Features



- Galvanically isolated converter that prevents noise from being induced on an RS485 communication bus by fully isolating the power and communications wires inside of the converter.
- Simple M12 connection for easy in-line installation
- Rugged overmolded design meets IP65, IP67, and IP68
- LED indicators for power in and power out

Models

Model Number	Function Description
S25GI-RS485-Q	RS-485 Galvanic Isolator

Overview

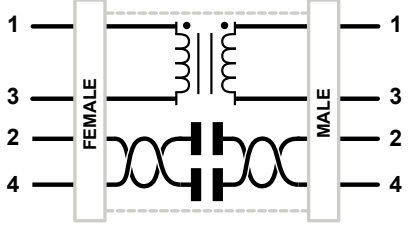
The S25GI-RS485-Q Galvanic Isolator is designed for applications primarily centered on optimizing and protecting RS-485 communication networks in challenging environments.

The S25GI-RS485-Q Galvanic Isolator is a fully integrated signal- and power-isolated data transceiver for RS-485 communication, and is suited for various high-speed, multipoint data transmission applications, particularly those requiring strong isolation and protection. It supports the widely used Modbus RTU industrial protocol, positioning it for use in controlling and monitoring industrial devices like PLCs, sensors, and actuators.

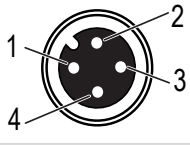
The primary application environment for this product series is demanding industrial applications, featuring an industrial-grade design, specifications, and certifications. Due to its robust isolation and suppression features, the S25GI-RS485-Q Galvanic Isolator is applied in locations subject to electrical noise, transients, and ground potential differences.

Wiring

Wiring Diagram



Female Pinout

Diagram	Pin Number	Wire Color	Signal Description
	Pin 1	Brown	12.6 V DC Output Power (max. 200 mA)
	Pin 2	White	Output RS-485 / D1 / B / +
	Pin 3	Blue	Ground from 12.6 V DC Output Power
	Pin 4	Black	Output RS-485 / D0 / A / -

Original Instructions
23-Oct-25

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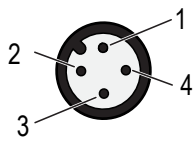
251896
p/n: 251896 Rev. A

ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

Male Pinout

Diagram	Pin Number	Wire Color	Signal Description
	Pin 1	Brown	10 V DC to 30 V DC Input Power
	Pin 2	White	Output RS-485 / D1 / B / +
	Pin 3	Blue	Ground from 10 V DC to 30 V DC Input Power
	Pin 4	Black	Output RS-485 / D0 / A / -

Specifications

Supply Power Input

10 V DC to 30 V DC at 5 watts maximum

Source Power Output

Output Voltage: 12.6 V DC

Output Current: 200 mA maximum

Supply / Source Protection Circuitry

Supply power is protected against reverse polarity and transient voltages

Source power is protected against short circuit

External voltage applied to the source power above 12.8 V is protected to allow external supplies on the source isolated power

Indicators

Green: Supply power in

Amber: Source power out

Connections

Integral male/female 4-pin M12 quick-disconnect connector

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)

Environmental Rating

IP65, IP67, IP68

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)

Product Identification

SNAP SIGNAL®

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.

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

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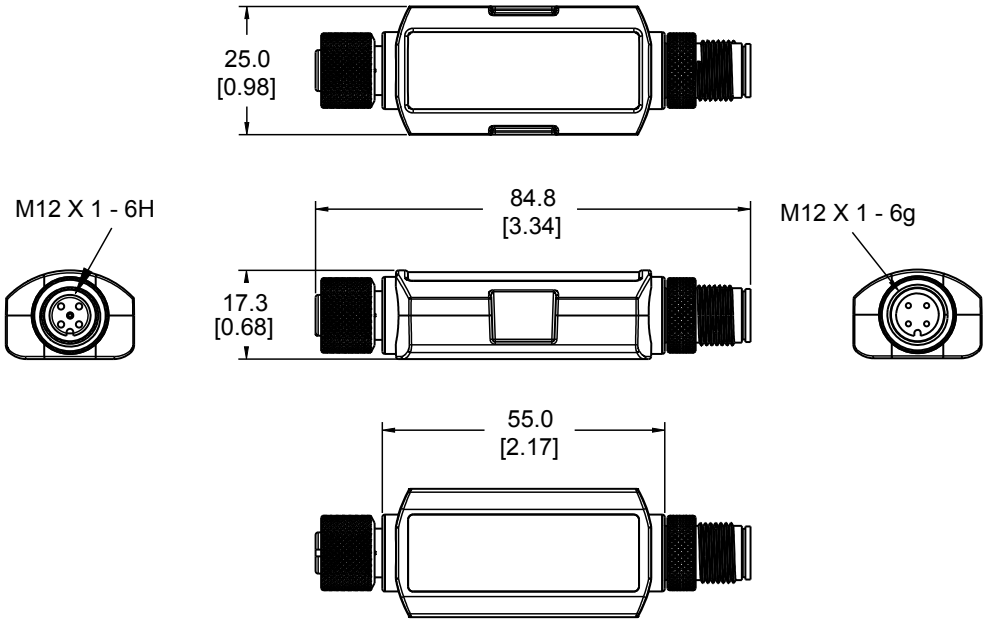
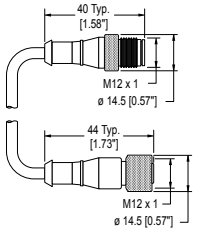
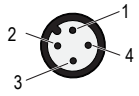
Dimensions

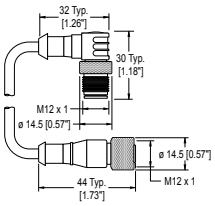
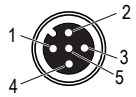
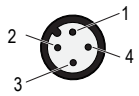
All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.



Accessories

Cordsets

4-pin A-Code Double-Ended M12 Female to M12 Male Cordsets (datasheet p/n 236186)				
Model	**Length**	**Dimensions (mm)**	**Pinouts**	
BC-M12F4-M12M4-22-1	1 m (3.28 ft)		Female  Male 	1 = Brown 2 = White 3 = Blue 4 = Black 5 = Unused
BC-M12F4-M12M4-22-2	2 m (6.56 ft)			
BC-M12F4-M12M4-22-3	3 m (9.84 ft)			
BC-M12F4-M12M4-22-4	4 m (13.12 ft)			
BC-M12F4-M12M4-22-5	5 m (16.4 ft)			
BC-M12F4-M12M4-22-10	10 m (30.81 ft)			
BC-M12F4-M12M4-22-15	15 m (49.2 ft)			

4-pin A-Code Double-Ended M12 Female to M12 Male Right-Angle Cordsets (datasheet p/n 236186)				
Model	**Length**	**Dimensions (mm)**	**Pinouts**	
BC-M12F4-M12M4A-22-1	1 m (3.28 ft)		Female  Male 	1 = Brown 2 = White 3 = Blue 4 = Black 5 = Unused
BC-M12F4-M12M4A-22-2	2 m (6.56 ft)			
BC-M12F4-M12M4A-22-5	5 m (16.4 ft)			
BC-M12F4-M12M4A-22-8	8 m (26.25 ft)			
BC-M12F4-M12M4A-22-10	10 m (30.81 ft)			
BC-M12F4-M12M4A-22-15	15 m (49.2 ft)			

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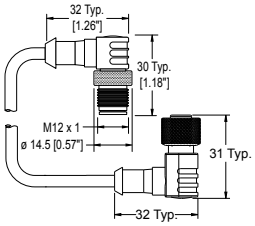
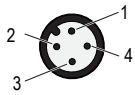
4-pin A-Code Double-Ended M12 Female Right-Angle to M12 Male Right-Angle Cordsets (datasheet p/n 236186)				
Model	**Length**	**Dimensions (mm)**	**Pinouts**	
BC-M12F4A-M12M4A-22-0.3	0.3 m (1 ft)		Female  Male 	1 = Brown 2 = White 3 = Blue 4 = Black 5 = Unused c UL us LISTED
BC-M12F4A-M12M4A-22-1	1 m (3.28 ft)			
BC-M12F4A-M12M4A-22-2	2 m (6.56 ft)			
BC-M12F4A-M12M4A-22-5	5 m (16.4 ft)			
BC-M12F4A-M12M4A-22-8	8 m (26.25 ft)			
BC-M12F4A-M12M4A-22-10	10 m (30.81 ft)			
BC-M12F4A-M12M4A-22-15	15 m (49.2 ft)			

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