Model 760

Capacitance Manometer

Setra's Vactron™ Model 760 capacitance manometer is an absolute pressure transducer designed for accurate and repeatable vacuum measurements. Various full scale ranges are available from 10 Torr up to 1000 Torr. The units of measurement may be specified in Torr, mBar/hPa, or kPa. The Model 760 operates from a ±15 VDC power supply and provides a 0-10 VDC or 0-5 VDC signal output that is linear with pressure and independent of gas composition. The electrical connection can be either the industry standard 15 pin D-sub or 6 position terminal strip connector.

Setra's Vactron™ Sensor

The high accuracy Vactron™ pressure sensor in the Model 760 is Setra's patented variable capacitance technology. A centrally located feed-through assembly supports a circular electrode in close proximity to the back surface of the diaphragm. Together, the electrode and diaphragm form a variable capacitor within a small reference vacuum chamber maintained at very low pressure. As the pressure increases, the diaphragm deflects and the gap between the electrode and diaphragm decreases, causing an increase in the capacitance. This change in capacitance is detected and converted to a highly accurate linear DC electronic signal by Setra's unique custom integrated circuit, which utilizes a patented charge balance principle. Excellent zero stability and barometric insensitivity are achieved through an innovative sensor design.

Superior EMI/RFI performance is achieved by the use of a metal case, in conjunction with surge and ESD suppression components and RFI filtering on the inputs and outputs. The Model 760 has an integrated sliding cover that provides easy access to multi-turn potentiometers for fine zero and span adjustments. Inconel® is used for all wetted materials allowing the Model 760 to be used with corrosive gases. A wide range of pressure and vacuum fittings are available. The all-welded Inconel® Vactron™ sensor incorporates a rigid mount electrode providing high overpressure capability and eliminating fragile moving parts found in competing capacitance manometers that can result in zero instability.

- **Excellent Thermal Stability**
- **Superior EMI/RFI Performance**
- **Corrosion Resistant Wetted Parts**

Model 760 Features:

- High Accuracy: ±0.25% of Reading Std., ±0.15% Optional
- Inconel® Wetted Parts for Corrosion Resistance
- Small/Compact Size
- Industry Standard Fittings and Electrical Connections

Applications

- Semiconductor Process Tools and Equipment
- Laboratory and R&D
- Test and Measurement
- Metrology
- Analytical Chemistry Systems

Phone: 800-257-3872 • Fax: 978-264-0292 • setra.com

Model 760

Capacitance Manometer

ORDERING INFORMATION

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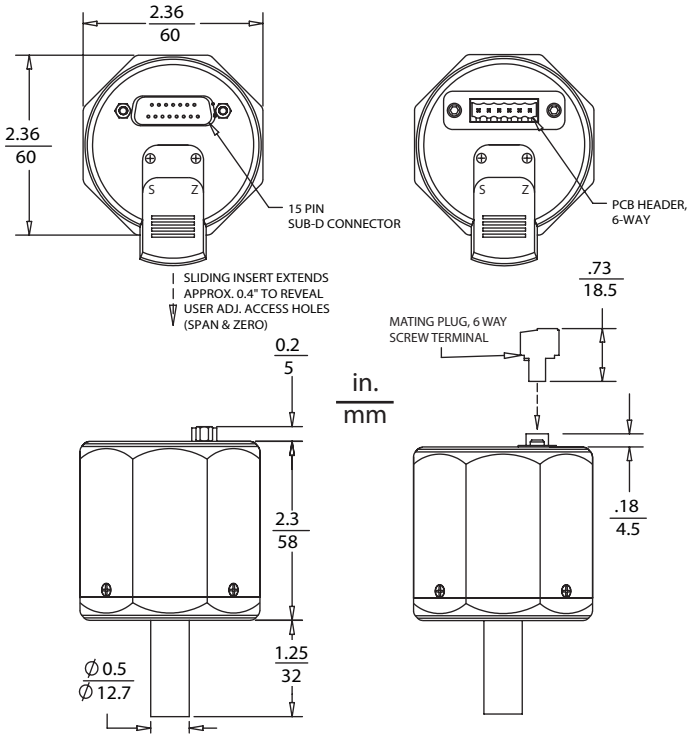
Model	Pressure Range				Pressure Type		Fitting		Output		Termination		Accuracy	
7601 = Model 760	010T	10 Torr	002K	2 kPa	A	Absolute	4T	0.5" OD Tube	7B	0-5 VDC	D2	15-Pin D-Sub	A	±0.25% of Reading (Standard)
	020T	20 Torr	010K	10 kPa			N1	ISO NW16	7C	0-10 VDC	T2	6 Position Screw Terminal	B	±0.15% of Reading (Optional)
	100T	100 Torr	100K	100 kPa			N2	ISO NW25						
	10CT	1,000 Torr					N4	ISO NW40						
	010M	10 mBar					D8	8 VCR®, Female Swivel						
	100M	100 mBar					T6	Tri-clover 1.50"						
	10CM	1,000 mBar												

VCR is a registered trademark of Swagelok Marketing Co., Solon, OH.

Please contact factory for versions not shown.

Ordering Example: 7601010TAN17CD2A= Model 760, 10 Torr pressure range, Absolute pressure type, ISO NW16 Fitting, 0-10VDC output, 15-Pin D-Sub termination, ±0.25% of Reading accuracy.

DIMENSIONS



GENERAL SPECIFICATIONS

Performance Data		Physical Description	
Accuracy	±0.25% of Reading ±0.15% of Reading (Opt)	Case	Aluminum Alloy
Response Time	<20 ms	Electrical Connection	15 Pin D-Sub Connector, or 6 Position Screw Terminal
Resolution	Infinite, limited only by output noise level (0.01% FS)	Pressure Fittings	See Ordering Information
Thermal Effects		Cavity Volume[2]	<6 cm³
Compensated Range	32 to 122°F (0 to 50°C)	Zero/Span Adjustments	Multi-Turn Potentiometers (Located under sliding cover)
Zero Shift	±0.005% FS/°C	Weight	260g (9 oz.)
Span Shift	±0.027% Rdg/°C	**Electrical Data (Voltage)**	
Proof Pressure	45 PSIA	Circuit	4-Wire
Pressure Media		Excitation	±15 VDC regulated ±5%
Gases or liquids compatible with Inconel®. Inconel® wetted material is for 0.5" tube option only. Other fitting options will add Stainless Steel.		Output[3]	0-5 VDC or 0-10 VDC
		Power Consumption	<0.5 Watts (<15mA)
Environmental Data			
Operating Temperature[1]	32 to 122°F (0 to 50°C)		
Storage Temperature	-58 to +257°F (-50 to +125°C)		

[1]Operating temperature limits of the electronics only. Pressure media temperatures may be considerably higher or lower.
[2]Maximum cavity volume includes the 0.5" O.D. tube volume of 4.28 cm.
[3]Calibrated into a 50K ohm load, operable into a 10,000 ohm load or greater.

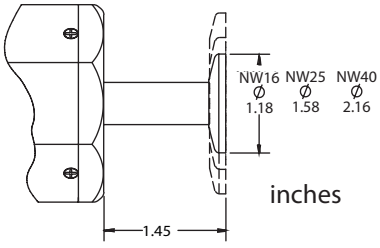
Specifications subject to change. Application of some available options may impact standard specifications

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

U.S. Patent nos. 4093915

DIMENSIONS (FITTINGS)

FITTING CODE N1, N2, N4



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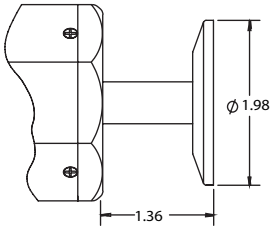

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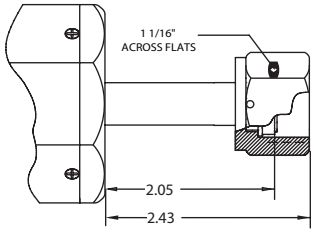

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