

# IPSU SERIES

## INDUSTRIAL PRESSURE TRANSDUCER - CERAMIC



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

<b>Accuracy (Non-linearity &amp; Hysteresis)</b>	$< \pm 0.25\%$ / FS (BFSL)	
<b>Setting Errors (Offsets)</b>	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

<b>Housing</b>	303 Stainless Steel
<b>"O" Ring Seals</b>	Viton
<b>Diaphragm</b>	Ceramic Al <sub>2</sub> O <sub>3</sub> 96%
<b>Media Wetted Parts</b>	Housing & connection, 'O' ring seal, diaphragm
<b>Weight</b>	Approx 3.5oz (100g)
<b>Installation Position</b>	Any
<b>Operation Life</b>	$> 100 \times 10^6$ cycles
<b>Insulation Resistance</b>	$> 50\text{MOhms}$ at 50Vdc

## Electrical Protection

<b>Supply Reverse Polarity</b>	No damage / no function
<b>Electromagnetic Compatibility</b>	CE EMC directive - EN 61326-1:2013

## Environmental Conditions

<b>Shock</b>	100g / 11s
<b>Vibration</b>	10g RMS (20 - 2000Hz)
<b>Media Temperature</b>	-40°C to +135°C
<b>Ambient Temperature</b>	-20°C to +80°C
<b>Storage Temperature</b>	-40°C to +125°C
<b>Humidity</b>	5% to 95% RH non-condensing

## Temperature & Thermal Effects

<b>Compensated Temperature Range</b>	+20°C to +80°C
<b>Thermal Zero Shift (TZS)</b>	<±0.04% /FS/°C
<b>Thermal Span Shift</b>	<-0.015% /°C

## PRESSURE RANGES

### Pressure Ranges & Passive mV/V Outputs

Nominal Pressure, Gauge	bar	1	6	10	40	100	400
<b>Compound Range</b>	bar			-1 to +9			
<b>Permissible Overpressure</b>	bar	2	10	15	100	150	500
<b>Burst Pressure</b>	bar	3	12	20	120	200	650

Nominal Pressure, Gauge	psi	15	30	75	100	150	300	750	1500
<b>Compound Range</b>	psi					-14.5 to +150	-14.5 to +350		
<b>Permissible Overpressure</b>	psi	30	60	150	225	225	500	1500	2000
<b>Burst Pressure</b>	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	

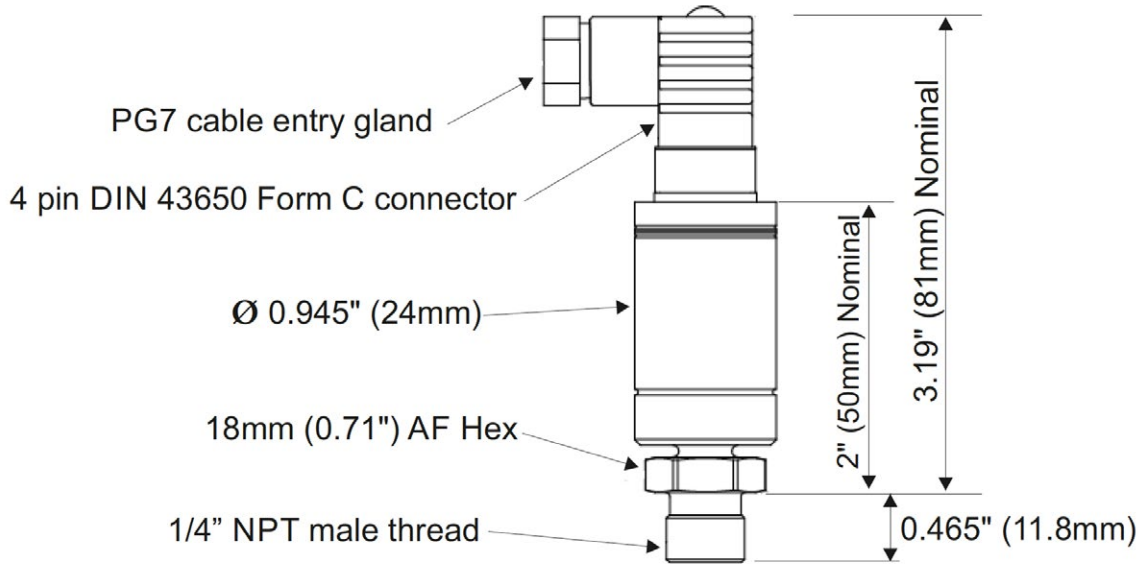
Part Number	Range	Output
IPSU-GP015-5	0-15 psi G	4-20mA
IPSU-GP015-6	0-15 psi G	0-5V
IPSU-GP030-5	0-30 psi G	4-20mA
IPSU-GP030-6	0-30 psi G	0-5V
IPSU-C0446-5	-14.5 to +150 psi G	4 - 20mA
IPSU-C0446-6	-14.5 to +150 psi G	0-5V
IPSU-GP075-6	0-75 psi G	0-5V
IPSU-GP100-3	0-100 psi G	0-100mV
IPSU-GP100-5	0-100 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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