

| PTE7500 SERIES

HERMETIC CANOPEN PRESSURE SENSOR



The PTE7500 CANopen pressure sensor simplifies integration with CANopen equipment. The features of sensor diagnostics and error management system provide more effectiveness to the users to identify the equipment operational issue remotely and quickly. The PTE7500 combines the high accuracy and robustness of the IMMSG family with the digital capabilities of providing you more options to digitize equipment. Sensata's micro-strain gauge pressure sensors provide class-leading accuracy in a robust, fully hermetic package, built to last in high vibration and shock environments. The PTE family of pressure sensors is available with many pressure ports, pressure ranges and output types, making product selection and design-in simple.



Features

- Measuring range from 0-16 bar to 0-600 bar (0-870 to 0-8700 psi)
- Stainless steel design with hermetic port
- Operating media temperature up to 125°C
- High accuracy
- High vibration resistance
- Snubber option for dampening of pressure spikes due to hammer and Cavitation
- Unique sensor identification
- Error management system
- Operational information record
- REACH/RoHS/UKCA/CE/CiA compliant

Applications

- Machine tools
- Injection molding equipment
- Industrial Hydraulics and Pneumatics
- Mobile Hydraulics and Off-Highway Vehicles
- Pumps and Compressors
- Plant Engineering and Automation

SPECIFICATIONS

Electrical

Operating voltage supply	9-32VDC
Operating current supply	<15mA
Protection on CANH and CANL	Yes
Short-circuit protection	Yes
Reverse polarity protection	Yes
Insulation resistance	50 VDC
MTTF (DIN EN ISO 13849-1:2008)	> 500 years

Temperature

Operating	-40 to 100 °C
Media	-40 to 125 °C
Storage	-40 to 125 °C

CAN

Output protocol	CANopen
Interface	CAN 2.0B
Communication Profile	CiA DS 301
Device profile	CiA DS 404
Layer Setting Services	CiA DS 305
Node ID	Configurable (Default:127)
Baud Rate	10-1000kb/s (Default:125Kb/s)
Sampling frequency	8k samples/s
Digital Filter	No Filter (Default)
Response time	1ms (12 ENOB ⁽¹⁾)

Accuracy

Total Error band	±1.5% FS @-20 to 85 °C
Basic Accuracy ⁽²⁾	±0.5% FS @25 °C
Non-linearity	±0.25% FS(BFSL ⁽³⁾)
Drift over life	±1.5% FS@25 °C

Conformity

ROHS & REACH	Yes
CE	EN 61326 (class B)
UKCA	UK Pressure Equipment Safety Regulation (PESR) 2016
ESD	±4kV contact, ±8kV air
Vibration resistance	30g(sine) min. according to IEC60068-2-6
Shock resistance	50g(half-sine) min. according to IEC60068-2-27
Protection rating	IP67 per IEC 60529
Operating Endurance	>10M
Media compatibility	All class II fluid and gases compatible with port material stainless steel 17-4PH according to NFPA 30

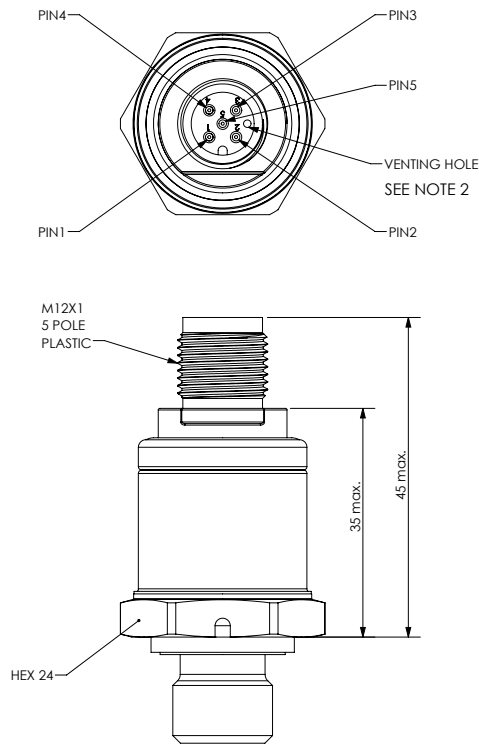


DIMENSIONS

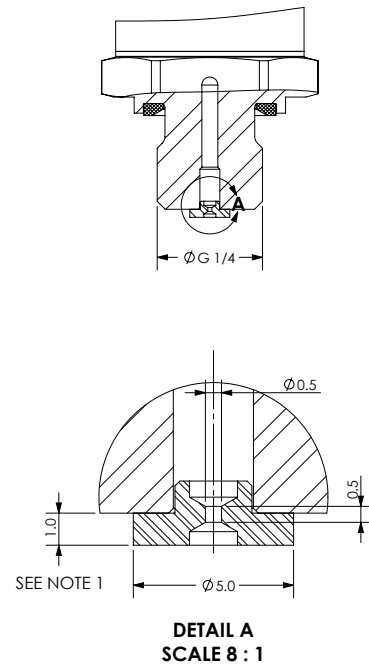
All dimensions are in millimeters

Electrical Connector

RTV-SEAL PACKAGE
MODEL SHOWN

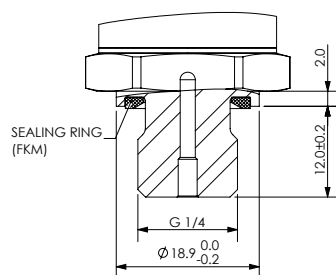


Snubber Option

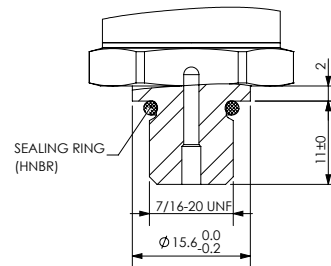


Pressure Connection Port Options

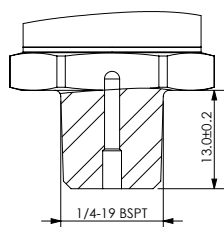
G1/4A (MALE) DIN 3852-E



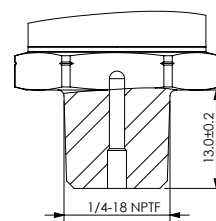
7/16-20 UNF J1926-2



1/4-19 PT (BSPT) (R1/4)



1/4-18 NPTF





ORDERING OPTIONS

Example : PTE7500-31AG-1A250BN

	PTE7500	-	3	1	A	G	-	1	A	250	B	N
Series												
PTE7500												
SEA Type												
1: 10~29BAR												
2: 30~100BAR												
3: 101~250BAR												
4: 251~400BAR												
5: 401~600BAR												
EMA Type												
1: CANOpen OUTPUT												
Pressure Port												
A: G1/4A DIN 3852-E												
B: 1/4-19PT (R1/4)												
C: 7/16-20 UNF-2A												
D: 1/4-18NPT												
Electrical Connector ⁽⁴⁾												
G: M12 5-pin plastic												
External Sealing												
0: No sealing ring												
1: FKM (Viton) sealing ring (only for port option A)												
2: HNBR sealing ring (only for port option C)												
Output Type												
A: CAN Open												
Pressure Range												
016: 0~16bar												
050: 0~50bar												
060: 0~60bar												
100: 0~100bar												
200: 0~200bar												
250: 0~250bar												
350: 0~350bar												
400: 0~400bar												
500: 0~500bar												
600: 0~600bar												
Pressure Type												
B: Gauge												
Snubber												
N: No snubber												
S: Snubber with 0.5 damping hole												



GENERAL NOTES

⁽¹⁾ ENOB: effective number of bits

⁽²⁾ Basic Accuracy: including non-linearity, non-repeatability, hysteresis, zero and span error per IEC 61298-2

⁽³⁾ BFS: best-fit-straight-line per IEC 61298-2

⁽⁴⁾ The sensor will use an vented connector when the sensor pressure range is <50bar



WARNINGS

Warning: This is a Class B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.



RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE

- The product's side panels may be hot, allow the product to cool before touching
 - Follow proper mounting instructions including torque values
 - Do not allow liquids or foreign objects to enter this product
- Failure to follow these instructions can result in serious injury, or equipment damage.



HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Disconnect all power before installing or working with this equipment
 - Verify all connections and replace all covers before turning on power
- Failure to follow these instructions can result in death or serious injury.

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