

Alternative article: PI2894 or PI2794

When selecting an alternative article and accessories please note that technical data may differ!

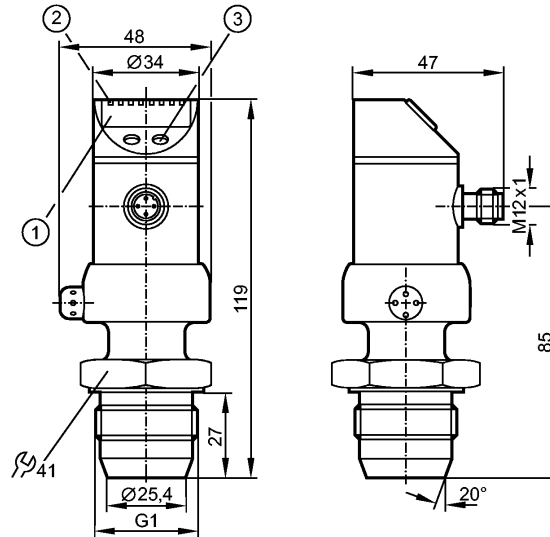
**efectorsoo**

PI1694



PI-010-REA01-E-ZVG/US/ /P

Pressure sensors



- 1: 4-digit alphanumeric display
- 2: status LEDs
- 3: Programming button



CE cULus EC 1935/2004 EHEDG Certified FDA

Product characteristics

Programmable pressure transmitter

Quick disconnect

no dead space

Freely rotatable housing 350°

2-wire connection technology

Zero and span adjustable

Sealing cone G 1 male

Process connection: Sealing cone G 1 male

Analog output

4-digit alphanumeric display

Measuring range: -1.00...10.00 bar / -14.5...145.0 psi / -0.100...1.000 MPa

Application

Application

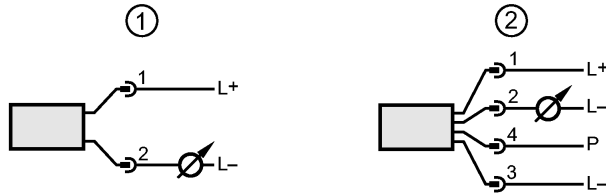
Type of pressure: relative pressure  
Hygienic systems, viscous media and liquids with suspended particles  
Liquids and gases

|                             |   |          |        |
|-----------------------------|---|----------|--------|
| Pressure rating             | 50 bar                                    | 725 psi  | 5 MPa  |
| Bursting pressure min.      | 150 bar                                   | 2175 psi | 15 MPa |
| Medium temperature [°C]     | -25...125 (145 max. 1h)                   |          |        |
| Electrical data             | DC  |          |        |
| Electrical design           | DC  |          |        |
| Operating voltage [V]       | 20...32 DC                                |          |        |
| Switch-on peak current [mA] | 60 (30 ms)                                |          |        |
| Insulation resistance [MΩ]  | > 100 (500 V DC)                          |          |        |
| Protection class            | III                                       |          |        |
| Reverse polarity protection | yes                                       |          |        |
| Outputs                     | Analog output                             |          |        |
| Output                      | Analog output                             |          |        |
| Output function             | 4...20 (20...4) mA analog (scaleable 1:4) |          |        |

**PI1694 - Programmable pressure transmitter - eclass: 27201302 / 27-20-13-02**

|  |   |                              |                    |
|--|---|------------------------------|--------------------|
| Overload protection  | yes   |                              |                    |
| Analog output  | I: 4...20 mA (Ineg: 20...4 mA)  |                              |                    |
| Max. load [Ω]  | max. 300  |                              |                    |
| Measuring / setting range  |   |                              |                    |
| Display unit   | bar, psi, MPa, % der Spanne   |                              |                    |
| Measuring range  | -1.00...10.00 bar   | -14.5...145.0 psi            | -0.100...1.000 MPa |
| Setting range  |   |                              |                    |
| Analog start point, ASP  | -1.00...7.25 bar  | -14.5...105.1 psi            | -0.100...0.725 MPa |
| Analog end point, AEP  | 1.75...10.00 bar  | 25.4...145.0 psi             | 0.175...1.000 MPa  |
| in steps of  | 0.01 bar  | 0.1 psi                      | 0.001 MPa          |
| Factory setting  | ASP = 0.00 bar; AEP = 10.00 bar   |                              |                    |
| Accuracy / deviations  |   |                              |                    |
| Accuracy / deviations<br>(in % of the span) Turn down 1:1  |   |                              |                    |
| Characteristics deviation *)   | < ± 0.2   |                              |                    |
| Linearity  | < ± 0.15  |                              |                    |
| Hysteresis   | < ± 0.15  |                              |                    |
| Repeatability **)  | < ± 0.1   |                              |                    |
| Long-term stability ***)   | < ± 0.1   |                              |                    |
| Temperature coefficients (TEMPCO) in the temperature range 0...70° C (in % of the span per 10 K) |   |                              |                    |
| Greatest TEMPCO of the zero point  | < ± 0.05  |                              |                    |
| Greatest TEMPCO of the span  | < ± 0.15  |                              |                    |
| Reaction times   |   |                              |                    |
| Power-on delay time [s]  | 0.5   |                              |                    |
| Damping for the analog output (dAA) [s]  | 0.1...100.0   |                              |                    |
| Response time analog output [ms]   | 40  |                              |                    |
| Integrated watchdog  | yes   |                              |                    |
| Environment  |   |                              |                    |
| Ambient temperature [°C]   | -25...80  |                              |                    |
| Storage temperature [°C]   | -40...100   |                              |                    |
| Protection   | IP 67 / IP 69K  |                              |                    |
| Tests / approvals  |   |                              |                    |
| EMC  | EN 61000-4-2 ESD:   | 4 kV CD / 8 kV AD            |                    |
|  | EN 61000-4-3 HF radiated:   | 10 V/m                       |                    |
|  | EN 61000-4-4 Burst:   | 2 kV                         |                    |
|  | EN 61000-4-5 Surge:   | 0.5/1 kV                     |                    |
|  | EN 61000-4-6 HF conducted:  | 10 V                         |                    |
| Shock resistance   | DIN IEC 68-2-27:  | 50 g (11 ms)                 |                    |
| Vibration resistance   | DIN IEC 68-2-6:   | 20 g (10...2000 Hz)          |                    |
| MTTF [Years]   | 238   |                              |                    |
| Mechanical data  |   |                              |                    |
| Process connection   | Sealing cone G 1 male   |                              |                    |
| Materials (wetted parts)   | ceramics (99.9 % Al <sub>2</sub> O <sub>3</sub> ); PTFE; stainless steel 316L / 1.4435; surface characteristics:<br>Ra < 0.4 / Rz 4 |                              |                    |
| Housing materials  | stainless steel 316L / 1.4404; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton); PTFE   |                              |                    |
| Min. pressure cycles   | 100 million   |                              |                    |
| Weight [kg]  | 0.441   |                              |                    |
| Displays / operating elements  |   |                              |                    |
| Display  | Display unit  | 4 x LED green                |                    |
|  | Function display  | 4-digit alphanumeric display |                    |
|  | Measured values   | 4-digit alphanumeric display |                    |
| Electrical connection  |   |                              |                    |
| Connection   | M12 connector; gold-plated contacts   |                              |                    |
| <b>Wiring</b>  |   |                              |                    |

**PI1694 - Programmable pressure transmitter - eclass: 27201302 / 27-20-13-02**



1: Normal operation  
 2: Programming operation (P = communication via EPS / FDT interface)

Remarks  
 Remarks

\*) linearity, incl. hysteresis and repeatability;  
 (limit value setting to DIN 16086)  
 \*\*) with temperature fluctuations < 10 K  
 \*\*\*) in % of the span per year  
 The 3-A qualification is only valid if adapters with 3-A qualification are used for installation.

Pack quantity [piece] 1

ifm efector, inc. • 1100 Atwater Drive • Malvern • PA 19355 — We reserve the right to make technical alterations without prior notice. — US — PI1694 — 28.05.2014  
 Alternative article: PI2894 or PI2794

When selecting an alternative article and accessories please note that technical data may differ!