

Features

- Low Range Industrial Pressure Sensor
- M12 4-Pin Connector
- Piezo-resistive sensor
- Stainless Steel body & diaphragm
- Accuracy $<+0.25\%$ FS BFSL
- Various outputs including Volts and mA
- Pressure ranges from 1 psi to 15 psi
- Gauge or Absolute pressure reference
- $\frac{1}{4}$ " NPT process connection

RS PRO Pressure Sensors

RS Stock No.: 175-5018, 175-5020, 175-5023, 175-5025, 175-5026, 175-5027, 175-5028, 175-5029



RS PRO is the own brand of RS. The RS PRO Seal of Approval is your assurance of professional quality, a guarantee that every part is rigorously tested, inspected, and audited against demanding standards. Making RS PRO the Smart Choice for our customers.

Product Description

This RS PRO range is suitable for use in a wide range of applications. The probe uses a piezo-resistive silicon sensor, giving excellent media compatibility within an oil filled 316L stainless steel housing.

The electronics incorporate a microprocessor based amplifier, requiring no adjusting and giving stable electronics, especially in high vibration/ shock applications.

*Each device is temperature compensated, calibrated and supplied with a traceable serial number and calibration data.**

**Calibration data is supplied as a sticker affixed to the product packaging - do not discard.*

Suitable applications

- HVAC • Pneumatics • Rainwater harvesting • Agricultural machinery • Laboratory testing
- Mechanical engineering • Environmental engineering • Automotive testing • Tank gauging • IBC, IBC Tote or pallet tank

Performance

Accuracy (Non-linearity & Hysteresis)	<+0.25% / FS (BFSL) for gauge reference	
Setting Errors (Offsets)	2-wire	Zero & Full Scale, <+0.5% / FS
	3-wire	Zero & Full Scale, <+0.5% / FS
Permissible Load	2-wire	$R_{max} = [(Supply - 9min) / 0.02] \Omega$
	3-wire	$R_{min} = 10k\Omega$
Influence Effects	Supply	<0.005% FS / 1V
	Load	0.05% FSO / kΩ

Material

Housing Material	316L Stainless Steel
"O" Ring Seals	Viton
Diaphragm Material	316L Stainless Steel
Media Wetted Parts	Housing & connection, 'O' ring seal, diaphragm

Miscellaneous

Current Consumption	2-wire Limits at 28mA
	3-wire Typical 6mA
Weight	Approx 3.5oz (100g)
Installation Position	Any, small zero shift when tilted through 90°
Operation Life	>100 x 10 ⁶ cycles
Insulation Resistance	>50MΩ at 50Vdc

Environmental Protection	IP67 (only when used with a similarly rated connector)
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Electrical Protection

Supply Reverse Polarity	No damage/no function
Electromagnetic Compatibility	CE Compliant

Environmental Conditions

Shock	100g / 11s
Vibration	10g RMS (20 - 2000Hz)
Media Temperature	-40°C to +125°C
Ambient Temperature	-20°C to +80°C
Storage Temperature	-40°C to +125°C
Humidity	5% to 95% RH non-condensing

Temperature & Thermal Effects

Compensated Temperature Range	+20°C to +80°C
Thermal Zero Shift (TZS)	<+0.04% /FS/°C
Thermal Span Shift	<-0.015% /°C

Pressure Ranges

Nominal Pressure, Gauge	psi	0.75	1.5	3.75	7.5	11.25	15
Permissible Overpressure	psi	30	30	30	75	75	75

Output Signal & Supply Voltage

Wire System	Output	Supply Voltage	Connection Pin Nos		
2-wire	4 - 20mA	9 - 32Vdc	+ve Supply Pin 1	-ve Supply Pin 2	Ground Earth Pin
3-wire	0 - 5Vdc	9 - 32Vdc	+ve Supply Pin 1	-ve Supply Pin 2	
			Output Pin 3	Earth Pin 4	

Range

RS Stock No.	Pressure Range	Output
175-5018	0-1 psi G	4-20mA
175-5020	0-2 psi G	4-20mA
175-5026	0-10 psi G	4-20mA
175-5028	0-15 psi G	4-20mA
175-5023	0-5 psi G	0-5V 3-wire
175-5025	0-8 psi G	0-5V 3-wire
175-5027	0-10 psi G	0-5V 3-wire
175-5029	0-15 psi G	0-5V 3-wire

All dimensions are in millimeters.

