

IPSU SERIES

INDUSTRIAL PRESSURE TRANSDUCER - CERAMIC



CE

The IPSU series is suitable for use in a wide range of industrial applications. The probe uses a piezo-resistive ceramic sensor, giving excellent media compatibility within a stainless steel housing.

The electronics incorporate a microprocessor based amplifier, requiring no adjusting and giving stable electronics, especially for industrial 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 thick film ceramic sensor
- Stainless steel body
- Accuracy $< \pm 0.25\%$ FS BFSL
- Various outputs including mV, Volts and mA.
- Pressure ranges from vacuum to +5800psi (Custom ranges available on request)
- 1/4" NPT Pressure port connection

SPECIFICATIONS

Performance

| | | |
|--|----------------------------|--|
| Accuracy (Non-linearity & Hysteresis) | $< \pm 0.25\%$ / FS (BFSL) | |
| Setting Errors (Offsets) | 2-wire | Zero & Full Scale, $< \pm 0.5\%$ / FS |
| | 3-wire | Zero & Full Scale, $< \pm 0.5\%$ / FS |
| | 4-wire | Zero & Full Scale, $< \pm 0.5\%$ / FS @10Volts |

Material

| | |
|------------------------------|--|
| Housing | 303 Stainless Steel |
| "O" Ring Seals | Viton |
| Diaphragm | Ceramic Al ₂ O ₃ 96% |
| Media Wetted Parts | Housing & connection, 'O' ring seal, diaphragm |
| Weight | Approx 3.5oz (100g) |
| Installation Position | Any |
| Operation Life | $> 100 \times 10^6$ cycles |
| Insulation Resistance | $> 50\text{MOhms}$ 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 +135°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 | bar | 1 | 6 | 10 | 40 | 100 | 400 |
| Compound Range | bar | | | -1 to +9 | | | |
| Permissible Overpressure | bar | 2 | 10 | 15 | 100 | 150 | 500 |
| Burst Pressure | bar | 3 | 12 | 20 | 120 | 200 | 650 |

| | | | | | | | | | |
|---------------------------------|-----|----|----|-----|-----|---------------|---------------|------|------|
| Nominal Pressure, Gauge | psi | 15 | 30 | 75 | 100 | 150 | 300 | 750 | 1500 |
| Compound Range | psi | | | | | -14.5 to +150 | -14.5 to +350 | | |
| Permissible Overpressure | psi | 30 | 60 | 150 | 225 | 225 | 500 | 1500 | 2000 |
| Burst Pressure | psi | 45 | 75 | 180 | 300 | 300 | 700 | 1800 | 3000 |

Output Signal & Supply Voltage

| 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 | |
| | | | +ve Output Pin 3 | Ground Earth Pin | |
| 4-wire (amplified) | 10mV/V (ratiometric) | 3 – 12Vdc | +ve Supply Pin 1 | -ve Supply Pin 2 | |
| | | | +ve Output Pin 3 | -ve Output Earth Pin | |

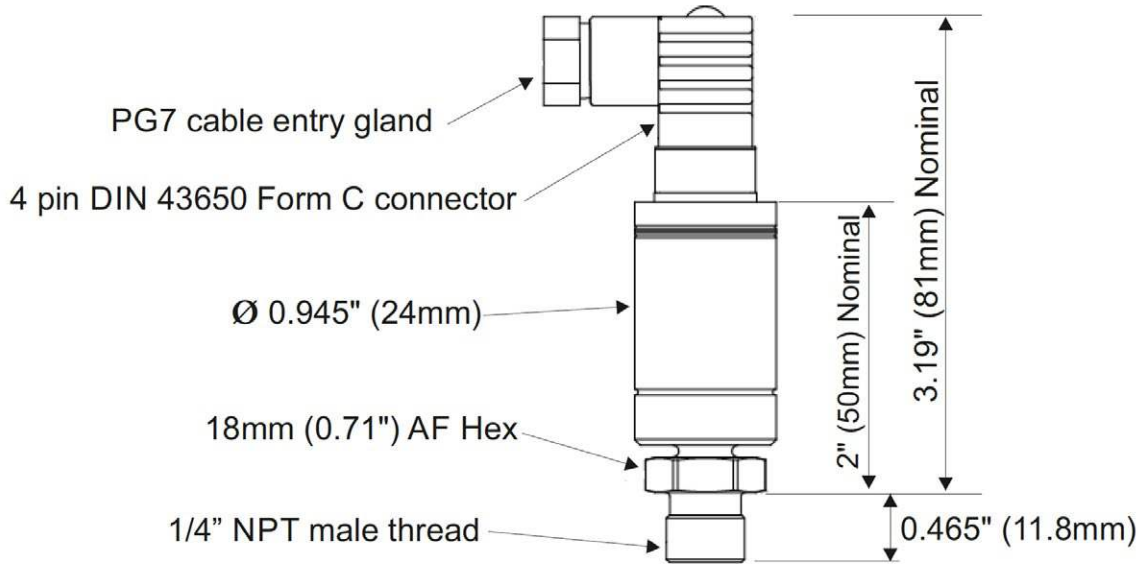
| Part Number | Range | Output |
|--------------|---------------------|----------|
| IPSU-GP015-5 | 0-15 psi G | 4-20mA |
| IPSU-GP015-6 | 0-15 psi G | 0-5V |
| IPSU-GP030-5 | 0-30 psi G | 4-20mA |
| IPSU-GP030-6 | 0-30 psi G | 0-5V |
| IPSU-C0446-5 | -14.5 to +150 psi G | 4 - 20mA |
| IPSU-C0446-6 | -14.5 to +150 psi G | 0-5V |
| IPSU-GP075-6 | 0-75 psi G | 0-5V |
| IPSU-GP100-3 | 0-100 psi G | 0-100mV |
| IPSU-GP100-5 | 0-100 psi G | 4-20mA |
| IPSU-GP100-6 | 0-100 psi G | 0-5V |
| IPSU-C0447-5 | -14.5 to +350 psi G | 4-20mA |
| IPSU-C0447-6 | -14.5 to +350 psi G | 0-5V |
| IPSU-GP150-3 | 0-150 psi G | 0-100mV |
| IPSU-GP150-5 | 0-150 psi G | 4-20mA |
| IPSU-GP150-6 | 0-150 psi G | 0-5V |
| IPSU-GP300-3 | 0-300 psi G | 0-100mV |
| IPSU-GP300-5 | 0-300 psi G | 4-20mA |
| IPSU-GP300-6 | 0-300 psi G | 0-5V |
| IPSU-GP750-6 | 0-750 psi G | 0-5V |
| IPSU-GP1K5-3 | 0-1500 psi G | 0-100mV |
| IPSU-GP1K5-5 | 0-1500 psi G | 4-20mA |
| IPSU-GP1K5-6 | 0-1500 psi G | 0-5V |

| Part Number | Range | Output |
|--------------|------------------------|---------|
| IPSU-G1000-3 | 0-1bar G (0-14.5psi) | 0-100mV |
| IPSU-G1000-5 | 0-1bar G (0-14.5psi) | 4-20mA |
| IPSU-G6000-5 | 0-6bar G (0-87psi) | 4-20mA |
| IPSU-GM1P9-6 | -1 to +9 Bar G | 0-5V |
| IPSU-G1002-5 | 0-10bar G (0-145psi) | 4-20mA |
| IPSU-G2502-5 | 0-25bar G (0-363psi) | 4-20mA |
| IPSU-G1003-5 | 0-100bar G (0-1405psi) | 4-20mA |
| IPSU-G4003-5 | 0-400bar G (0-5802psi) | 4-20mA |

(Custom ranges and outputs available on request)



DIMENSIONS



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