

IPSLU-M12 series

Low Range Industrial Pressure Sensor with M12 4-Pin connector



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.

Custom versions can be made for particular applications.

Material Specifications

| | |
|--------------------|--|
| 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° |
| Operational Life | > 100x 10 ⁶ cycles |
| Insulation resistance | > 50MΩ at 50Vdc |
| Environmental protection | IP67 (only when used with a similarly rated connector) |

- Piezo-resistive sensor
- Stainless steel body & diaphragm
- Accuracy $\leq \pm 0.25\%$ 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

Options available on the IPSLU-M12 pressure transmitter.

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

Suitable applications

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

Performance

| | | |
|---------------------------------------|---|--|
| Accuracy (Non-Linearity & Hysteresis) | $\leq \pm 0.25\%$ / FS (BFSL) for gauge reference | |
| Setting Errors (offsets) | 2-wire | Zero & Full Scale, $\leq \pm 0.5\%$ / FS |
| | 3-wire | Zero & Full Scale, $\leq \pm 0.5\%$ / 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 / kΩ |

Electrical Protection

| | |
|-------------------------------|-----------------------|
| Supply reverse polarity | No damage/no function |
| Electromagnetic compatibility | CE Compliant |

Mechanical Stability

| | |
|-----------|-----------------------|
| Shock | 100g / 11s |
| Vibration | 10g RMS (20 - 2000Hz) |

Temperatures & Thermal Effects

| | |
|-------------------------------|--------------------------|
| Media Temperature | -40°C to +125°C |
| Ambient Temperature | -20°C to +80°C |
| Storage temperature | -40°C to +125°C |
| Compensated temperature range | +20°C to +80°C |
| Thermal Zero Shift (TZS) | $\leq \pm 0.04\%$ /FS/°C |
| Thermal Span Shift | $\leq -0.015\%$ /°C |

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ISO9001 CERTIFIED



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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 Signals and Supply Voltages

| 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 |

| Part No | Pressure Range | Output |
|------------------|----------------|---------------|
| IPSLU-GP001-5M12 | 0-1 psi G | 4-20mA |
| IPSLU-GP002-5M12 | 0-2 psi G | 4-20mA |
| IPSLU-GP005-5M12 | 0-5 psi G | 4-20mA |
| IPSLU-GP008-5M12 | 0-8 psi G | 4-20mA |
| IPSLU-GP010-5M12 | 0-10 psi G | 4-20mA |
| IPSLU-GP015-5M12 | 0-15 psi G | 4-20mA |
| IPSLU-GP001-6M12 | 0-1 psi G | 0 to 5V 3Wire |
| IPSLU-GP002-6M12 | 0-2 psi G | 0 to 5V 3Wire |
| IPSLU-GP005-6M12 | 0-5 psi G | 0 to 5V 3Wire |
| IPSLU-GP008-6M12 | 0-8 psi G | 0 to 5V 3Wire |
| IPSLU-GP010-6M12 | 0-10 psi G | 0 to 5V 3Wire |
| IPSLU-GP015-6M12 | 0-15 psi G | 0 to 5V 3Wire |

Mechanical Dimensions

