S15J In-Line Fuse

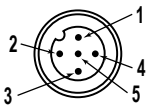
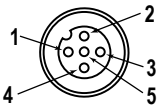
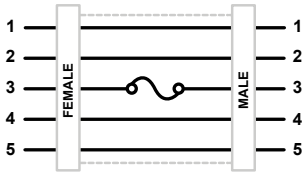
Datasheet

- Protect devices from over-current
- Rugged over-molded design meets IP65, IP67, and IP68
- Simple M12 connection for easy installation where needed in the circuit
- LEDs provide fuse status to indicate healthy or blown state
- Provides an alternative solution to products that require a Class 2 power supply

Models

Model Number	Function Description
S15J-2AFB-Q	Fast-blow fuse, 2 A max
S15J-3AFB-Q	Fast-blow fuse, 3 A max

Wiring

Male Pinout	Female Pinout	Diagram
		

Specifications

Supply Voltage
12 V DC to 30 V DC at 15 mA maximum device current draw
Use only with one of the following:
- Class 2 power supply (North America)
- Power supply rated to a maximum of 100 VA
- Power supply certified to either IEC 60950-1 or IEC 62368-1

Maximum Fuse Current
Model-dependent, see Models on page 1 and Operational Conditions on page 2

Connections
Integral 5-pin M12 male/female quick-disconnect connector

Construction
Coupling Material: Nickel-plated brass
Connector Body: PVC translucent black

Environmental Rating
IP65, IP67, IP68
UL Type 1

Operating Conditions
Temperature: –40 °C to +55 °C (–40 °F to +131 °F)
Storage Temperature: –40 °C to +70 °C (–40 °F to +158 °F)

Indicators [1]
Green: Power present, normal signal transmission
Red & Green: Power present, normal signal transmission, but current approacing or over rating
Red: Fuse blown, signal transmission stopped

Alternative to Class 2 Power Supply Requirement

When the S15J is paired with a power supply in accordance with Annex Q of IEC 62368-1, then it can be used to create a low voltage, limited energy power source.

The S15J may be used with a power supply that can deliver up to 100 A at a maximum of 30 V DC (3000 VA).

The S15J limits the current of a 0 V DC to 30 V DC source to satisfy Class 2 or SELV Power Supply requirements.

Selecting a fuse size depends on the type of connection cabling to the device.

Power Supply > **(Cable 1)** > **Fuse** > **(Optional Cable 2)** > **Protected Device**

The correct fuse rating is based on the connection or cabling upstream from the fuse, but before the power supply.

Cable(s) (Awg)	Amperage Rating
22	3 A
24	2 A

This power supply combination meets the requirements for Class 2 power while the fuse is intact. There is no rating available when the fuse is blown or disabled.

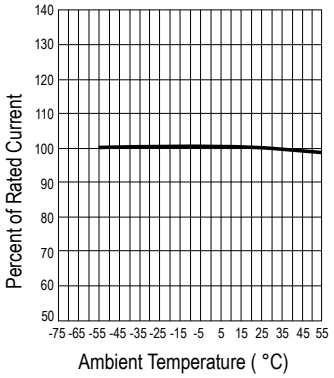
[1] The fuse functions properly when power is applied on either the male or female connector. The LEDs function properly only when power is applied to Pin 1 on the male connector.

Operational Conditions

The operation of the fast-blow fuse is variable, and depends on ambient temperature and conditions. A fuse running at 100% of its rated current could potentially blow after 4 hours of use. However, a fuse at 200% of its rated current will blow within 5 seconds, and a fuse at 300% of its rated current will blow within 0.2 seconds.

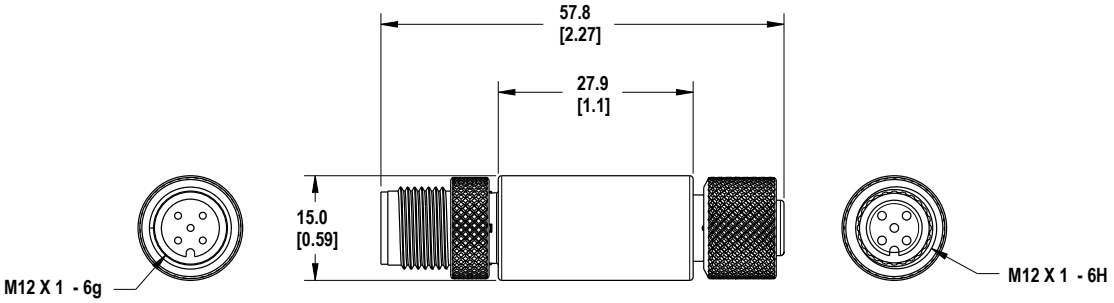
Amperage Rating	Minimum Blow Time	Maximum Blow Time
100%	4 hours	N/A
200%	N/A	5 seconds
300%	N/A	0.2 seconds

Figure 1. Temperature Derating



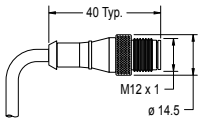
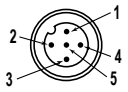
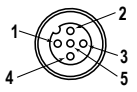
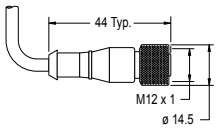
Dimensions

All measurements are listed in millimeters [inches], unless noted otherwise.



Accessories

Cordsets

5-Pin Threaded M12 Cordsets—Double Ended					
Model	Length	Style	Dimensions	Pinout (Male)	Pinout (Female)
MQDEC-501SS	0.31 m (1.02 ft)	Male Straight/ Female Straight			
MQDEC-503SS	0.91 m (2.99 ft)				
MQDEC-506SS	1.83 m (6 ft)				
MQDEC-512SS	3.66 m (12 ft)				
MQDEC-515SS	5 m (16.4 ft)				
MQDEC-530SS	9 m (29.5 ft)				
MQDEC-550SS	15 m (49.2 ft)			1 = Brown 2 = White 3 = Blue	4 = Black 5 = Gray