

## Pressure Transducers

# Precise Measurement and Transmission



# Mensor – Your Source for High Accuracy Pressure Transducers

Mensor provides a wide range of pressure transducers to cover applications in OEM products, manufacturing or calibration.

Requirements for high accuracy, compact design, corrosion-resistant materials of construction, high speed output and cost effective solutions are met by Mensor's line of transducers. Each transducer has specific qualities suited to different application environments.

Recent advancements from Mensor R&D have significantly improved sensor characterization to even further ensure high accuracy and long term stability. This makes Mensor transducers particularly suited for critical applications where high accuracy is required to hold stable over long periods of time. Reliability in accuracy is valued in OEM, manufacturing, and Calibration applications

## High Accuracy

High accuracy, transducers with accuracy up to 0.008% IS-33. Ranges from 0-10 in. H<sub>2</sub>O (25 mbar) up to 15,015 psi (1001 bar).



## Industrial

Industrial accuracy class transducers with accuracy of 0.02% FS, 0-10 in. H<sub>2</sub>O (25 mbar) up to 15,015 psi (1001 bar).



## High Speed

High speed transducers with 250 readings per second output, accuracy to 0.025% IS-50, and ranges from 0-1 psi up to 6015 psi (401 bar).



## Custom For OEMs

Custom and OEM transducers to fit your specific needs in accuracy, stability, materials of construction, mounting configuration and size.





# Contents

High Accuracy Transducers	4
Industrial Accuracy Class Transducers	6
Barometers & High Speed Transducers	8
OEM / Custom Transducers	10

## Pressure Transducers and Transmitters for Demanding Applications

The demand for pressure transducers with high accuracy, corrosion-resistant materials of construction, compact size, fast and reliable communication and wide pressure ranges has driven the variety of products at Mensor. The selection of the right solution depends on each application's requirement

This brochure provides an initial overview of different specifications and typical applications where Mensor transducers have been used.

The last section shows a few of the many transducer packages that have been custom made for some very specific applications.

QR codes in each section link to data sheets or product pages where more detailed information can be viewed.

# High Accuracy Pressure Transducers

## CPT9000

### Precision Pressure Transducer Premium Version



Data Sheet



The CPT9000 delivers accuracy of 0.008% of reading for process, OEM and laboratory applications that require a small footprint and stainless steel housing. Pressure ranges as low as 0-10 in. H<sub>2</sub>O and as high as 15,015 psi.

- Accuracy up to 0.008% IS-33
- Measuring range: 0-10 in. H<sub>2</sub>O up to 15,015 psi
- Communication: RS-232 or RS-485
- Compact 316 SS housing
- Temperature output

## CPT6180 CPT6100

### Precision Pressure Transducers Standard Version



Data Sheet



Both the CPT6180 and the CPT6100 have the same robust aluminum housing, mounting configuration, pressure connections and communication options, utilizing RS-232 or RS-485. They only differ in their accuracy and available ranges.

#### CPT6100

- Accuracy up to 0.01% FS
- Measuring range:
  - Gauge: 0...0.36 to 0... 6000 psi
  - Absolute: 0... 7.5 to 0... 6015 psi
  - Bi-Directional: -0.18...0.18 to -15...6000 psi

#### CPT6180

- Accuracy up to 0.01% IS-50
- Measuring range:
  - Gauge: 0... 15 to 0... 6000 psi
  - Absolute: 0... 15 to 0... 6015 psi
  - Bi-Directional: -15... 145 to -15... 6000 psi



## High Accuracy Applications

The CPT9000 and CPT6180/6100 are used when the highest accuracy is required. The CPT9000 Premium Version offers the highest accuracy, widest range availability, and a rugged stainless steel housing. The CPT6180 and CPT6100, both with aluminum housings, are suitable for less corrosive environments and where accuracy requirements are appropriately matched. The CPT9000 and the CPT6180/6100 both have 365 day calibration interval for ranges >1 psi.

- Aerospace
  - Wind tunnels
  - Calibration
  - Hydraulic testing
  - Avionics
- Original Equipment Manufacturers (OEMs)
- Calibration transfer standards
- Medical / Pharmaceutical testing and monitoring
- Power Generation
- Oil & gas refining and exploration

# Industrial Accuracy Pressure Transducers

## CPT6020

### Precision Pressure Transducer Basic Version



Data Sheet



The CPT6020 delivers an accuracy of 0.02% of full scale for process, OEM and laboratory applications that require a small footprint, stainless steel housing, and pressure ranges as low as 0-10 in. H<sub>2</sub>O to as high as 15,015 psi.

- Accuracy 0.02% FS
- Measuring range:
  - Gauge: 0...0.36 to 0... 1500 psi
  - Absolute: 0...5 to 0... 15,015 psi
  - Bi-Directional: -0.18...0.18 to -15... 1500 psi
- Communication: RS-232 or RS-485
- Compact 316 SS housing
- IP-67 rating

## CPT6030

### Precision Pressure Transducers Analog Version



The CPT6030 delivers an accuracy of 0.025% of full scale via its 4-20 mA output for process, OEM and laboratory applications that require an analog output along with a small footprint and stainless steel housing. It is available in pressure range as low as 0-10 in. H<sub>2</sub>O and as high as 15,015 psi.

- Accuracy of 0.025% FS
- Measuring range:
  - Gauge: 0...0.36 to 0... 1500 psi
  - Absolute: 0... 7.5 to 0... 15,015 psi
  - Bi-Directional: -0.18...0.18 to -15... 1500 psi
- 4-20 mA output
- Compact 316 SS housing
- IP-67 rating



## Industry Applications

The CPT6020 and the CPT6030 are used when an accuracy of 0.02% or 0.025% of full scale is sufficient. The CPT6020 provides a RS-232 or RS-485 output while the CPT6030 provides a 4-20 mA output. Both have a stainless steel housing, small footprint and calibration interval of 180 days.

- OEM Applications
- Corrosive environments
- High accuracy measurement for flow meter calibration
- Monitoring of precision manufacturing processes
- Pressure calibration and test benches
- Oil & gas refining and exploration
- Pharmaceutical & medical device manufacturing
- Power generation

# Barometric & High Speed Pressure Transducers

## CPT Barometers

### Precision Barometers



Barometer  
Web Page

Every transducer in the CPT series is available as a barometer. The standard barometric range is 8 to 17 psia, but these transducers can be configured in any barometric range needed. The percent of reading accuracy will correspond to the accuracy of the transducers chosen.

- Percent of reading accuracy over the barometric range
- Communication: RS-232, RS-485 or 4-20 mA
- Compact design

## CPT6140

### Precision Pressure Transducer High Speed Version



Data Sheet

The CPT6140 is the high speed version in the 6100 series of transducers. It has a pressure output rate of 250 readings per second (50 Hz) and can be configured in a query response mode or continuous "burst" mode. It has a robust aluminum housing, threaded mounting connections, and RS-232 or RS-485 communication options.

- Accuracy 0.025% FS
- Measuring range:
  - Gauge: 0...1 to 0...6000 psi
  - Absolute: 0...7.5 to 0...6015 psi
  - Bi-Directional: -0.5...0.5 to -15...6000 psi
- Accuracy 0.025% IS-50
- Measuring range:
  - Gauge: 0...15 to 0...6000 psi
  - Absolute: 0...15 to 0...6015 psi
  - Bi-Directional: -15...145 to -15...6000 psi





## Barometric Applications

Barometers are used in forecasting and monitoring weather conditions, as well as monitoring barometric pressure in laboratories, production and test facilities, airports, and hospitals. Industries like aerospace, healthcare, power generation, petrochemical, semiconductor, and calibration all have a need for the precision measurement of barometric pressure. Measurements including flow, temperature, airspeed, altitude, humidity, buoyancy, radiation attenuation, density and many others all rely on an accurate reading of barometric pressure.

## High Speed Applications

Understanding and measuring rapid changes in pressure is critical in many applications including wind tunnels, flow measurement, engine compression testing, consumer electronics, aerodynamic / hydrodynamic design, and blood pressure. Continuous output of pressure or rapid query response may be needed. The CPT6140 can supply either type of output up to 250 readings per second.

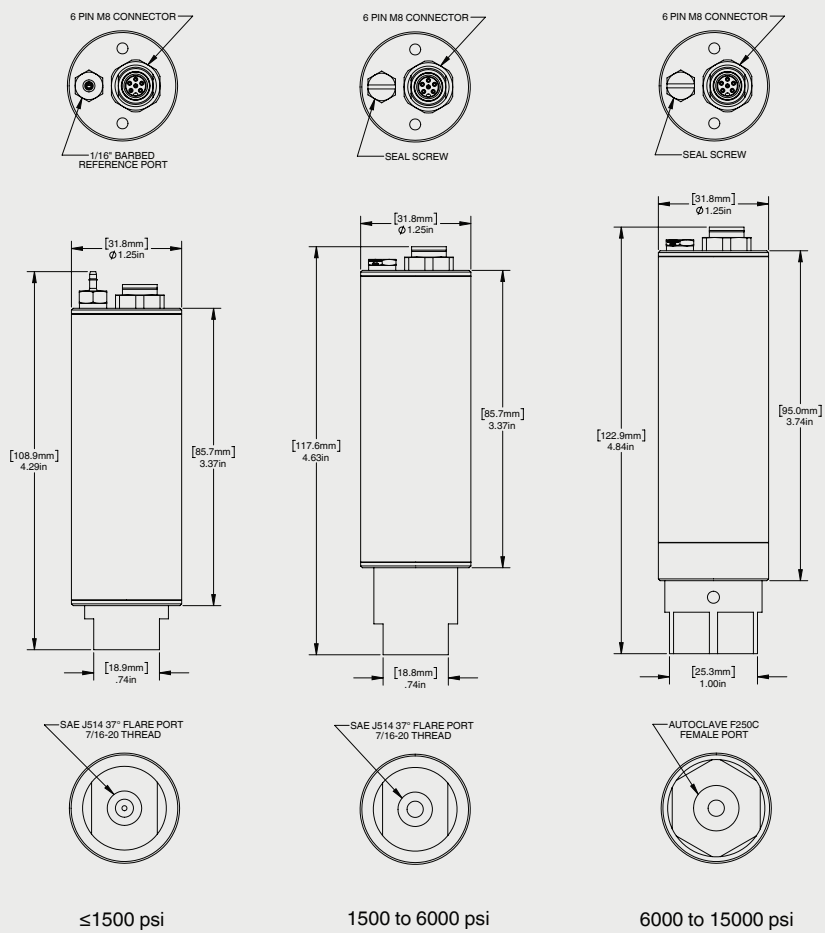
# Custom and OEM Pressure Transducers

All Mensor transducers can be modified in design to accommodate special customer requirements. Modification can include specifications in communication protocol (digital or analog), pressure connections, electrical connections and cabling, fitting alternatives, mechanical dimensions, and materials of construction. If you have a specific requirement consult with sales.

Listed below are a range of available specifications. Specifications outside of these limits are possible. Specifications like accuracy, temperature compensation, speed are interdependent. Changes in one of these parameters will inevitably affect the others.

- Accuracy from 0.025% FS up to 0.008% IS-33
- Measuring range from -15 ... 15,015 psi
- Analog output: 4-20 mA
- Digital Outputs: RS-232 or RS-485 interface
- Custom fittings
- Materials: Aluminum, 316 SS, 303 SS







Stay up to date with new products, events and calibration topics on our social media channels and blog.  
Follow Mensor on Facebook, Twitter, Youtube, LinkedIn and [blog.mensor.com](http://blog.mensor.com)



Mensor Blog



YouTube



Mensor LP  
201 Barnes Drive  
San Marcos, Texas 78666  
Tel: 512-396-4200  
800-984-4200  
Fax: 512-396-1820  
[www.mensor.com](http://www.mensor.com)

