

SEL-C814 Arc-Flash Detection (AFD) Fiber Cables and Accessories

Configure Multimode Fiber Optic Arc Flash Detection Point and Fiber Loop Sensor Cable Assemblies with Multiple Splices, Order Bulk Cables, Connectors, Termination Kits and Accessories. Use the optical budgeting example shown below to calculate and verify link losses.

Part Number:

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Cable Construction

1.0mm Black-Jacketed Fiber, Zipcord Duplex						B					
1.0mm Clear-Jacketed Fiber, Simplex						C					

Connector Option

Bulk (No connectors) (max length limited to 500 m)							X	X			
V-Pin to V-Pin Connector (length 01 to 50 m)						C	V	V			
ST [®] to ST [®] Connector (length 01 to 50 m)						C	S	S			
V-Pin to ST [®] Connector (length 01 to 50 m)						C	V	S			
V-Pin to V-Pin Connector (length 01 to 34 m)						B	V	V			
ST [®] to ST [®] Connector (length 01 to 34 m)						B	S	S			
V-Pin to ST [®] Connector (length 01 to 34 m)						B	V	S			
V-Pin to Point Sensor (length 01 to 34 m)						B	V	P			
ST to Point Sensor (length 01 to 34 m)						B	S	P			
V-Pin to Window Point Sensor (length 01 to 34 m)						B	V	W			
ST to Window Point Sensor (length 01 to 34 m)						B	S	W			
Dual V-Pin Latch -V-Pin (length 01 to 34 m)						B	V	L			
Dual V-Pin Latch -ST [®] (length 01 to 34 m)						B	S	L			

Length

Specify in meters with leading zeros (example: 15 meters = 015)											
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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		
Mounting Hardware Kit*	9	1	5	9	0	0	1	5	5		

* Additional Cost

Note: For Multimode-Fiber Optic Arc Flash Detection Sensors without additional splice connectors, refer to SEL-C804 Multimode Fiber-Optic Arc-Flash Detection (AFD) Sensors 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.

Ordering examples showing part numbers generated using C814 MOT and the link optical loss calculations:

- 1) Bare-Fiber Sensor with four ST connector splices and an "A" dimension of 15 meters as shown in Figure 1. Two connectors is the standard configuration.

Link Budget	17 dB
- (2 dB x # of connector splices)	- 8 dB
- (0.175 dB/m x "A" dimension x 2)	- 5.25 dB
Link Losses =	3.75 dB
= (0.175 dB / m)	21.42 meters, maximum "B" dimension

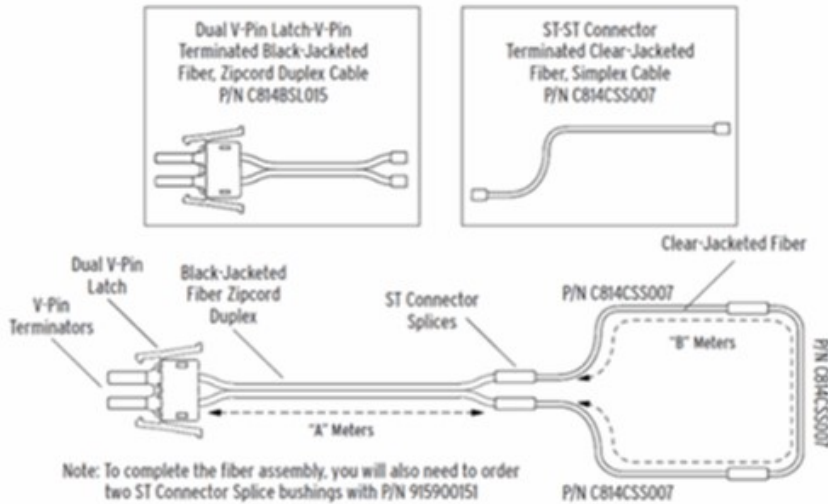
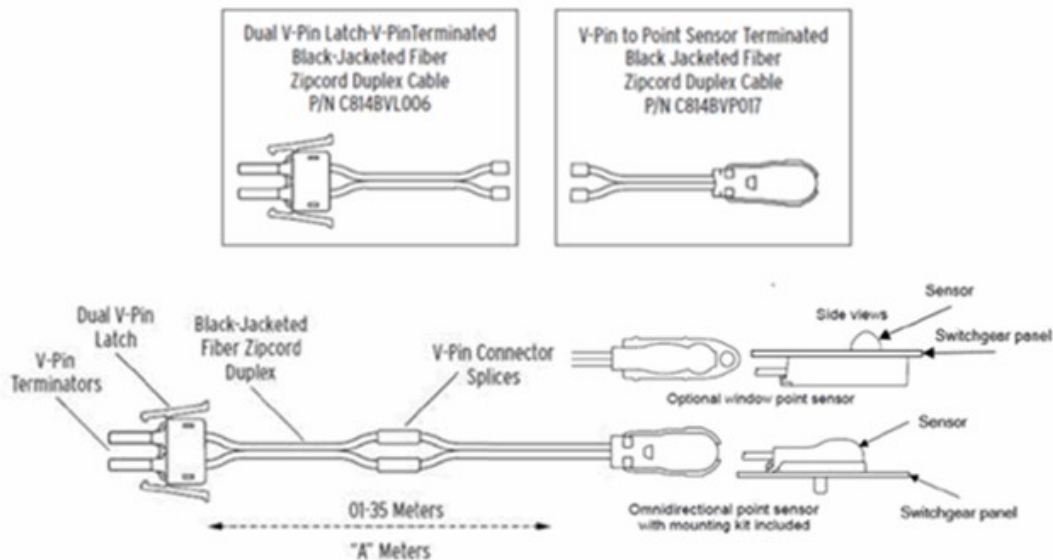


Figure 1 - Bare-Fiber Sensor Assembly with two additional ST Splice Connectors

- 2) Point Sensor with two V-pin connectors as shown in figure 2.

Link Budget	12.25B
- (2 dB x # of connector splices)	- 4 dB
Link Losses =	8.25 dB
= (2 x 0.175 dB / m)	23.6 meters, maximum "A" dimension



Note: To complete the cable assembly, you will also need to order two V-Pin Connector Splice Bushings with P/N 915900148

Figure 2 - Point Sensor Assembly with two V-pin Splice Connectors

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

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