

P-522C

EL-PRESS P-522C

Digital Electronic Pressure Meter

- For absolute or gauge pressure
- High accuracy and repeatability
- Well proven, compact thru-flow design
- On-board PID controller for pressure control
- Analog, RS232 and fieldbus communication



Digital Electronic Pressure Meters

Bronkhorst® model P-522C Electronic Pressure Transducers (EPTs) are suited for precise measurement of pressure ranges between 2...100 bar and 4...200 bar absolute or gauge. The EPT has a well-proven compact thru-flow design and includes a diaphragm type piezo-resistive pressure sensor, a microprocessor based pc-board with signal and fieldbus conversion and a PID controller for optional pressure control by means of a separately mounted control valve.

EL-PRESS series are equipped with a digital pc-board, offering high accuracy, excellent temperature stability and fast response. The main digital pc-board contains all of the general functions needed for measurement and control. In addition to the standard RS232 output the instruments also offer analog I/O. As an option, an on-board interface can be mounted to provide DeviceNet™, PROFIBUS DP, Modbus, EtherCAT®, PROFINET or FLOW-BUS protocols.

Technical specifications

Measurement / control system

Absolute pressure sensor Code: M40A - Ranges (FS): 100 ... 400 bara - P-max: 500 bara

Accuracy (incl. linearity and hysteresis) standard: $\pm 0,5\%$ FS

Repeatability $< 0,1\%$ Rd

Pressure rangeability 1:50 for pressure meter;
1 : 20 for P2-control; 1 : 5 for P1-control

Response time (sensor) 2 msec

Operating temperature $-10...+70^{\circ}\text{C}$

Temperature sensitivity 0,1% FS/ $^{\circ}\text{C}$

Leak integrity, outboard tested $< 2 \times 10^{-9}$ mbar l/s He

Attitude sensitivity max. error at 90° off horizontal $< 0,3$ mbar

Warm-up time negligible

Mechanical parts

Material (wetted parts)	stainless steel 316L or comparable
Process connections	compression type or face seal couplings
Seals	standard: Viton [®] ; options: EPDM, Kalrez [®] (FFKM)
Weight	0,4 kg
Ingress protection (housing)	IP40

Electrical properties

Power supply	+15...24 Vdc		
Max. power consumption meter	Supply	at voltage I/O	at current I/O
	15 V	67 mA	90 mA
	24 V	49 mA	67 mA
Max. power consumption controller	Supply	at voltage I/O	at current I/O
	15 V	223 mA	223 mA
	24 V	150 mA	150 mA
PROFIBUS DP	add 53 mA (15 V supply) or 30 mA (24 V supply)		
PROFINET	add 77 mA (15 V supply) or 48 mA (24 V supply)		
EtherCAT [®]	add 66 mA (15 V supply) or 41 mA (24 V supply)		
DeviceNet [™]	add 48 mA (24 V supply)		
Analog output/command	0...5 (10) Vdc or 0 (4)...20 mA (sourcing output)		
Digital communication	standard: RS232; options: PROFIBUS DP, DeviceNet [™] , PROFINET, EtherCAT [®] , Modbus RTU or ASCII, FLOW-BUS		

Electrical connection

Analog/RS232	9-pin D-connector (male);
PROFIBUS DP	bus: 9-pin D-connector (female); power: 9-pin D-connector (male);
Devicenet [™]	5-pin M12-connector (male);
EtherCAT [®] / PROFINET	2 x RJ45 modular jack (in/out)
FLOW-BUS/Modbus-RTU/ASCII	RJ45 modular jack

Note: The measuring cell of the pressure sensor is separated from the external pressure by a thin, sensitive stainless steel diaphragm, and the sealed off cavity between diaphragm and cell is filled with oil. Since the standard oil filling is flammable, Bronkhorst advises to take precautions when oxygen or any other explosive fluid is used.

Technical specifications subject to change without notice.

For dimensional drawings and hook-up diagrams please visit the [productpage](#) on our [website](#)

Recommended accessories



E-8000 - DIGITAL READOUT / CONTROL SYSTEMS

Bright, wide angle, 1.8" display (TFT technology)

User friendly operation, menu driven with 4 push buttons



BRIGHT - COMPACT LOCAL READOUT/CONTROL MODULE

Bright, wide angle, 1.8" display

User friendly operation

Indication/operation/configuration



PIPS - PLUG-IN POWER SUPPLY

For lab-style or industrial devices
Interchangeable plugs (Euro, UK, USA, Australian, IEC) for mains connection

Related products



EL-PRESS P-512C

Min. pressure 1,28...64 bar
Max. pressure 2...100 bar
Absolute or gauge pressure
High accuracy



EL-PRESS P-532C

Min. pressure 4...200 bar
Max. pressure 8...400 bar
Absolute or gauge pressure
High accuracy



IN-PRESS P-522CI

Min. pressure 2...100 bar
Max. pressure 4...200 bar
Absolute or gauge pressure
Compact IP65 design



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