Models 764/769/774
电容式绝对压力变送器

Gases Compatible with Inconel® and Monel®

Setra's HEATED 700 Series is a high accuracy vacuum CDG designed with an integral heated sensor, which prevents gases from condensing on the sensor and contaminating processes in critical applications.

The HEATED 700 Series offers the following models: The Model 764 (temperature controlled to 45℃), Model 769 (temperature controlled to 100℃), and the Model 774 (temperature controlled to 123℃). All three models offer a ±0.15% of Reading accuracy in pressure ranges from 1 Torr up to 1000 Torr Full Scale, with a resolution better than 0.005% Full Scale. The Model 764 is also available in 50 and 100 mTorr Full Scale ranges, while the Model 769 is available in a 100 mTorr Full Scale range.

The HEATED 700 Series operates from a ±15 VDC power supply and provides a 0-10 VDC signal output that is linear with pressure and independent of gas composition. A 15-pin "D" connector for electrical termination is provided as well as a selection of pressure and vacuum fittings

Corrosion-resistant Inconel® (Monel® on the particle screen) used for all wetted materials, making the HEATED 700 Series virtually insensitive to dirty or corrosive media.

Principle of Operation

The HEATED 700 Series utilizes high accuracy capacitance sensing technology. The sensor consists of two capacitive electrodes and a flexible diaphragm enclosed within a hermetically sealed chamber to neutralize the effects of barometric changes and temperature fluctuations.

As pressure is applied, the diaphragm flexes, causing a change in distance between the electrodes and the diaphragm, resulting in changes in capacitance. These changes in capacitance are converted into a linearized DC signal through an excited AC bridge, The signal is then amplified, providing a linear, high level DC output signal.

The tranducer housing, which houses the electrode chamber, AC bridge, and linearizing/oscillator circuitry is internally temperature controlled to improve zero and full scale output stability.

Before the electrode chamber is sealed, it is pumped to a high vacuum and baked. During the sealing process a chemical gettering system is activated to preserve the integrity of the high vacuum reference.

Applications

- Plasma Deposition
- Dry Etching
- Sputtering/PVD/RTP
- Industrial CVD
- LPCVD
- Crystal Growing/Freeze Dryers

Benefits

- Choice of 45°, 100°, or 123℃ Heated Sensor
- Pressure ranges as low as 50 mTorr up to 1000 Torr
- Prevents Gases from Condensing and Contaminating Process
- Inconel® Wetted Parts for Corrosion Resistance
- Choice of Pressure Fitting and Electrical Connection
- Meets CE Conformance Standards

When it comes to a product to rely on - choose the HEATED 700 Series. When it comes to a company to trust - choose Setra

ISO 9001 Certified

Visit Setra Online:

setra

800-257-3872

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http: www.zktid.com

HEATED 700 Series Specifications

Performance Data

Accuracy	±0.15% of Reading + 0.005% of FS
Repeatability	±0.01% FS
Thermal Effects	
Compensated Range °C	+15 to +40
Zero Shift °C	>1 torr = 0.002% FS
	≤ 1 Torr = 0.005% FS
Span Shift °C	<0.02% of Reading
Resolution	0.005% of FS
Warm-up time	Typically 2 Hours > 1 Torr
	Typically 4 Hours < 1 Torr
Proof Pressure	45 PSIA (3.1 Bar Absolute)
Heater Temperature °C	
Model 764	45
Model 769	100
Model 774	123

Physical Description

Electrical Connection	15 pin "D"
Pressure Fittings	See Ordering Information
Cavity Volume	8.3 cc Including 1/2" OD Tube
Weight	0.55 Kg (1.2lb)

Environmental Data

Temperature	
Operating* °C	
Model 764	+15 to +40
Model 769	+15 to +70
Model 774	+15 to +70
Storage °C	-45 to +80
Sensitivity °C	<0.02% of Reading
Barometric Pressure Effect	<0.005% of FS/760 Torr

Electrical Data

Circuit	5-Wire
Excitation	±15 VDC ±5%
Current Consumption	
Model 764	250 mA Maximum
Model 769	500 mA Maximum
Model 774	700 mA Maximum
Output	0 to 10 VDC
Output Impedance	<0.1 Ω
Output Noise	<0.002% FS rms

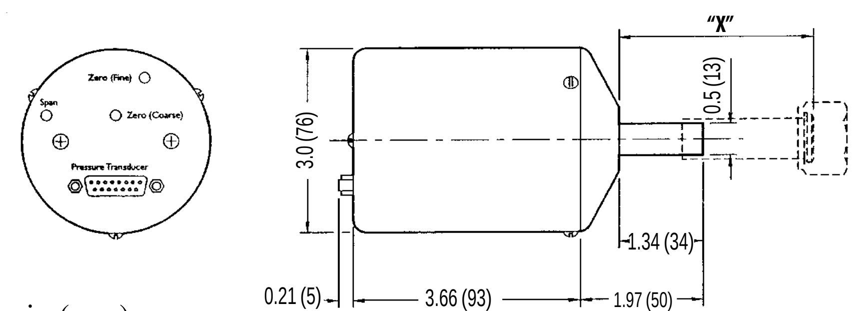
Pressure Media

Gases compatible with Inconel®, Monel®

Specifications subject to change without notice.

Application of some available options may impact standard specifications.

Outline Drawings



in (mm)

Fitting	Dim "X"
Mini-Conflat®	1.38 (35)
Cajon 8 VCR®	2.45 (62)
Cajon 8 VCO®	1.76 (45)
NW-16	1.43 (36)

ORDERING INFORMATION

Code all blocks in table.

Example: Part No. 7641010TAN17CD2A for a 764 Transducer, 10 Torr Range, ISO NW16 Fitting, 0 to 10 VDC Output, 15 pin D-sub Connector with ±0.15% Reading Accuracy.

[| | |] – [| | |] – [A] – [|] – [7 | C] – [D | 2] – [B]

Model

7641 = 764 (45°C)
7691 = 769 (100°C)
7741 = 774 (123°C)

Pressure Range

R50T = 50 mTorr*
R10T = 100 mTorr**
001T = 1 Torr
002T = 2 Torr
010T = 10 Torr
100T = 100 Torr
10CT = 1000 Torr
001M = 1 Millibar/hPa
010M = 10 Millibar/hPa
100M = 100 Millibar/hPa
10CM = 1000 Millibar/hPa

Absolute

Type of Fitting

Standard

4T = 0.5" OD Tube
17 = Mini Conflat ®
D8 = Cajon 8 VCR®, Female Swivel
4S = Cajon 8 VCO®
N1 = ISO NW16

Output

7C = 0-10 VDC

Electrical Connection

D2 = 15 Pin "D"

Accuracy

Standard

B = ±0.15% of Reading

*Note: VCR and VCO is a registered trademark of Cajon Company. Conflat is a registered trademark of Varian Associates. Inconel and Monel is a registered trademark of Inco-Alloys International, Inc.

*Range available on Model 764 only
** Range available on 764 and 769 only

Please contact factory for versions not shown.

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