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EL-PRESS P-512C

Digitale Druckmesser

- Für Absolut- oder Überdruck
- Hohe Genauigkeit und Wiederholgenauigkeit
- Bewährtes, kompaktes Durchfluss-Design
- On-Board PID-Controller für die Druckregelung
- Analog, RS232 und Feldbus-Kommunikation

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Digitale Druckmesser

Bronkhorst® P-512C elektronische Druckmessumformer sind für die genaue Messung von Druckbereichen zwischen 1,28...64 bar und 2...100 bar Absolut- oder Überdruck geeignet. Der elektronische Druckmessumformer basiert auf einem bewährten Durchfluss-Design. Er umfasst einen piezoresistiven Membrandrucksensor, eine mikroprozessorgesteuerte Platine mit Signal- und Feldbusumwandlung sowie einen PID-Regler für die optionale Druckregelung mittels eines separat angebrachten Regelventils.

Die EL-PRESS Serie ist mit einer Digitalplatine ausgestattet, die eine hohe Genauigkeit, hervorragende Temperaturstabilität und schnelle Ansprechzeit gewährleistet. Die digitale Hauptplatine umfasst alle allgemeinen Funktionen, die für Messung und Regelung erforderlich sind. Neben dem Standard-RS232-Ausgang bieten die Instrumente auch analoge Signale. Optional kann eine On-Board-Schnittstelle für CANopen®, DeviceNet™, EtherCAT®, PROFIBUS DP, PROFINET, Modbus RTU, ASCII or TCP/IP, EtherNet/IP or FLOW-BUS Protokolle montiert werden.

Technical specifications

Measurement / control system

Measurement / control system

Absolute pressure sensors Code: M10A - Ranges (FS): 20 ... 100 bara - P-max: 200 bara
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 °C

Temperature sensitivity 0,1% FS/°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 (VCR/VCO) couplings

Seals standard: Viton®;

options: EPDM, Kalrez® (FFKM), FDA and USP Class VI approved compounds

Weight 0,4 kg

Ingress protection IP40

Electrical properties

Power supply +15 ... 24 Vdc

Max. power consumption meter	Supply	at voltage I/O	at current I/O	extra for fieldbus
	15 V	95 mA	125 mA	< 75 mA
	24 V	65 mA	85 mA	< 50 mA

Max. Power consumption controller	Supply	at voltage I/O	at current I/O	extra for fieldbus
	15 V	290 mA	320 mA	< 75 mA
	24 V	200 mA	215 mA	< 50 mA

Analog output 0...5 (10) Vdc or 0 (4)...20 mA (sourcing output)

Digital communication standard: RS232;
options: CANopen®, DeviceNet™, EtherCAT®, PROFIBUS DP, PROFINET, Modbus RTU, ASCII or TCP/IP, EtherNet/IP or 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);

CANopen® / DeviceNet™ 5-pin M12-connector (male);

FLOW-BUS/Modbus-RTU/ASCII RJ45 modular jack

Modbus TCP / EtherNet/IP 2 x RJ45 modular jack (in/out);

EtherCAT®/ PROFINET 2 x RJ45 modular jack (in/out);

Control valve options

Control valve options

External actuator options to be connected to the controller

Ex-proof specifications

Approvals / certificates

Technical specifications subject to change without notice.

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.

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

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Anschlussdiagramme

Analog IO - RS232

DeviceNet

EtherCAT

FLOW-BUS

Modbus RTU/ASCII

PROFIBUS DP

PROFINET

CANopen

EtherNet/IP

Modbus-TCP

Optional Bus and IO Configurations



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Dimensionszeichnungen

P-502C_P-512C_P-522C_P-532C

Recommended accessories

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