



Model 210

Circuit Board-Mountable Pressure Transducer

Features

- Fully signal conditioned
- High level output
- Excellent long term stability
- RFI/EMI immunity
- Non-oil-filled sensor
- Easily customized package
- Optional excitations, outputs, and accuracies
- Wide operating temperature range
- High signal to noise ratio
- Meets CE conformance standards

Applications

- Analytical measurement and control
- OEM medical systems

Setra's Model 210 is the ultimate in circuit board-mountable pressure transducers. In addition to the convenience of quick PCB installations, the 210 offers wide media compatibility with its stainless steel sensor construction. The calibrated high level output eliminates the need for additional circuit and calibration labor costs.

Packaged in a compact plastic enclosure (1.25" diameter footprint), the Model 210 incorporates Setra's unique capacitance technology, known worldwide for its solid stability, accuracy and thermal performance. With the custom ASIC circuit and capacitive sensor, the Model 210 performs with reliability and EMI/RFI immunity. The Model 210 can be customized to accommodate various package and performance requirements, and is designed for OEM applications.

Pressure ranges

| 0 psig to: | Proof Pressure (psig) | Burst Pressure (psig) |
|------------|-----------------------|-----------------------|
| 1 | 2 | 250 |
| 2 | 4 | 250 |
| 5 | 10 | 500 |
| 10 | 20 | 500 |
| 15 | 30 | 500 |
| 50 | 100 | 500 |
| 100 | 200 | 500 |
| 150 | 300 | 500 |

Note: Our pressure sensor products are not necessarily designed or manufactured for use as a "critical component" in a "critical device", as those terms are defined in the Medical Devices Subchapter contained in the Food and Drug Administration Rules, 21CFR800.

Note: Setra adheres to strict quality standards including ISO 9002 and ANSI-Z540-1. The calibration of this product is NIST traceable.



Specifications

| Performance data | Standard | Optional |
|-----------------------|-----------|-----------|
| Accuracy RSS | ±1.0% FS | ±0.5% FS |
| Non-linearity, (BFSL) | ±0.98% FS | ±0.45% FS |
| Hysteresis | 0.20% FS | 0.16% FS |
| Non-repeatability | 0.05% FS | 0.05% FS |

Thermal effects

| | |
|--------------------------------|---------------|
| Zero shift %FS/100°F(%FS/50°C) | <±2.0 (<±1.8) |
| Span shift %FS/100°F(%FS/50°C) | <±1.5 (<±1.4) |
| Long term stability | 0.5% FS/YR |

Electrical data

| | |
|-------------------------|----------------------------|
| Circuit | 3-Wire (+In, +Out, Common) |
| Excitation ¹ | 5VDC (4.9 to 8.1) |
| Output ² | 0.5 to 4.5 VDC |
| Output impedance | <100 Ohms |
| Response time | 10 Milliseconds |

¹See ordering code for excitation/ output availability.

²Calibrated into 50K ohm load or greater.

Zero output factory set to within ±25 mV.

Span (full scale) output factory set to within ±40 mV.

Specifications subject to change without notice

Dimensional Data

| | |
|-----------------------|---|
| Case | Fire retardant glass-filled polyester |
| Sensor | Stainless steel 17-4 and 17-7 PH |
| Pressure fittings | Barbed nylon pressure fitting for 1/8" or 1/16" I.D. tubing |
| Electrical Connection | Solder pins, 0.030" round on 0.2" centers |
| Weight (approx.) | 0.5 ounces |

Environmental Data

| | |
|-----------------------|------------------------------|
| Operating temperature | -4 to +176°F (-20 to +80°C) |
| Storage temperature | -40 to +185°F (-40 to +85°C) |
| Operating humidity | 0 to 95% RH non-condensing |
| Storage humidity | 0 to 98% RH non-condensing |
| Vibration | 5g Operating |
| Shock | <100g |

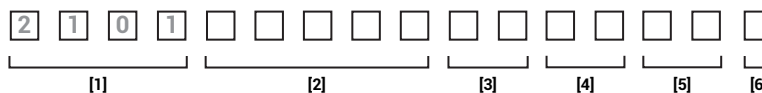
Pressure media

Gases or liquids compatible with 17-4 PH, 17-7 PH series stainless steel, nylon, polyester, and silicone.

Ordering information

Example part number: 2101001PG1B35C1C

Model 210 with a Pressure range of 0 to 1 PSI, barbed fitting, 12 VDC excitation, 0.5 to 4.5 VDC output with PC board mountable pins, and an accuracy of $\pm 1.0\%$.



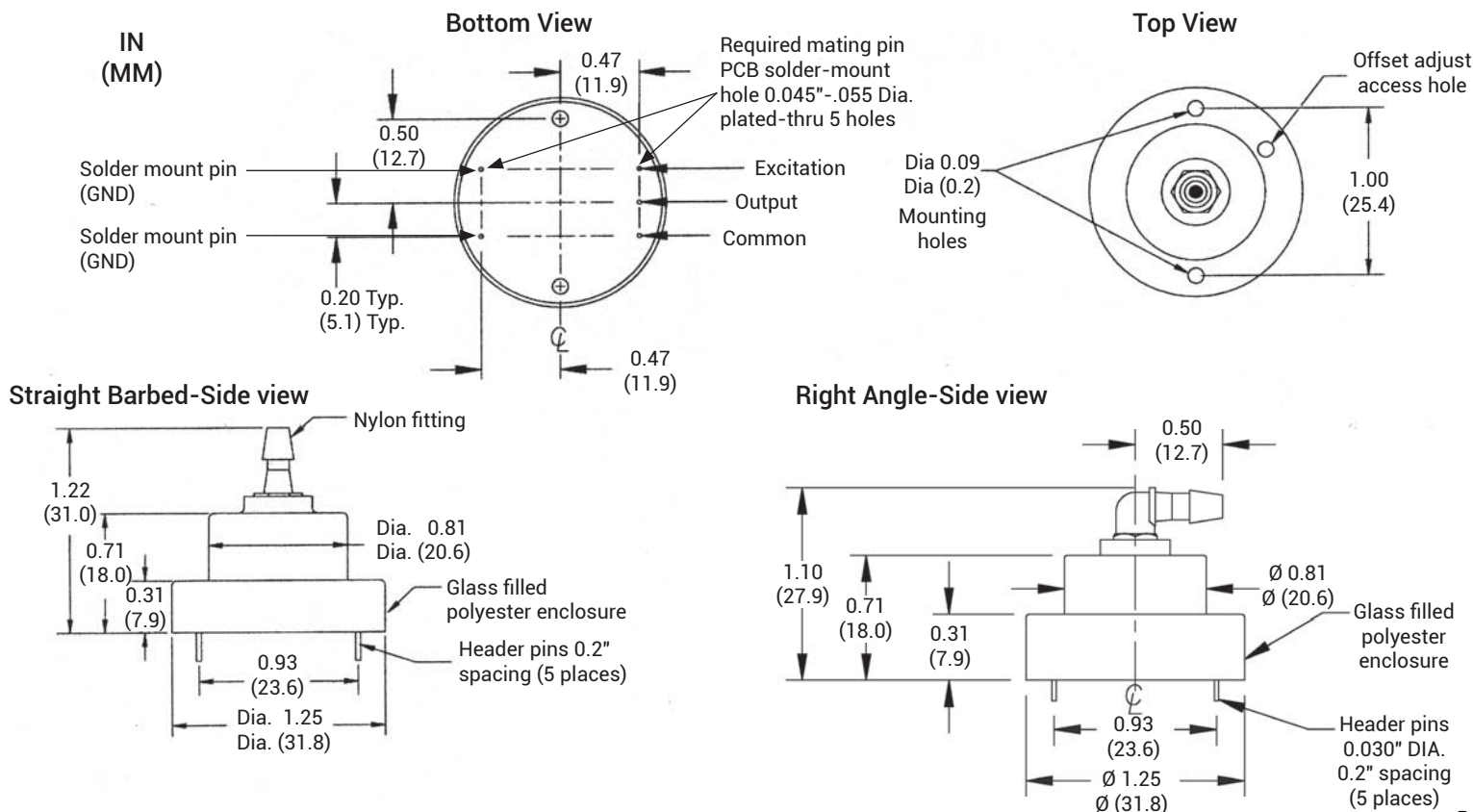
| [1] | [2] | [3] | [4] | [5] | [6] |
|-----------------------|---|---|------------------------------|-----------------------------------|---|
| Model | Pressure range | Fitting | Exc./ Output | Elec. termination | Accuracy¹ |
| 2101 Model 210 | 001PG 1 PSIG 002PG 2 PSIG 005PG 5 PSIG 010PG 10 PSIG 015PG 15 PSIG 050PG 50 PSIG 100PG 100 PSIG 150PG 150 PSIG 100PC -14.7 to 100 PSIG | 1B Straight, 1/8" ID tube, 3/16" Barb 1D Right angle, 1/8" ID tube, 3/16" Barb 2D Right angle, 1/16" ID tube, 3/32" Barb | 45 5 VDC/ 0.5-4.5 VDC | C1 PC board mountable pins | Standard C $\pm 1.0\%$ FS H $\pm 0.5\%$ FS <i>Options (w/Cal Cert)</i> G $\pm 1.0\%$ FS D $\pm 0.5\%$ |

¹RSS of Non-Linearity, Hysteresis, and Non-Repeatability

While we provide application assistance on all Setra products both personally and through our literature, it is the customer's responsibility to determine the suitability of the product in the application.

Please contact factory for configurations not shown.

Dimensions





Setra Systems, Inc.
159 Swanson Road
Boxborough, MA 01719
800.257.3872
www.setra.com

© Setra Systems, Inc. All rights reserved.

The Setra Systems name and logo
are trademarks of Setra Systems, Inc.