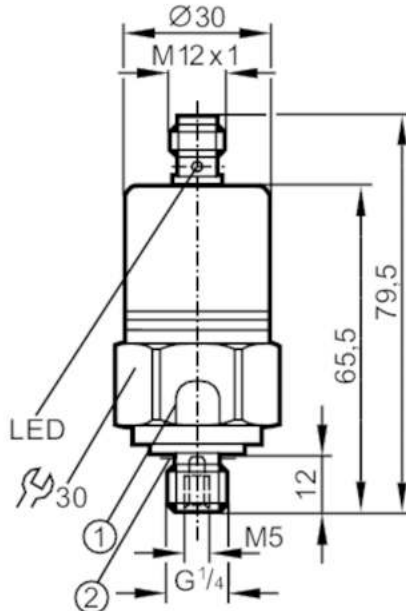


PP7551



Pressure switch with ceramic measuring cell

PP-250-SBG14-QFPKG/US/ IV



- 1 pressure relief mechanism
No mechanical force must be exerted on the pressure relief mechanism.
- 2 Sealing



Product characteristics

| | | | |
|------------------------------|--|--------------|------------|
| Number of inputs and outputs | Number of digital outputs: 2 | | |
| Measuring range | 0...250 bar | 0...3625 psi | 0...25 MPa |
| Process connection | threaded connection G 1/4 external thread internal thread:M5 | | |

Application

| | | | |
|----------------------------|--|-----------|--------|
| Application | for industrial applications | | |
| Media | liquids and gases | | |
| Conditionally suitable for | use in gases at pressures > 25 bar only on request | | |
| Medium temperature [°C] | -25...90 | | |
| Min. bursting pressure | 850 bar | 12300 psi | 85 MPa |
| Pressure rating | 400 bar | 5800 psi | 40 Mpa |
| Type of pressure | relative pressure | | |

Electrical data

| | | | |
|---------------------------------|--|--|--|
| Operating voltage [V] | 9.6...36 DC; (communication mode: 18...32) | | |
| Current consumption [mA] | < 45 | | |
| Min. insulation resistance [MΩ] | 100; (500 V DC) | | |
| Protection class | III | | |
| Reverse polarity protection | yes | | |
| Power-on delay time [s] | 0.3 | | |

Inputs / outputs

| | | | |
|------------------------------|------------------------------|--|--|
| Number of inputs and outputs | Number of digital outputs: 2 | | |
|------------------------------|------------------------------|--|--|

Outputs

| | | | |
|-------------------------|---|--|--|
| Total number of outputs | 2 | | |
|-------------------------|---|--|--|

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| | | | |
|--|--|--|--|
| Output signal | switching signal; IO-Link; (configurable) | | |
| Electrical design | PNP | | |
| Number of digital outputs | 2 | | |
| Output function | normally open / normally closed; (parameterisable) | | |
| Max. voltage drop switching output DC [V] | 2 | | |
| Permanent current rating of switching output DC [mA] | 250 | | |
| Switching frequency DC [Hz] | 170 | | |
| Short-circuit protection | yes | | |
| Type of short-circuit protection | pulsed | | |
| Overload protection | yes | | |

Measuring/setting range

| | | | |
|-----------------|-------------|---------------|----------------|
| Measuring range | 0...250 bar | 0...3625 psi | 0...25 MPa |
| Set point SP | 2...250 bar | 40...3620 psi | 0.2...25 MPa |
| Reset point rP | 1...249 bar | 20...3600 psi | 0.1...24.9 MPa |
| In steps of | 1 bar | 20 psi | 0.1 MPa |
| Factory setting | | SP1 = 63 bar | rP1 = 58 bar |
| | | SP2 = 188 bar | rP2 = 183 bar |
| | | OUT1 = Hno | OUT2 = Hno |

Accuracy / deviations

| | |
|---|---|
| Switch point accuracy [% of the span] | < ± 0,5 |
| Repeatability [% of the span] | < ± 0,1; (with temperature fluctuations < 10 K) |
| Characteristics deviation [% of the span] | < ± 0,25 (BFSL) / < ± 0,5 (LS); (BFSL = Best Fit Straight Line; LS = limit value setting) |
| Hysteresis deviation [% of the span] | < ± 0,1 |
| Long-term stability [% of the span] | < ± 0,1; (per year) |
| Temperature coefficient zero point [% of the span / 10 K] | 0,2; (0...80 °C) |
| Temperature coefficient span [% of the span / 10 K] | 0,2; (0...80 °C) |

Response times

| | |
|--|---|
| Response time [ms] | < 3 |
| Damping process value dAP in steps [s] | 0,003 - 0,006 - 0,010 - 0,017 - 0,060 - 0,125 - 0,250 - 0,500 |

Interfaces

| | |
|---------------------------|-------------------|
| Communication interface | IO-Link |
| Transmission type | COM2 (38,4 kBaud) |
| IO-Link revision | 1.0 |
| Profiles | no profile |
| SIO mode | yes |
| Required master port type | A |

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| | | |
|-------------------------|-------------------|----------|
| Process data analogue | | 1 |
| Process data binary | | 2 |
| Min. process cycle time | [ms] | 2.3 |
| Supported DeviceIDs | Type of operation | DeviceID |
| | Default | 3 |

Operating conditions

| | | |
|---------------------|------|---|
| Ambient temperature | [°C] | -25...85 |
| Storage temperature | [°C] | -40...100 |
| Protection | | IP 68; (7 days / 1 m water depth / 0.1 bar) |

Tests / approvals

| | | |
|------------------------------|---|---|
| EMC | immunity | EN 61000-6-2 |
| | EN 61000-4-2 ESD | 4 kV contact discharge / 15 kV air discharge |
| | EN 61000-4-3 HF radiated | 20 V/m |
| | EN 61000-4-4 Burst | 4 kV coupling clamp |
| | EN 61000-4-5 Surge | 0,5 kV supply / 1 kV signal for DC units |
| | EN 61000-4-6 HF conducted | 10 V |
| | immunity | according to the automotive directive 1995/54/EC / 04/104EG / 05/83/EG |
| | absorber chamber test to ISO 11452-2: | 80 V/m |
| | EN 50155 | Klasse T3, C1, S1 |
| Shock resistance | DIN IEC 60068-2-27 / DIN IEC 60068-2-29 | 1000 g |
| | DIN EN 61373 | category 3 |
| Vibration resistance | DIN IEC 68-2-6 | 20 g (10...2000 Hz) |
| | DIN EN 60068-2-64 | 14 g |
| | DIN EN 61373 | category 2 |
| MTTF | [years] | 308 |
| UL approval | UL Approval no. | J010 |
| Pressure Equipment Directive | | Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request |

Mechanical data

| | | |
|-------------------------------|-----|--|
| Weight | [g] | 227.5 |
| Materials | | stainless steel (1.4301 / 304); FKM; EPDM/X; PA |
| Materials (wetted parts) | | stainless steel (1.4305 / 303); ceramics; FKM |
| Min. pressure cycles | | 100 million |
| Process connection | | threaded connection G 1/4 external thread internal thread:M5 |
| Restrictor element integrated | | no (can be retrofitted) |

Displays / operating elements

| | | |
|----------------|------------------|-----------------|
| Display | operation | 2 x LED, green |
| | switching status | 2 x LED, yellow |
| Teach function | | yes |

Remarks

| | | |
|---------------|--|--------|
| Pack quantity | | 1 pcs. |
|---------------|--|--------|

PP7551

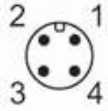


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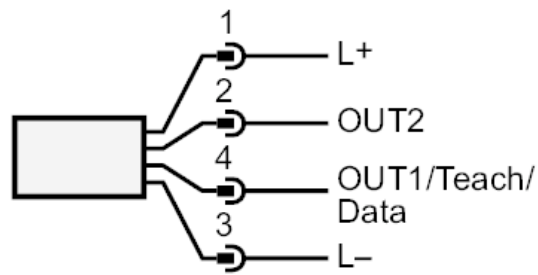
PP-250-SBG14-QFPKG/US/ IV

Electrical connection

Connector: 1 x M12; coding: A



Connection



| | |
|------|-------------------|
| OUT1 | switching output |
| OUT2 | switching output |
| | Diagnostic output |