Fiber Tracer & Power Meter with soft case	MFTP1-12-BAS
Multi-Fiber Tracer, Identifier, and Power Meter with soft case	MFTIP1-12-BAS
ACCESSORIES	
Cable, MPO/APC(M)-SC/APC, 12-fiber, SM, fan-out, 3 meters	8700-00-0198MR
Cable, MPO/APC (M) - SC/UPC, 12-fiber, SM, fan-out, 3 meters	8700-00-0200MR
Cable, MPO/APC (M) - LC/UPC, 12-fiber, SM, fan-out, 3 meters	8700-00-0201MR
One-Click Cleaner MPO (500+ cleans)	8500-05-0030MZ
One-Click Cleaner Mini-100 SC, ST, FC (100+ cleans)	8500-05-0005MZ

MFIS Multi-Fiber Identification System

Recommended Products



FOCIS Flex Connector Inspection

- Self-contained, tether-free, hand-held
- Auto-focus and auto-centering for fast, easy inspection
- IEC, IPC and user-defined pass/fail analysis



One-Click® Cleaners

- Patented single-action
- Variety of sizes and types
- Low cost per clean

Qualifications

CATEGORY	REGULATION/STANDARD	QUALIFICATION
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety/EMC/EMI	IEC	Compliant to IEC 61010-1 for safety requirements for electrical equipment
	EN	Compliant to EN 61010-1 for safety requirements for electrical equipment
	IEC	Compliant to IEC 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
	FDA	Compliant to code of federal regulations FDA 21 CFR 1040.10 and 1040.11 on laser products
	IEC	Compliant to IEC 60825-1 for safety of laser products
RoHS	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)
Generic Requirement	IEC	Compliant to IEC 61315 for requirements on calibration of fibre-optic power meters

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OFI-BIPM and OFI-BIPMe Optical Fiber Identifiers



OFI-BIPM

OFI-BIPMe

Features

- World-class signal detection sensitivity
- Positive-stop trigger lock for optimum detection
- Integrated optical power meter
- 2.4" color touchscreen with backlight
- Up to 4 Tones detection (OFI-BIPMe only)

Applications

- Maintenance of fiber optic networks
- Troubleshooting network issues
- Identification of live fibers or trace fibers
- Power levels verification

The OFI-BIPM/-BIPMe optical fiber identifier is an easy-to-use tool that determines if a fiber is live, the transmission direction, and the relative core power on standard and bend-insensitive single-mode and multimode fibers. Its positive-stop trigger mechanism provides the right amount of pressure every time to assure proper detection, while keeping loss to a minimum. This ensures that traffic will not be interrupted and the fiber will not be damaged.

Nicknamed "The Job saver": The OFI-BIPM/-BIPMe removes the need to access the optical fiber at a connection or splice point, eliminating the possibility of interrupting service to a customer.

No heads to change or lose: The universal head of the OFI-BIPM/-BIPMe eliminates the need to change an adapter head for jacketed, coated, or ribbon fibers, making it extremely easy to use in the field.

Integrated optical power meter: The optical power meter mode verifies power levels during installation or troubleshooting.

Color touchscreen: The touchscreen provides simple-to-follow setup instructions and clear results that are easy to read.

Field technician favorite: The OFI-BIPM/-BIPMe is a favorite of technicians for its accuracy, ease of use, integrated power meter, and ergonomic design.

Doesn't damage delicate fibers: The positive-stop trigger ensures that the right pressure is applied every time, while the slim head makes it easier to reach and test tightly-packed fibers without damaging them.

OFI-BIPM and OFI-BIPMe Optical Fiber Identifiers

Specifications^a

OPTICAL (OFI)							
Fiber Type	0.25 mm SM and MM fiber; SM and MM ribbon fiber (up to 12 ribbon fiber) 1.1 mm/1.5 mm/1.7 mm/2.0 mm/3.0 mm SM and jacketed fiber						
Optical Characteristic	Wavelength Range	900 to 1700 nm					
	Detectable Light Signals	CW, Traffic or 270 Hz, 330 Hz (OFI-BIPMe only), 1 kHz, 2 kHz Tone ^b					
Insertion Loss (IL) & Minimum Detect Level ^c at Normal, Fast or Fine operation mode	Wavelength	1310 nm		1550 nm		1650 nm	
	Fiber Type	IL (dB)	Normal/Fast/Fine (dBm)	IL (dB)	Normal/Fast/Fine (dBm)	IL (dB)	Normal/Fast/Fine (dBm)
	0.25 mm (R=30 mm)	0.2	-58/-53/-64	1.0	-67/-62/-73	2.5	-67/-62/-73
	0.25 mm (R=15 mm), Ribbon	0.1	-44/-39/-50	0.3	-57/-52/-63	1.0	-57/-52/-63
	0.5 mm (R=15 mm)	0.2	-58/-53/-64	1.0	-67/-62/-73	2.5	-67/-62/-73
	1.1 mm/1.5 mm Jacketed	0.3	-43/-37/-53	1.0	-55/-50/-61	2.5	-57/-52/-63
	1.7 mm/2.0 mm Jacketed	0.5	-22/-17/-28	2.0	-27/-22/-33	3.0	-27/-22/-33
	3.0 mm Jacketed	1.0	-20/-15/-25	3.0	-23/-18/-28	3.0	-23/-18/-28

POWER METER (OPM)	
Wavelength	1310 nm, 1490 nm, 1550 nm
Detectable Light Signal	CW, Traffic or 270 Hz, 330 Hz (OFI-BIPMe only), 1 kHz, 2 kHz Tone ^b
Detector Sensitivity	+10 to -60 dBm at modulated tone; +10 to -40 dBm at CW or Traffic ^b
Accuracy ^d	±0.3 dB @1310/1550 nm; ±0.6 dB @1490 nm

GENERAL	
Operation Conditions	-10 to +50 °C, 0 to 95 % RH (non-condensing)
Storage Conditions	-20 to +60 °C, 0 to 95 % RH (non-condensing)
Power Supply	2 x AA batteries; 1.2 to 1.5 V DC
Battery Life	8 hours ^e
Dimensions (W x H x D)	5.0 x 11.5 x 21.2 cm (1.9 x 4.5 x 8.3 in) ^f
Weight	230 g (8.1 oz) including battery

Notes:


- a. All specifications valid at 25°C unless otherwise specified.
- b. Traffic is a light signal modulated by a random data sequence.
- c. Typical value. The minimum detect level (core power) the insertion loss varies due to coating material, color, etc.
- d. Under the condition of temperature 25°C with input power at -20 dBm.
- e. Using 2 Alkaline AA Batteries.
- f. Except protruding part.

OFI-BIPM and OFI-BIPMe Optical Fiber Identifiers

Ordering Information

DESCRIPTION	AFL NO.
BI Optical Fiber Identifier with integrated Optical Power Meter. The kit includes one 2.5 mm Universal Power Meter Port Adapter, BIPM-00-25.	OFI-BIPM
BI Enhanced Optical Fiber Identifier with integrated Optical Power Meter. The kit includes one 2.5 mm Universal Power Meter Port Adapter, BIPM-00-25.	OFI-BIPMe
OPTIONAL ADAPTERS (ordered separately)	
2.5 mm Universal Power Meter Port Adapter	BIPM-00-25
SC Power Meter Port Adapter	BIPM-00-SC
FC Power Meter Port Adapter	BIPM-00-FC
ST Power Meter Port Adapter	BIPM-00-ST
LC Power Meter Port Adapter	BIPM-00-LC

Recommended Products



FlexScan® FS300 (quad) and FS200 (single-mode) OTDRs

- SmartAuto® 1-button automated testing for fast results
- LinkMap® color-coded icons for easy troubleshooting
- FleXpress® mode (FS200) completes OTDR test in <5 seconds!
- Integrated Source, Power Meter and VFL



Optical Light Sources

- Encircled Flux Compliant
- 5-Year Product Warranty
- Integrated LED and Laser light sources

Qualifications

CATEGORY	REGULATION/STANDARD	QUALIFICATION
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety /EMC /EMI	IEC	Compliant to IEC 61010-1 for safety requirements for electrical equipment
	EN	Compliant to EN 61010-1 for safety requirements for electrical equipment
	IEC	Compliant to IEC 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
	FCC	Compliant to code of federal regulations FCC 47 CFR 15 on unlicensed transmissions
RoHS	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)

Contact Sales@AFLglobal.com to schedule a demonstration or learn how to buy.

Visit www.AFLglobal.com/Test to learn more about OFI-BIPM/-BIPMe.

International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts

OFI-400 Series Optical Fiber Identifiers



OFI-400

OFI-400C

OFI-400HP

Features

- 5-year product warranty; 3-year recommended calibration interval
- Rugged, hand-held, lightweight, and easy-to-use
- Unique optical head with two-position plunger for use with all fiber types
- Built-in power meter with Set Reference feature

Applications

- Live fiber detection to avoid technician-induced outages
- Fiber identification and tracing with CW or tones
- Core power measurements
- Testing 250 μm , 900 μm , and ribbon fiber or 2 mm and 3 mm jacketed fiber

AFL's OFI-400 Optical Fiber Identifiers are rugged, hand-held, and easy-to-use fiber optic test instruments designed to detect and measure the core power levels of optical signals on single-mode optical fiber without disrupting traffic on that fiber. They are simply clamped onto a fiber and display the presence and direction of traffic, continuous test signals, and modulated test tones. This permits network personnel to easily and quickly identify a specific fiber without the risk of disrupting service. All of AFL's optical light sources are ideal companions to the OFI-400 family of optical fiber identifiers.

No adapters to purchase, store, swap, or misplace: Each OFI-400 uses a unique optical head design featuring a two-position plunger that enables it to be used with 250 μm , 900 μm , and ribbon fiber or 2 mm and 3 mm jacketed fiber. Other brands of optical fiber identifiers require users to purchase, store and change optical plungers each time a different type of fiber is tested.

Low insertion loss for in-service ID tasks: OFI-400's optical heads induces a safe, repeatable macro-bend to the fiber that allows a small amount of light to escape for analysis. The insertion loss induced by the macro-bend is too small to affect the signal on the fiber and the integrity of the fiber is unaffected by the measurement process.

Designed for the real world: The OFI-400 family are simple, easy-to-use tools that feature rugged, drop-proof construction - perfect for inside or outside plant use. Their ergonomically designed macro-bend trigger is comfortable to use and the integrated, backlit LCD display enables them to be used in dimly lit spaces. Each OFI-400 uses readily available 1.5 V AAA batteries which can power thousands of fiber tests before needing to be replaced.

OFI-400 model: The OFI-400 is designed for use with a wide range of single-mode fibers including 250 μm (bare) coated, 900 μm buffered and ribbon fibers or 2 mm and 3 mm jacketed fibers. The OFI-400 is ideal for network personnel involved in installation, reconfiguration, restoration and maintenance tasks that involve bare, buffered, jacketed or ribbon fibers in outside plant pedestals, fiber cabinets, aerial enclosures and inside plant premises demarcation cabinets. The slim design of the OFI-400 head facilitates access in crowded splice trays.

OFI-400C model: Designed specifically for use with 2 mm or 3 mm jacketed single-mode fibers, the OFI-400C is ideal for general purpose maintenance, configuration and installation tasks. The OFI-400C is functionally equivalent to the OFI-400 but includes an optical head design and a calibration scheme optimized for use with jacketed fiber.

OFI-400HP model: The OFI-400HP is designed for use where high levels of optical power are present. This includes fibers carrying a single high-power signal, CWDM or DWDM signals with high total power levels, amplified optical signals, or pump lasers associated with EDFA or Raman amplifiers. When display reaches +23 dBm (200 mW) or greater, the OFI-400HP will display "High" warning indication.

OFI-400 Series Optical Fiber Identifiers

Specifications^a

DETECTABLE SIGNAL RANGE					
FIBER TYPE ^b	PARAMETER	TEST CONDITIONS ^c	OFI-400	OFI-400C	OFI-400HP
250 µm coated fiber (SMF-28 with 250 µm CPC6 coating)	Minimum level detected, average power	1310 nm, CW, Tone, Traffic 1550 nm, CW, Tone, Traffic	-45 dBm -50 dBm	N/A	N/A
	Insertion loss (typical)	@ 1310 nm @ 1550 nm	0.6 dB 2.5 dB	N/A	N/A
3 mm jacketed fiber (SMF-28/28E with 250 µm CPC6 coating and 3 mm, yellow jacket)	Minimum level detected, average power	1310 nm, CW, Tone, Traffic 1550 nm, CW, Traffic 1550 nm, Tone	-30 dBm -33 dBm -33 dBm	-35 dBm -40 dBm -40 dBm	-30 dBm -40 dBm -35 dBm
	Insertion loss (typical)	@ 1310 nm @ 1550 nm	1.0 dB 2.8 dB	1.0 dB 2.8 dB	0.2 to 0.5 dB 0.8 to 1.3 dB

OPTICAL SPECIFICATIONS ^d	OFI-400	OFI-400C	OFI-400HP
Calibrated Fiber and Wavelength	250 µm @ 1550 nm (SMF-28/28E)	3 mm @ 1550 nm (SMF-28/28E)	
Working Fiber Size	250 µm, 900 µm, ribbon, 2 mm and 3 mm jacketed	2 mm and 3 mm jacketed	
Core Power Measurement Range ^e	+13 to -50 dBm @ 1550 nm, 250 µm	+13 to -40 dBm @ 1550nm, 3 mm	+33 to -40 dBm @ 1550 nm, 3 mm
Detector Type	InGaAs		
Wavelength Range	800 - 1700 nm		
Measurement Units	dBm, dB		
Fiber Stress	<100 kPSI max		
Tone Detection	270, 330, 1000, 2000 Hz (±5 %)		

GENERAL SPECIFICATIONS	ALL OFI-400 MODELS
User Interface	Multi 7 segment LCD; 3 LEDs; 1 piezo buzzer
Power	2 x 1.5 V AAA alkaline
Battery Life	>10,000 operations typical
Operation Temperature	-5°C to 50°C 95 % RH (Non-condensing)
Storage Temperature	-30°C to +60°C 95 % RH (Non-condensing)
Dimensions (H x W x D)	21.5 x 3.8 x 2.8 cm (8.5 x 1.5 x 1.1 in)
Weight	168 g (6 oz)

Notes:

- All specifications stated above are as measured at 25°C.
- 250 µm coated fiber parameters are specified with OFI plunger in the "250 / 900 / RIB" position. 2 mm / 3 mm jacketed fiber parameters are specified with OFI plunger in the "2 mm / 3 mm" position.
- CW is a light signal that is not modulated. Traffic is a light signal modulated by high speed user data. Tone is a light signal modulated into a nominal 50 % duty cycle square wave.
- Unless noted otherwise, all specifications are typical. Actual results can vary by several dB depending on fiber type, coating material, jacket color, jacket hardness, and other factors.
- SMF-28/28E.


OFI-400 Series Optical Fiber Identifiers

Ordering Information

All OFI-400 products include a user's guide, 2 AAA batteries and a soft carry case. Each carries a 5-year warranty and a 3-year recommended calibration interval.

INCLUDES	AFL NO.
Users guide, 2 AAA batteries, soft carry case	OFI-400
Users guide, 2 AAA batteries, soft carry case	OFI-400C
Users guide, 2 AAA batteries, soft carry case	OFI-400HP

Recommended Products



FlexScan® FS300 (quad) and FS200 (single-mode) OTDRs

- SmartAuto® 1-button automated testing for fast results
- LinkMap® color-coded icons for easy troubleshooting
- FleXpress® mode (FS200) completes OTDR test in <5 seconds!
- Integrated Source, Power Meter and VFL



Optical Light Sources

- Encircled Flux Compliant
- 5-Year Product Warranty
- Integrated LED and Laser light sources

Qualifications

CATEGORY	REGULATION/STANDARD	QUALIFICATION
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety /EMC /EMI	IEC	Compliant to IEC 61010-1 for safety requirements for electrical equipment
	EN	Compliant to EN 61010-1 for safety requirements for electrical equipment
	IEC	Compliant to IEC 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
RoHS	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)

Contact Sales@AFLglobal.com to schedule a demonstration or learn how to buy.

Visit www.AFLglobal.com/Test to learn more about Optical Fiber Identifiers.

International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts

OFI-200 Optical Fiber Identifier



Features

- 5-year product warranty; 3-year recommended calibration interval
- Rugged, hand-held, lightweight, and easy-to-use
- Unique optical head with two-position plunger for use with all fiber types
- Visually and audibly indicates tone signal across 2 kHz range

Applications

- Live fiber identification to avoid technician-induced service outages
- Fiber tracing or identification with CW or test tones
- Testing 250 μm , 900 μm coated, 2 mm, 3 mm jacketed, and ribbon fiber

AFL Optical Fiber Identifiers are rugged, hand-held, and easy-to-use fiber optic test instruments designed to detect optical signals transmitted through a single-mode fiber without disrupting traffic.

The OFI-200 is simply clamped onto a fiber and indicates if there is NO SIGNAL, TONE, or TRAFFIC and the associated signal direction. This permits network personnel to easily and quickly identify a specific fiber without the risk of disrupting service. When testing coated fibers, the slim design of the OFI-200 allows easier access on a splice tray where the amount of workspace is limited.

No adapters to purchase, store, swap, or misplace: The OFI-200 uses a unique optical head design featuring a two-position plunger that enables it to be used with 250 μm , 900 μm , and ribbon fiber or 2 mm and 3 mm jacketed fiber. Other brands of optical fiber identifiers require users to purchase, store, and change optical plungers each time a different type of fiber is tested.

Low insertion loss for in-service ID tasks: The OFI-200 optical head induces a safe, repeatable macro-bend to the fiber that allows a small amount of light to escape for analysis. The insertion loss induced by the macro-bend is too small to affect the signal on the fiber and the integrity of the fiber is unaffected by the measurement process.

Designed for the real world: The OFI-200 is a simple, easy-to-use tool that features rugged, drop-proof construction perfect for inside or outside plant use. Its ergonomically designed macro-bend trigger is comfortable to use and the integrated, backlit LCD display enables it to be used in dimly lit spaces. The OFI-200 uses readily available 1.5 V AAA batteries, which power thousands of fiber tests before needing to be replaced.

OFI-200 Optical Fiber Identifier

Specifications ^a

DETECTABLE SIGNAL RANGE			
FIBER TYPE ^b	PARAMETER	TEST CONDITIONS ^c	OFI-200D
250 µm coated fiber (SMF-28 with 250 µm CPC6 coating)	Minimum level detected, average power	1310 nm, CW or Traffic 1310 nm, Tone 1550 nm, CW or Traffic 1550 nm, Tone	-40 dBm -43 dBm -45 dBm -50 dBm
	Insertion loss (typical)	1310 nm 1550 nm	0.6 dB 2.5 dB
3 mm jacketed fiber (SMF-28 with 250 µm CPC6 coating and 3 mm, yellow jacket)	Minimum level detected, average power	1310 nm, CW or Traffic 1310 nm, Tone 1550 nm, CW or Traffic 1550 nm, Tone	-30 dBm -32 dBm -33 dBm -37 dBm
	Insertion loss (typical)	1310 nm 1550 nm	0.8 dB 2.5 dB
OPTICAL SPECIFICATIONS ^d			
Detector Type	InGaAs		
Wavelength Range	800 - 1700 nm		
Calibrated Size of Fiber and Wavelength	N/A		
Fiber Stress	<100 kPSI max		
Fiber Size	250 µm, 900 µm, ribbon, 2 mm or 3 mm and jacketed fiber		
Tone Detection	2000 ± 100 Hz		
GENERAL SPECIFICATIONS			
Display Type	N/A		
Power	1 9-Volt Alkaline		
Battery Life	>10,000 operations typical		
Operation Temperature	0°C to 50°C 90 % RH (Non-condensing)		
Storage Temperature	-30°C to +60°C 90 % RH (Non-condensing)		
Dimensions (H x W x D)	22 x 3.8 x 2.8 cm (8.5 x 1.5 x 1.1 in)		
Weight	210 g (7.5 oz)		

Notes:


- All specifications stated above are as measured at 25°C.
- 250 µm coated fiber parameters are specified with OFI plunger in the "250/900/RIB" position. 2 mm/ 3 mm jacketed fiber parameters are specified with OFI plunger in the "2 mm/3 mm" position.
- CW is a light signal that is not modulated. Traffic is a light signal modulated by a random data sequence. Tone is a light signal modulated into a nominal 50% duty cycle square wave.
- Unless noted otherwise, all specifications are typical. Actual results can vary by several dB depending on fiber type, coating material, jacket color, jacket hardness, and other factors.

OFI-200 Optical Fiber Identifier

Ordering Information

INCLUDES	AFL NO.
Users guide and carry case	OFI-200D

Recommended Products



FlexScan® FS300 (quad) and FS200 (single-mode) OTDRs

- SmartAuto® 1-button automated testing for fast results
- LinkMap® color-coded icons for easy troubleshooting
- Flexpress® mode (FS200) completes OTDR test in <5 seconds!
- Integrated Source, Power Meter and VFL



Optical Light Sources

- Encircled Flux Compliant
- 5-Year Product Warranty
- Integrated LED and Laser light sources

Qualifications

CATEGORY	REGULATION/STANDARD	QUALIFICATION
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety /EMC /EMI	IEC	Compliant to IEC 61010-1 for safety requirements for electrical equipment
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VFI4 Visual Fault Identifier



Features

- Eye-safe Class 3R visible red laser source, 650 nm
- Output power of 5.0 mW with 10 km range
- Universal connector interface for quick connection
- 2.5 mm universal adapter (included) accepts FC, SC, ST, etc. connectors
- 1.25 mm universal adapter (included) accepts LC and MU connectors

Applications

- Identify and trace fibers during activation and installation
- Identify poorly mated connectors
- Verify AFL's FASTConnect® field-installable connector installation
- Find faults inside OTDR dead zones

ADAPTER, 2.5MM, VFI4, ZIRCONIA SLEEVE, SPLIT, ROHS
ADAPTER, 1.25MM, VFI4, ZIRCONIA SLEEVE, SPLIT, ROHS

A Visible Fault Identifier (VFI), also referred to as a Visual Fault Locator (VFL), is an essential tool for fiber installation and maintenance technicians.

AFL's compact VFI4 injects high-powered red-laser light to provide exceptional brightness and range for locating defects in single-mode and multimode fibers. The light generated by these units will escape from sharp bends and breaks in jacketed or bare fibers, as well as poorly mated connectors enabling technicians to quickly spot faults. The universal connector interface mates with many connector styles without needing an adapter.

Rugged and Compact: The rugged VFI4 is designed for the rigors of real-life field testing. It has a range of up to 10 km, fits on a keychain, and features extensions that protect the red-laser port. It has both CW and pulsating modes and is powered by a single AA battery for up to 30 hours of operation.

Installation and Activation: VFI4 is used for quick continuity checks, fiber tracing, splice verification, and Pass/Fail validation for mechanical connectors. VFI4 is also an excellent complement to any OTDR because it can locate faults inside the OTDR's dead zone.

Essential Troubleshooting Tool: The VFI4 highlights sharp bends, breaks, faulty connectors, and other defects that "leak" light. Other applications include end-to-end continuity checks, as well as identifying connectors in patch panels and fibers during splicing operations.

VFI4 Visual Fault Identifier

Specifications^a

OPTICAL	
Emitter Type	Laser, Class IIIa FDA 21 CFR 1040.10 and 1040.11, Class 3R IEC 60825-1:2014
Wavelength	650 nm ±15 nm
Output Power	5 mW maximum
Modulation	2 Hz or CW selected

GENERAL	
Adapter	2.5 mm Universal, 1.25 mm Universal
Power	1 AA battery, <30 hours (Flash mode)
Operating Temperature	-10°C to 50°C, 85 % humidity non condensing
Storage Temperature	-30°C to 60°C, 95 % humidity non condensing
Size (H x W x D)	7.9 x 5.1 x 2.2 cm (3.1 x 2.0 x 0.9 in)
Weight	43 g (1.5 oz)

Notes:

a. All specifications valid at 25°C unless otherwise specified.

Ordering Information

DESCRIPTION	AFL NO.
VFI4 visual fault identifier with 2.5 mm and 1.25 mm adapters	VFI4-01-0900PR

Adapters


DESCRIPTION	AFL NO.
2.5 mm Universal for VFI port	2900-50-0013MR
1.25 mm Universal for VFI port	2900-50-0012MR

Recommended Products



One-Click® Cleaner Mini

- Small compact design with single action cleaning
- Automatically advance ensures each clean is performed with fresh cleaning tape
- 100 clean and 500 clean versions available
- Low cost per clean



FASTConnect® Field-Installable Connectors

- Field-installable, takes less than a minute to complete
- Fast and easy to terminate
- Low insertion/return loss
- Reusable

Qualifications

CATEGORY	REGULATION/STANDARD	QUALIFICATION
CE Marking	EU	Compliant to relevant EU Directives on health, safety, and environmental protection, and certified with CE marking
Safety/EMC/EMI	IEC	Compliant to IEC 61010-1 for safety requirements for electrical equipment
	EN	Compliant to EN 61010-1 for safety requirements for electrical equipment
	IEC	Compliant to IEC 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 61326-1 for EMC requirements for electrical equipment
	EN	Compliant to EN 55011 for EMC requirements for industrial, scientific and medical equipment
	FDA	Compliant to code of federal regulations FDA 21 CFR 1040.10 and 1040.11 on laser products
RoHS	IEC	Compliant to IEC 60825-1 for safety of laser products
	EU	Compliant to EU regulations Directive 2011/65/EU (RoHS 2) and Directive 2015/863 (RoHS 3)

Contact Sales@AFLglobal.com to schedule a demonstration or learn how to buy.

Visit www.AFLglobal.com/Test to learn more about VFI4 Visual Fault Identifier.

International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts.

Push-Type Cleaners



SC/ST/FC

MU/LC

Mini-100
SC, ST, FC

Mini-100
MU/LC



Ultra 2.5

D-LC

One-Click® Cleaners

Features

- Patented single-action cleaning in a small ergonomic design
- Variety of sizes and types for different connector styles
- Cleans connectors in both jumpers and bulkhead adapters
- Low cost per clean

Applications

- Removing oil, dust, and dirt without damaging delicate fiber end-faces
- Both dry and wet cleaning (add cleaning fluid)
- Clean connectors in tight spaces
- Field or laboratory use

One-Click Cleaner

Easy-to-use solution for cleaning fiber optic connectors on jumpers and in adapters. Since over 85% of network outages are attributed to dirty and/or damaged connectors, it is critical to clean every connector! The patented One-Click Cleaner uses the mechanical push action to advance an optical grade cleaning tape while the cleaning tip is rotated to ensure the fiber end-face is effectively, but gently, cleaned. It is a favorite of field technicians for its ease of use, durability, effectiveness, and small size.

Compact One-Click Cleaner Mini

Offering the same technology and performance as the original, the One-Click Cleaner mini enables cleaning connectors in tighter places. Its smaller size also makes it a great addition to test kits and cleaning kits. The mini One-Click Cleaners come in both 100+ or 500+ cleans per unit.

One-Click Ultra Cleaner 2.5

The One-Click Ultra Cleaner 2.5 has an enlarged cleaning area to clean more of the connector end-face. Cleaning up to a 2 mm diameter area of the connector end-face, the One-Click Ultra Cleaner 2.5 is a superior cleaner for SC, ST, and FC connectors.

One-Click Cleaner D-LC (Duplex LC)

The One-Click Cleaner D-LC cuts cleaning time in half by effectively cleaning both connectors of a duplex LC connector simultaneously. Available in a long-lasting 500+ clean pen shape.

Push-Type Cleaners

One-Click® Cleaners

One-Click Cleaner MPO and MPO-16

The One-Click Cleaner MPO/MPO-16 is a revolutionary push-type cleaner that simplifies cleaning of the ferrule end-face of MPO/MTP® connector. The One-Click MPO-16 cleans 16-fiber MPO/MTP connectors, both pinned (male) and socketed (female). MPO-16 is used with IEEE 802.3bs 400G trunk cabling with each fiber carrying 25 Gbps data signals (400GBASE-SR16 for example), among other applications.



MPO

MPO-16

One-Click Cleaner CS/MDC Duplex

The One-Click Cleaner CS/MDC cuts cleaning time in half by effectively cleaning both connectors of a duplex CS/MDC at one time.

One-Click Cleaner SN Duplex

The One-Click Cleaner SN cuts cleaning time in half by effectively cleaning both connectors of a duplex SN at one time.

One-Click Cleaner HOC

The Hardened Outdoor Connector (HOC) One-Click Cleaner is an essential cleaning tool for OptiTap®, TITAN RTD®, TRIDENT®, and SC connectors. The new design of the HOC Cleaner allows it to be used for Plug/Receptacle without the need for the conventional guide cap.



CS, MDC

SN Duplex

HOC

Ordering Information

DESCRIPTION	AFL NO.
One-Click Cleaner SC, ST, FC (500+ cleans)	8500-05-0001MZ
One-Click Cleaner MU/LC (500+ cleans)	8500-05-0002MZ
One-Click Cleaner ODC, outdoor connector (500+ cleans)	8500-05-0004MZ
One-Click Cleaner Mini-100 SC, ST, FC (100+ cleans)	8500-05-0005MZ
One-Click Mini-100 MU/LC (100+ cleans)	8500-05-0006MZ
One-Click Cleaner Mini-500 SC, ST, FC (500+ cleans)	8500-05-0009MZ
One-Click Cleaner Mini-500 MU/LC (500+ cleans)	8500-05-0010MZ
One-Click Ultra Cleaner 2.5 (enlarged cleaning) SC, ST, FC (500+ cleans)	8500-05-0007MZ
One-Click Cleaner D-LC, Duplex LC (2 x 500+ cleans)	8500-05-0008MZ
One-Click Cleaner MPO (500+ cleans)	8500-05-0030MZ
One-Click Cleaner MPO-16 (500+ cleans)	8500-05-0013MZ
One-Click Cleaner MT-RJ (500+ cleans)	8500-05-0031MZ
One-Click Cleaner M20, 2.0 mm ferrule (500+ cleans)	8500-05-0014MZ
One-Click Cleaner CS, MDC Duplex (500+ cleans)	8500-05-0015MZ
One-Click Cleaner SN Duplex (500+ cleans)	8500-05-0016MZ
One-Click Cleaner HOC, Hardened Optic Connectors (500+ cleans)	8500-05-0018MZ
BOXES OF 5 UNITS	
One-Click Cleaner SC, ST, FC (box of 5 units)	8500-05-0021MZ
One-Click Cleaner MU/LC (box of 5 units)	8500-05-0022MZ
One-Click Cleaner Mini-100 SC, ST, FC (box of 5 units)	8500-05-0025MZ
One-Click Cleaner Mini-100 MU/LC (box of 5 units)	8500-05-0026MZ
One-Click Ultra Cleaner 2.5 SC, ST, FC (box of 5 units)	8500-05-0027MZ
One-Click Cleaner MPO-16 (box of 5 units)	8500-05-0023MZ

Push-Type Cleaners

Cleaning Supplies



NEOCLEAN-E Models (E1, E2, E3)



NEOCLEAN-M and NEOCLEAN-M2

NEOCLEAN Cleaners

Features

- Push action
- Replaceable cleaning cartridge - 750 cleaning per cartridge (NEOCLEAN-E)
- Low cost per clean

Applications

- Cleans connectors on jumpers or in adapters
- SC, FC, ST, E2000, LC, and MU connectors
- MPO and MTP connectors
- Suitable for field or laboratory use

NEOCLEAN-E uses a push action to clean contamination from the end-face of connectors on jumpers or in adapters. The replaceable cleaning cartridge can perform 750 cleans, reducing cleaning cost.


NEOCLEAN-M is designed for cleaning MPO and MTP multi-fiber connectors used in data centers and other high-density optical networks. It uses a one-push operation, which simplifies cleaning of the ferrule end-face of both MPO and MTP connectors and connectors in adapters.

NEOCLEAN-M2 is designed for cleaning MPO-16 and MTP-16 multi-fiber multi-row connectors used in data centers and other high-density optical network environments.

Ordering Information

MODEL	APPLICABLE CONNECTORS & DESCRIPTION	# OF CLEANS	AFL NO.
NEOCLEAN-E1	For MU, LC with UPC/APC polishes	750+	8500-15-0900MZ
NEOCLEAN-E2	For SC,FC with UPC/APC polishes; OptiTap		8500-15-0901MZ
NEOCLEAN-E3	For SC, ST, FC, E2000 with UPC/APC polishes; OptiTap		8500-15-0902MZ
NEOCLEAN-ES1	Pack of 3 replacement cartridges for NEOCLEAN-E1		8500-15-0903MZ
NEOCLEAN-ES2	Pack of 3 replacement cartridges for NEOCLEAN-E2		8500-15-0904MZ
NEOCLEAN-ES3	Pack of 3 Replacement cartridges for NEOCLEAN-E3		8500-15-0905MZ
NEOCLEAN-M	For MPO/MTP	600+	8500-15-0909MZ
NEOCLEAN-M2	For MPO-16/MPT-16		8500-15-0910MZ

Recommended Products




FOCIS Flex Connector Inspection

- Self-contained, tether-free, hand-held
- Auto-focus and auto-centering for fast, easy inspection
- IEC, IPC and user-defined pass/fail analysis



Cletop Cleaners

- Simple push-button shutter application
- Easily replaceable cost-effective tape cartridges
- Over 400 wipes per tape



FCC2 Cleaning Fluid

- Unique dispenser for use with AFL Connector Cleaning Tips and FiberWipes
- Dissipates static charge
- Up to 400+ cleanings per can

Contact Sales@AFLglobal.com to schedule a demonstration or learn how to buy.

Visit www.AFLglobal.com/Clean to learn more about Push-Type Cleaners.

International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts

CleTOP Optical Fiber Connector Cleaner



Features

- Simple push-button shutter application
- Compact lightweight design
- Easily replaceable cost-effective tape cartridges
- Over 400 wipes per tape

Applications

- Ideal for labs, assembly lines, and field use
- Cleans a wide variety of connector types
- Excellent anti-static properties for static sensitive applications

The CleTOP Optical Fiber Connector Cleaner is a rugged palm-sized cleaner that offers exceptional performance with a proven track record. The choice of many leading manufacturers and telecom carriers worldwide for nearly 20 years, CleTOP is a name you can rely on.

CleTOP Options

- CleTOP Series – Original
- CleTOP –S Series - Second generation cleaner offering “Drop-in” replacement tape cartridge and ergonomic design
- Type A & -SA - Designed for single 2.5mm ferrules (SC, FC, ST, & D4)
- Type B & -SB - Cleans SC, SC2, FC, ST®, DIN, D4, MU, LC, MT, MPO/MTP® without pins

Ordering Information

DESCRIPTION	AFL NO.
CLETOP – S SERIES	
CleTOP -SA with Blue Tape	8500-10-0020MZ
CleTOP -SB with Blue Tape	8500-10-0029MZ
CleTOP -SB with White Tape	8500-10-0016MZ
Replacement Tape Type S - Blue	8500-10-0021MZ
Replacement Tape Type S - White	8500-10-0017MZ

DESCRIPTION	AFL NO.
CLETOP ORIGINAL SERIES	
CleTOP Type A with Blue Tape	8500-10-0027MZ
CleTOP Type A with White Tape	8500-10-0011MZ
CleTOP Type B with Blue Tape	8500-10-0028MZ
CleTOP Type B with White tape	8500-10-0014MZ
CleTOP for MT-RJ with pins (White Tape)	8500-10-0032MZ
CleTOP for MPO/MTP with pins (White Tape)	8500-10-0033MZ
Replacement Tape Blue	8500-10-0012MZ
Replacement Tape White	8500-10-0015MZ

Recommended Products



Cleaning Kits

- Complete kits for cleaning variety of connectors
- Includes wet and dry cleaning products
- Convenient refill options



One-Click® Cleaners

- Patented single-action
- Variety of sizes and types
- Low cost per clean



WFW FiberWipes™

- Lint free and fully optical grade
- Robust and tear-resistant
- Softer than traditional cellulose wipes

Contact Sales@AFLglobal.com to schedule a demonstration or learn how to buy.

Visit www.AFLglobal.com/Clean to learn more about CleTOP Optical Fiber Connector Cleaners.

International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts

Cleaning Fluids and Wipes

FCC2 Enhanced Fiber Connector Cleaner and Preparation Fluid

Cleaning Supplies



Features

- Not Hazardous/Not Regulated for all modes of transport, including air cargo
- Unique dispenser for use with AFL Connector Cleaning Tips and FiberWipes™
- Dissipates static charge
- Up to 400+ cleanings per can

Applications


- Cleans of all types of connector end-faces
- Cleans bare fiber before field terminating or fusion splicing
- Removes oils, salts, dust, dirt, and uncured epoxies
- Safe on glass, ceramic, metal, plastic optical fiber

FCC2 Enhanced Fiber Connector Cleaner and Preparation Fluid is a nonflammable, environmentally safe, residue-free solvent engineered to clean fiber connector end-faces and bare fiber. The 3-way dispenser provides easy one-handed use as tap dispenser for fiber wipes, a well for CCT Connector Cleaning Tips, and a spray nozzle for larger areas. Packaged in a spill-proof container, it can be shipped with connector cleaning and termination kits providing everything techs need in the field. FCC2 was developed with Micro Care Corporation, a world leader in cleaning solvents.

Ordering Information


DESCRIPTION	AFL NO.
Fiber Connector Cleaner and Preparation Fluid in 3 oz / 85 g can	FCC2-00-0902
Fiber Connector Cleaner and Preparation Fluid , Case of 12 cans	FCC2-00-0903

Recommended Products



FOCIS Flex Connector Inspection

- Self-contained, tether-free, hand-held
- Auto-focus and auto-centering for fast, easy inspection
- IEC, IPC and user-defined pass/fail analysis



One-Click® Cleaners

- Patented single-action
- Variety of sizes and types
- Low cost per clean



Cleto Cleaners

- Simple push-button shutter application
- Easily replaceable cost-effective tape cartridges
- Over 400 wipes per tape

Cleaning Fluids and Wipes

Debris Destroyer® Fiber Cleaning Pen



Features

- Precise applicator tip for controlled cleaning
- Eliminates electrostatic charge
- Designed for use with One-Click® Cleaners, FiberWipes™, CleanWipes™
- Safe for plastic components

Applications

- Cleaning fiber optic connector end-faces and bare fiber
- Wet to dry cleaning with wipes and One-Click cleaners
- Ideal for bare fiber preparation prior to fusion splicing
- Remove dirt, dust, oils, and other debris from fiber optic components

The Debris Destroyer is a cleaning pen for fiber optic connectors and bare fiber. It can be used for controlled application of cleaning fluid to cassette cleaners and wipes. AFL offers multiple products that can be used with the Debris Destroyer, including CLETOP-S, OPTIPOP-R, FiberWipe, and CleanWipe. The Debris Destroyer can also be used to moisten the tip of One-Click cleaners, turning them into a wet cleaning solution for tough end-face contamination.



Ordering Information

DESCRIPTION	AFL NO.
Debris Destroyer Fiber Cleaning Pen, 9 grams/0.32 oz.	FCC3-00-PEN1

Recommended Products



FOCIS Flex Connector Inspection

- Self-contained, tether-free, hand-held
- Auto-focus and auto-centering for fast, easy inspection
- IEC, IPC and user-defined pass/fail analysis



Cletop Cleaners

- Simple push-button shutter application
- Easily replaceable cost-effective tape cartridges
- Over 400 wipes per tape



One-Click® Cleaners

- Patented single-action
- Variety of sizes and types
- Low cost per clean

Cleaning Fluids and Wipes

Optical Cloth Wipes

Cleaning Supplies



FiberWipes

Features

- Lint free and fully optical grade
- Robust and tear-resistant
- Softer than traditional cellulose wipes

Applications

- Cleaning optical fibers prior to termination or splicing
- Cleaning fiber optic connector ferrule end-faces
- Cleaning lenses, mirrors, and other optical surfaces
- Use for wet cleaning with FCC2 Connector Cleaning Fluid or FCC3 Fiber Cleaning Pen

Specifically designed to lift and trap common contaminants found in fiber optic installations, AFL wipes provide superior cleaning results because they are made from material that is stronger, softer, and more absorbent than traditional cellulose wipes. Packaged in a clean room, the fabric is optical-quality grade and comes in two convenient form factors and are perfect additions to both tool kits and test kits.



FiberAide 1

WFW FiberWipes™

- Rugged 90-wipe mini-tub ideal for laboratory and field use
- Hexagonal cover minimizes rolling distance when dropped
- Solvent safe – wipes may be moistened to provide wet / dry cleaning


FiberAide 1

- Hermetically sealed wipes remain uncontaminated and ready for use
- Foil-backed wipes protect skin from cleaning solvents and cable gel
- Packaging contains no glues to leach out
- Solvent safe – wipes may be moistened to provide wet / dry cleaning

Ordering Information

DESCRIPTION	AFL NO.
FiberWipes – case of 24 mini-tubs (2160 total wipes, 90 wipes per mini-tub)	9000-03-0026MZ
FiberAide 1 – case of 600 packets (60 bundles, 10 packets per bundle)	9000-03-0027MZ

Recommended Products




FOCIS Flex Connector Inspection

- Self-contained, tether-free, hand-held
- Auto-focus and auto-centering for fast, easy inspection
- IEC, IPC and user-defined pass/fail analysis



Cletope Cleaners

- Simple push-button shutter application
- Easily replaceable cost-effective tape cartridges
- Over 400 wipes per tape



One-Click® Cleaners

- Patented single-action
- Variety of sizes and types
- Low cost per clean

Contact Sales@AFLglobal.com to schedule a demonstration or learn how to buy.

Visit www.AFLglobal.com/Clean to learn more about Cleaning Fluids and Wipes.

International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts

Cleaning Kits



FCP1 Kit



FCP2 Kit



FCP3 Kit

Features

- Mix of wet and dry cleaning products for most applications
- MPO/MTP® Option
- Field portable
- Convenient refill options

Applications

- Field cleaning connectors on jumpers and through bulkhead adapters
- Clean SC, ST, FC, LC, MU, and MPO connectors
- Clean a variety of contaminants

Cleaning saves time and money! Over 85% of network failures can be traced back to dirty and damaged connectors. The foolproof way to avoid these outages is to inspect and clean every connector, every time - without fail. You should even inspect new ones right out of the box. Proper fiber hygiene can extend the life of connectors and reduces replacement costs. FCP Cleaning Kits from AFL offer a complete selection of fiber optic cleaning products for field cleaning of connector end-faces in a convenient carry case.

FCP1 kits consist of a wall or rack mountable carry case, FCC2 Fiber Connector Cleaner and Preparation Fluid, CCT Connector Cleaning Tips, Cletop-SB, and color-coded instructions.

FCP2 kits include FCC2 Fiber Connector Cleaner and Preparation Fluid, FCC3 Debris Destroyer® Fiber Cleaning Pen, WFW FiberWipes™, Cletop SB, One-Click Cleaners for SC, ST, FC, LC/MU, MPO connectors, and a field portable duffel bag.

FCP3 kits include FCC2 Fiber Connector Cleaner and Preparation Fluid, FCC3 Debris Destroyer® Fiber Cleaning Pen, CCT Connector Cleaning Tips, Cletop-SB, One-Click Cleaners for SC, ST, FC, LC/MU, MPO connectors, and an easy-access soft carry case.

Cleaning Kits


Ordering Information

FCP1 WALL/RACK MOUNTABLE FIELD PORTABLE CLEANING KITS	AFL NO.		
	FCP1-00-0901	FCP1-00-0907	FCP1-00-0914
CONTENTS / ITEMS DESCRIPTION			
FCC2 Fiber Connector Cleaner And Preparation Fluid (Can)	◆	◆	◆
CCTS-12 (for 1.25 mm ferrule) Connector Cleaning Tips		◆	◆
CCTS-25 (for 2.5 mm ferrule) Connector Cleaning Tips	◆	◆	◆
CCTP-25 (for all connectors) Connector Cleaning Tips	◆	◆	◆
CCTX-MT (for MTP, MPO, MPX connectors) Connector Cleaning Tips		◆	
Cletop-S, Type B with White Tape	◆	◆	◆
Color-coded Instructions	◆	◆	◆
Wall/Rack Mountable Carry Case	◆	◆	◆

FCP2 FIELD PORTABLE DUFFLE BAG CLEANING KITS	AFL NO.	
	FCP2-10-0900	FCP2-00-0901
CONTENTS / ITEMS DESCRIPTION		
FCC2 Fiber Connector Cleaner and Preparation Fluid (Can)	◆	◆
FCC3 Debris Destroyer® Fiber Cleaning Pen	◆	◆
WFW FiberWipes™	◆	◆
Cletop-S, Type B with White Tape	◆	◆
One-Click Cleaner SC, ST, FC	◆	◆
One-Click Cleaner MU/LC	◆	◆
One-Click Cleaner MPO		◆
Field Portable Duffle Bag	◆	◆


FCP3 EASY-ACCESS CLEANING KITS	AFL NO.	
	FCP3-00-0900	FCP3-00-0901
CONTENTS / ITEMS DESCRIPTION		
FCC2 Fiber Connector Cleaner And Preparation Fluid (Can)	◆	◆
FCC3 Debris Destroyer® Fiber Cleaning Pen	◆	◆
CCTS-12 (for 1.25 mm ferrule) Connector Cleaning Tips	◆	◆
CCTS-25 (for 2.5 mm ferrule) Connector Cleaning Tips	◆	◆
Cletop-S, Type B with White Tape	◆	◆
One-Click Cleaner SC, ST, FC	◆	
One-Click Cleaner MU/LC	◆	◆
One-Click Cleaner Ultra 2.5 (enlarged cleaning) SC, ST, FC	◆	◆
One-Click Cleaner D-LC, Duplex LC		◆
One-Click Cleaner MPO	◆	◆
Soft Carry Case	◆	◆

Recommended Products



FOCIS Flex & FOCIS Lightning (Multi-fiber) Connector Inspection

- Self-contained, tether-free, hand-held inspection solution
- Auto-focus and auto-centering for fast, easy inspection
- IEC, IPC and user-defined pass/fail analysis
- FOCIS Lightning: extremely fast multi-fiber auto-analysis for datacom and telecom inspection applications



FOCIS WiFi2™ Fiber Optic Connector Inspection

- Trim, lightweight, ergonomic and highly productive tool
- App-based automatic and manual focus; auto-centering after image capture
- One button workflow using rapid LED feedback on probe
- Multi-color LED on probe for fast pass/fail user inspection feedback

Contact Sales@AFLglobal.com to schedule a demonstration or learn how to buy.

Visit www.AFLglobal.com/Clean to learn more about Cleaning Kits.

International Sales and Service Contact Information available at www.AFLglobal.com/Test/Contacts



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As an end-to-end solutions provider, AFL has a vast amount of content on the many aspects of fiber optic networks for a variety of broadband and telecom applications—now in one easy-to-find location. Introducing the new resource center, which provides quick and easy viewing of everything “AFL.” Everything from instructional videos to best practices for test and inspection as well as:

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