

IPSLU-M12 SERIES

LOW RANGE INDUSTRIAL PRESSURE SENSOR WITH M12 4-PIN CONNECTOR



CE

The IPSLU-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.*

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

Features

- Piezo-resistive sensor
- Stainless steel body & diaphragm
- Accuracy $<\pm 0.25\%$ FS BFSL
- Various outputs including Volts and mA
- Pressure ranges from 1 psi to 15 psi
- Gauge or Absolute pressure reference
- 1/4" NPT process connection

Suitable Applications

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

Options Available

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

SPECIFICATIONS

Performance

Accuracy (Non-linearity & Hysteresis)	$<\pm 0.25\%$ / FS (BFSL) for gauge reference	
Setting Errors (Offsets)	2-wire	Zero & Full Scale, $<\pm 0.5\%$ / FS
	3-wire	Zero & Full Scale, $<\pm 0.5\%$ / 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	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 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)

Electrical Protection

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

Mechanical Stability

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 – 32V dc	+ve Supply Pin 1	-ve Supply Pin 2	Ground Earth Pin
3-wire	0 - 5V dc	9 – 32V dc	+ve Supply Pin 1	-ve Supply Pin 2	
			Output Pin 3	Earth Pin 4	

RS Stock No.	Pressure Range	Output
1755018	0-1 psi G	4-20mA
1755020	0-2 psi G	4-20mA
1755022	0-5 psi G	4-20mA
1755024	0-8 psi G	4-20mA
1755026	0-10 psi G	4-20mA
1755028	0-15 psi G	4-20mA
1755019	0-1 psi G	0 to 5V 3Wire
1755021	0-2 psi G	0 to 5V 3Wire
1755023	0-5 psi G	0 to 5V 3Wire
1755025	0-8 psi G	0 to 5V 3Wire
1755027	0-10 psi G	0 to 5V 3Wire
1755029	0-15 psi G	0 to 5V 3Wire

DIMENSIONS

All dimensions are in millimeters.

