

627H 24 VDC/Profibus® Version

Heated (45°C) Absolute Baratron® Capacitance Manometer



The 627H Baratron® capacitance manometer is heated to 45°C, accurate to 0.12% of Reading and includes updated temperature control electronics to provide superior long-term stability and repeatability. The 24V (20.0 to 31.5 VDC) analog / Profibus version capacitance manometer is available in Full Scale ranges down to 0.1 mbar / Torr.

Based on established Baratron capacitance manometer technology, the sensor's wetted surfaces are Inconel® for excellent resistance to corrosive gases. The contemporary

stainless steel package provides a cleanroom-compatible product. The product is interchangeable with earlier 627 Baratron capacitance manometers both analog and Profibus and can be used with MKS power supplies, display units and pressure controllers, or the user's compatible power supply/readout devices. The 627H 24V analog version has a 15-pin D-subminiature electrical connector, and the 627H Profibus version has two 9-pin D-subminiature electrical connectors.

Product Features

- Excellent long-term stability
- Percent of Reading accuracy for more precise output signal in lower pressure ranges
- Full Scale ranges low as 0.1 mbar / Torr for precise measurement of low pressure processes
- All-Inconel corrosion-resistant wetted surfaces
- Integrated sump (US patent #5,822,685) provides particle protection
- Fast warm-up time
- Compatible with earlier Baratron capacitance manometers, MKS power supply/readout modules, and pressure controllers
- Analog with output signal 0 – 10 VDC
- Profibus DPV1 optional
- Operates from 20.0 to 31.5 VDC

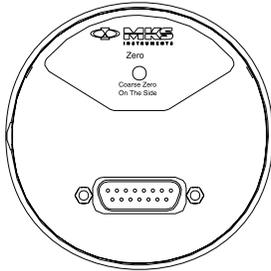


Key Benefits

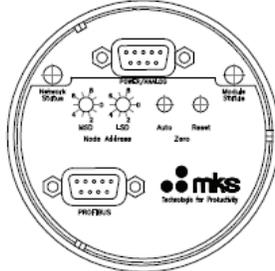
- Measures total pressure directly, independent of gas composition
- High overpressure rating for improved reliability
- Cleanroom-compatible stainless steel package

Specifications		
Full Scale Ranges		0.1, 1, 2, 10, 20, 100, 1000 mbar / Torr
Resolution		0.001% of Full Scale
Accuracy (including non-linearity, hysteresis, and non-repeatability)		<ul style="list-style-type: none"> • 0.12% of Reading for 1 – 1000 mbar / Torr range • 0.15% of Reading for 0.1 mbar / Torr
Temperature Coefficients	Zero	<ul style="list-style-type: none"> • 0.002% of Full Scale/°C for 1 – 1000 mbar / Torr range • 0.005% Full Scale/°C for 0.1 mbar / Torr range
	Span	<ul style="list-style-type: none"> • 0.02% of Reading./°C
Ambient Operating Temperature		15°C to 40°C
Volume		< 7 cc
Warm-Up Time		<ul style="list-style-type: none"> • 2 hours for 1 – 1000 mbar / Torr Full Scale • 4 hours for 0.1 mbar / Torr Full Scale
Overpressure Limit		45 psia (310 kPa)
Materials Exposed to Gases		Inconel® 600 and 316 SS
Input Power Required	Analog Version	<ul style="list-style-type: none"> • 20.0 – 31.5 VDC @ 400 mA max
	Profibus Version	<ul style="list-style-type: none"> • 20.0 – 31.5 VDC @ 700 mA max
Output Signal	Analog	<ul style="list-style-type: none"> • Pressure: 0 to +10 VDC into >10K Ω load
	Digital (optional)	<ul style="list-style-type: none"> • Profibus DPV1
Fittings	Standard	<ul style="list-style-type: none"> • 1/2" (12.7 mm) OD tube
	Optional	<ul style="list-style-type: none"> • 8 VCR® compatible female, 8 VCO® compatible female, NW16-KF, NW25-KF, mini-CF (rotatable), DN40-CF (rotatable)
Compliance*		CE

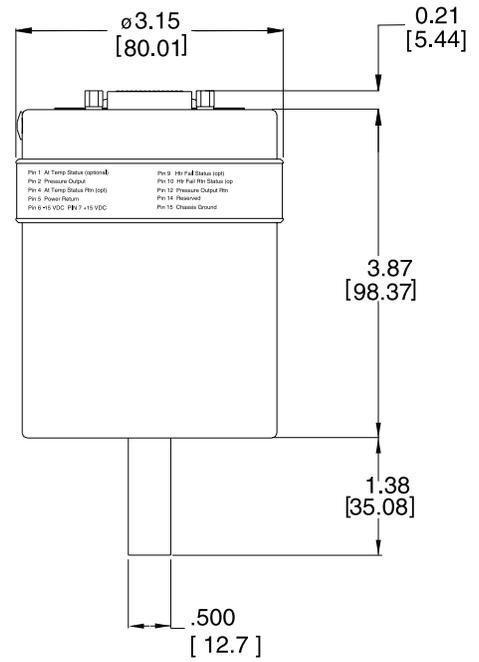
*For CE compliance, the mating connector must be properly grounded.



Analog Configuration



Profibus Configuration



Dimensional Drawing -

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

Ordering Code Example: 627H01MBC9B	Code		Configuration
Model			
627H	627H		627H
Pressure Range Full Scale	mbar	Torr	
0.1	.1M	.1T	01M
1	01M	01T	
2	02M	02T	
10	11M	11T	
20	21M	21T	
100	12M	12T	
1000	13M	13T	
Fittings			
1/2" (12.7 mm) OD tube	A		B
8 VCR compatible female	B		
Mini-CF, rotatable	C		
NW16 KF	D		
NW25 KF	Q		
NW40 CF, rotatable	L		
8 VCO compatible female	E		
Accuracy (see specifications for applicability)			
0.12% of Reading (1 - 1000 mbar / Torr)	C		C
0.15% of Reading (0.1 mbar / Torr)	D		
Options			
Profibus Interface with 20.0 – 31.5 VDC input and analog 0 – 10 VDC output	4		9
20.0 – 31.5 VDC input / 0 – 10 VDC output	9		
Connector			
1 x 15 pin Type "D" with Thread Lock for analog version	B		B
2 x 9 pin Type "D" with Thread Lock for Profibus version	B		