

Precision Barometric Transducer

Basic version

Model CPT6020



WIKA data sheet CPT6020 Barometer

Applications

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

Special Features

- Accuracy: 0.020% reading
- Range: 8-17 psia or 552-1,172 mbar abs
- Temperature compensation: 0 to 50 °C
- RS-232 or RS-485 communication
- Compact rugged design



Precision Barometric Transducer, Model CPT6020

Description

The CPT6020 Precision Barometric Transducer is a self-contained pressure sensing device that provides high accuracy pressure measurements. This transducer incorporates a low hysteresis silicon sensor with electronically compensated pressure linearity over the compensated temperature range. The CPT6020 transducer is characterized over the full pressure and temperature range to achieve 0.020% R accuracy. This specification includes linearity, hysteresis, repeatability and temperature errors. Also featured is an output which is updated at a rate of 50 readings per second (20 ms).

Application

The CPT6020 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.

Functions

The model CPT6020 Precision Barometric Transducer has an RS-232 or RS-485 interface. The RS-485 interface offers multi-drop capability with cabling that includes power and communications. Four different baud rates can be selected and the transducer can be located up to 4,000 feet from the host. System designers appreciate these high accuracy remotely accessible transducers that are not tied to a front panel. With a recalibration time of 185 days and a high resolution of 8 significant digits, the CPT6020 is flexible enough to be used in a wide variety of applications.

Design

The 316L SS construction and IP67 rating are an asset 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 AN-4 or the Autoclave® F250C connection.

Specifications

Model CPT6020

Precision pressure sensor technolog	
Pressure range	8 ... 17 psi abs. (552 ... 1,172 mbar abs)
Accuracy ¹⁾	0.020% of reading
Calibration interval	185 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.

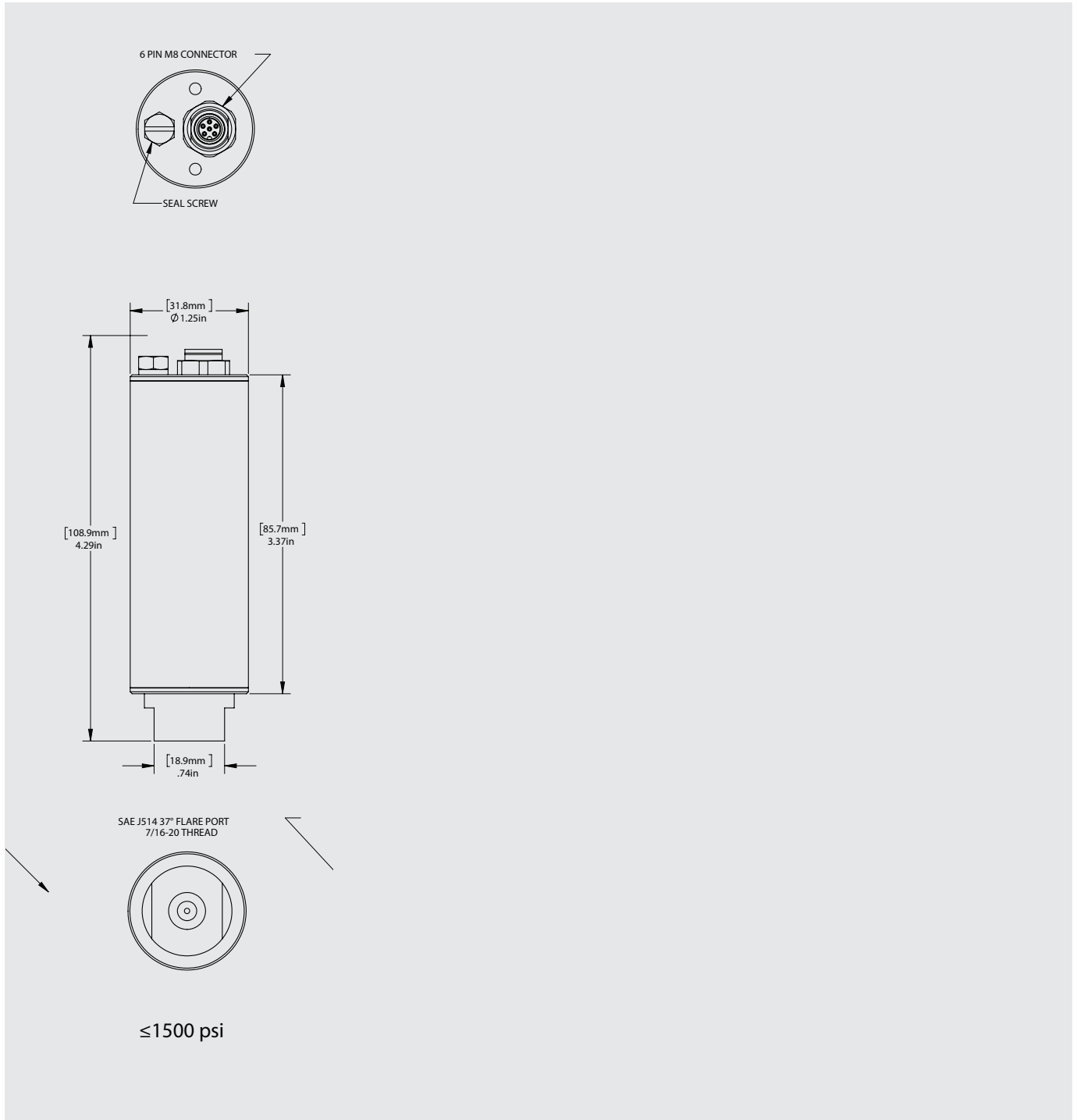
General Specifications	
Case	
Orientation effects	Negligible – completely removable with re-zeroing
Dimensions	See technical drawings
Weight	~250 g (depending on range)
Ingress protection	IP-67
Display	
Resolution	100 ppb or better
Warm-up time	15 min.
Connections	
Pressure connections	FSAE J514/JIC 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
Pressure media	Media compatible with the listed wetted parts.
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)
Measure port internal volume	<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)

Certificates

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

3) Calibration in a vertical position.

Dimensions in [mm] in.



Note: Reference port is plugged for Barometric ranges.

Scope of Delivery

- Precision Barometric Transducer model CPT6020
- 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

CPT6020 / Instrument version / Pressure application / Pressure unit / Type of pressure / Start of measuring range / End of measuring range / Accuracy / Type of certificate / Mounting position / Interface / Baud rate / Output mode / Pressure adapter / Additional order information

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