

Model 730 Absolute Capacitance Manometer

Available in Standard Torr, kPa and mbar Vacuum Ranges



Setra's low cost, compact Model 730 is designed for Semi-conductor, Petrochemical/Pharmaceutical/Process and Industrial Vacuum Markets. The 730's new high frequency electronics design is fully RoHS compliant and yields extremely low noise, while maintaining the fast response time required for today's critical control applications. External noise rejection, fast warm-up, resistance to environmental effects, and quick return to zero are unmatched by competing models costing twice as much.

The 730 employs a welded, all Inconel® wetted parts sensor for compatibility with virtually all process chemistries. This field proven, rigid mount, single electrode sensor provides high over-pressure capability and exceptional long-term stability. The tensioned diaphragm

provides low hysteresis, high resolution, and repeatability.

The Model 730 offers 0 to 5 VDC or 0 to 10 VDC output that is linear with pressure and independent of gas composition. A wide dynamic measuring range is insured through Percent of Reading accuracy ($\pm 0.5\%$ standard and $\pm 0.25\%$ optional) and negligible temperature coefficients across its 0 to 50 degree C compensated range. Temperature coefficients of $\pm 0.25\%$ FS/50°C on zero and $\pm 1.35\%$ of Reading/50°C on span are standard.

Offered in a variety of full scale pressure ranges from 10 torr up to 1000 Torr, the Model 730 accepts 12 to 30 VDC power and can be configured with a 9 or 15 pin D-Sub or 5 pin terminal strip electrical connection, all with "plug and play" industry standard pinouts. A variety of vacuum fittings are also available.

Inconel® is a registered trademark of Special Metals, Inc. Huntington, WV, USA.

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

U.S. Patent nos. 5442962
Other patents pending.

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

Applications

- Semiconductor
 - Process Chambers
 - Load Locks
 - Water Handlers
 - Scrubbers
- Petrochemical
- Pharmaceutical
- Absorption Chillers
- Lasers
- Autoclaves
- Vacuum Packaging
- Freeze Drying
- Vacuum Distillation

Features

- Wide Compensated Operating Temperature
- Extremely Low Noise
- Insensitive to Environmental Changes
- CE Mark Compliant
- EU RoHS Compliant

When it comes to a product to rely on - choose the Model 730 .
When it comes to a company to trust - choose Setra.

ISO
9001:
2008
Certified

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

setra
800-257-3872

Model 730 Specifications

Accuracy Data

Accuracy ¹	±0.5% of Reading
	±0.25% of Reading (Optional)
Resolution	Infinite, limited only by output noise level (≤0.005% FS)

Thermal Effects²

Compensated Range	0 to +50 °C
Zero Shift	±0.25% FS/50°C
Span Shift	±1.35% Rdg/50°C
Long Term Stability ³	±0.5% FS/YR, excluding environmental effects

Response Time

Proof Pressure	45 psia
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1. Includes Non-Linearity, Non-Repeatability and Hysteresis.

2. Units calibrated at nominal 66°F. Maximum thermal error computed from this datum.

3. ±1.0% FS/yr for ranges less than 100 Torr full scale for when operated at 80°C

Environmental Data

Temperature	
Operating	0 to +80°C
Storage	-20 to +85°C
Shock	50 g Operating

Physical Description

Case	Stainless Steel
Electrical Connection	5-Pin Screw Terminal, 9 Pin D-Sub, or 15 Pin D-Sub on 6" Pigtail
Pressure Fittings	See Ordering Information
Wetted Material	Inconel®
Cavity Volume	<6.0 cc
Weight (approx)	<250 g

Electrical Data (Voltage)

Circuit	3-Wire
Excitation/Output*	12 to 30 VDC for 0-10 VDC 9 to 30 VDC for 0-5 VDC
Output Load	>10 kΩ Load
Current Consumption	<10 mA Max.
Output Impedance	<1 ohm
CE Compliance	Electro Magnetic Compatibility Directive 2004/108 EC

EU RoHS Compliant

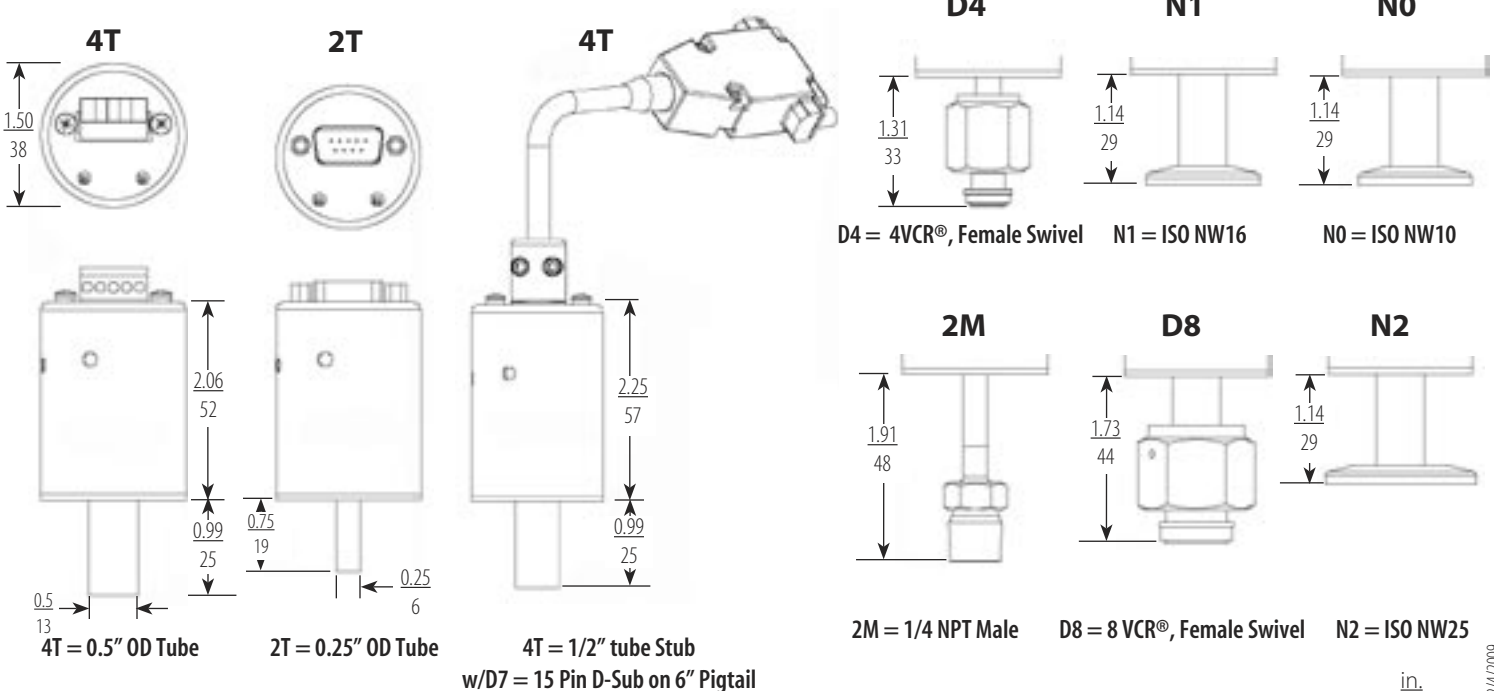
*Calibrated into a 50K ohm load, operable into a 5000 ohm load or greater.

Pressure Media

Gases or liquids compatible with Inconel®. Inconel® wetted material is for 0.5" tube option only. Other fitting options will add Stainless Steel.

Specifications subject to change without notice.

Outline Drawings



ORDERING INFORMATION

Code all blocks in table.

Example: Part No. 730G010TAN12CD9K is a Model 730, 0 to 10 Torr Full Scale, Absolute, ISO NW16 Pressure Fitting, 10 VDC output with a 9 Pin D-Sub and 0.5% of Reading accuracy.

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Model				Range		Pressure	Type of Fitting	Output	Elec. Termination	Accuracy	
730G = 730				010T = 10 Torr		A = Absolute	Standard	2B = 0-5 VDC	D9 = 9 Pin D-Sub	Standard	
				020T = 20 Torr			4T = 0.5" OD Tube	2C = 0-10 VDC	T1 = Terminal Strip	K = ±0.5% of Reading	
				100T = 100 Torr			N0 = ISO NW10		D7 = 15 Pin D-Sub on 6" Pig Tail	A = ±0.25% of Reading	
				200T = 200 Torr			N1 = ISO NW16				
				10CT = 1000 Torr			N2 = ISO NW25				
				010M = 10 mbar*			D8 = 8 VCR®, Female swivel				
				020M = 20 mbar			2T = 1/4" O.D. Tube				
				100M = 100 mbar			D4 = 4 VCR Female Swivel				
				10CM = 1000 mbar			2M = 1/4 NPT Male				
				001K = 1 kPa*							
				002K = 2 kPa							
				010K = 10 kPa							
				100K = 100 kPa							

*Only available with K Code (±0.5% of Reading) Accuracy
Please contact factory for versions not shown.

Note: VCR and Swagelok are registered trademarks of Swagelok Marketing Company, Solon, OH. Conflat is a registered trademark of Varian Associates, Lexington, MA.

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.

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