

## PTE 7300 Series

- The pressure sensor detects the system pressure and converts it into a I<sup>2</sup>C output signal.
- These operating instructions contain important information on handling the instrument.
- All safety instructions and work instructions should be observed to prevent injury or harm.
- Observe the relevant local accident prevention regulations and general safety regulations for the instrument's range of use.
- The operating instructions are part of the product and must be kept in the immediate vicinity of the instrument and readily accessible to skilled personnel at any time. Pass the operating instructions on to the next operator or owner of the instrument.
- The general terms and conditions contained in the sales documentation shall apply, subject to technical modifications.

### Explanation of Symbols

**!** **WARNING!** ...indicates a potentially dangerous situation that can result in serious injury or death, if not avoided.

**!** **CAUTION!**...indicates a potentially dangerous situation that can result in light injury or damage to property or the environment, if not avoided.

**i** **INFORMATION**...points out useful tips, recommendations, and information for efficient and trouble-free operation.

## FUNCTIONS & FEATURES

### Pressures

The pressure transmitter is used for measuring pressure. The measured pressure is output as an electrical signal. Proper pressure range should be selected based on application requirement.

| From 0 to ...  | barG | 50   | 100  | 200  | 250  | 350  | 400  | 600  |
|----------------|------|------|------|------|------|------|------|------|
| Proof Pressure | barG | 200  | 200  | 400  | 500  | 800  | 800  | 1200 |
| Burst Pressure | barG | 2000 | 2000 | 4000 | 4000 | 4000 | 4000 | 4000 |

**!** Avoid overload pressure exceeding the specified maximum permissible pressure by taking appropriate measures. The indicated bursting pressure must not be exceeded. Even if the bursting pressure is exceeded only for short time, the unit may be destroyed. ATTENTION: Risk of injury!

## INSTALLATION

**!** Before installing and removing the unit: Make sure that no pressure is applied to the system. Only use the pressure transmitter if it is in perfect condition with respect to safety. Prior to commissioning, the pressure transmitter must be subjected to a visual inspection. Leaking fluid is indicative of damage.

The mounting point must meet the following conditions:

- Sealing faces are clean and undamaged.
- Sufficient space for a safe electrical installation.
- Permissible ambient and medium temperatures remain within the performance limits. Consider possible restrictions on the ambient temperature range caused by mating connector used.

Tighten firmly. Recommended tightening torque:

| Final value of the measuring range in bar        | Tightening torque in Nm |
|--|-------------------------|
| 10...400   | 25...35                 |
| 600  | 30...50                 |
| Depends on lubrication, seal on pressure rating! |                         |

Sensata Technologies, Inc. ("Sensata") data sheets are solely intended to assist designers ("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, evaluation and judgment in designing Buyer's systems and products. Sensata data sheets 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 data sheet. Sensata may make corrections, enhancements, improvements and other changes to its data sheets or components without notice. Buyers are authorized to use Sensata data sheets with the Sensata component(s) identified in each particular data sheet. 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 DATA SHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATA SHEETS OR USE OF THE DATA SHEETS, 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 DATA SHEETS OR USE THEREOF. All products are sold subject to Sensata's terms and conditions of sale supplied at [www.sensata.com](http://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. Copyright © 2021 Sensata Technologies, Inc.

## SPECIFICATIONS

### Electrical

|   |  |
|---|--|
| <b>Pressure Range</b>                                       | 0-16 bar to 0-600 bar (sensor);0-400 bar (module)  |
| <b>Pressure Reference</b>                                   | Gauge (Module) and Sealed Gauge (fully hermetic sensor)  |
| <b>Supply Voltage</b>                                       | 3.3VDC to 5.5VDC   |
| <b>Digital Interface</b>                                    | I <sup>2</sup> C with CRC  |
| <b>Overvoltage Protection</b>                               | 36VDC  |
| <b>Device Address</b>                                       | 0xDA (hex, 0x6C without CRC)   |
| <b>Operating Current In Sleep Mode</b>                      | 6.5 uA (typical)   |
| <b>Operating Current In Active Mode</b>                     | 3.7mA typical (4mA maximum)  |
| <b>Response Time (12 bit)</b>                               | < 1 ms   |
| <b>Probe Configurations</b>                                 | Continuous   |
| <b>EOC<sup>(1)</sup></b>                                    | Available in single cycle mode, through the STATUS register using the I <sup>2</sup> C interface |
| <b>Recommended pull-up resistors</b>                        | 1kOhm to 10kOhm, depending on cable length   |
| <b>External Capacitive Load for I<sup>2</sup>C Bus Line</b> | 400 pF max (depends on the cable length)   |
| <b>ESD</b>  | ±4kV contact, ±8kV air   |
| <b>Radiated Immunity<sup>(1)</sup></b>                      | 80-1000MHz 10V/m ; 1400-2000MHz 3V/m ; 2000-2700MHz 1V/m ; 2000-2700MHz 1V/m ;                   |
| <b>Conducted Immunity<sup>(1)</sup></b>                     | 0.15-80MHz 3Vrms   |
| <b>Magnetic Immunity<sup>(1)</sup></b>                      | 3 A/m for 5 minutes  |

<sup>(1)</sup> Only applicable for the sensor, not the module.

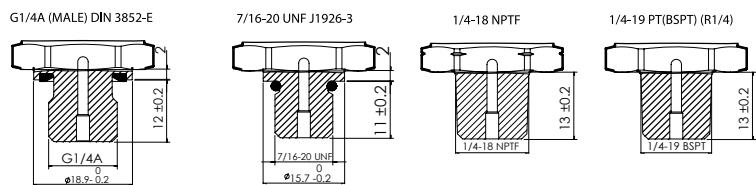
### Physical

|                            |   |
|----------------------------|---|
| <b>Proof Pressure</b>      | 2.5X full scale pressure  |
| <b>Burst Pressure</b>      | 5X full scale pressure  |
| <b>Vibration</b>           | IEC 60068-2-6 with 2.0mm displacement, Sensor: 30g (10...2000Hz); Module: 20g (10...2000Hz) |
| <b>Mechanical Shock</b>    | IEC 60068-2-27, 50g min (Module); IEC 60068-2-27, 500g min (fully hermetic sensor)          |
| <b>Drop (any Axis)</b>     | 1m  |
| <b>Water Hammer</b>        | 1.6X full scale pressure for 100k cycles, 1.3xFS for 200k cycles                            |
| <b>Ingress Protection</b>  | IP00 (Module), IP69K (fully hermetic sensor)  |
| <b>Media Compatibility</b> | Fluids and gases compatible with 17-4PH stainless steel                                     |

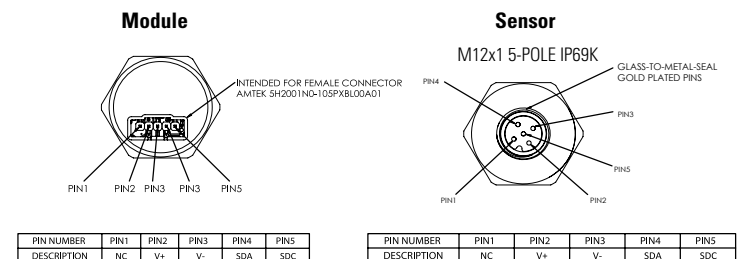
### Performance

|                                      |                         |
|--------------------------------------|-------------------------|
| <b>Pressure (Best Fit Straight)</b>  | +/-0.5%FS @25°C         |
| <b>Pressure (Total Error Band)</b>   | +/-1.5%FS @-20° to 85°C |
| <b>Operating Endurance</b>           | >10M cycles             |
| <b>Operating Ambient Temperature</b> | -40° to +100°C          |
| <b>Operating Media Temperature</b>   | -40° to +125°C          |
| <b>Storage Temperature</b>           | -40° to +125°C          |

### Pressure Port Connections



### Electrical Connections



| PIN NUMBER  | PIN1 | PIN2 | PIN3 | PIN4 | PIN5 |
|-------------|------|------|------|------|------|
| DESCRIPTION | NC   | V+   | V-   | SDA  | SDC  |

| PIN NUMBER  | PIN1 | PIN2 | PIN3 | PIN4 | PIN5 |
|-------------|------|------|------|------|------|
| DESCRIPTION | NC   | V+   | V-   | SDA  | SDC  |

## 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