



**Pressure  
&**

**Vacuum Measurement  
Solutions**

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## AA04A

### BARATRON® GENERAL PURPOSE ABSOLUTE PRESSURE TRANSMITTER

MKS Instruments Inc., the recognized leader in capacitance manometer technology, includes in its broad range of pressure measurement tools the AA04A Absolute Pressure Transmitter. This Baratron® transmitter represents MKS' commitment to continuous product improvement and is the result of over thirty years of experience in gas measurement and control devices. This design of the AA04A offers superior temperature compensation, a dual electrode design, and a higher operating temperature.

With the AA04A, pressure is determined by measuring the change in capacitance between the Inconel® diaphragm and an adjacent dual electrode. The diaphragm deflects as a result of pressure changes causing a change in the capacitance between the diaphragm and the electrode. An electronic circuit converts the pressure sensitive capacitance to a precise linear current output. It also permits an accuracy specification as a percentage of output reading, rather than in terms of Full Scale reading.

### Features & Benefits

- Superior temperature compensation
- Operating temperature up to 50°C (special order available for ranges up to 100°C)
- Dual electrode design provides improved stability
- Full Scale range as low as 10 Torr and as high as 25K Torr
- Measures total pressure directly, independent of gas composition
- Percent of Reading accuracy enables a broad dynamic range of useful measurement capability
- All Inconel corrosion-resistant construction
- Two-year warranty
- Two-wire, 4-20 mA signal output



## Specifications and Ordering Information

### Full Scale Pressure Ranges

**Accuracy** (includes non-linearity, hysteresis & non-repeatability)

Standard  
Optional

### Temperature Coefficients

Zero  
Span

### Operating Temperature Range

### Materials Exposed to Gases

### Volume (P<sub>x</sub> side)

### Overpressure Limit

### Input Required/Output Signal

### Fittings

Standard  
Optional

### Compliance

10, 100, 1000, 5000, 10000, 15000, 20000, 25000 Torr (mmHg)

±0.5% of Reading  
±0.3% of Reading

200 ppm  
400 ppm

0°-50°C (ranges up to 100°C available as a special order)

Inconel, or Inconel and Stainless Steel (for fittings)

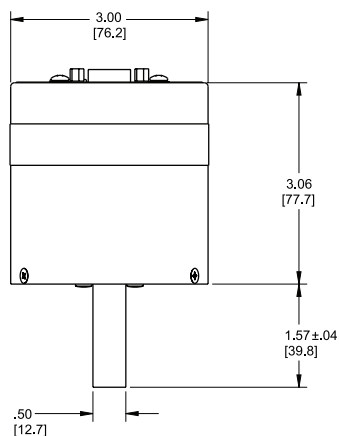
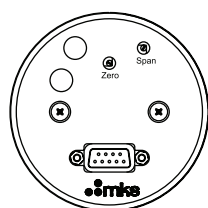
7.0 cc

120% of Full Scale or 35 psia (240 kPa), whichever is greater without damage

Two-wire, 4-20 mA @ +24 to 32 VDC into 500 Ω load (4 mA @ 0 pressure to 20 mA @ F.S.)

½-inch tubulation

Swagelok® 8 VCR® female, mini-CF—rotatable, NW 16 KF, Swagelok 8 VCO® female  
CE



### Dimensional Drawing —

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

### Ordering Code Example: AA04A13TBAADF000

### Code

### Configuration

AA04A Baratron® General Purpose Pressure Transmitter

AA04A

AA04A

### Pressure Range Full Scale

Pressure Range Full Scale	Code	Configuration
10	11	13
100	12	
1000	13	
5000	53	
10000	14	
15000	RB	
20000	24	
25000	RC	

### Units

Units	Code	Configuration
Torr/mmHg	T	T
mbar Absolute	M	
kPa	K	

### Fittings

Fittings	Code	Configuration
½" OD tube	BA	BA
8 VCR Female	CE	
8 VCO Female	DA	
KF16 (Max 1000 Torr)	GA	
KF25 (Max 1000 Torr)	GC	
1.33" CF	HA	
2.75" CF	HC	

### Electrical Connector

Electrical Connector	Code	Configuration
9 pos D-subminiature, male	A	A
9 pos D-subminiature, male, filtered	V	

### Optional Terminal Block Adapter

Optional Terminal Block Adapter	Code	Configuration
None	D	D
Terminal Block Adapter on D Sub	T	

### Accuracy

Accuracy	Code	Configuration
Standard: ±0.5% of Reading	F	F
Optional: ±0.3% of Reading	T	

\*Other calibration temperatures are available as special orders.  
Contact Applications Engineering for more information.



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