



**Pressure &**

**Vacuum Measurement Solutions**

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## *a*-Baratron®

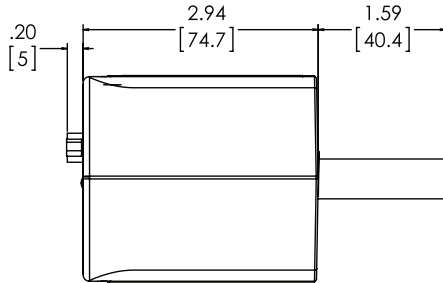
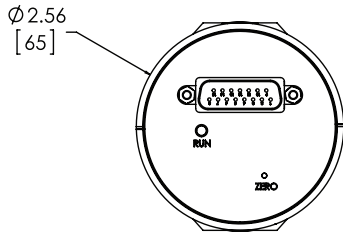
**ABSOLUTE, AMBIENT TEMPERATURE CAPACITANCE MANOMETER  
VACUUM MEASUREMENT FROM 1 TORR TO 1000 TORR ABSOLUTE**

The a-Baratron® manometer is an advanced high-performance absolute unheated capacitance manometer developed specifically for use in vacuum and pressure measurement applications where accuracy and repeatability are crucial to process success. These capacitance manometers are used in a wide variety of applications including vacuum furnaces, freeze-drying of fruits and vegetables, gas lasers, automotive component testing, bottle coatings, and vacuum distillation, to highlight a few. They use state-of-the-art digital architecture throughout to produce the highest possible long-term performance and reliability. These manometers operate on +15 VDC to +30 VDC input voltage, and have a standard 0 to 10 VDC analog output signal. Full Scale measurement ranges from 1 Torr (133 Pa) to 1000 Torr (133.3 kPa) are available.

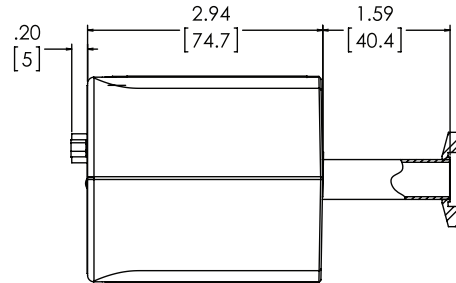
### **Features & Benefits**

- All products are specified in percent of reading for best accuracy and improved process yield
- Direct measurement of chamber total pressure independent of gas type or composition, eliminating need for lookup tables and conversion factors
- Best-available long-term output stability ensures state-of-the-art process repeatability in nearly any application
- Inconel® and Incoloy® nickel alloy construction of basic sensor operates without damage in virtually any chemical environment, including halogens, deionized water and steam, and ozone
- High overpressure limit ensures reliability from occasional system mishaps
- Push button zeroing

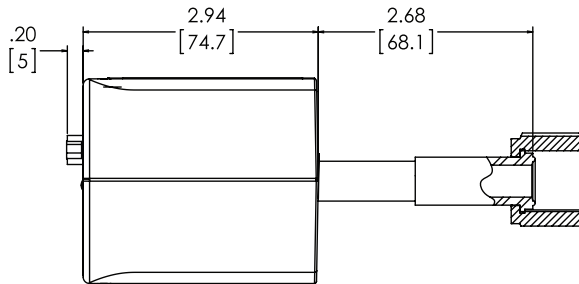




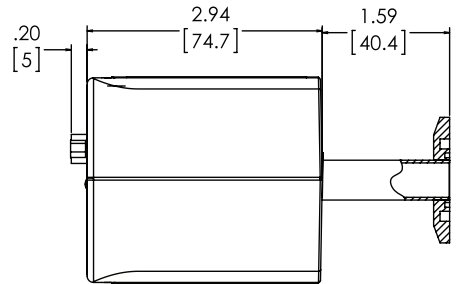
STRAIGHT TUBE .50 O.D.



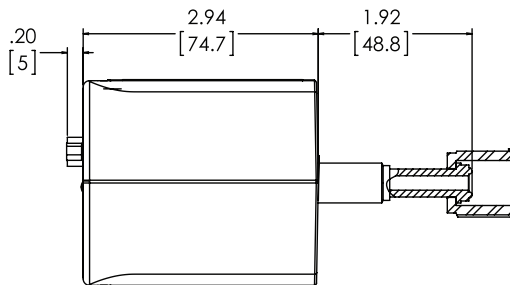
NW-KF-16



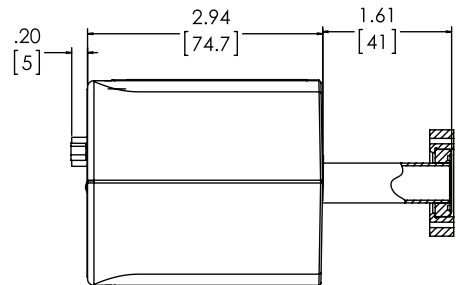
8 VCR FEMALE



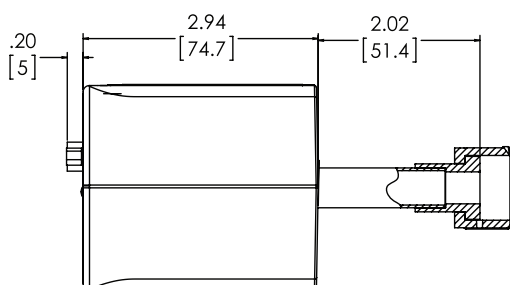
NW-KF-25



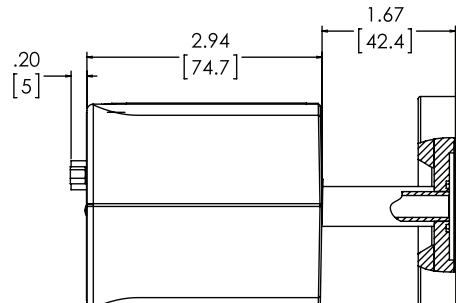
4 VCR FEMALE



MINI-CONFLAT, ROTATABLE



8 VCO FEMALE



2.75 CONFLAT

**Dimensional Drawing —**

Note: Unless otherwise specified, dimensions are nominal values in inches (mm referenced).



# Specifications

<b>Full Scale Pressure Ranges</b>	1, 2, 10, 20, 100, 500, 1000 Torr and metric equivalents
<b>Accuracy - % of Reading*</b>	0.25% for 1 to 1000 Torr (0.15% optional)
<b>Temperature Coefficients</b>	
Zero	0.005% FS/°C for 10 to 1000 Torr ranges, 0.010% FS/°C for 2 Torr range, 0.015% FS/°C for 1 Torr range
Span	0.04% of Reading/°C
<b>Resolution</b>	0.002% of Full Scale
<b>Ambient Operating Temperature</b>	0 to 50°C
<b>Overpressure Limit</b>	45 psia (310 kPa)
<b>Materials Exposed to Process</b>	Inconel and Incoloy nickel alloys
<b>Volume</b>	
1/2" Tube	6.29 cm <sup>3</sup>
8 VCR	8.605 cm <sup>3</sup>
<b>Input Power Required</b>	+15 VDC to + 30 VDC @ 35 mA
<b>Output Signal</b>	0 - 10 VDC into > 10 kΩ load
<b>Electrical Connector</b>	15-pin D-subminiature standard, terminal block adapter optional
<b>Compliance**</b>	CE
<b>Fittings</b>	
Standard	½" (12.7 mm) OD tube standard
Optional	4 VCR® female, 8 VCR female, 8 VCR male, 8 VCO® female, NW16-KF, NW25-KF, 1.33" (33.8mm) OD Conflat®, 2.75" (70 mm) OD Conflat

\* Includes hysteresis, non-linearity, and non-repeatability.

\*\* For CE compliance, the mating connector must be properly grounded.



# Ordering Information

Ordering Code Example: AA01A11TBAS3B00000	Code	Configuration
<b>AA01A Unheated Capacitance Manometer</b>	<b>AA01A</b>	AA01A
<b>Range Full Scale</b>		
1	01	11
2	02	
10	11	
20	21	
100	12	
500	52	
1000	13	
<b>Engineering Units</b>		
Torr/mmHg	T	T
mbar	M	
kPa	K	
<b>Fittings (compatible with)</b>		
½" (12.7 mm) OD tube	BA	BA
4 VCR female (V sensor only)	CD	
8 VCR female	CE	
8 VCR male	CF	
NW16-KF	GA	
NW25-KF	GC	
1.33" (33.8 mm) Conflat, rotatable	HA	
2.75" OD Conflat, rotatable	HC	
8 VCO female	DA	
<b>Sensor</b>		
Standard	S	S
Short Standard (GC or HA fitting only)	T	
¼" dia. tube (CD fitting only)	V	
<b>Input/Output Voltage</b>		
+24 VDC input, 0 to 10 VDC output	3	3
<b>Electrical Connector</b>		
15 POS D-subminiature-M with screw locks	B	B
15 POS D-subminiature-M with slide lock posts	P	
<b>Reserved</b>		
Reserved	00	00
<b>Calibration Orientation</b>		
Ranges ≥ 1 Torr	0	0
Ranges ≤ 1 Torr, horizontal	H	
Ranges ≤ 1 Torr, vertical	V	
<b>Accuracy</b>		
Standard	0	0
<b>Options</b>		
None	0	0
15 pin D terminal block adapter	U	



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