

## 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.

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### 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
- $\text{C}$  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.



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800-257-3872

# Model 730 Specifications

## Accuracy Data

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

## Thermal Effects<sup>2</sup>

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

## Response Time

<20 milliseconds

## Proof Pressure

**45 psia**

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	<b>Operating</b>	<b>0 to +80°C</b>
	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

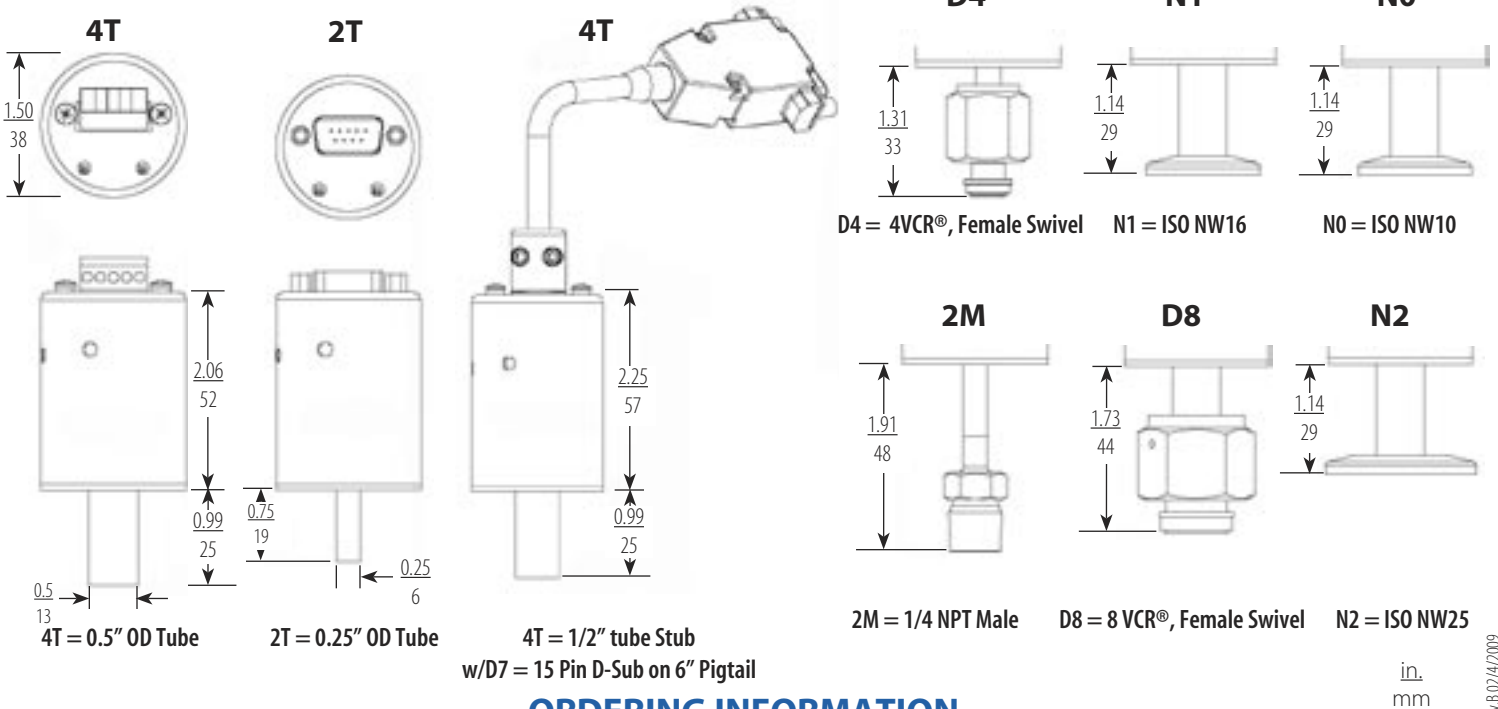
\*Calibrated into a 50K ohm load, operable into a 5000 ohm load or greater.

## 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 020T = 20 Torr 100T = 100 Torr 200T = 200 Torr 10CT = 1000 Torr 010M = 10 mbar* 020M = 20 mbar 100M = 100 mbar 10CM = 1000 mbar 001K = 1 kPa* 002K = 2 kPa 010K = 10 kPa 100K = 100 kPa			A = Absolute	Standard 4T = 0.5" OD Tube N0 = ISO NW10 N1 = ISO NW16 N2 = ISO NW25 D8 = 8 VCR®, Female swivel 2T = 1/4" O.D. Tube D4 = 4 VCR Female Swivel 2M = 1/4 NPT Male	2B = 0-5 VDC 2C = 0-10 VDC	D9 = 9 Pin D-Sub T1 = Terminal Strip D7 = 15 Pin D-Sub on 6" Pig Tail	Standard K = ±0.5% of Reading A = ±0.25% of Reading
*Only available with K Code (±0.5% of Reading) Accuracy Please contact factory for versions not shown.											
<small>Note: VCR and Swagelok are registered trademarks of Swagelok Marketing Company, Solon, OH. Conflat is a registered trademark of Varian Associates, Lexington, MA.</small>											

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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