

# Precision Barometric Transducer Premium Version Model CPT9000



WIKA data sheet CPT9000 Barometer

## Applications

- Pressure calibration
- High accuracy pressure monitoring
- Pressure sensing in critical applications
- Aerospace

## Special Features

- Accuracy: 0.008% of reading
- Temperature compensation: 0 to 50 °C
- Range: 8-17 psia or 552-1,172 mbar abs
- RS-232 or RS-485 communication
- Versatile output string options
- Compact rugged design
- Pressure and temperature alarms
- Temperature output

## Description

The model CPT9000 Precision Barometric Transducer is designed to excel in performance and value. Advancements in pressure sensor technology, characterization and miniaturization are heavily leveraged to fulfill the needs of a demanding market. With an accuracy of 0.008% of reading, a temperature compensation range of 0 to 50 °C, calibration interval of 365 days and a range from 8 psia (552 mbar) to 17 psia (1,172 mbar), the CPT9000 stands alone at the top of Mensor's high accuracy transducer line, in performance and value in the high accuracy pressure transducer market.

### Application

The CPT9000 Precision Barometric Transducer is ideal for OEM instruments that require a high accuracy barometer. It can also be used as a barometric standard in pressure calibration and testing areas of production facilities, windtunnels, metrology and geoscience.



Precision Barometric Transducer, Model CPT9000

### Functions

The model CPT9000 Precision Barometric Transducer has an RS-232 or RS-485 interface. The RS-485 interface offers multi-drop capability with simple cabling and four different baud rates to choose from.

This high accuracy pressure transducer can be configured in a variety of units which provides a customizable device output for each application. With a recalibration time of 365 days and a high resolution of 8 significant figures, the CPT9000 is flexible enough to be used in a wide variety of applications.

### Design

The 316L SS construction and wetted parts are an asset when utilizing in corrosive or wet environments. Its compact design offers an advantage in miniaturization of product design in many OEM applications. The pressure connection and housing can be customized to fit your application. Standard fittings are easily changed using the SAE J514/JIC 4 female connection.

# Specifications

## Model CPT9000

Precision pressure sensor technolog	
Pressure range	8 ... 17 psi abs. (552 ... 1,172 mbar abs)
Accuracy <sup>1)</sup>	0.008% of reading
Calibration interval	365 days

1) It is defined by the total measurement uncertainty, with the coverage factor (k = 2) and includes the intrinsic performance of the instrument, the measurement uncertainty of the reference instrument, long-term stability, influence of ambient conditions, drift and temperature effects over the compensated range with recommended zero point adjustment every 30 days.

### Precision pressure sensor

Case	
Orientation effects	Negligible – completely removable with re-zeroing
Dimensions	See technical drawings
Weight	~250 g (depending on range)
Ingress protection	IP-67
Display	
Resolution	100 ppb or better
Warm-up time	15 min.
Connections	
Pressure connections	FSAE J514/JIC 4
Overpressure limit	2X proof, 3X burst; static pressure < 50 psig
Pressure port adapters	Standard: without Option: 1/8" female BSP fitting, 1/4" BSP fitting, 1/8" female NPT fitting, 1/4" male NPT fitting, 6 mm tube fitting, 1/4" tube fitting and female 7/16-20 SAE fitting
Materials, wetted parts	316 SS
Voltage supply	
Power supply	9 to 18 VDC (12 VDC nominal)
Power consumption	< 26 mA at 12 VDC +/-5% (.40 W max)
Permissible ambient conditions	
Compensated temperature range	0 to 50 °C (32 to 122 °F)
Operating temperature range	-40 to 85 °C (-40 to 185 °F)
Storage temperature range	-40 to 85 °C (-40 to 185 °F)
Humidity	0 ... 95% r.h. (non-condensing)
Operating altitude	<3000 meters (10,000 feet)
Internal volume	
Measure port	<1 cc
Reference port internal volume	~ 40 cc
Communication	
Interface	RS-232 or RS-485
Baud rate	Default 57,600 baud - 9600, 19200 and 115200 user selectable
Measuring rate	50 values/second, default - (factory adjustable)
Command sets	See manual, Section 6 Operation

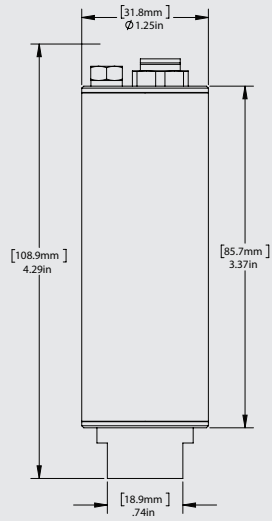
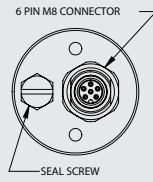
### Certificates

Compliance	EN 50581:2012, EN 61326-1:2013, 61010-1:2010 (ed.3)
Calibration <sup>4)</sup>	A2LA accreditation

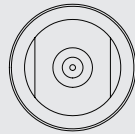
4) Calibration in a vertical position.

Dimensions in [mm] in.

Low Pressure Version  
(Pressure < 1500 psi)



SAE J514 37° FLARE PORT  
7/16-20 THREAD



≤1500 psi

## Scope of Delivery

- Precision Barometric Transducer model CPT9000
- Operating instructions
- ISO 17025, A2LA accredited calibration certificate
- Pressure adapter (as specified)
- 5 ft. connection cable with flying leads

## Accessories

- Power supply & communication cable
- Pressure adapters

## Ordering Information

CPT9000 / Instrument version / Pressure application / Pressure unit / Type of pressure / Start of measuring range / End of measuring range / Type of certificate / Mounting position / Interface / Baud rate / Pressure adapter / Additional order information

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