

| PTE7500 SERIES

HERMETIC CANOPEN PRESSURE SENSOR



The PTE7500 CANopen pressure sensor simplifies integration with CANopen equipment. It's a cost effective solution to control complex machines from the installation to the use of the sensor. 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 0-10 bar to 0-600 bar (0-145 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/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	3.2ms (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

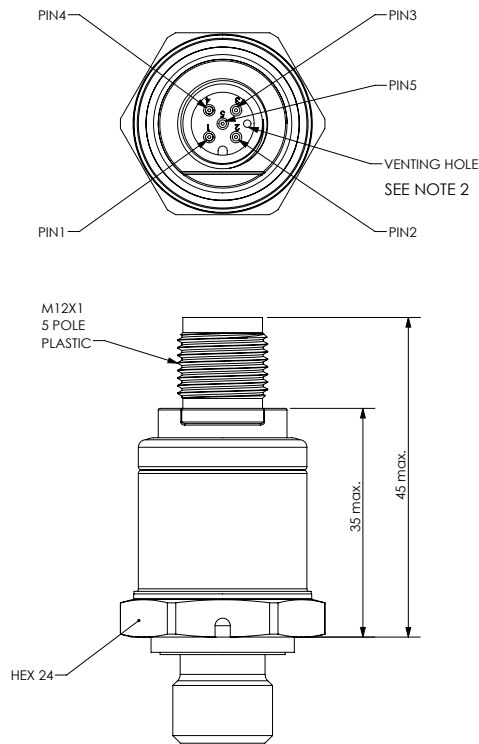
ROHS & REACH	Yes
CE	EN 61326 (class B)
UKCA	UK Pressure Equipment Safety Regulation (PESR) 2016
ESD	±4kV contact, ±8kV air
Vibration resistance	30g(sine) min. according to IEC60068-2-6
Shock resistance	50g(half-sine) min. according to IEC60068-2-27
Protection rating	IP67 per IEC 60529
Operating Endurance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

DIMENSIONS

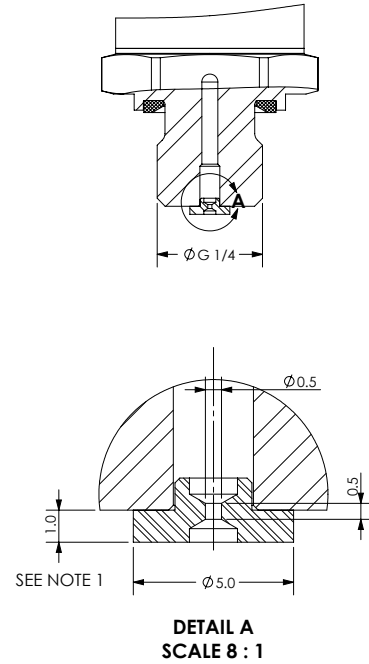
All dimensions are in millimeters

Electrical Connector

RTV-SEAL PACKAGE
MODEL SHOWN

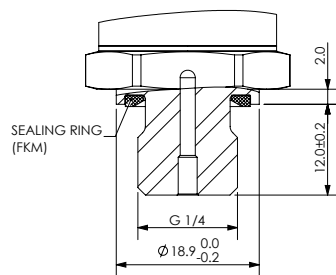


Snubber Option

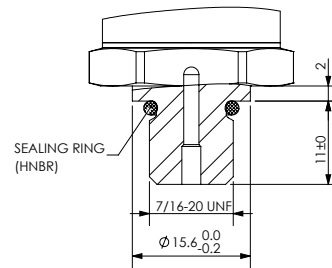


Pressure Connection Port Options

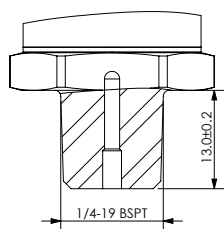
G1/4A (MALE) DIN 3852-E



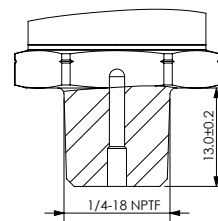
7/16-20 UNF J1926-2



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



1/4-18 NPTF



	PTE7500	-	3	1	A	G	-	1	A	250	B	N
Series												
PTE7500												
SEA Type												
0-29bar (0-420 PSI)												
30-100bar (420-1450 PSI)												
101-250bar (1450-3625 PSI)												
251-400bar (3625-5800 PSI)												
401-600bar (5800-8700 PSI)												
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⁾												
F: M12 5-Pin vented plastic. (only for pressure range <50bar)												
G: M12 5-Pin non-vented plastic (only for pressure range ≥50bar)												
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												
010: 0-10bar = 145 PSI												
016: 0-16bar = 230 PSI												
025: 0-25bar = 360 PSI												
040: 0-40bar = 580 PSI												
050: 0-50bar = 725 PSI												
060: 0-60bar = 870 PSI												
100: 0-100bar = 1450 PSI												
160: 0-160bar = 2320 PSI												
200: 0-200bar = 2900 PSI												
250: 0-250bar = 3625 PSI												
350: 0-350bar = 5075 PSI												
400: 0-400bar = 5800 PSI												
500: 0-500bar = 7250 PSI												
600: 0-600bar = 8700 PSI												
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



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.

Datasheets provided by Sensata Technologies, Inc., its subsidiaries and/or affiliates ("Sensata") are solely intended to assist third parties ("Buyers") who are developing systems that incorporate Sensata products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, valuation, and judgment in designing Buyer's systems and products. Sensata datasheets have been created using standard laboratory conditions and engineering practices. Sensata has not conducted any testing other than that specifically described in the published documentation for a particular datasheet. Sensata may make corrections, enhancements, improvements, and other changes to its datasheets or components without notice.

Buyers are authorized to use Sensata datasheets with the Sensata component(s) identified in each particular datasheet. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER SENSATA INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN. SENSATA DATASHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATASHEETS OR USE OF THE DATASHEETS, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. SENSATA DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO SENSATA DATASHEETS OR USE THEREOF.

All products are sold subject to Sensata's terms and conditions of sale supplied at www.sensata.com. SENSATA ASSUMES NO LIABILITY FOR APPLICATIONS ASSISTANCE OR THE DESIGN OF BUYERS' PRODUCTS. BUYER ACKNOWLEDGES AND AGREES THAT IT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL LEGAL, REGULATORY, AND SAFETY-RELATED REQUIREMENTS CONCERNING ITS PRODUCTS, AND ANY USE OF SENSATA COMPONENTS IN ITS APPLICATIONS, NOTWITHSTANDING ANY APPLICATIONS-RELATED INFORMATION OR SUPPORT THAT MAY BE PROVIDED BY SENSATA.

Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA

CONTACT US

Americas

+1 (800) 350 2727

sensors@sensata.com

switches@sensata.com

Europe, Middle East & Africa

+359 (2) 809 1826

pressure-info.eu@sensata.com

Asia Pacific

sales.isasia@list.sensata.com

China +86 (21) 2306 1500

Japan +81 (45) 277 7117

Korea +82 (31) 601 2004

India +91 (80) 67920890

Rest of Asia +886 (2) 27602006

ext 2808