

## IPSS SERIES

### SEMI-FLUSH MOUNT PRESSURE TRANSMITTER

The semi-flush mount pressure transmitter, IPSS, has a piezo-resistive silicon or ceramic pressure sensor. The sensor is semi-flush to the housing making this product ideal for viscous or paste like media. 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.

The electronics incorporate a microprocessor-based amplifier, requiring no adjusting and giving stable electronics - especially in high vibration or shock applications.

Every 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.



CE

#### Features

- Piezo-resistive sensor, Ceramic or Silicon
- Accuracy  $<\pm 0.25\%$  FS BFSL
- Various outputs including Volts and mA
- Pressure ranges from 100mbar to 100 bar
- Pressure reference, Gauge or Absolute

#### Suitable Applications

- Environmental engineering
- Static tank level
- Viscous and paste-like media
- Composite manufacturing
- Process control
- Automotive testing
- Process pumping
- Sewage or grey water
- Injection moulding or infusion
- Aggressive media

## 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
<b>Permissible Load</b>	2-wire	$R_{max} = [(VS - VS_{min}) / 0.02] \Omega$
	3-wire	$R_{min} = 10k\Omega$
<b>Influence Effects</b>	Supply	$<0.005\%$ FS / 1V
	Load	0.05% FSO / $k\Omega$

## Material

<b>Housing</b>	303 Stainless Steel
<b>"O" Ring Seals</b>	Viton
<b>Diaphragm</b>	316L Stainless Steel or Ceramic
<b>Media Wetted Parts</b>	Housing & process connection, 'O' ring seal, diaphragm

## Miscellaneous

<b>Current Consumption</b>	2-wire Limits at 28mA
	3-wire Typical 6mA
<b>Weight</b>	Approx 100g
<b>Installation Position</b>	Any, small zero shift when tilted through 90° for silicon
<b>Operation Life</b>	> 100 x 10 <sup>6</sup> cycles
<b>Insulation Resistance</b>	> 50MΩ at 50Vdc

## Electrical Protection

<b>Supply Reverse Polarity</b>	No damage/no function
<b>Electromagnetic Compatibility</b>	CE Compliant

## Environmental Conditions

<b>Shock</b>	100g / 11s
<b>Vibration</b>	10g RMS (20 - 2000Hz)
<b>Media Temperature</b>	-40°C to +125°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</b>	+20°C to +80°C
<b>Thermal Zero Shift (TZS)</b>	<±0.04% /FS/°C
<b>Thermal Span Shift (TSS)</b>	<-0.015% /°C



## PRESSURE RANGES

### Input Pressure Ranges

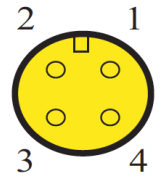
<b>Nominal Pressure, Gauge</b>	Bar	0.1	0.5	1	2	5	10	20	50	100
<b>Nominal Pressure*, Absolute</b>	Bar			1	2	5	10	20		
<b>Nominal Pressure*, Compound</b>	Bar			-1 to +1		-1 to +5	-1 to +9	-1 to +19		
<b>Permissible Overpressure</b>	Bar	2	2	2	4	10	15	35	100	150

\* Ceramic sensor only.

## Output Signal & Supply Voltage

## Wiring Designation

Wire System	Output	Supply Volts	Connection	Pin No. (M12 4-pin connector)
2-wire	4 - 20mA	9 – 32V dc	+ve Supply	Pin 1
			-ve Supply	Pin 2
			Ground	Pin 3
3-wire	0 - 10Vdc (non-ratiometric)	14 – 32V dc	+ve Supply	Pin 1
			-ve Supply	Pin 2
			+ve Output	Pin 3
			Ground	Pin 4

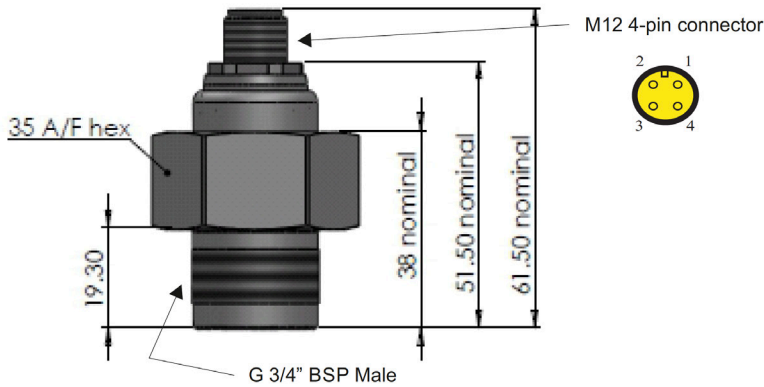


Part No	Sensor type	Pressure Range	Output
IPSS-G0100-5S	Silicon	0-100mbar G (0-1.4psi)	4-20mA
IPSS-G0500-5S	Silicon	0-500mbar G (0-7.25psi)	4-20mA
IPSS-G1000-5S	Silicon	0-1000mbar G (0-14.5psi)	4-20mA
IPSS-G2000-5C	Ceramic	0-2 Bar G (0-29psi)	4-20mA
IPSS-G5000-5C	Ceramic	0-5 Bar G (0-73psi)	4-20mA
IPSS-G1002-5C	Ceramic	0-10 Bar G (0-145psi)	4-20mA
IPSS-G2002-5C	Ceramic	0-20 Bar G (0-290psi)	4-20mA
IPSS-G5002-5C	Ceramic	0-50 Bar G (0-725psi)	4-20mA
IPSS-G1003-5C	Ceramic	0-100 Bar G (0-1450psi)	4-20mA
IPSS-G0100-7S	Silicon	0-100mbar G (0-1.4psi)	0 -10V
IPSS-G0500-7S	Silicon	0-500mbar G (0-7.25psi)	0 -10V
IPSS-G1000-7S	Silicon	0-1000mbar G (0-14.5psi)	0 -10V
IPSS-G2000-7C	Ceramic	0-2 Bar G (0-29psi)	0 -10V
IPSS-G5000-7C	Ceramic	0-5 Bar G (0-73psi)	0 -10V
IPSS-G1002-7C	Ceramic	0-10 Bar G (0-145psi)	0 -10V
IPSS-G2002-7C	Ceramic	0-20 Bar G (0-290psi)	0 -10V
IPSS-G5002-7C	Ceramic	0-50 Bar G (0-725psi)	0 -10V
IPSS-G1003-7C	Ceramic	0-100 Bar G (0-1450psi)	0 -10V
IPSS-GM1P1-5C	Ceramic	-1 to +1 Bar G (-14.5 to +14.5psi)	4-20mA
IPSS-GM1P5-5C	Ceramic	-1 to +5 Bar G (-14.5 to +73psi)	4-20mA
IPSS-GM1P9-5C	Ceramic	-1 to +9 Bar G (-14.5 to +131psi)	4-20mA
IPSS-C0072-5C	Ceramic	-1 to +19 Bar G (-14.5 to +276psi)	4-20mA
IPSS-A1000-5C	Ceramic	0-1 Bar Abs (0-14.5psiA)	4-20mA
IPSS-A2000-5C	Ceramic	0-2 Bar Abs (0-29psiA)	4-20mA
IPSS-A5000-5C	Ceramic	0-5 Bar Abs (0-73psiA)	4-20mA



## DIMENSIONS

All dimensions are in millimeters.



Made in the UK

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