

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.*

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

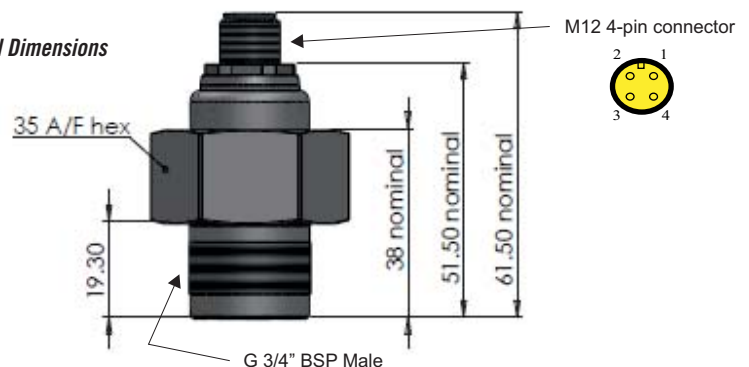
Suitable applications

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

Performance

Accuracy (Non-Linearity & Hysteresis)	$\leq \pm 0.25\%$ / FS (BFSL)	
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	$R_{max} = [(VS - VS_{min}) / 0.02] \Omega$
	3-wire	$R_{min} = 10k\Omega$
Influence Effects	Supply	$< 0.005\%$ FS / 1V
	Load	0.05% FS0 / $k\Omega$

Mechanical Dimensions



Material Specifications

Housing	303 Stainless Steel
"O" ring seals	Viton
Diaphragm	316L Stainless Steel or Ceramic
Media wetted parts	Housing & process 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° for silicon
Operational Life	$> 100 \times 10^6$ cycles
Insulation resistance	$> 50M\Omega$ at 50Vdc

Electrical Protection

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

Mechanical Stability

Shock	100g / 11s
Vibration	10g RMS (20 - 2000Hz)

Temperatures & Thermal Effects

Media Temperature	-40°C to +125°C
Ambient Temperature	-20°C to +80°C
Storage temperature	-40°C to +125°C
Compensated temperature	+20°C to +80°C
Thermal Zero Shift (TZS)	$\leq \pm 0.04\%$ / FS/°C
Thermal Span Shift (TSS)	$\leq -0.015\%$ / °C



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Input Pressure Ranges

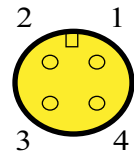
Nominal pressure, Gauge,	Bar	0.1	0.5	1	2	5	10	20	50	100
Nominal pressure*, Absolute	Bar	-	-	1	2	5	10	20	-	-
Nominal pressure*, Compound	Bar	-1 to +1	-1 to +5	-1 to +9	-1 to +19					
Permissible Overpressure	Bar	2	2	5	5	10	20	50	100	200

* Ceramic sensor only

Output Signal and Supply Voltage

Wiring Designation

Wire system	Output	Supply Volts	Connection	Pin No. (M12 4-pin connector)
2-wire	4-20mA	9-32Vdc	+ve Supply -ve Supply Ground	Pin 1 Pin 2 Pin 3
3-wire	0-10Vdc (non-ratiometric)	14-32 Vdc	+ve Supply -ve Supply +ve Output Ground	Pin 1 Pin 2 Pin 3 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(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(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
IPSS-A1002-5C	Ceramic	0-10 Bar Abs (0-1345psiA)	4-20mA