

PN2598



Pressure sensor with display

PN-,25-REG14-MFRKG/US/ IV



- 1 alphanumeric display 4-digit red/green
- 2 LEDs Display unit / switching status
- 3 programming button
- 4 upper part of the housing can be rotated 345°
- 5 Sealing



Product characteristics

| | | | | |
|--------------------|---|------------------|------------------|----------------|
| Output signal | switching signal; analogue signal; IO-Link; (configurable) | | | |
| Measuring range | -0.0125...0.25 bar | -12.5...250 mbar | -5...100.4 inH2O | -1.25...25 kPa |
| Process connection | threaded connection G 1/4 external thread (DIN EN ISO 1179-2); internal thread M5 | | | |

Application

| | | | |
|--------------------------|--|-------------|----------|
| Special feature | Gold-plated contacts | | |
| Measuring element | ceramic-capacitive pressure measuring cell | | |
| Application | for industrial applications | | |
| Media | liquids and gases | | |
| Medium temperature [°C] | -25...80 | | |
| Pressure rating | 6000 mbar | 2400 inH2O | 600 kPa |
| Min. bursting pressure | 30000 mbar | 12000 inH2O | 3000 kPa |
| Vacuum resistance [mbar] | -1000 | | |
| Type of pressure | relative pressure | | |



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| Electrical data | | | | | |
|---|-----------------|--|--------------------|------------------|----------------|
| Operating voltage | [V] | 18...30 DC; (according to EN 50178 SELV/PELV) | | | |
| Current consumption | [mA] | < 35 | | | |
| Min. insulation resistance | [MΩ] | 100; (500 V DC) | | | |
| Protection class | | III | | | |
| Reverse polarity protection | | yes | | | |
| Power-on delay time | [s] | 0.3 | | | |
| Integrated watchdog | | yes | | | |
| Inputs / outputs | | | | | |
| Number of inputs and outputs | | Number of digital outputs: 2; Number of analogue outputs: 1 | | | |
| Outputs | | | | | |
| Total number of outputs | | 2 | | | |
| Output signal | | switching signal; analogue signal; IO-Link; (configurable) | | | |
| Electrical design | | PNP/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] | < 500 | | | |
| Number of analogue outputs | | 1 | | | |
| Analogue current output | [mA] | 4...20; (scalable 1:5) | | | |
| Max. load | [Ω] | 500 | | | |
| Analogue voltage output | [V] | 0...10; (scalable 1:5) | | | |
| Min. load resistance | [Ω] | 2000 | | | |
| Short-circuit protection | | yes | | | |
| Type of short-circuit protection | | pulsed | | | |
| Overload protection | | yes | | | |
| Measuring/setting range | | | | | |
| Measuring range | | -0.0125...0.25 bar | -12.5...250 mbar | -5...100.4 inH2O | -1.25...25 kPa |
| Set point SP | | -11.5...250 mbar | -4.6...100.4 inH2O | -1.15...25 kPa | |
| Reset point rP | | -12...249.5 mbar | -4.8...100.2 inH2O | -1.2...24.95 kPa | |
| Analogue start point | | -12.5...200 mbar | -5...80.2 inH2O | -1.25...20 kPa | |
| Analogue end point | | 37.5...250 mbar | 15...100.4 inH2O | 3.75...25 kPa | |
| In steps of | | 0.5 mbar | 0.2 inH2O | 0.05 kPa | |
| Accuracy / deviations | | | | | |
| Switch point accuracy | [% of the span] | < ± 0,4; (Turn down 1:1) | | | |
| Repeatability | [% of the span] | < ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1) | | | |
| Characteristics deviation | [% of the span] | < ± 0,25 (BFSL) / < ± 0,5 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line; LS = limit value setting) | | | |
| Hysteresis deviation | [% of the span] | < ± 0,1; (Turn down 1:1) | | | |
| Long-term stability | | < ± 0,05; (Turn down 1:1; per 6 months) | | | |

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| | | |
|------------------------------------|------------------------|--|
| | [% of the span] | |
| Temperature coefficient zero point | [% of the span / 10 K] | $< \pm 0,2; (-0...80 \text{ } ^\circ\text{C})$ |
| Temperature coefficient span | [% of the span / 10 K] | $< \pm 0,2; (-0...80 \text{ } ^\circ\text{C})$ |

| Response times | | |
|--------------------------------------|------|---------|
| Response time | [ms] | < 1.5 |
| Delay time programmable dS, dr | [s] | 0...50 |
| Damping for the switching output dAP | [s] | 0...4 |
| Damping for the analogue output dAA | [s] | 0...4 |
| Max. response time analogue output | [ms] | 3 |

| Software / programming | |
|---------------------------|--|
| Parameter setting options | hysteresis / window; normally open / normally closed; switch-on/ switch-off delay; Damping; Display unit; current/voltage output |

| Interfaces | |
|---------------------------|--|
| Communication interface | IO-Link |
| Transmission type | COM2 |
| IO-Link revision | 1.1 |
| SDCI standard | IEC 61131-9 |
| IO-Link device ID | 466 d / 00 01 d2 h |
| Profiles | Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis |
| SIO mode | yes |
| Required master port type | A |
| Process data analogue | 1 |
| Process data binary | 2 |
| Min. process cycle time | [ms] 2.3 |

| Operating conditions | |
|----------------------|----------------|
| Ambient temperature | [°C] -25...80 |
| Storage temperature | [°C] -40...100 |
| Protection | IP 65; IP 67 |

| Tests / approvals | | |
|------------------------------|---|---------------------|
| EMC | DIN EN 61000-6-2 | |
| | DIN EN 61000-6-3 | |
| Shock resistance | DIN EN 60068-2-27 | 50 g (11 ms) |
| Vibration resistance | DIN EN 60068-2-6 | 20 g (10...2000 Hz) |
| MTTF | [years] | 145 |
| UL approval | UL Approval no. | J012 |
| Pressure Equipment Directive | Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request | |

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| Mechanical data | |
|-------------------------------|--|
| Weight [g] | 263.5 |
| Materials | stainless steel (1.4404 / 316L); PBT+PC-GF30; PBT-GF20; PC |
| Materials (wetted parts) | stainless steel (1.4404 / 316L); Al2O3 (ceramics); FKM |
| Min. pressure cycles | 100 million |
| Tightening torque [Nm] | 25...35; (recommended tightening torque; depends on lubrication, seal and pressure rating) |
| Process connection | threaded connection G 1/4 external thread (DIN EN ISO 1179-2); internal thread M5 |
| Process connection sealing | FKM (to DIN 3869) |
| Restrictor element integrated | no (can be retrofitted) |

| Displays / operating elements | | |
|-------------------------------|------------------|---|
| Display | Display unit | 4 x LED, green (mbar, mmWS, kPa, inH2O) |
| | switching status | 2 x LED, yellow |
| | measured values | alphanumeric display, red/green 4-digit |

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

Electrical connection

Connector: 1 x M12; Contacts: gold-plated



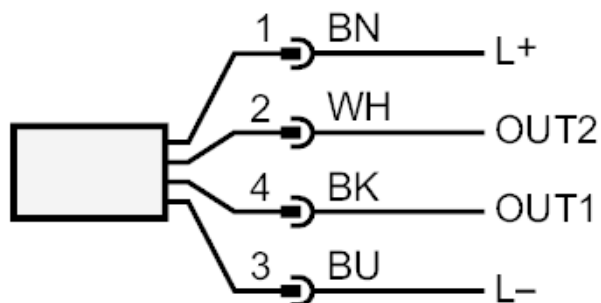
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Connection



OUT1 switching output

OUT2 switching output

analogue output

Core colours :

BK = black

BN = brown

BU = blue

WH = white