

# IF-IOL Series

## IO-Link Converter

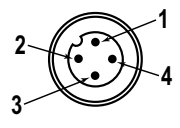
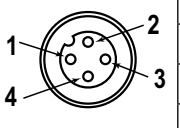
- Compact analog current or voltage to IO-Link device converter that connects to a current or voltage source (4 mA to 20 mA or 0 V to 10 V) and outputs the value to the IO-Link master
- Rugged over-molded design meets IP65, IP67, and IP68
- Connects directly to a sensor or anywhere in-line for ease of use

### 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).

### Configuration

The measured current value is available via Process Data In as the measured value in  $\mu$ A. The measured voltage value is available via Process Data In as the measured value in mV. For more information, see the Omega IF-IOL Series IO-Link Data Reference Guide.

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

Male (IO-Link Master)	Signal Description
Pin 1	18 Vdc to 30 Vdc
Pin 2	Omega-Specific
Pin 3	Ground
Pin 4	IO-Link

Female (Sensor)	Signal Description
Pin 1	18 Vdc to 30 Vdc
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.

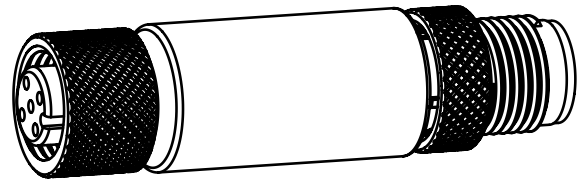
### Status Indicators

#### 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>

	IF-IOL-001	IF-IOL-002
SP1	0.004 A	0 V
SP2	0.02 A	10 V

### Specifications

**Supply Voltage:** 18 Vdc to 30 Vdc at 50 mA maximum

**Power Pass-Through Current:** 1 A maximum

**Analog Input Impedance:**

IF-IOL-001: Approximately 450 ohms

IF-IOL-002: Approximately 14.3K ohms

**Supply Protection Circuitry:** Protected against reverse polarity and transient voltages

**Leakage Current Immunity:** 400  $\mu$ A

**Resolution:**

IF-IOL-001: 14-bits

IF-IOL-002: 13-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: 15 G 11 ms duration, half sine wave)

**Certifications**



**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)

Supply wiring leads < 24 AWG shall not be spliced.

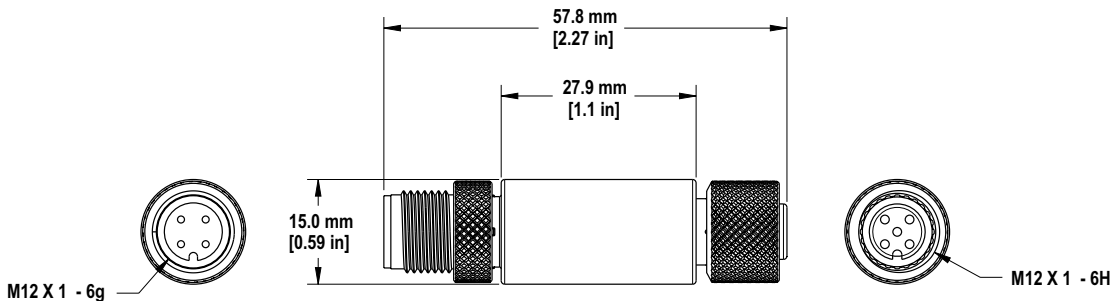
**Required Overcurrent Protection**

**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.

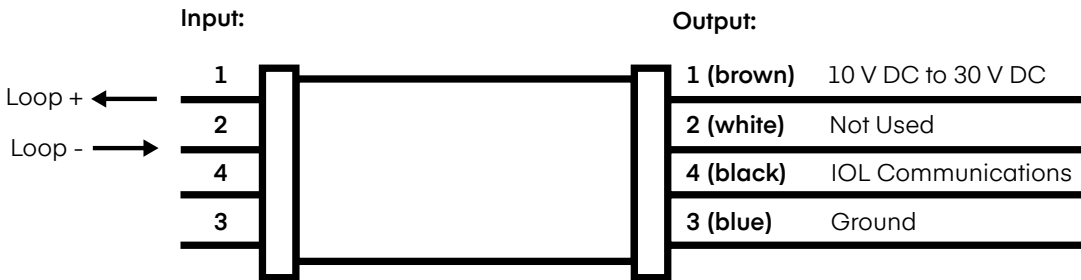
Supply Wiring (AWG)	Required Overcurrent Protection (Amps)
20	5.0
22	3.0
24	2.0
26	1.0
28	0.8
30	0.5

**Dimensions**

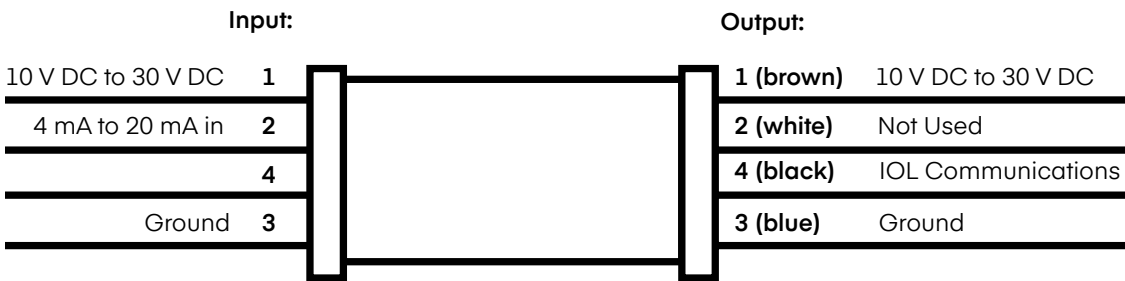


**Pin Diagrams**

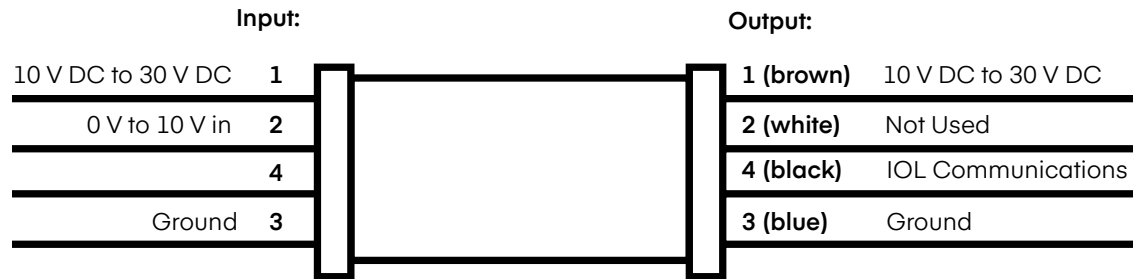
**Connecting 2-Wire 4 mA to 20 mA Sensors**



**Connecting 3-Wire 4 mA to 20 mA Sensors**



Connecting 0 V to 10 V Sensors



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.

Models

Model Number	Length
IF-IOL-001	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
IF-IOL-002	Compact analog voltage to IO-Link device converter that connects to a voltage source (0 V to 10 V) and outputs the value to the IO-Link master

