

BAROMETRIC PRESSURE SENSOR



Description

Pressure sensors are electronic barometers with analog output. The transduction element consists of a piezoresistive sensor that provides extremely precise and stable measurements of atmospheric pressure, with excellent repeatability, low hysteresis and excellent temperature behavior.

The sensor output signal is conditioned to provide a linear output voltage (or current depending on the model) proportional to atmospheric pressure. The transmitters are factory calibrated, ready to use and have an offset adjustment potentiometer for height installations.

Sensors require a continuous voltage supply. Their extremely low consumption (< 4ma) makes them ideal for acquisition systems or remote applications such as automatic panel-powered weather stations. They are available with different analog outputs: 0...1V and, on request, 0...5V, 1...5V, 0...10V or 4...20ma with two-wire connection.

Pressure sensors are low cost solutions with excellent performance for weather applications, environmental monitoring systems, meteorological and environmental data logging, atmospheric pressure compensation in the efficiency of internal combustion engines, Barometric pressure compensation in cleanrooms, vehicle emission testing.

The measurement of barometric pressure in the free field can be interfered by wind fluctuations. With the static socket for barometric measurements it is possible to minimize such errors.



Barometric pressure sensor



Installation with static socket

Technical specifications may be varied without prior notice

Technical specifications

Sensor type	Piezoresistive
Measuring range	800...1100hPa 600...1100hPa on request
Analog output	0...1V standard; 0...5V o 4...20mA (2 wires) on request
Accuracy	± 0,5hPa @ 20°C
Resolution	0,1hPa
Temperature drift	< 1% F.S., zero < 1% F.S., span da -20 °C a +60 °C
Long-term stability	< 0,25 % F.S. 6 months at 20°C
Stabilization time	1 sec. at 99% of the measure
Response time	< 200 msec. After stabilization of pressure
Power supply	8...35V
Power consumption	< 4mA
Operating temperature	-30...+60°C
Compatibility	Air and dry gases, non-corrosive
Overpressure	2 bar

Ordering codes

Barometric sensor atm. 600 ... 1100hPa, electrical output 4 ... 20mA	PCTPR309
Barometric sensor atm. 600 ... 1100hPa, electrical output 0 ... 1V	PCTPR305
Barometric sensor atm. 600 ... 1100hPa, electrical output 0 ... 5V	PCTPR307
Barometric sensor atm. 800 ... 1100hPa, electrical output 4 ... 20mA	PCTPR311
Barometric sensor atm. 800 ... 1100hPa, electrical output 0 ... 1V	PCTPR306
Barometric sensor atm. 800 ... 1100hPa, electrical output 0 ... 5V	PCTPR318
Static port for barometric measurements without support bracket	PCTPR300
Support bracket for static port	PCTPR301

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