

SEL-C804 Multimode Fiber-Optic Arc-Flash Detection (AFD) Sensors

Configure Standard Multimode Fiber Optic Arc Flash Detection Point and Fiber Loop Sensor Cable Assemblies and accessories

Part Number:

C	8	0	4							X	X
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Point Sensor AFD (see Figure 2 below)⁽¹⁾

Point Sensor Fiber Length:
Enter 01 to 35 meters*

								X	X	X		
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Fiber Sensor AFD (see Figure 1 below)⁽²⁾

Length of Black-Jacketed Fiber (Zipcord Duplex) **A** in meters:
Enter 01 to 30 meters^{(3)*}

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Length of Clear-Jacketed Fiber **B** in meters, (A+B+A) <=70 meters:
Enter 01 to 50 meters maximum^{(4)*}

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Splice Connection Type for Fiber Sensor AFD

V-Pin Connector

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ST[®] Connector

								S				
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Accessories

V-Pin/ST Termination Tool Kit - 1.0mm POF*	9	1	5	9	0	0	1	4	6
V-Pin Connector (Qty 25) - 1.0mm POF*	9	1	5	9	0	0	1	4	7
V-Pin Connector Splice Bushing (Qty 1) - 1.0mm POF*	9	1	5	9	0	0	1	4	8
Dual V-Pin Latching Kit (Qty 12) - 1.0mm POF*	9	1	5	9	0	0	1	4	9
ST-Connector (Qty 1) - 1.0mm POF*	9	1	5	9	0	0	1	5	0
ST-Connector Splice Bushing (Qty 1) - 1.0mm POF*	9	1	5	9	0	0	1	5	1
1.0mm Clear-Jacketed Fiber Spool (500 meters)*	9	1	5	9	0	0	2	3	4
1.0mm Black-Jacketed Fiber, Zipcord Duplex Spool (500 meters)*	9	1	5	9	0	0	1	5	4
Mounting Hardware Kit*	9	1	5	9	0	0	1	5	5

* Additional Cost

⁽¹⁾ **Example:** Point Sensor with 30 meters Black-Jacketed fiber length. Order part number C80430XXXXX.

⁽²⁾ **Example:** Fiber Sensor with 25 meters Black-Jacketed fiber (A), 10 meters Clear-Jacketed fiber (B), and ST (S) connectors for splice. Order part number C80425S10XX.

⁽³⁾ Range for 'A' equals 1-30 meters.

⁽⁴⁾ Range for 'B' equals 1-50 meters. (A+B+A) is less than or equal to 70 meters.

Note: For Multimode-Fiber Optic Arc Flash Detection Sensors with additional splice connectors, refer to SEL-C814 Arc-Flash Detection (AFD) Fiber Cables and Accessories MOT

Optical Budget Calculations:

Link Budget⁽¹⁾

Point Sensor: 12.25 dB

Fiber Sensor: 17.00 dB

Loss Data⁽²⁾

ST Connector splice: 2 dB

V-Pin Connector splice: 2 dB

Clear-Jacketed fiber: 0.175 dB/m

Black Jacketed fiber: 0.175 dB/m

⁽¹⁾ Link budget is calculated after allowing for the losses of the dual V-Pin latch. When using a point sensor it allows for the sensor loss as well.

⁽²⁾ Link losses are calculated by adding up the fiber loss and the splice connector losses. The link losses should be less than the link budget. Please find link optical loss calculation examples below.

Link Optical Loss calculation examples:

- 1) Bare-Fiber Sensor with two V-Pin or ST splice connectors and an "A" dimension of 15 meters and "B" dimension of 40 meters— two connectors is the standard configuration as shown in Figure 1.

Link Budget	17 dB
- (2 dB x # of connector splices)	-4 dB
- (0.175 dB/m x "A" dimension x 2)	-5.25 dB
- (0.175 dB/m x "B" dimension)	-7 dB
Total Link Losses	-16.25 dB

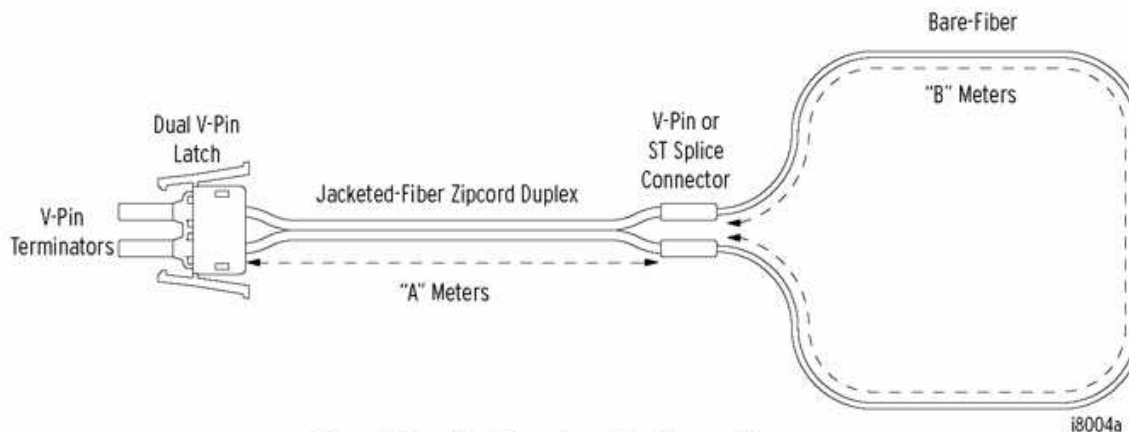


Figure 1 - Bare-Fiber Sensor Assembly with two splices

- 2) Point Sensor with "A" dimension of 30 as shown in figure 2.

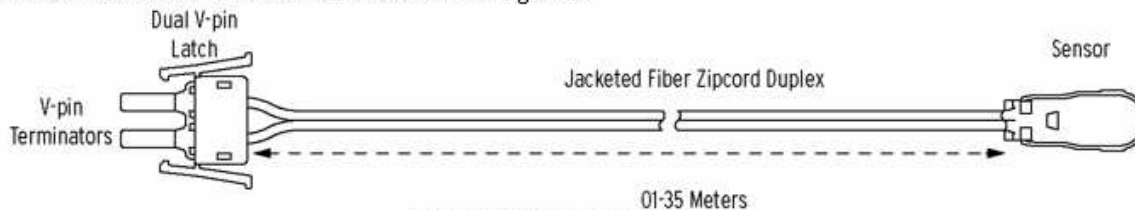


Figure 2 - Point Sensor Assembly

Link Budget	12.25 dB
- (0.175 dB / m* "A" dimension *2)	-10.5 dB
Link Losses=	-10.5 dB

Note: The losses and budget values shown above are typical values

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