Model 265

Very Low Differential Pressure Transducer

Ranges: 0.25 to 100 in. W.C./±0.1 to ±50 in. W.C.
Air or Non-Conducting Gas

Conduit enslosure is available as an option.

Setra Systems 265 pressure transducers sense differential or gauge (static) pres-sures and convert this pressure difference to a proportional electrical output. The 265 is offered with a high level 0-5 VDC output or a 4-20 mA output. It is also offered with 0-5 or 0-10 VDC output in the 24 VAC excitation version.

Used in Building Energy Management Systems, these transducers are capable of measuring pressures and flows with the accuracy necessary for proper building pressurization and air flow control.

The 265 Series very low pressure transducers are available for air pressure ranges as low as 0.25 in. WC full scale up to 100 in. WC full scale. Static accuracy is ±1% full scale in normal ambient temperature environments. The units are temperature compensated to less than ±0.033% FS/°F of thermal error over the temperature range of 0°F to +150°F.

The Model 265utilizes an improved all stainless steel micro-tig welded sensor.

The tensioned stainless steel diaphragm and insulated stainless steel electrode, positioned close to the diaphragm, form a variable capacitor. Positive pressure moves the diaphragm toward the electrode, increasing the capacitance.

A decrease in pressure moves the diaphragm away from the electrode, decreasing the capacitance. The change in capacitance is detected and converted to a linear DC electrical signal by Setra's unique electronic circuit.

The micro-tig welded tension sensor allows up to 10 PSI overpressure (range dependent) with no damage to the unit. In addition, the sensor parts have thermally matched coefficients, which promote improved temperature performance and excellent long-term stability.

Pressure Ranges

Unidirectional Pressure	Bidirectional Pressure
0 to 0.25 in. WC	0 to ±0.1 in. WC
0 to 0.5 in. WC	0 to ±0.25 in. WC
0 to 1 in. WC	0 to ±0.5 in. WC
0 to 2.5 in. WC	0 to ±1 in. WC
0 to 5 in. WC	0 to ±2.5 in. WC
0 to 10 in. WC	0 to ±5 in. WC
0 to 25 in. WC	0 to ±10 in. WC
0 to 50 in. WC	0 to ±25 in. WC
0 to 100 in. WC	0 to ±50 in. WC
Proof Pressure for all ranges: up to 10 PSI	

NOTE: Setra quality standards including ISO 9001 are based on ANSI-Z540-1. The calibration of this product is NIST traceable.

U.S. Patent Nos. 5442962, 6019002, 6014800 and other Patents Pending.

Applications

- Heating, Ventilating and Air Conditioning (HVAC)
- Energy Management Systems
- Variable Air Volume and Fan Control (VAV)
- Environmental Pollution Control
- Static Duct and Clean Room Pressures
- Oven Pressurization and Furnace Draft Controls

Benefits

- Up to 10 PSI Proof Pressure (Range Dependent)
- 24 VDC or 24 VAC Excitation
- High Level 0-5 VDC , 0-10 VDC or 2-Wire 4-20 mA Analog Outputs are Compatible with All Energy Management Systems
- Fully Protected Against Reverse Wiring
- Internal Regulation Permits Use with Unregulated DC Power Supplies
- 1% Accuracy Improves Variable Air Volume System Performance.
- Optional Accuracies as High as 0.25% FS
- Fire Retardent Case (UL 94 V-0 Approved)
- Meets CE Conformance Standards

ISO 9001: 2000 Certified

Visit Setra Online:
http://www.setra.com

setra

800-257-3872

159 Swanson Rd., Boxborough, MA 01719/Telephone: 978-263-1400/Fax: 978-264-0292

Model 265 Specifications

Performance Data

	Standard	Optional	
Accuracy RSS* (at constant temp.)	±1.0% FS	±0.4% FS	±0.25% FS
Non-Linearity (BFSL)	±0.98% FS	±0.38% FS	±0.22% FS
Hysteresis	0.10% FS	0.10% FS	0.10% FS
Non-Repeatability	0.05% FS	0.05% FS	0.05% FS

Thermal Effects**

Compensated Range °F(°C)	0 to +150 (-18 to +65)
Zero/Span Shift %FS/°F(°C)	±0.033 (±0.06)
Maximum Line Pressure	10 PSI
Overpressure	Up to 10 PSI (Range Dependent)
Long-Term Stability	0.5% FS/YR
Warm-up Shift	±0.1% FS Total

Position Effect***

Range	Zero Offset (%FS/G)
To 0.5 in. WC	0.60
To 1.0 in. WC	0.50
To 2.5 in. WC	0.22
To 5.0 in. WC	0.14

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

**Units calibrated at norminal 70°F. Maximum thermal error computed from this datum.

***Unit is factory calibrated at 0g effect in the vertical position.

Environmental Data

Temperature	
Operating* °F (°C)	0 to +150 (-18 to +65)
Storage °F (°C)	-40 to +185 (-40 to +85)

*Operating temperature limits of the electronics only.

Pressure media temperatures may be considerably higher or lower.

Physical Description

Case	Fire Retardent Glass Filled Polyester (UL 94 V-0 Approved)
Electrical Connection	Screw Terminal Strip
Pressure Fittings	1/4" Fitting
Weight	3 ounces

Electrical Data (Voltage)

Circuit	3-Wire (Com, Out, Exc)
Excitation/Output*	9 to 30 VDC/ 0 to 5 VDC**
	9 to 30 VAC/ 0 to 5 VDC
	12 to 30 VAC/0 to10 VDC**
Bidirectional output at zero pressure:	2.5 VDC (±50 mV)
Output Impedance	100 Ohms

*Calibrated into a 50K ohm load, operable into a 5000 ohm load or greater.

**Zero output factory set to within ±50mV (±25 mV for optional accuracies). Span (Full Scale) output factory set to within ±50mV (±25 mV for optional accuracies).

Electrical Data (Current)

Circuit	2-Wire
Output*	4 to 20 mA**
Bidirectional output at zero pressure:	12 mA
Electrical Load	0 to 800 Ohms

Minimum loop supply voltage (VDC) = 9 + 0.02 x (Resistance of receiver plus line).

Maximum loop supply voltage (VDC) = 30 + 0.004 x (Resistance of receiver plus line).

*Calibrated at factory with a 24 VDC loop supply voltage and a 250 ohm load.

**Zero output factory set to within ±0.16mA (±0.08 mA for optional accuracies).

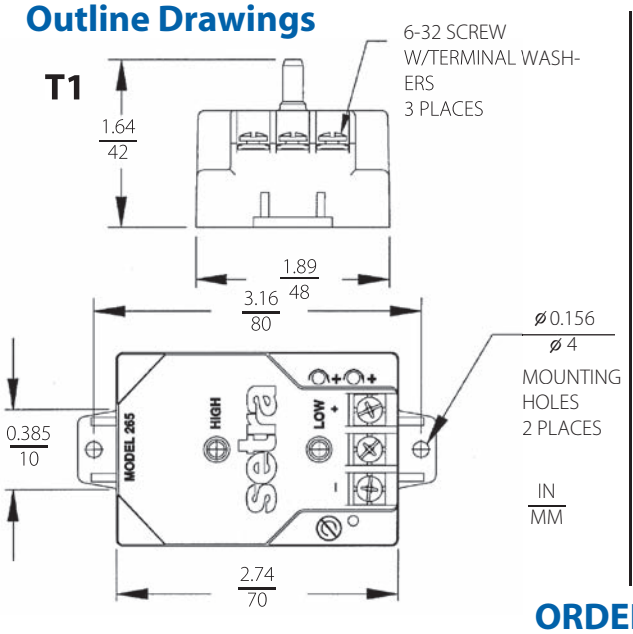
Span (Full Scale) output factory set to wtihin ±0.16mA (±0.08 mA for optional accuracies).

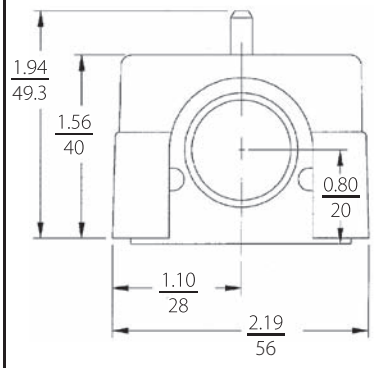
Pressure Media

Typically air or similar non-conducting gases.

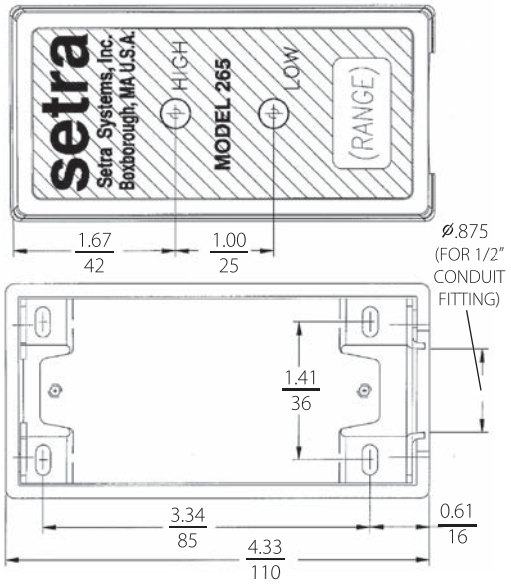
Specifications subject to change without notice. Application of some available options may impact standard specifications.

Outline Drawings





Optional A1 Conduit Enclosure



ORDERING INFORMATION

Code all blocks in table.

Example: Part No. 26512R5WD11T1C for a 265 Transducer 0 to 2.5" WC Range, 4 to 20 mA Output, Terminal Strip Electrical Connection, and ±1% Accuracy.

2 6 5 1 – [Ranges] – [Excitation/Output] – [Elec. Termination] – [Accuracy]

Model

2651 = 265

Ranges

Differential		Bidirectional	
R25WD	= 0 to 0.25" WC	0R1WB	= ±0.1" WC
0R5WD	= 0 to 0.5" WC	R25WB	= ±0.25" WC
001WD	= 0 to 1" WC	0R5WB	= ±0.5" WC
2R5WD	= 0 to 2.5" WC	001WB	= ±1" WC
005WD	= 0 to 5" WC	2R5WB	= ±2.5" WC
010WD	= 0 to 10" WC	005WB	= ±5" WC
025WD	= 0 to 25" WC	010WB	= ±10" WC
050WD	= 0 to 50" WC	025WB	= ±25" WC
100WD	= 0 to 100" WC	050WB	= ±50"WC

Excitation/Output

Standard

11 = 24 VDC/ 4-20 mA
2B = 24VDC/ 0-5 VDC
AB = 24 VAC/ 0-5 VDC
AC = 24 VAC/ 0-10 VDC

Elec. Termination

Standard

T1 = Terminal Strip

Optional

A1 = 1/2" Conduit

Accuracy

Standard

C = ±1% FS

Optional (w/Cal. Cert.)

E = ±0.4% FS
F = ±0.25% FS
G = ±1% FS

Please contact factory for versions not shown.

SSP265 Rev.D 11/10/2008

159 Swanson Road, Boxborough, MA 01719/Tel: 978-263-1400;
Toll Free: 800-257-3872; Fax: 978-264-0292; email: sales@setra.com