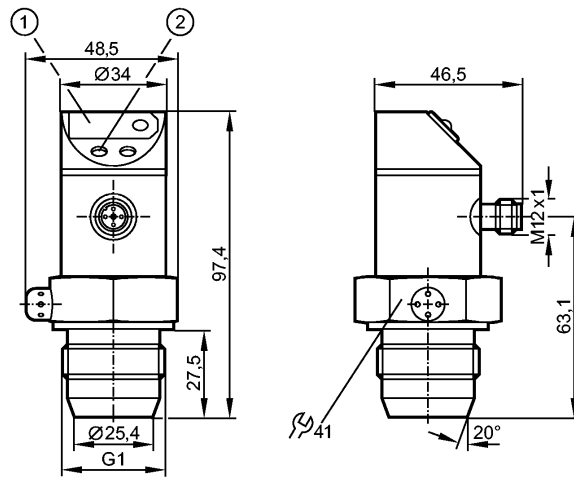


PF2658

Pressure sensors



1: 7-segment LED display
2: Programming button



Made in Germany

Product characteristics

| |
|--|
| Combined pressure sensor |
| Connector |
| Process connection: G1 A |
| no dead space |
| Freely rotatable housing 350° |
| Zero and span adjustable |
| Function programmable |
| 2 outputs OUT1 = switching output OUT2 = switching output or analogue output |
| 7-segment LED display |
| Measuring range: -13...250 mbar / -5.0...100 inH2O / -1.3...25.0 kPa |

Application

| | | | |
|-------------------------|--|-------------|----------|
| Application | Type of pressure: relative pressure Hygienic systems, viscous media and liquids with suspended particles Liquids and gases | | |
| Pressure rating | 10000 mbar | 4000 inH2O | 1000 kPa |
| Bursting pressure min. | 30000 mbar | 12000 inH2O | 3000 kPa |
| Medium temperature [°C] | -25...80 | | |

Electrical data

| | |
|-----------------------------|------------------|
| Electrical design | DC PNP/NPN |
| Operating voltage [V] | 20...30 DC |
| Current consumption [mA] | < 60 |
| Insulation resistance [MΩ] | > 100 (500 V DC) |
| Protection class | III |
| Reverse polarity protection | yes |

Outputs

| | |
|--------|--|
| Output | 2 outputs OUT1 = switching output OUT2 = switching output or analogue output |
|--------|--|

PF2658

Pressure sensors

| | | | |
|--------------------------|---|--|--|
| Output function | 2 x normally open / closed programmable or 1 x normally open / closed programmable + 1 x analogue (4...20 mA / 0...10 V; scaleable 1:4) | | |
| Current rating [mA] | 2 x 250 | | |
| Voltage drop [V] | < 2 | | |
| Short-circuit protection | pulsed | | |
| Overload protection | yes | | |
| Switching frequency [Hz] | ≤ 170 | | |
| Analogue output | 4...20 mA / 0...10 V | | |
| Max. load [Ω] | 4...20 mA: max. (U _b - 10 V) x 50 / 0...10 V: min. 2000 | | |

Measuring / setting range

| | | | |
|---------------------------|--|-------------------|-----------------|
| Display unit | mbar, inH2O, kPa | | |
| Measuring range | -13...250 mbar | -5.0...100 inH2O | -1.3...25.0 kPa |
| Setting range | | | |
| Set point, SP | -11...250 mbar | -4.4...100 inH2O | -1.1...25.0 kPa |
| Reset point, rP | -12...249 mbar | -4.8...99.6 inH2O | -1.2...24.9 kPa |
| Analogue start point, ASP | -13...188 mbar | -5.0...74.9 inH2O | -1.3...18.8 kPa |
| Analogue end point, AEP | 50...250 mbar | 20.1...100 inH2O | 5.0...25.0 kPa |
| in steps of | 1 mbar | 0.1 inH2O | 0.1 kPa |
| Factory setting | SP1 = 63 mbar; rP1 = 58 mbar ASP = 0 mbar; AEP = 250 mbar | | |

Accuracy / deviations

| | | | |
|--|---------|--|--|
| Accuracy / deviations (in % of the span) Turn down 1:1 | | | |
| Characteristics deviation *) | < ± 0.6 | | |
| Linearity | < ± 0.5 | | |
| Hysteresis | < ± 0.1 | | |
| Repeatability **) | < ± 0.1 | | |
| Long-term stability ***) | < ± 0.1 | | |
| Temperature coefficients (TEMPCO) in the temperature range 0...80° C (in % of the span per 10 K) | | | |
| Greatest TEMPCO of the zero point | < ± 0.1 | | |
| Greatest TEMPCO of the span | < ± 0.4 | | |

Reaction times

| | |
|------------------------------------|-----|
| Power-on delay time [s] | 0.2 |
| Response time analogue output [ms] | 3 |
| Integrated watchdog | yes |

Software / programming

| | |
|---------------------|--|
| Programming options | hysteresis / window function; N.O. / N.C; output polarity; current / voltage outputs; damping; calibration of displayed values; display can be rotated / deactivated; display unit |
|---------------------|--|

Environment

| | |
|--------------------------|-----------|
| Ambient temperature [°C] | -25...80 |
| Storage temperature [°C] | -40...100 |
| Protection | IP 67 |

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 61000-4-6 HF conducted: 10 V |
|-----|--|

PF2658

Pressure sensors

| | | |
|----------------------|------------------|---------------------|
| 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] | | 182 |

| Mechanical data | | |
|--------------------------|--|--|
| Process connection | G1 A | |
| Materials (wetted parts) | ceramics (99.9 % Al ₂ O ₃); PTFE; stainless steel 316L / 1.4435; surface characteristics: Ra < 0.4 / Rz 4 | |
| Housing materials | stainless steel 316L / 1.4404; PBT (Pocan); PC (Makrolon); PEI; EPDM/X (Santoprene); FPM (Viton) | |
| Switching cycles min. | 100 million | |
| Weight [kg] | 0.375 | |

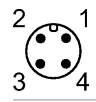
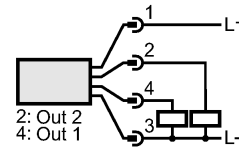
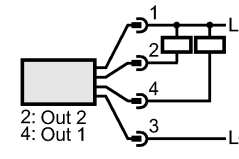
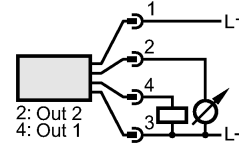
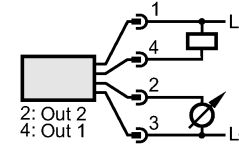
| Displays / operating elements | |
|-------------------------------|---|
| Display | Switching status 2 x LED red Function display 7-segment LED display Measured values 7-segment LED display |

| Electrical connection | |
|-----------------------|-------------------------------------|
| Connection | M12 connector; gold-plated contacts |

Wiring

Programming of the output function (OUT1 / OUT2):
 Hno = hysteresis / normally open
 Hnc = hysteresis / normally closed
 Fno = window function / normally open
 Fnc = window function / normally closed
 Complementary outputs:
 output 1: = Hno, output 2: = Hnc
 (with the same SP / rP)

Programming of the analogue output (OUT2):
 I = current output (4...20 mA)
 U = voltage output (0...10 V)

| 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 3A authorisation is only valid if adapters with 3A authorisation are used for installation. |

| | |
|-----------------------|---|
| Pack quantity [piece] | 1 |
|-----------------------|---|

| Other data | |
|--|-------------------|
| Min. response time switching output [ms] | 3 |
| Damping for the switching output (dAP) [s] | 0...4 |
| Damping for the analogue output (dAA) [s] | 0 - 0.1 - 0.5 - 2 |