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 1b) 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.

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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	MFI1-00-0900MR
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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