



IPSSAT series

Intrinsically Safe, Semi-Flush Mount Pressure Transmitter



Approvals:-
ATEX / IECEx

II 1G Ex ia IIC T4 Ga (Ta -see schedule)



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

The intrinsically safe, semi-flush mount pressure transmitter, IPSSAT, 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 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.



Performance

Accuracy (Non-Linearity & Hysteresis)	$\leq \pm 0.25\%$ / FS (BFSL)
Setting Errors (offsets)	Zero & Full Scale, $\leq \pm 0.5\%$ / FS

Material Specifications

Housing	316 Stainless Steel
"O" ring seals	Viton
Diaphragm	316L Stainless Steel or Ceramic
Media wetted parts	Housing & process connection, "O" ring seal, diaphragm

Miscellaneous

Weight	Approx 100g
Installation position	Any, small zero shift when tilted through 90° for silicon
Operational Life	$> 100 \times 10^6$ cycles
Insulation resistance	$> 50\text{M}\Omega$ 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)

Environment & Thermal Effects

Ambient Temperature Range	-20°C to +75°C
Storage temperature	-40°C to +80°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
Permissible environment	Zone 0

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ISO9001 CERTIFIED

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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

Wire system	Output	Supply Volts	Wiring Designation	Pin No.
2-wire	4-20mA	10-28Vdc	+ve Supply	Pin 1
			-ve Supply	Pin 2
			Ground	Pin 3

Part No	Sensor type	Pressure Range
IPSSAT-G0100-5S	Silicon	0-100mbar G (0-1.4psi)
IPSSAT-G0500-5S	Silicon	0-500mbar G (0-7.25psi)
IPSSAT-G1000-5S	Silicon	0-1000mbar G (0-14.5psi)
IPSSAT-G2000-5C	Ceramic	0-2 Bar G (0-29psi)
IPSSAT-G5000-5C	Ceramic	0-5 Bar G (0-73psi)
IPSSAT-G1002-5C	Ceramic	0-10 Bar G (0-145psi)
IPSSAT-G2002-5C	Ceramic	0-20 Bar G (0-290psi)
IPSSAT-G5002-5C	Ceramic	0-50 Bar G (0-725psi)
IPSSAT-G1003-5C	Ceramic	0-100 Bar G (1450psi)
IPSSAT-GM1P1-5C	Ceramic	-1 to +1 Bar G (-14.5 to +14.5psi)
IPSSAT-GM1P5-5C	Ceramic	-1 to +5 Bar G (-14.5 to +73psi)
IPSSAT-GM1P9-5C	Ceramic	-1 to +9 Bar G (-14.5 to +131psi)
IPSSAT-C0072-5C	Ceramic	-1 to +19 Bar G (-14.5 to +276psi)
IPSSAT-A1000-5C	Ceramic	0-1 Bar Abs (0-14.5psiA)
IPSSAT-A2000-5C	Ceramic	0-2 Bar Abs (0-29psiA)
IPSSAT-A5000-5C	Ceramic	0-5 Bar Abs (0-73psiA)
IPSSAT-A1002-5C	Ceramic	0-10 Bar Abs (0-1345psiA)

