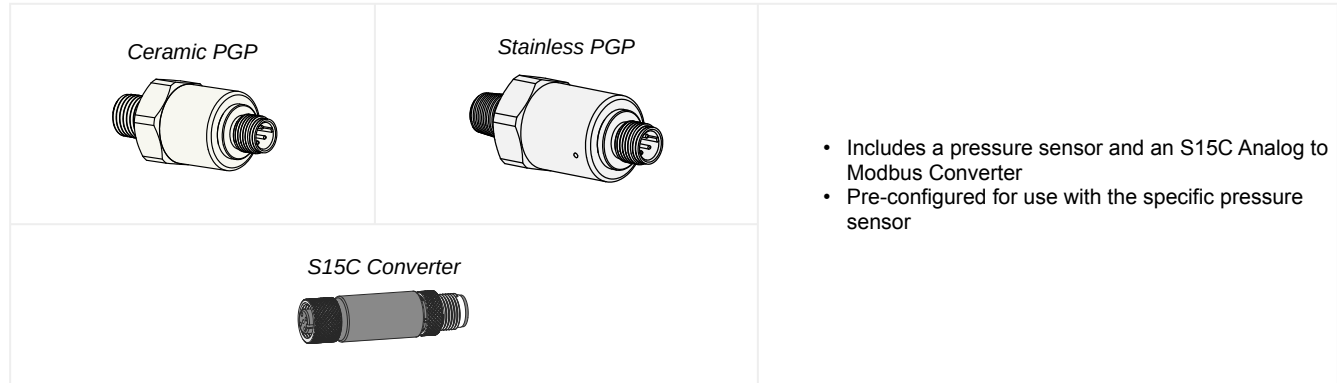


## Datasheet



## Models

Model Number	Pressure Range	Measuring Cell
S15C-PS15SS-MQ	0 PSIG to 15 PSIG	Stainless Steel
S15C-PS50SS-MQ	0 PSIG to 50 PSIG	Stainless Steel
S15C-PS100SS-MQ	0 PSIG to 100 PSIG	Stainless Steel
S15C-PS150C-MQ <sup>(1)</sup>	0 PSIG to 150 PSIG	Ceramic
S15C-PS150SS-MQ	0 PSIG to 150 PSIG	Stainless Steel
S15C-PS3000SS-MQ	0 PSIG to 3000 PSIG	Stainless Steel
S15C-PS5000SS-MQ	0 PSIG to 5000 PSIG	Stainless Steel

## Configuration Instructions

### Sensor Configuration Software

The Sensor Configuration Software offers an easy way to manage converter Modbus settings, retrieve data, and visually show converter data. The Sensor Configuration Software runs on any Windows machine and uses an adapter cable (BWA-UCT-900, p/n 19970) to connect the converter to the computer.

Download the most recent version of the Sensor Configuration Software from the Banner Engineering website: [https://info.bannerengineering.com/cs/groups/public/documents/software/b\\_3128586.exe](https://info.bannerengineering.com/cs/groups/public/documents/software/b_3128586.exe).

### Modbus Configuration

Modbus Register Address	Description	I/O Range	Comments	Default <sup>(2)</sup>	Access
<b>IO Data Out</b>					
40001	Pressure Data output	0-32768	Pressure (PSI) = Register Value / 100 Pressure (PSI) = Register Value / 100 Pressure (PSI) = Register Value / 100 Pressure (PSI) = Register Value / 100 Pressure (PSI) = Register Value / 1 Pressure (PSI) = Register Value / 1	1500 5000 10000 15000 3000 5000	RO
40002	Alarm State for IO 1 based on Min and Max thresholds defined in Analog In Min Value () and Analog In Max Value()	0...1	0 = Within threshold range 1 = Out of threshold range	-	RO

Continued on page 2

<sup>(1)</sup> Ceramic measuring cell for compressed air applications.  
<sup>(2)</sup> Depending on model selected.



Continued from page 1

Modbus Register Address	Description	I/O Range	Comments	Default	Access
40003	Status of program	0...2	STATUS_ERROR_TYPE_NO_ERROR = 0 STATUS_ERROR_TYPE_BELOW_MIN = 1 STATUS_ERROR_TYPE_ABOVE_MAX = 2	-	RO
<b>Input_ADC_Config</b>					
41201	Sample interval time	0...65535	0 = Disabled 1 = 10 ms 2...65535 = 5 ms increments	1	RW
<b>FilterConfig</b>					
41202	Takes current ADC value and the last ADC reading and takes the median of the values.	0...1	0 = Median Filter Disabled 1 = Median Filter Enabled	0	RW
<b>Minimum Value</b>					
41204	Minimum pressure value for data read	0...14 PSI 0...49 PSI 0...99 PSI 0...149 PSI 0...149 PSI 0...2999 PSI 0...4999 PSI	Must be less than maximum	0 PSI	RW
<b>Maximum Value</b>					
41205	Maximum pressure value for data read	1...15 PSI 1...50 PSI 1...100 PSI 1...150 PSI 1...150 PSI 1...3000 PSI 1...5000 PSI	Must be greater than the minimum	15 PSI 50 PSI 100 PSI 150 PSI 150 PSI 3000 PSI 5000 PSI	RW
<b>COMs Settings</b>					
46101	Baud Rate	0 = 9.6k 1 = 19.2k 2 = 38.4k	0 = 9.6k 1 = 19.2k 2 = 38.4k	1	RW
46102	Parity	0 = None 1 = Odd 2 = Even	0 = None 1 = Odd 2 = Even	0	RW
46103	Slave Address	1...247	1 to 247	1	RW

## Wiring

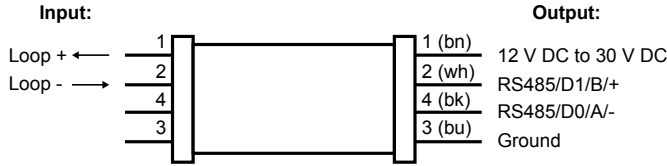
### S15C Wiring



Male (Gateway)	Female (Sensor)	Pin	Wire Color
		1	Brown
		2	White
		3	Blue
		4	Black

**IMPORTANT:** If using a cable to connect the converter to an analog sensor, use of a shielded M12 cable is recommended, with the shield tied to pin 3.

## Connecting 2-wire 4 mA to 20 mA Sensors



## PGP Wiring

4-pin M12 Male QD	Pin	Description
	1	Supply +
	2	Output
	3	Not used/no connection
	4	Not used/no connection

## Status Indicators

### Power LED Indicator (Green)

- Solid Green = Power On
- Off = Power Off

### Modbus Communication LED Indicator (Amber)

- Flashing Amber (4 Hz) = Modbus communications are active
- Solid Amber for 2 seconds to Off = Modbus communications are lost after connection
- Solid Amber for 2 seconds to Flashing Amber (4 Hz) = Modbus communications momentarily lost, but communication reestablished
- Solid Amber = Modbus communications are intermittent, or communications error occurs more frequently than once every 2 seconds
- Off = Modbus communications are not present

## Specifications

### S15C Specifications

#### Supply Voltage

12 V DC to 30 V DC at 50 mA maximum

#### Power Pass-Through Current

4 A maximum

#### Supply Protection Circuitry

Protected against reverse polarity and transient voltages

#### Leakage Current Immunity

400  $\mu$ A

#### Resolution

12-bits

#### Accuracy

1.5% of full scale

#### Internal Resistance

100 ohms

#### Indicators

Green power  
Amber Modbus communications

#### 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  
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)

#### Certifications



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



Turck Banner LTD Blenheim House  
Blenheim Court  
Wickford, Essex SS11 8YT  
GREAT BRITAIN



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

**Product Identification**



**Ceramic Pressure Sensor Specifications**

**Supply Voltage**

9 to 30 V DC

**Output**

4 to 20mA, 2-wire Loop Power

**Connections**

Electrical: M12x1 4-pin Male

Process: 1/4"-18 Male NPT

**Ambient Temperature**

-20 °C to +70 °C (-4 °F to +158 °F)

**Compensated Temperature**

-20 °C to +70 °C (-4 °F to +158 °F)

**Storage Temperature**

-20 °C to +70 °C (-4 °F to +158 °F)

**Enclosure Rating**

IP65

**Accuracy**

±1% of Full Scale

**Zero/Span Tolerance**

±1% of Full Scale

**Long Term Stability**

±1%/year

**Permissible Over-pressure**

1.5x Full Scale

**Burst Pressure**

2x Full Scale

**Construction**

Housing: #304SS, Copper, Aluminium

Wetted Parts: #316L Stainless Steel, Ceramic

**Certifications**



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



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Blenheim Court  
Wickford, Essex SS11 8YT  
GREAT BRITAIN

**Stainless Pressure Sensor Specifications**

**Supply Voltage**

9 to 30 V DC

**Output**

4 to 20mA, 2-wire Loop Power

**Connections**

Electrical: M12x1 4-pin Male

Process: 1/4"-18 Male NPT

**Ambient Temperature**

-40 °C to +85 °C (-40 °F to +185 °F)

**Compensated Temperature**

-10 °C to +70 °C (+14 °F to +158 °F)

**Storage Temperature**

-45 °C to +85 °C (-49 °F to +185 °F)

**Enclosure Rating**

IP67

**Accuracy**

±0.5% of Full Scale

**Zero/Span Tolerance**

±0.5% of Full Scale

**Long Term Stability**

±0.5%/year

**Permissible Over-pressure**

2.5x Full Scale

**Burst Pressure**

4x Full Scale

**Construction**

Housing: #304SS, Copper, Aluminium

Wetted Parts: #316L Stainless Steel

**Certifications**



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



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Blenheim Court  
Wickford, Essex SS11 8YT  
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**FCC Part 15 Class B**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses

and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## Industry Canada ICES-003(B)

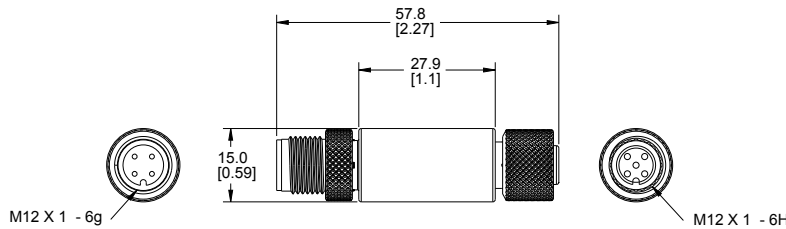
This device complies with CAN ICES-3 (B)/NMB-3(B). Operation is subject to the following two conditions: 1) This device may not cause harmful interference; and 2) This device must accept any interference received, including interference that may cause undesired operation.

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.

## Dimensions

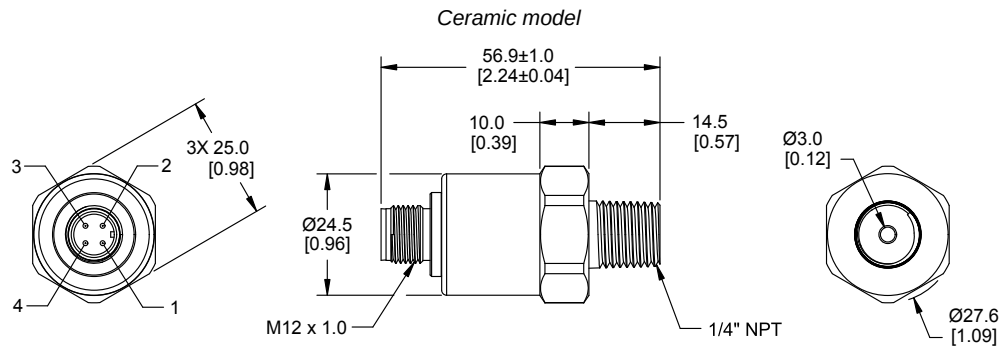
### S15C Dimensions

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



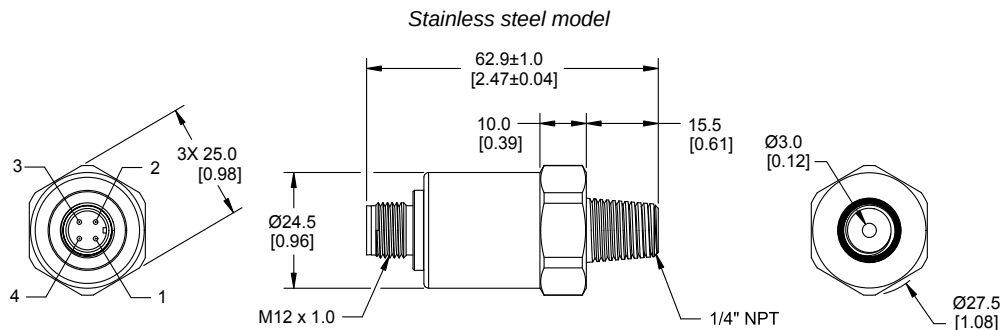
### Ceramic Pressure Sensor Dimensions

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



### Stainless Pressure Sensor 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)			Female
MQDEC-406SS	1.83 m (6 ft)			Female
MQDEC-412SS	3.66 m (12 ft)			Female
MQDEC-420SS	6.10 m (20 ft)			Female
MQDEC-430SS	9.14 m (30.2 ft)			Female
MQDEC-450SS	15.2 m (49.9 ft)			Male

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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This Warranty is exclusive and limited to repair or, at the discretion of Banner Engineering Corp., replacement. **IN NO EVENT SHALL BANNER ENGINEERING CORP. BE LIABLE TO BUYER OR ANY OTHER PERSON OR ENTITY FOR ANY EXTRA COSTS, EXPENSES, LOSSES, LOSS OF PROFITS, OR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM ANY PRODUCT DEFECT OR FROM THE USE OR INABILITY TO USE THE PRODUCT, WHETHER ARISING IN CONTRACT OR WARRANTY, STATUTE, TORT, STRICT LIABILITY, NEGLIGENCE, OR OTHERWISE.**

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