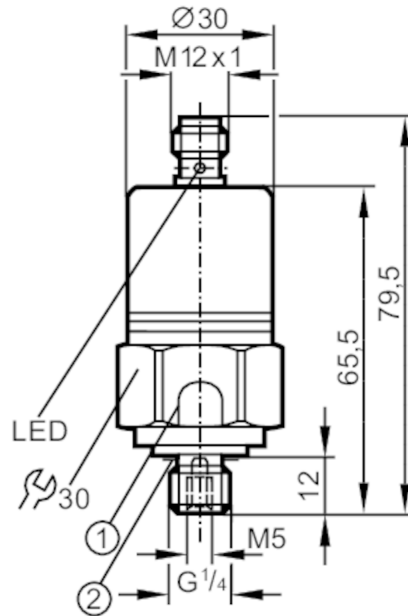


PP0520



Pressure switch with ceramic measuring cell

PP-400-SBG14-QFNKG/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...400 bar | 0...5800 psi | 0...40 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. burst pressure | 1000 bar | 14500 psi | 100 MPa |
| Pressure rating | 600 bar | 8700 psi | 60 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 |
| Electrical design | NPN |
| 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...400 bar | 0...5800 psi | 0...40 MPa |
| Set point SP | 4...400 bar | 60...5790 psi | 0.4...40 MPa |
| Reset point rP | 2...398 bar | 30...5760 psi | 0.2...39.8 MPa |
| In steps of | 2 bar | 30 psi | 0.2 MPa |
| Factory setting | | SP1 = 100 bar | rP1 = 92 bar |
| | | SP2 = 300 bar | rP2 = 292 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) |
| Zero-point stabilisation [% of the span] | 1,0; (display, switching output (see operating instructions zero-point behaviour)) |
| 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 |

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

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| 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 | 30 V |
| 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] | | 309 |
| Pressure Equipment Directive | Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request | |
| Mechanical data | | |
| Weight [g] | | 216 |
| Housing | | cylindrical |
| Dimensions [mm] | | Ø 30 / L = 79.5 |
| Materials | stainless steel (304/1.4301); FKM; EPDM/X; PA | |
| Materials (wetted parts) | stainless steel (303/1.4305); ceramics; FKM | |
| Min. pressure cycles | | 100 million |
| Process connection | threaded connection G 1/4 external thread internal thread:M5 | |
| Restrictor element integrated | | yes |
| Displays / operating elements | | |
| Display | operation | 2 x LED, green |
| | switching status | 2 x LED, yellow |
| Teach function | | yes |
| Remarks | | |
| Pack quantity | | 1 pcs. |
| Electrical connection | | |
| Connector: 1 x M12; coding: A; Contacts: 4 | | |
| | | |

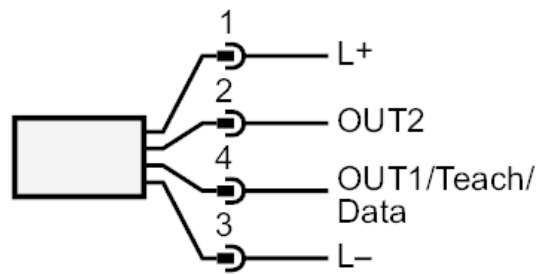
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Connection



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