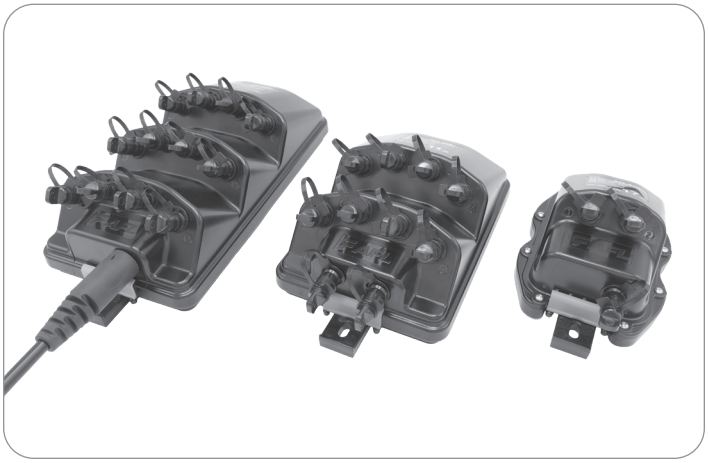
INSTALLATION INSTRUCTIONS

AFL RTD™ Terminal Powered by Prodigy®



AFL RTD™Terminal

Prodigy® Hardened Drop Cable

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GENERAL

The AFL RTD™ Terminal powered by Prodigy® is the latest offering from AFL to support FTTx deployments. This product features the reduced size Prodigy hardened fiber optic adapters with a large selection of cable types and lengths. The AFL RTD is factory sealed to withstand the harsh outside plant application environments and allows for long-term reliability when installed anywhere in the network – underground, in pedestals, on poles or on aerial strand or ADSS cables. The AFL RTD Terminal features conventional point to point (straight through) fiber terminations as well as optical splitter versions to support a wide range of system designs.

MULTIPORT TERMINAL SPECIFICATIONS

Parameter	Value
Dimensions - (L x W x H) in. (mm)	2-Port – 6.1 x 4.5 x 3.1 (155 x 114 x 79)
	4, 6, and 8-port – 7.9 x 5.6 x 3.1 (201 x 142 x 79)
	12-port – 10.6 x 5.6 x 3.1 (269 x 142 x 79)
Maximum Span Length at 1% Sag - ft (m) at 60°F Installation per NESC loading conditions	Light Loading: Flat Drop - 375 (114) ; ADSS – 1,090 (332)
	Medium Loading: Flat Drop - 275 (83) ; ADSS – 710 (216)
	Heavy Loading: Flat Drop - 150 (45) ; ADSS – 420 (128)
Cable Stub Nominal Diameter – in (mm)	Flat Drop – 0.17 x 0.32 (4.5 x 8.1)
	ADSS – 0.338 (8.6)
	Armored – 0.32 (8.2)
	Pushable Round Drop - 0.20 (5.1)
Cable Stub Maximum Tensile Loading - lbs (N)	Flat Drop - 300 (1,335) Install ; 90 (405) Long-Term
	ADSS – 1,000 (4,448) MRCL
	Armored – 300 (1,355) Install ; 100 (445) Long-Term
	Pushable Round Drop – 112 (500)
Cable Stub Minimum Bend Radius - in (mm)	Flat Drop - 3.2 (82)
	ADSS – 7.0 (130) Install ; 5.0 (180) Long-Term
	Armored – 6.4 (163) Install ; 3.2 (82) Long-Term
	Pushable Round Drop – 2 (51)
Operating Temperature – °F (°C)	-49°F to +149°F (-40°C to +65°C)

AFL RTD TERMINAL QUALIFICATIONS

Standard	Specification
IEC 61753-1	Category G
IEC 61753-111-08 (IEC 60529 IP68)	2 m waterhead

AFL RTD TERMINAL OPTICAL SPECIFICATIONS

Parameter	Value
Insertion Loss, Maximum – Point-to-Point Terminals	0.50 dB
Insertion Loss, Typical	0.20 dB
Return Loss, Connector, Typical	65 dB
1x2 Splitter Insertion Loss, Typical	4.00 dB
1x4 Splitter Insertion Loss, Typical	7.00 dB
1x8 Splitter Insertion Loss, Typical	10.70 dB

PACKAGE CONTENTS

AFL RTD™Terminal Powered by Prodigy®

REQUIRED TOOLS

One-Click® SC Cleaner

Lint-Free Connector Cleaning Swabs

ADD-ON COMPONENTS

Description	AFL Part Number
Strand Mount Bracket Kit	FC001365
Adjustable Strand Mount Bracket Kit	FC000489
Prodigy® to SC/APC Adapter- for referencing test jumpers	CS019765
Prodigy® Male to SC/APC Test Jumper (1 meter)	RTDD-PRD-ASC-1PS-0001

TERMINAL IDENTIFICATION - PLACARDS

The base of the AFL RTD™ terminal has a color-coded placard for easily identifying the type of terminal – Point-to-Point (Straight Through), Splitter, or Distributive Tap **(Figures 1 & 2)**. The color code is defined below in **Table 1**.

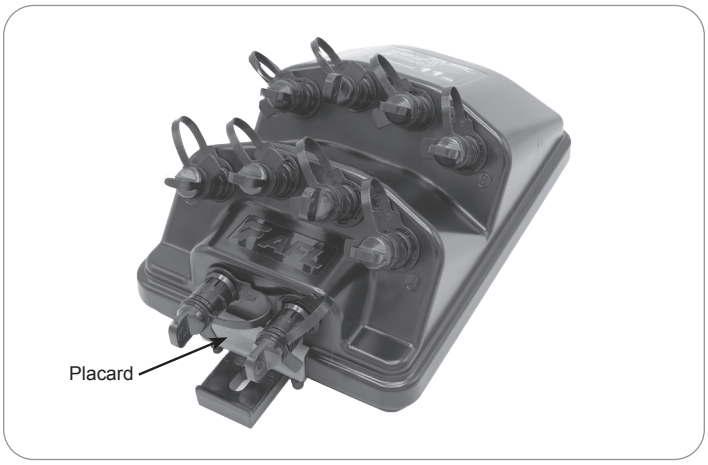

Figure 1

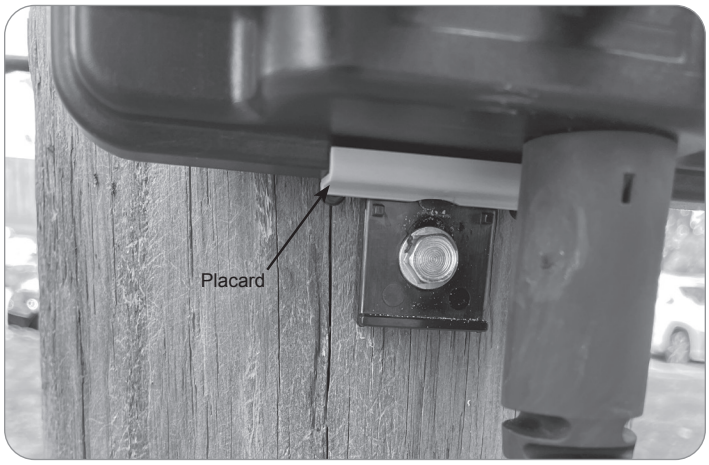

Figure 2

Placard Color	Terminal Configuration
Green	Point-to-Point (Straight Through)
Blue	Splitter (Even Split)
Orange	Distributive Tap

TERMINAL IDENTIFICATION – LABELS

On the front of every terminal is a white label that shows the AFL part number of the terminal as well as the average dB loss of the terminal **(Figure 3)**.

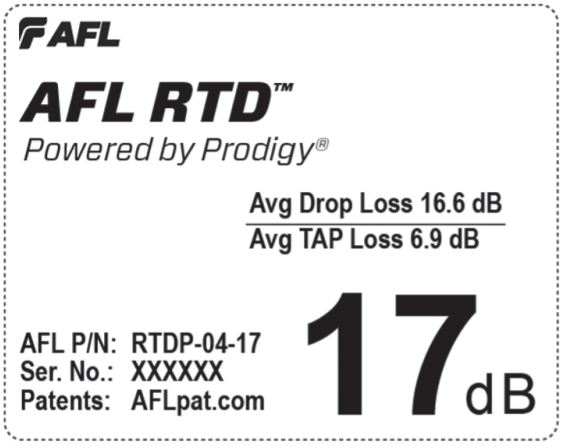

Figure 3

MULTIPORT TERMINAL MOUNTING OPTIONS

⚠ **Caution: Fiber optic cables are susceptible to damage from excessive bending, pulling or crushing forces. At every stage of the installation process ensure that cables are free from unintentional cuts, nicks or bends to avoid potential fiber damage. Flat cable terminal tails cannot be bent other than their preferential bend direction.**

MULTIPORT TERMINAL MOUNTING – STRAND

✻ **Note: For best practice, it is recommended that the multiport terminal be mounted on the strand with the adapter ports oriented towards the pole (Figure 4).**

1. Using local engineering practices, determine the installation location for the multiport terminal.
2. Align the pem-nut hole on the strand mount bracket with the terminal mounting hole.
3. Secure the strand mount bracket to the terminal using the bolt and washers provided in the Strand Mount Bracket Kit. **(Figure 5)**

✻ **Note: For best practice, it is recommended that both strand mount brackets be installed onto the terminal before beginning the strand mount procedure.**

4. Determine the size of the strand and loosen the strand clamp. Do not remove this bolt from the strand mount bracket.
5. Place both strand mount bracket clamps over the strand and tighten completely. **(Figure 4)**

For applications that require the multiport terminal be mounted on large overlash bundles the Adjustable Strand Mount Bracket Kit will be utilized.

1. Determine the necessary height for the bracket.
2. Using a standard 216 style tool, or similar, to loosen the bolt allowing the bracket to expand to the desired height. **(Figure 6 and 7)**
3. Re-tighten the bolt locking the bracket into place.
4. Follow steps 1 – 5 of the ***MULTIPORT TERMINAL MOUNTING – STRAND*** section to complete the Adjustable Strand Mount Bracket installation.

✻ **Note: When mounting the terminal aerially, the stubs of the drop cables should also be bundled together and routed to the strand avoiding sharp bends that would violate the minimum bend radius of the cable.**

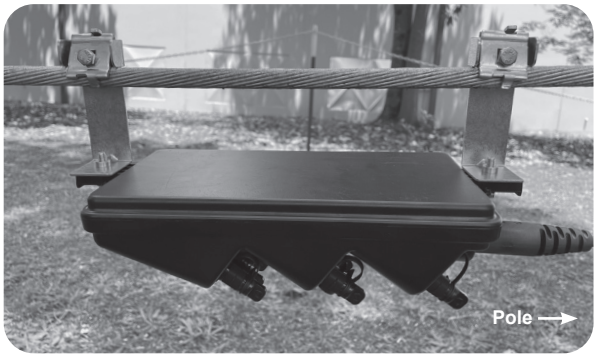

Figure 4

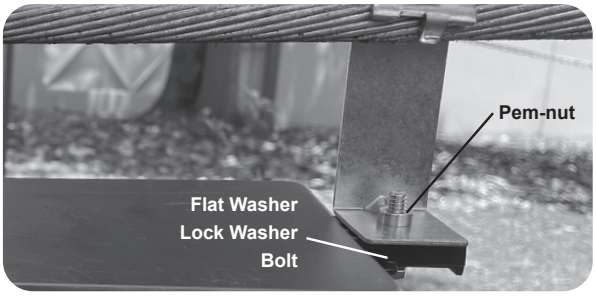

Figure 5

Figure 6

Figure 7

MULTIPORT TERMINAL MOUNTING – WALL OR POLE

1. Using local engineering practices, determine the installation location for the multiport terminal.
2. Using local accepted practices and approved hardware, secure the top and bottom of the terminal to the wall or pole **(Figure 9)**. AFL recommends using ¼"-size lag screws to secure the terminal to the pole **(Figure 8)**.

Note: When mounting to a metal or concrete pole, the top and bottom mounting tabs of the multiport terminal are designed to accept a ¾" band.

Note: To avoid excessive side pressure to the terminal ports, the drop cable stubs should follow the same routing path as the stubs for the terminal. Take care to not exceed the minimum bend radius of the terminal cable stub or drop cable stubs. AFL recommends the use of bridle rings or similar hardware to aid in guiding the cable stubs.

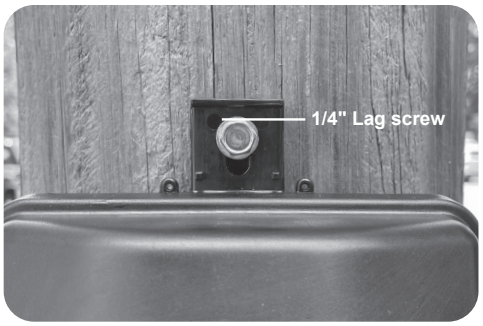

Figure 8

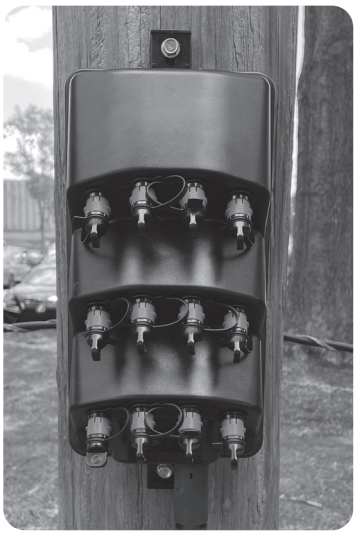

Figure 9

MULTIPORT TERMINAL MOUNTING – HANDHOLE OR PEDESTAL

1. Using local engineering practices, determine the installation location for the multiport terminal.
2. Align the terminal mounting holes with the mounting holes on the pedestal back plate or vertical mounting channel.
3. Using local accepted practices and approved hardware, secure the top and bottom of the terminal to the back plate or channel **(Figure 10)**.

Note: For best practice, it is recommended that the hardware sizes below be used in the following order:

- *** 1/4 - 20 Bolt**
- *** 1/4" Lock Washer**
- *** 1/4" Flat Washer**
- *** 1/4" Locking Nut**

Figure 10

Figure 11

CONNECTING PRODIGY® HARDENED CONNECTOR

⚠ **Caution: When working with fiber optics, do not look directly into the end of the fiber cable or adapter port. A power meter may be used to determine if the cable or port is dark. Always use locally accepted fiber optic safety practices.**

✻ **Note: When adding a new hardened drop cable to an AFL RTD™terminal that was previously installed, ensure that the terminal is clear from any environmental debris before removing the adapter dust cap. When cleaning the outside of the terminal, only clean water is to be used.**

⚠ **Caution: Fiber optic cables are susceptible to damage from excessive bending, pulling or crushing forces. At every stage of the installation process ensure that cables are free from unintentional cuts, nicks or bends to avoid potential fiber damage. Flat cable terminal tails cannot be bent other than the preferential bend direction.**

1. Using local engineering practices, determine the terminal port to be used for connecting with the Prodigy® Hardened Connector cable assembly.

✻ **Note: Each port on the terminal is identifiable by an embossed port ID located next to each adapter (Figure 12).**

2. Remove the adapter dust cap on the terminal by twisting a quarter turn to the left and pulling **(Figure 13).**

✻ **Note: AFL recommends inspecting and cleaning the adapter before making a connection to verify the adapter end face is clean.**

3. Insert a dry, lint-free swap into the adapter to clean the adapter end face. Apply light pressure against the end face and fully rotate the dry swap three times. Use a new swab for each adapter **(Figure 14).**

✻ **Note: The adapter dust cap and connector dust cap should only be removed immediately prior to connection in order to avoid any contamination.**

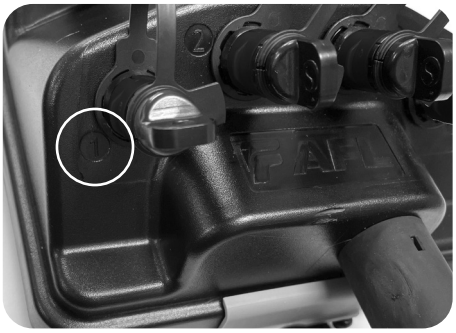

Figure 12

Figure 13

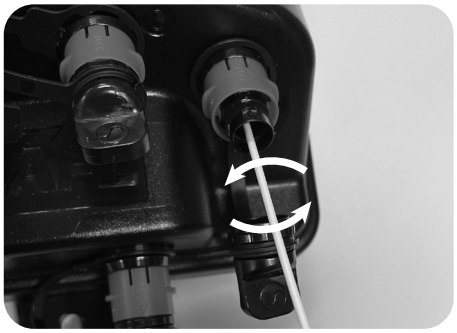

Figure 14

4. On the Prodigy® hardened connector, twist the connector dust cap counter-clockwise to unlock and pull of the cap **(Figure 15)**. Pull off the ferrule dust cap as well. **(Figure 16)**.

Note: The connector dust cap has a breakaway piece that breaks off once the cap is removed, and is used to indicate whether the drop is still factory sealed (Figure 17).

5. Use a One-Click SC Cleaner or similar to clean the connector end face. Always insert the cleaner straight into the connector (not at an angle), and press in until an audible click is heard **(Figure 18)**.
6. Align the key on the Prodigy hardened connector with the top of the adapter housing **(Figure 19)**.
7. Insert the connector and twist a quarter turn to the right to engage the connector. An audible click will be heard **(Figure 20)**.
8. Lock the connector in place by pulling the locking ring down towards the connector housing **(Figure 21)**.
9. Secure the dust caps by threading the connector dust cap into the adapter dust cap **(Figure 22)**.
10. Repeat Steps 1-9 for any additional Prodigy drops that need to be connected.

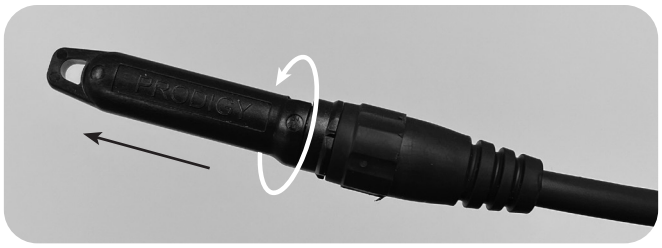

Figure 15

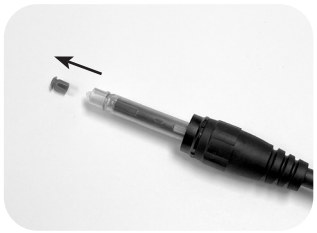

Figure 16

Figure 17

Figure 18

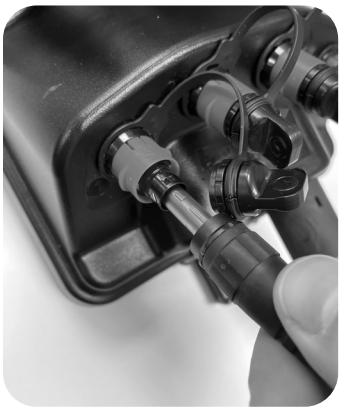

Figure 19

Figure 20

Figure 21

Figure 22

DISCONNECTING PRODIGY® HARDENED CONNECTOR

1. Unscrew the connector dust cap from the adapter dust cap.
2. Push the locking ring up towards the port to unlock the connector **(Figure 23)**.
3. Twist the connector a quarter turn to the left to disengage and pull the connector out **(Figure 24)**.
4. Re-install the adapter dust cap over the adapter with a quarter turn to the right **(Figure 25)**.
5. Re-install the connector dust cap and lock it with a clockwise turn. An audible click will be heard when engaged **(Figure 26)**.

Figure 23

Figure 24

Figure 25

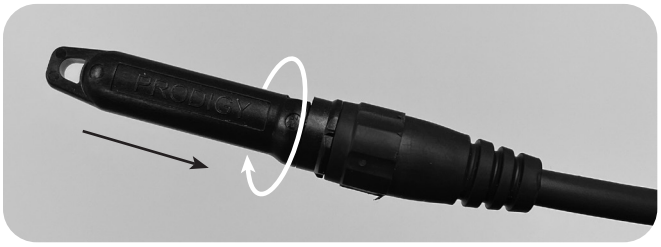

Figure 26