

P-822CI

IN-PRESS P-822CI

Process Pressure Controller, Industrial Style

- Dual valve pressure control (inlet/relief)
- For absolute or gauge pressure
- High accuracy and repeatability
- Rugged, weatherproof housing (IP65, dust and waterproof)
- On-board PID controller for pressure control
- Analog, RS232 and fieldbus communication



Process Pressure Controller, Industrial Style

Bronkhorst® model P-822CI Process Pressure Controllers (PPCs) are suited for precise pressure control with closed volumes, i.e. with one fluid connection. This PPC model is suited for pressure ranges between 5...100 bar and 10...200 bar absolute or gauge. The instrument comprises a diaphragm type piezo-resistive pressure sensor, a microprocessor based pc-board with signal and fieldbus conversion and a PID controller for pressure control by means of two integrated control valves. This dual valve construction is a compact, economical alternative to configurations where forward pressure controllers are combined with separate bleed ports and relief valves. It is considered as a great advantage that the relief valve does not vent to the atmosphere. Furthermore the system can be set for either fast or smooth controlled (de)pressurization. The IN-PRESS model is of rugged design (IP65) for use in industrial environments.

IN-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 PROFIBUS DP, DeviceNet™, Modbus RTU/ASCII or FLOW-BUS protocols.

Technical specifications

Measurement / control system

| | |
|---|---|
| Pressure ranges | min. 5 ... 100 bar max. 10 ... 200 bar |
| Accuracy (incl. linearity and hysteresis) | ± 0,5 % FS |
| Repeatability | < 0,25 % RD |
| Pressure rangeability | 1:20 (with flow range 1:50) |
| Response time (sensor) | 2 msec |
| Operating temperature | -10 ... +70 °C |
| Temperature sensitivity | 0,1% FS/°C |
| Leak integrity, outboard | tested < 2 x 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 | Viton® |
| Ingress protection | IP65 |

Electrical properties

| | | | | |
|------------------------|--|----------------|----------------|--------------------|
| Power supply | +15 ... 24 Vdc | | | |
| Max. power consumption | 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: PROFIBUS DP, DeviceNet™, Modbus RTU/ASCII or FLOW-BUS | | | |

Electrical connection

| | |
|---------------------------|--|
| Analog/RS232 | 8 DIN (male); |
| PROFIBUS DP | bus: 5-pin M12 (female); power: 8 DIN (male); |
| CANopen® / DeviceNet™ | 5-pin M12-connector (male); |
| FLOW-BUS/Modbus-RTU/ASCII | 5-pin M12 (male) |

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](#)

Recommended accessories



E-8000 SERIES

Digital Readout / Control Systems

Bright, wide angle, 1.8" display (TFT technology)
User friendly operation, menu driven with 4 push buttons



BRIGHT SERIES

Compact Local R/C Module

Bright, wide angle, 1.8" display
User friendly operation
Indication/operation/configuration



PIPS SERIES

Plug-in Power Supply

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

Related products



IN-PRESS P-802CI

Min. pressure 17,5...350 mbar
Max. pressure 3,2...64 bar
Absolute or gauge pressure
Fast or smooth pressure control
Rugged IP65 construction



IN-PRESS P-812CI

Min. pressure 3,2...64 bar
Max. pressure 5...100 bar
Absolute or gauge pressure
Fast or smooth pressure control
Rugged IP65 construction



EL-PRESS P-822CV

Min. pressure 5...100 bar
Max. pressure 10...200 bar
Absolute or gauge pressure
Fast or smooth pressure control



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