



IPSL SERIES

LOW RANGE INDUSTRIAL PRESSURE SENSOR



The IP SL 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.

Features

- Piezo-resistive sensor
- Stainless steel body & diaphragm
- Accuracy $\leq \pm 0.25\%$ 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
- 1/4" BSP Pressure port 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

SPECIFICATIONS

Performance

| | | |
|--|---|---|
| Accuracy (Non-linearity & Hysteresis) | $\leq \pm 0.25\%$ / FS (BFSL) for gauge | |
| 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 / $k\Omega$ |

Material

| | |
|---------------------------|--|
| Housing | 303 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 | > 50MΩ 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

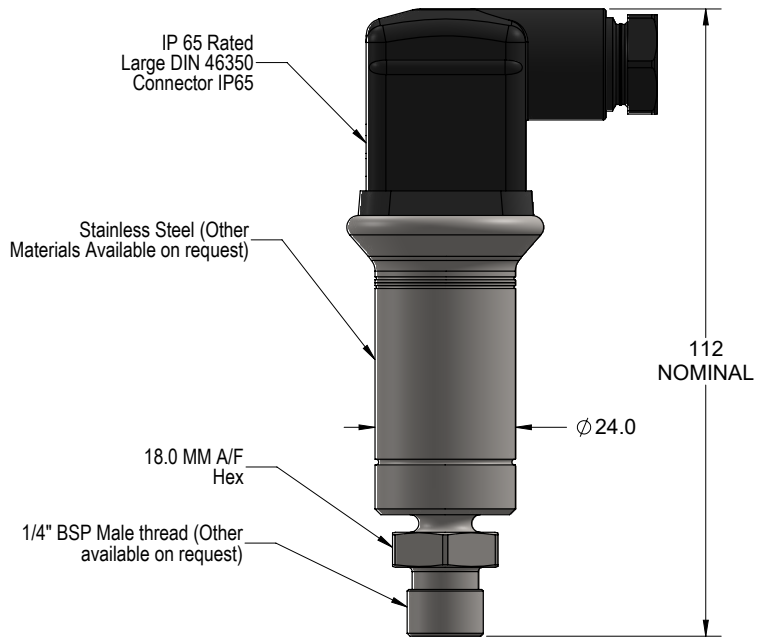
| Wire System | Output | Supply Voltage | Connection | Pin No. |
|-------------|--------------------------------|----------------|------------|-----------|
| 2-wire | 4 - 20mA | 9 – 32V dc | +ve Supply | Pin 1 |
| | | | -ve Supply | Pin 2 |
| | | | Ground | Earth pin |
| 3-wire | 0.5 - 4.5Vdc (non-ratiometric) | 9 – 32V dc | +ve Supply | Pin 1 |
| | | | -ve Supply | Pin 2 |
| | | | +ve Output | Pin 3 |
| | | | Ground | Earth pin |

| RS Stock No. | Part No | Pressure Range | Output |
|--------------|--------------|--------------------|-------------------|
| 8285707 | IPSL-G0050-5 | 0 - 50mbar G | 4-20mA |
| 8285710 | IPSL-G0100-5 | 0 - 100mbar G | 4-20mA |
| 8285717 | IPSL-G0250-5 | 0 - 250mbar G | 4-20mA |
| 8285729 | IPSL-G0500-5 | 0 - 500mbar G | 4-20mA |
| 8285732 | IPSL-G0750-5 | 0 - 750mbar G | 4-20mA |
| 8285739 | IPSL-G1000-5 | 0 - 1000mbar G | 4-20mA |
| 8285701 | IPSL-G0050-D | 0 - 50mbar G | 0.5 to 4.5V 3Wire |
| 8285713 | IPSL-G0100-D | 0 - 100mbar G | 0.5 to 4.5V 3Wire |
| 8285726 | IPSL-G0250-D | 0 - 250mbar G | 0.5 to 4.5V 3Wire |
| 8285723 | IPSL-G0500-D | 0 - 500mbar G | 0.5 to 4.5V 3Wire |
| 8285735 | IPSL-G0750-D | 0 - 750mbar G | 0.5 to 4.5V 3Wire |
| 8285748 | IPSL-G1000D | 0 - 1000mbar G | 0.5 to 4.5V 3Wire |
| 8285690 | IPSL-A0500-5 | 0 - 500mbar G Abs | 4-20mA |
| 8285694 | IPSL-A0750-5 | 0 - 750mbar G Abs | 4-20mA |
| 8285704 | IPSL-A1000-5 | 0 - 1000mbar G Abs | 4-20mA |



DIMENSIONS

All dimensions are in millimeters.



TOP VIEW (PIN OUT ELECTRICAL CONNECTION)

