

IPSS SERIES

RS PRO 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.



Features

- Piezo-resistive sensor, Ceramic
- Accuracy $\leq \pm 0.25\%$ FS BFSL
- mA output available
- Pressure ranges from -1 Bar to +19Bars
- Pressure reference, Gauge or Absolute
- 3/4" BSP Pressure port connection

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

Accuracy (Non-linearity & Hysteresis)	$\leq \pm 0.25\%$ / FS (BFSL)	
Setting Errors (Offsets)	2-wire	Zero & Full Scale, $\leq \pm 0.5\%$ / FS
Permissible Load	2-wire	$R_{max} = [(VS - VS_{min}) / 0.02] \Omega$
Influence Effects	Supply	$< 0.005\%$ FS / 1V
	Load	0.05% FSO / $k\Omega$

Material

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
Weight	Approx 100g
Installation Position	Any, small zero shift when tilted through 90° for silicon
Operation Life	> 100 x 10 ⁶ cycles
Insulation Resistance	> 50MOhms 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 +125°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	+20°C to +80°C
Thermal Zero Shift (TZS)	<±0.04% /FS/°C
Thermal Span Shift (TSS)	<-0.015% /°C



PRESSURE RANGES

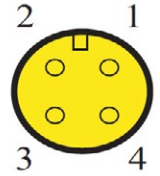
Input Pressure Ranges

Nominal Pressure, Gauge	Bar	2	5	
Nominal Pressure Absolute	Bar	2		
Nominal Pressure Compound	Bar		-1 to +5	-1 to +19
Permissible Overpressure	Bar	4	10	35

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



RS Stock No.	Sensor type	Pressure Range	Output
8285754	Silicon	0-0.1 bar (0-1.4psi)	4-20mA
8285757	Silicon	0-0.5 bar (0-7.25psi)	4-20mA
8285751	Silicon	0-1 bar (0-14.5psi)	4-20mA
8285760	Ceramic	0-2 Bar G (0-29psi)	4-20mA
8285763	Ceramic	0-5 Bar G (0-73psi)	4-20mA
8285767	Ceramic	0-10 Bar G (0-145psi)	4-20mA
8285776	Ceramic	0-20Bar G (0-290psi)	4-20mA
8285779	Ceramic	0-50 Bar G (0-725psi)	4-20mA
8285773	Ceramic	0-100 Bar G (1450psi)	4-20mA
8285782	Silicon	0-0.1 bar (0-1.4psi)	0-10V
8285785	Silicon	0-0.5 bar (0-7.25psi)	0-10V
8285789	Silicon	0-1 bar (0-14.5psi)	0-10V
8285798	Ceramic	0-2 Bar G (0-29psi)	0-10V
8285791	Ceramic	0-5 Bar G (0-73psi)	0-10V
8285795	Ceramic	0-10 Bar G (0-145psi)	0-10V
8285805	Ceramic	0-20Bar G (0-290psi)	0-10V
8285808	Ceramic	0-50 Bar G (0-725psi)	0-10V
8285802	Ceramic	0-100 Bar G (1450psi)	0-10V
8285811	Ceramic	-1 to +1 Bar G (-14.5 to +14.5psi)	4-20mA
8285814	Ceramic	-1 to +5 Bar G (-14.5 to +73psi)	4-20mA
8285818	Ceramic	-1 to +9 Bar G (-14.5 to +131psi)	4-20mA
8285827	Ceramic	-1 to +19 Bar G (-14.5 to +276psi)	4-20mA
8285820	Ceramic	0-1 Bar Abs (0-14.5psiA)	4-20mA
8285824	Ceramic	0-2 Bar Abs (0-29psiA)	4-20mA
8285833	Ceramic	0-5 Bar Abs (0-73psiA)	4-20mA
8285836	Ceramic	0-10 Bar Abs (0-1345psiA)	4-20mA



DIMENSIONS

All dimensions are in millimeters.

