

Model 730

Vacuum Capacitance Manometer



Setra's Model 730 is a high accuracy absolute capacitance manometer (also referred to as Capacitance Diaphragm Gauge (CDG)), for measuring low vacuum pressure ranges that are critical to the control of processes in photovoltaic, semiconductor and industrial markets. The 730 utilizes welded, all Inconel® wetted components which provides capability with the most aggressive process media. Its 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 long term stability are unmatched by competing models.

High Performance For Demanding Applications

The Model 730 capacitance manometer uses a rigid single electrode variable capacitance sensing element resulting in high over pressure capability and superior long term stability. Its percent of reading accuracy, low hysteresis, and high resolution provides a wide dynamic range, making the 730 an ideal fit for measuring and controlling critical manufacturing processes.

Process Compatible Inconel® Sensor

The 730 is designed using Inconel® for all its wetted parts. Inconel® is highly resistive to the corrosive media used in semiconductor and industrial vacuum processes. Their material, along with the all welded construction, ensures long life in the most demanding applications.

Direct Pressure Measurement

Unlike some vacuum measuring technologies, the Model 730 capacitance manometer measures direct pressure; force/unit area. Its 0-5 or 0-10 VDC analog output signal is proportional to the applied pressure and independent of the process gas composition.

- Chemical Resistive Inconel® Design
- Precise Low Vacuum Measurements
- Industry Standard Connections

Model 730 Features:

- High Accuracy: $\pm 0.5\%$ of Reading Std., $\pm 0.25\%$ Optional
- Tensioned Diaphragm Provides Superior Performance
- Wide Compensated Operating Temperature
- Fast Response Time With Low Circuit Noise
- Insensitive to Environmental Changes
- Exceptional Overpressure Capability
- CE & RoHS Compliant

Applications

- Semiconductor
- Petrochemical
- Plasma Sterilizers
- Vacuum Packaging

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ORDERING INFORMATION

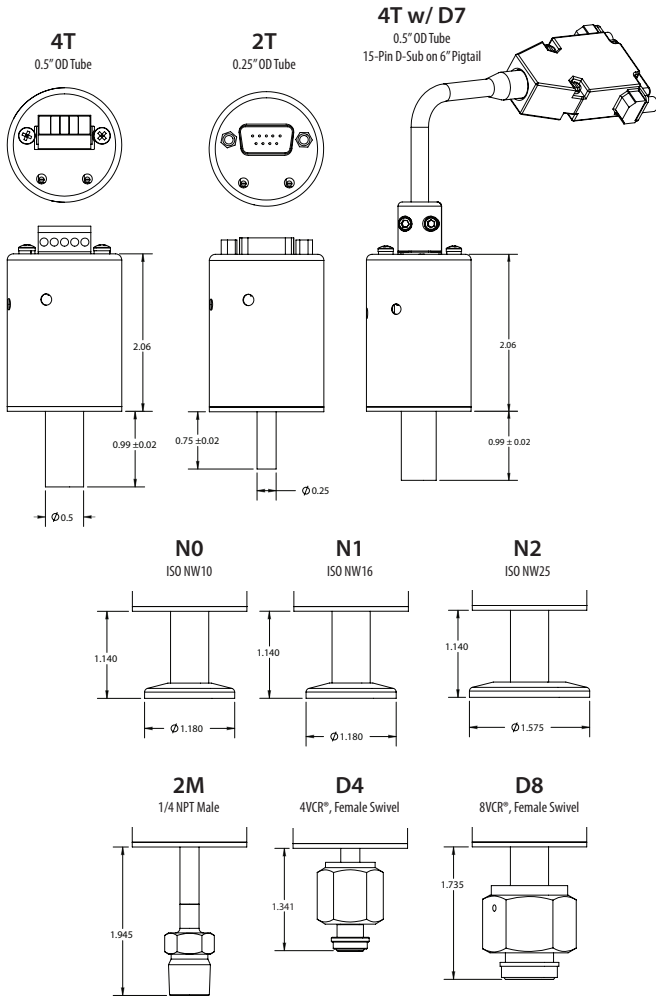
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Model	Pressure Range	Pressure Type	Fitting	Output	Termination	Accuracy	
730G = 730	010T 10 Torr	100M 100 mBar	A Absolute	4T 0.5" OD Tube	2B 0-5 VDC	D9 9-Pin D-Sub	K ±0.5% of Reading
	020T 20 Torr	10CM 1000 mBar		N0 ISO NW10	2C 0-10 VDC	T1 Terminal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

¹Only available with K Code (±0.5% of Reading) Accuracy. Please contact factory for versions not shown.

Ordering Example: 730G010TA4T2BD9K= Model 730, 10 Torr pressure range, Absolute pressure type, 0.5" OD Tube fitting, 0-5VDC output, 9-Pin D-Sub termination, ±0.5% of Reading accuracy

DIMENSIONS



GENERAL SPECIFICATIONS

Performance Data		Physical Description	
Accuracy ¹	±0.5% of Reading ±0.25% of Reading (Opt)	Pressure Fittings	See Ordering Information
Response Time	<20 ms	Wetted Material	Inconel®
Resolution	Infinite, limited only by output noise level (≤0.005% FS)	Electrical Connection	5-Pin Screw Terminal, 9-Pin D-Sub, or 15-Pin D-Sub on 6" Pigtail
Thermal Effects ²		Case	Stainless Steel
Compensated Range	0 to +50°C	Cavity Volume	<6.0 cc
Zero Shift	±0.25% FS/50°C	Weight (approx.)	<250 g
Span Shift	±1.35% Rdg/ 50°C	Electrical Data (Voltage)	
Long Term Stability ³	0.5% FS/1 YR, excluding environmental effects	Excitation/Output ⁴	12 to 30 VDC for 0-10 VDC 9 to 30 VDC for 0-5 VDC
		Current Consumption	<10 mA max
Pressure Media		Output Load	>10 kΩ Load
Gases or liquids compatible with Inconel®. Inconel® wetted material is for 0.5" tube option only. Other fitting options will add Stainless Steel.		Output Impedance	<1 ohm
Environmental Data		Circuit	3-Wire
Temperature		¹ Includes Non-Linearity, Non-Repeatability and Hysteresis	
Operating	0 to +80°C	² Units calibrated at nominal 66°F. Maximum thermal error computed from this datum.	
Approvals		³ ±1.0% FS/yr for ranges <100 Torr full scale when operated at 80°C	
CE, RoHS		⁴ Calibrated into a 50K ohm load, operable into a 5000 ohm load or greater	

PROOF PRESSURE

Range	Proof PSIA
All ranges	45 PSIA