

Datasheet

RS PRO Pressure Sensor

ENGLISH

Stock No.s: 1755006, 1755008, 1755010, 1755012, 1755014, 1755016, 1755007, 1755009, 1755011, 1755013, 1755015, 1755017

IPSL-M12 SERIES

LOW RANGE INDUSTRIAL PRESSURE SENSOR WITH M12 4-PIN CONNECTOR



Options Available

- Pressure range
- Output type
- Mating cable and plug assemblies are available - see datasheet M12 Cable Set Series



Performance

The IPSL-M12 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.

Features

- Piezo-resistive sensor
- Stainless steel body & diaphragm
- Accuracy <±0.25% FS BFSL
- 4-20mA or 0-5Vdc output
- Pressure ranges from 50mbar to 1000mbar
- M12 4-pin connector

Suitable Applications

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

Accuracy (Non-linearity & Hysteresis)	${<}\pm0.25\%$ / FS (BFSL) for gauge, ${<}\pm0.5\%$ for Absolute		
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] Ω	
	3-wire	$R_{min} = 10k\Omega$	
Influence Effects	Supply	<0.005% FS / 1V	
	Load	0.05% FSO / kΩ	

Material

Housing	316L Stainless Steel		
"O" Ring Seals	Viton		
Diaphragm	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 100g		
Installation Position	Any, small zero shift when tilted through 90°		
Operation Life	> 100 x 10 ⁶ cycles		
Insulation Resistance	> 50M0hms at 50Vdc		
Environmental Protection	IP67 (only when used with a similarly rated connector)		

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

Pressure Ranges & Passive mV/V Outputs

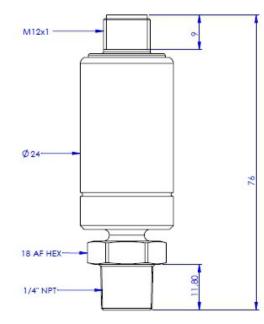
Nominal Pressure, Gauge	mbar	50	100	250	500	750	1000
Nominal Pressure, Absolute	mbar				500	750	1000
Permissible Overpressure	mbar	2 bar	2 bar	2 bar	5 bar	5 bar	5 bar

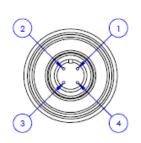
Output Signal & Supply Voltage DIN 43650

Wire System	Output	Supply Voltage	Connection	Pin No.
2-wire	4 - 20mA	9 — 32Vdc	+ve Supply	Pin 2
			-ve Supply	Pin 2
			Ground	Earth Pin
3-wire	0 - 5Vdc	9 – 32Vdc	+ve Supply	Pin 1
			-ve Supply	Pin 2
			+ve Output	Pin 3
			Ground	Pin 4 Earth

RS Stock No.	Pressure Range	Output
1755006	0-50mbarG	4-20mA
1755008	0-100mbarG	4-20mA
1755010	0-250mbarG	4-20mA
1755012	0-500mbarG	4-20mA
1755014	0-750mbarG	4-20mA
1755016	0-1000mbarG	4-20mA
1755007	0-50mbarG	0-5V 3-wire
1755009	0-100mbarG	0-5V 3-wire
1755011	0-250mbarG	0-5V 3-wire
1755013	0-500mbarG	0-5V 3-wire
1755015	0-750mbarG	0-5V 3-wire
1755017	0-1000mbarG	0-5V 3-wire







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