

Mensor's CPC3050 High-Speed Pressure Controller

FAST • DURABLE • PRECISE

High-Speed Pressure Controller Model CPC3050

Applications

- High speed controlling
- End-of-Line production testing
- Pressure calibration
- Automotive
- Oil and Gas

Special Features

- Control speed < 4 seconds for 25%FS steps
- Accuracy: 0.020% FS
- Range: -1 ... 210 bar (-15 ... 3,045 psi)
- PACE remote emulation
- Up to two individual transducer ranges



Description

The CPC3050 High-Speed Pressure Controller is designed with a primary focus on improving throughput in a manufacturing or calibration process. Offering pressure ranges as low as 0 ... 350 mbar (5 psi) up to 210 bar (3,045 psi), the CPC3050 can be the solution for multiple applications. This controller can be configured as a desktop or 19" rack-mount version. Capable of 2 internal reference transducers and a barometric reference, a single CPC3050 can provide a wide range of pressure control and also emulate both absolute or gauge pressure types. The two customizable transducer ranges provide more flexibility for customer needs and pressure range coverage.

Application

The CPC3050 has an accuracy of 0.020%FS and uses a regulator technology that is designed specifically for high speed pressure control; ideal for end of line testing of an automated production and manufacturing line. Along with the high speed, the 0.020%FS accuracy provides adequate calibration requirements for numerous devices designed for the automotive and oil/gas industry.

Functions

The CPC3050 High-Speed Controller can be operated locally through a simple and intuitive menu that allows users to control and measure pressure. Additionally, it is capable of remote control with software that can drive all the same functions as local operation. Using serial, USB, Ethernet or GPIB, the CPC3050 can be completely setup to function automatically in a process and achieve optimal output of a manufacturing process. With the Mensor legacy command set, along with PACE emulated commands, it can also be a solution for previously defined remote software.

Design

The standard chassis is designed to be a desktop for bench work in a production or engineering environment. For integration into a more automated process, the sleek design fits in a 3U rack mount tray. Along with the same pressure port layout as many other Mensor controllers, the CPC3050 uses a common SAE 7/16-20 threaded pressure ports, which makes it very easy to find the appropriate pressure adapters for most applications.

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Reference pressure transducers model CPR3050

Pressure Range	Low Pressure (LP)	High Pressure (HP)
Accuracy ¹⁾	0.020% FS ²⁾	
Gauge pressure ³⁾	0 ... 5 up to 1,500 psi (0 ... 0.35 up to 100 bar)	0 ... 1,500 up to 3,045 psi (0 ... 100 up to 210 bar)
Absolute pressure ⁵⁾	0 ... 15 up to 0 ... 1,515 psi (0 ... 1 up to 0 ... 101 bar)	0 ... 1,515 up to 3,065 psia (0 ... 101 up to 211 bar)
Bi-directional pressure ³⁾⁴⁾	-2.5 ... 2.5 up to -15 ... 1,500 psi (-0.17 ... 0.17 up to -1 ... 100 bar)	-15 ... 1,500 up to 3,045 psi (-1 ... 100 up to 210 bar)
Calibration interval	365 days	
Optional barometric reference		
Function	The barometric reference can be used to switch pressure types ⁶⁾ , absolute <=> gauge. With gauge pressure transducers, the measuring range of the transducers must begin with -1 bar (-15 psi) in order to carry out a complete absolute pressure emulation.	
Measuring range	8 ... 17 psi abs. (552 ... 1,172 mbar abs.)	
Accuracy ¹⁾	0.02% of reading	
Pressure units	39 and two freely programmable	

- 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..
- 2) FS = Full Span.
- 3) Ranges from 1,500 to 3,045 psi will be sealed gauge transducers..
- 4) The minimum calibrated range of absolute transducers is 600mTorr
- 5) For pressure type emulation, we recommend a native absolute pressure transducer, since the zero point drift can be eliminated through a zero point adjustment.

