

MRB20

General Purpose Piezoresistive Pressure Transmitter

Features

- High Measuring Accuracy
- Pressure Measurement Range of -1 to 1000bar
- Compact and Rugged Model(SS316L)
- Wide Range of Media Compatibility
- Low Static and Thermal Errors
- Reverse polarity and transient current protected



Description

MRB20 series with SS316L diaphragm is a rugged piezoresistive silicon technology based pressure transmitter suitable for harsh environments. This compact pressure transmitter offers great flexibility and reliability for a wide range of applications with highly competitive pricing.

MRB20 is available in pressure ranges from -1 to 1000bar with an output of mA or V. Standard version of MRB20 is suitable for pressure measurement of gases & liquids compatible with SS316L. Options for Titanium, Hastelloy or Tantalum diaphragm are available on request. While the standard Precision is 0.5% FS, you can optionally get a precision of 0.25% FS and 0.1% FS.

The robust construction of MRB20 with its high performance makes it ideal for demanding long term applications.

Applications

- Production machinery
- Hydrology research
- Data logging
- Machine tool control
- Agricultural equipment
- Hydrostatic level control
- Hydraulic pumps
- Compressed air line

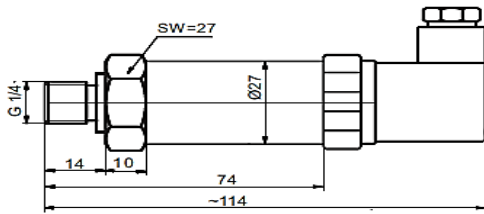
Technical Specifications

- **Pressure media:** all fluids compatible with SS316L and option for Titanium, Hastelloy or Tantalum
- **Ranges:** -1 to 1000bar
- **Pressure references:** Vented Gauge, Absolute, Sealed Gauge (Above 10bar),
- **Supply voltage:** 12 to 36 VDC
- **Output signals:** 4/20mA, 0/5V, 0/10V, 1/5V, 0.5/4.5V
- **Precision:** 0.5% FS (standard), 0.25% FS, 0.1% FS, combined LRH error
- **Long term stability:** <0.2% FS/year
- **Overpressure rating:** 150% FS
- **Power Consumption:** 4mA
- **Protection Level:** IP65 with DIN connection; IP67 and IP68 with cable connection
- **Compensated temp. range:** -10 to 70°C
- **Operating temp. range:** -30 to +80°C
- **Temp. coefficient of zero:** 0.02% FS /°C
- **Temp. coefficient of span:** 0.02% FS /°C
- **Insulation resistance:** 100MΩ @ 50VDC
- **Process connection:** G1/4 or others
- **Electrical connection:** DIN43650, 3m cable
- **Case materials:** SS316L
- **Diaphragm materials:** SS316L, Titanium, Hastelloy or Tantalum
- **Sealing:** n-Butyronitrile or fluoro-rubber sealing ring
- **Frequency Response:** 1kHz (with dynamic accuracy of < 2%)

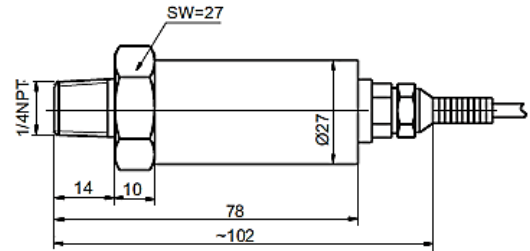
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Dimensions

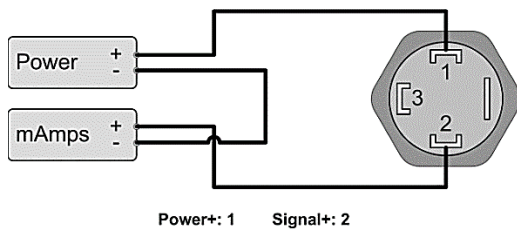


MRB20 with G1/4" port and DIN connector

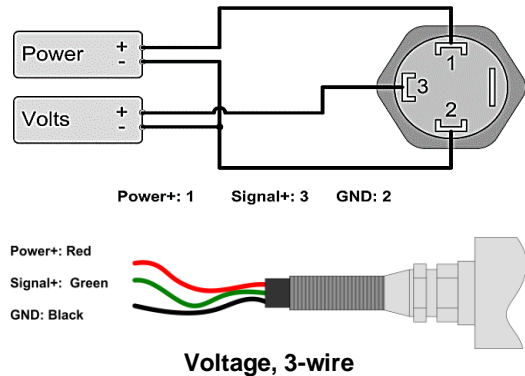


MRB20 with NPT1/4" and lock nut

Connection Diagrams



4/20mA, 2 wire loop powered



Voltage, 3-wire

Ordering Code

MRB20								
	Range	[-1/0]; [-1/+1]; [-0.5/+1]; 0.1, 0.2, 0.5, 1, 2, 4, 6, 8, 10, 12, 15, 16, 20, 35, 50, 100, 200, 300, 500, 600, 800 & 1000 bar or other ranges in bar or psi						
		Pressure Reference						
		VG (vented gauge)	SG (sealed gauge)	Abs (absolute)				
		Precision ±⁽¹⁾						
		0.5% FS	0.25% FS	0.1% FS				
		Output Signal						
		4/20mA	0/10V	0/5V volts				
		Pressure Port						
		G1/4 (1/4" BSPP male) max 300 bar			G1/2 (1/2" BSPP male)			
		R1/4 (1/4" BSPT male)		NPT1/4 (1/4" NPT male)	others			
		Electrical Connection						
		3m Cable			DIN 43650 connector			
		3m IP68 Cable			and others			
		Diaphragm Material						
		SS316L	Tantalum	others				
		Display						
		LED⁽³⁾			No			
MRB20	200bar	SG	0.5%	4/20mA	G1/4	DIN	SS316L	LED

Notes:

(1): Sensors with range of up to 1bar are available in only accuracy of 0.5% FS.

(2): Sealed gauge is possible only for pressure range of 10 bar and above.

All specifications are subject to change without prior notice

Ver. 5.6-21/08