



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 | $> 50M\Omega$ 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) |

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 |

Cynergy3 Components Ltd.
7 Cobham Road
Ferndown Industrial Estate
Wimborne, Dorset BH21 7PE
Telephone +44 (0) 1202 897969
Email:sales@cynergy3.com

IPSSAT 2017

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Input Pressure Ranges

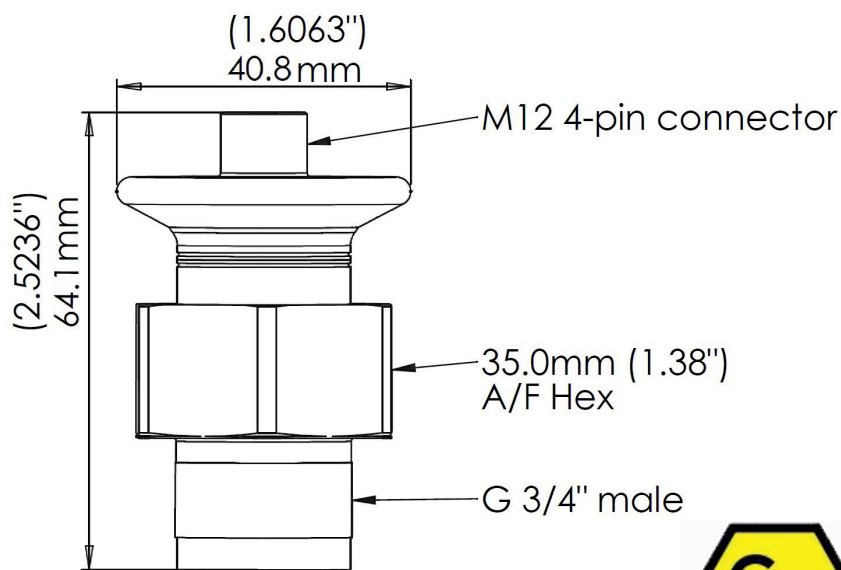
| | | | | | | | | | | |
|-----------------------------|-----|----------|----------|----------|-----------|----|----|----|-----|-----|
| Nominal pressure, Gauge, | Bar | 0.1 | 0.5 | 1 | 2 | 5 | 10 | 20 | 50 | 100 |
| Nominal pressure*, Absolute | Bar | - | - | 1 | 2 | 5 | 10 | 20 | - | - |
| Nominal pressure*, 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) |



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