



Atmospheric Pressure

Low Range Industrial Pressure Transmitter

- Oil filled Isolated diaphragm, silicon sensor
- Accuracy: $<\pm 0.25\%$ FS BFSL (0.1% optional)
- Pressure ranges from 25mbar to 1000mbar
- Selection of process & electrical connections
- Variety of Outputs including Volts and mA

The low range pressure transmitter, IMP-LR, has a piezo-resistive silicon pressure sensor which is an oil filled isolated diaphragm. The sensor and housing are made from stainless steel with a choice of internal O ring seals to ensure the product is suitable for a wide range of applications. Every device is temperature compensated and calibrated and supplied with a traceable serial number and calibration certificate. The electronics incorporates a microprocessor based amplifier, this means there are no adjusting pots and therefore the electronics are very stable, especially in high vibration / shock applications.

Pressure Range (mbar): 600 mbar Abs to 1100 mbar Abs
Output: 0 - 2.5V dc
Accuracy (Combined NL&H): $<\pm 0.25\%$ / FS
Accuracy (Thermal Zero Shift): $<\pm 0.04\%$ / FS / °C
Electrical Connection: Large Plug & Socket (GDM3009, DIN43650)
Process Connection: G 1/4" male DIN 3852
Cable Length (in mtrs): 0.5m
Diaphragm Material: Aluminium Oxide 96% (Ceramic Al₂O₃)
Process Connection Material: 303 Stainless Steel
Media Temperature: -20 to +135°C
Operating Temperature: -20 to +80°C
Supply Voltage: 6 - 15V dc

Item is supplied calibrated



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Input Pressure Range

| | | | | | | | | | | |
|--------------------------|------|-----|-----|-----|-----|-----|-----|------|------|------|
| Nominal pressure, Gauge | mbar | 25 | 40 | 60 | 100 | 160 | 250 | 400 | 600 | 1000 |
| Permissible Overpressure | mbar | 100 | 100 | 200 | 400 | 400 | 700 | 1400 | 1400 | 2000 |

Output Signal & Supply Voltage

| Wire system | Output | Supply Voltage |
|-------------|-------------|----------------|
| 3-wire | 0 - 2.5 Vdc | 6 - 15 Vdc |

Performance

| | | |
|---------------------------------------|--|---|
| Accuracy (Non-linearity & hysteresis) | $<\pm 0.25\% / \text{FS (BFSL)}$ $<\pm 0.1\% / \text{FS (BFSL) optional}$ | |
| Setting Errors (offsets) | 3-wire | Zero & Full Scale, $<\pm 0.5\% / \text{FS}$ |
| Permissible Load | 3-wire | Rmin = 10 k Ω |
| Influence Effects | Supply | 0.5 to 4.5V – Ratiometric, other outputs - $<0.005\% \text{ FS} / 1\text{V}$ |
| | Load | 0.05 % FSO / k Ω |

Permissible Temperatures & Thermal Effects

| | |
|-------------------------------|--|
| Media temperature | -40°C to +120°C |
| Ambient temperature | -20° to +80°C |
| Storage temperature | -40°C to +120°C |
| Compensated temperature range | +20°C to +80°C |
| Thermal Zero Shift (TZS) | $<\pm 0.04\% / \text{FS} / ^\circ\text{C}$ (option code 4) |
| | $<\pm 0.02\% / \text{FS} / ^\circ\text{C}$ (option code 2) |
| Thermal Span Shift (TSS) | $<-0.015\% / ^\circ\text{C}$ |

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Electrical Protection

| | |
|------------------------------------|--------------------------------|
| Supply reverse polarity protection | No damage but also no function |
| Electromagnetic compatibility | CE Compliant |

Mechanical Stability

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

Materials

| | |
|------------------------------|--|
| Housing & process connection | 303 Stainless Steel 316L Stainless Steel (optional) |
| 'O' ring seals | Viton NBR, Nitrile (optional) EPDM (optional) |
| Diaphragm | 316L Stainless Steel |
| Media wetted parts | Housing and process connection, 'O' ring seal, diaphragm |

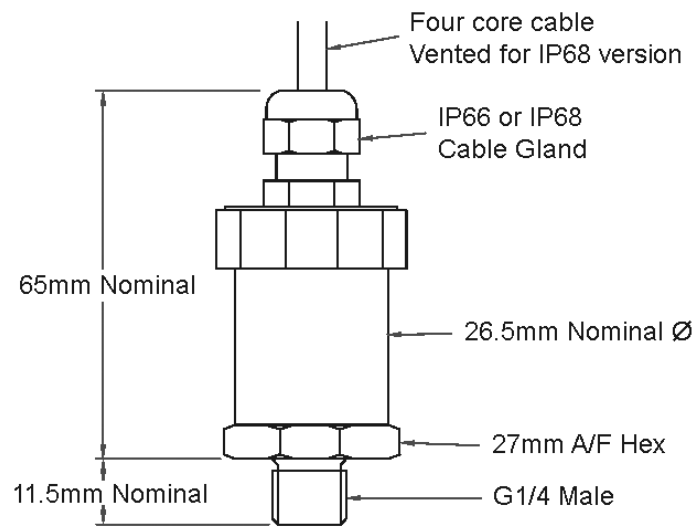
Miscellaneous

| | | |
|-----------------------|--|----------|
| Current consumption | 3-wire | Typ. 6mA |
| Weight | Approx. 100g | |
| Installation position | Any, <0.1% FS of capsule on Zero shift for 90° tilt in any direction | |
| Operation Life | > 100 x 10 ⁶ cycles | |
| Insulation Resistance | >500M Ω at 50V dc | |

Wiring Designation

IP66 Cable

| | | |
|--------|------------|--------|
| 3-wire | +ve Supply | Red |
| | -ve Supply | Blue |
| | +ve Output | Green |
| | Ground | Yellow |



Cable Gland Assembly
IP65 gland, screened PVC industrial cable