



# Pressure &

# Vacuum Measurement Solutions

WWW.MKSINST.COM

## 230E

### BARATRON® GENERAL PURPOSE PRESSURE TRANSMITTER

MKS Instruments Inc., the recognized leader in capacitance manometer technology, includes in its broad range of pressure measurement tools the 230E 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 230E offers superior temperature compensation, a dual electrode design, and a higher operating temperature.

With the 230E, 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 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

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

±0.5% of Reading  
±0.3% of Reading

200 ppm  
400 ppm

0°-100°C

Inconel, or Inconel and Stainless Steel (for fittings)

7.0 cc

120% of F.S. 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.)

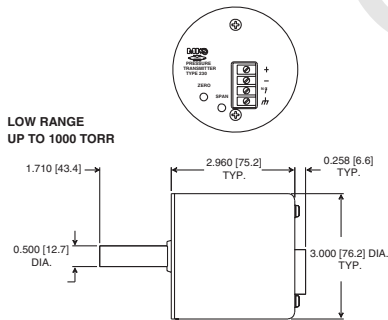
½-inch tubulation

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

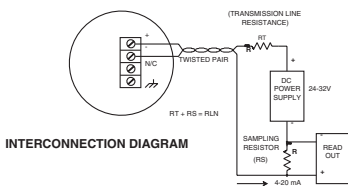
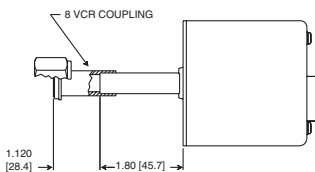
## Ordering Code Example: 230EA-00100AB

230 Code	Configuration		
Number, Absolute	230EA	230EA	
<b>Pressure Range Full Scale</b>			
10	00010	00100	
100	00100		
1,000	01000		
5,000	05000		
10,000	10000		
15,000	15000		
20,000	20000		
25,000	25000		
<b>Fittings</b>			
½" diameter tubulation	A		A
Swagelok 8 VCR	B		
Mini-CF, rotatable	C		
NW 16 KF	D		
Swagelok 8 VCO	E		
<b>Accuracy</b>			
Standard: ±0.5% of Reading	B	B	
Optional: ±0.3% of Reading	C		

*Note: High pressure units 5K to 25K Torr available only with certain fittings. Call MKS Applications Engineering at 800-227-8766 for details.*



**HIGH RANGE**  
5000 THRU 25000 TORR  
(all other dimensions are the same as above)



## Dimensional Drawing —

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



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