

Features

- Low Range Industrial Pressure Sensor
- Piezo-resistive sensor
- Stainless Steel body & diaphragm
- Accuracy $\leq +0.25\%$ FS BFSL
- Various outputs including Volts and mA
- Pressure ranges from 50 mbar to 1000 mbar
- Gauge pressure reference
- IP65 Large DIN 43650 electrical connector & plug
- $\frac{1}{4}$ " BSP Pressure port connection

RS PRO Pressure Sensors

RS Stock No.: 828-5701, 828-5707, 828-5710, 828-5713, 828-5717, 828-5723, 828-5726, 828-5729, 828-5732, 828-5735, 828-5739



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.* There is a choice of internal O ring seals to ensure that the device is compatible with a wide range of media. *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	
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 / k Ω

Material

Housing Material	303 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 28mA0
	3-wire Typical 6mA
Weight	Approx 100g
Installation Position	Any, small zero shift when tilted through 90°
Operation Life	>100 x 10 ⁶ cycles
Insulation Resistance	>50M Ω at 50Vdc

Electrical Protection

Supply Reverse Polarity	No damage/no function
Electromagnetic Compatibility	CE EMC directive EN 61326-1:2013

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 & Passive mV/V Outputs

Nominal Pressure, Gauge	mbar	50	100	250	500	750	1000
Nominal Pressure, Absolute	mbar				500	750	1000
Permissible Overpressure	mbar	2 bar	2 bar	2 bar	5 bar	5 bar	5 bar

Output Signal & Supply Voltage DIN 43650

Wire System	Output	Supply Voltage	Connection	Pin No.
2-wire	4 - 20mA	9 – 32Vdc	+ve Supply	Pin 1
			-ve Supply	Pin 2
			Ground	Earth Pin
3-wire	0 – 4.5Vdc (non-ratiometric)	9 – 32Vdc	+ve Supply	Pin 1
			-ve Supply	Pin 2
			+ve Output	Pin 3
			Ground	Earth pin

Range

RS Stock No.	Pressure Range	Output
828-5707	0-50mbarG	4-20mA
828-5710	0-100mbarG	4-20mA
828-5717	0-250mbarG	4-20mA
828-5729	0-500mbarG	4-20mA
828-5732	0-750mbarG	4-20mA
828-5739	0-1000mbar G	4-20mA
828-5701	0-50mbarG	0.5 to 4.5V 3Wire
828-5713	0-100mbarG	0.5 to 4.5V 3Wire
828-5726	0-250mbarG	0.5 to 4.5V 3Wire
828-5723	0-500mbarG	0.5 to 4.5V 3Wire
828-5735	0-750mbarG	0.5 to 4.5V 3Wire