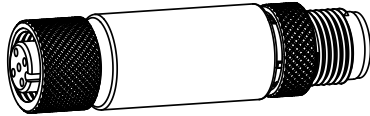


# S15C Analog Current to IO-Link Device Converter



## Datasheet



- Compact analog current to IO-Link device converter that connects to a current source (4 mA to 20 mA) and outputs the value to the IO-Link master
- Rugged over-molded design meets IP65, IP67, and IP68
- Connects directly to a sensor or anywhere in-line for ease of use

## Models



## IO-Link®

IO-Link® is a point-to-point communication link between a master device and a sensor and/or light. It can be used to automatically parameterize sensors or lights and to transmit process data. For the latest IO-Link protocol and specifications, please visit [www.io-link.com](http://www.io-link.com).

For the latest IODD files, please refer to the Banner Engineering Corp website at: [www.bannerengineering.com](http://www.bannerengineering.com).

## Configuration

The measured current value is available via Process Data In as the measured value in  $\mu\text{A}$ .

For more information, see Banner P/N 217418 *S15C Analog Converter (Voltage and Current) - IO-Link Data Reference Guide* and Banner P/N 217417 *S15C-U/I-KQ IODD Files*.

## Wiring Diagrams

Male	Female	Pin	Wire Color
		1	Brown
		2	White
		3	Blue
		4	Black

Female (Sensor)	Signal Description
Pin 1	18 V DC to 30 V DC
Pin 2	Analog In
Pin 3	Ground
Pin 4	Not Used



**Important:** A shielded cable is required on the female (sensor) side, with the shield tied to the blue wire.



Male (IO-Link Master)	Signal Description
Pin 1	18 V DC to 30 V DC
Pin 2	Banner-specific
Pin 3	Ground
Pin 4	IO-Link

## Status Indicators

### Power LED Indicator (Green)

- Solid Green = Power On
- Off = Power Off

### IO-Link Communication LED Indicator (Amber)

- Flashing Amber (900 ms On, 100 ms Off) = IO-Link communications are active
- Off = IO-Link communications are not present

### Analog Communication LED Indicator (Amber)

- Solid Amber = Analog current value is between setpoint SP1 AND setpoint SP2
- Off = Analog current value is less than setpoint SP1 OR analog value is greater than setpoint SP2
- Default Values <sup>1</sup>:
  - SP1 = 0.004 A
  - SP2 = 0.02 A

## Specifications

### Supply Voltage

18 V DC to 30 V DC at 50 mA maximum

### Power Pass-Through Current

1 A maximum

### Analog Input Impedance

Approximately 450 ohms

### Supply Protection Circuitry

Protected against reverse polarity and transient voltages

### Leakage Current Immunity

400 µA

### Resolution

14-bits

### Accuracy

0.5%

### Indicators

Green power  
Amber IO-Link communications  
Amber analog value present

### Connections

Integral male/female 4-pin M12/Euro-style quick disconnect

### Construction

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

### Vibration and Mechanical Shock

Meets IEC 60068-2-6 requirements (Vibration: 10 Hz to 55 Hz, 0.5 mm amplitude, 5 minutes sweep, 30 minutes dwell)  
Meets IEC 60068-2-27 requirements (Shock: 15G 11 ms duration, half sine wave)

### Certifications



**Banner Engineering Europe**  
Park Lane, Culliganlaan 2F bus  
3, 1831 Diegem, BELGIUM



**Turck Banner LTD** Blenheim  
House, Blenheim Court,  
Wickford, Essex SS11 8YT,  
Great Britain



### Environmental Rating

IP65, IP67, IP68  
NEMA/UL Type 1

### Operating Conditions

**Temperature:** -40 °C to +70 °C (-40 °F to +158 °F)  
90% at +70 °C maximum relative humidity (non-condensing)  
**Storage Temperature:** -40 °C to +80 °C (-40 °F to +176 °F)

### Required Overcurrent Protection



**WARNING:** Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

Overcurrent protection is required to be provided by end product application per the supplied table.

Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.

Supply wiring leads < 24 AWG shall not be spliced.

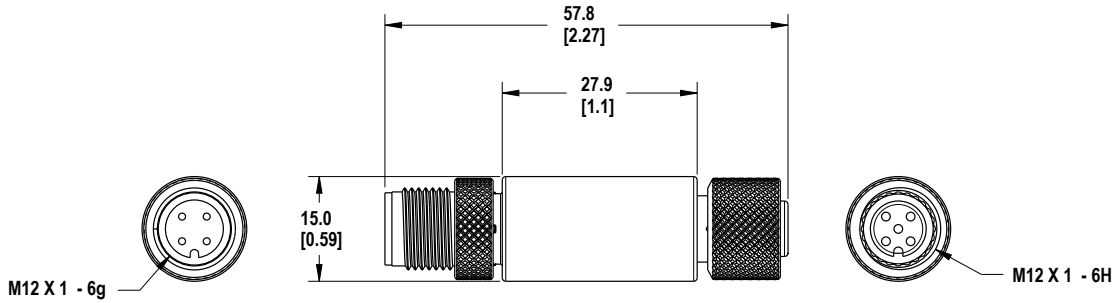
For additional product support, go to [www.bannerengineering.com](http://www.bannerengineering.com).

Supply Wiring (AWG)	Required Overcurrent Protection (Amps)
20	5.0
22	3.0
24	2.0
26	1.0
28	0.8
30	0.5

<sup>1</sup> SP1 and SP2 values are IO-Link read/write parameters.

## Dimensions

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



## Accessories

### Cordsets

4-Pin Threaded M12 Cordsets—Double Ended				
Model	Length	Style	Dimensions	Pinout
MQDEC-401SS	0.31 m (1 ft)	Male Straight/ Female Straight		Female
MQDEC-403SS	0.91 m (2.99 ft)			
MQDEC-406SS	1.83 m (6 ft)			Male
MQDEC-412SS	3.66 m (12 ft)			
MQDEC-420SS	6.10 m (20 ft)			
MQDEC-430SS	9.14 m (30.2 ft)			
MQDEC-450SS	15.2 m (49.9 ft)			
				1 = Brown 2 = White 3 = Blue 4 = Black

## Banner Engineering Corp Limited Warranty

Banner Engineering Corp. warrants its products to be free from defects in material and workmanship for one year following the date of shipment. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture which, at the time it is returned to the factory, is found to have been defective during the warranty period. This warranty does not cover damage or liability for misuse, abuse, or the improper application or installation of the Banner product.

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For patent information, see [www.bannerengineering.com/patents](http://www.bannerengineering.com/patents).

## FCC Part 15

This device complies with Part 15 of the FCC Rules. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation is subject to the following two conditions: 1) This device may not cause harmful interference; and 2) This device must accept any interference received, including interference that may cause undesired operation.

## Industry Canada

This device complies with CAN ICES-3 (B)/NMB-3(B). Operation is subject to the following two conditions: 1) This device may not cause harmful interference; and 2) This device must accept any interference received, including interference that may cause undesired operation.

Cet appareil est conforme à la norme NMB-3(B). Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne peut pas occasionner d'interférences, et (2) il doit tolérer toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité du dispositif.