ONLINE DATA SHEET
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Pressure sensors
Pressure switch

PBSH-RB010SHGEENMA0Z

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Model Name > PBSH-RB010SHGEENMA0Z
Part No. > 6051881

Illustration may differ

At a glance

- Hygienically-graded pressure switch with display for the food and beverage industry
- Wetted parts are made from stainless steel 1.4435
- Individually programmable switching outputs and analog output
- Pressure values are indicated on the display
- Unit of pressure value in the display can be switched
- Output states are indicated separately via large LEDs

Your benefits

- Safe hygienic operation due to flush-mounted, highly resistant stainless steel membrane and hygienic process connections
- Suitability for CIP and SIP ensures high system availability
- Safe and easy setup with three large pushbuttons and legible, rotatable display
- Rotatable housing for optimum cable routing
- Wide range of available configurations enable customer-specific solutions
- High reliability: Corrosion-resistant design of wetted parts and housing with IP 65 and IP 67 enclosure ratings
- Ultimate system availability: IO-Link enables fast, reliable parameter setting when changing over products

IO-Link

Features

Pressure type:	Gauge pressure
Measuring range:	0 bar ... 10 bar
Process temperature:	-20 °C ... +125 °C, +150 °C for max. 1 h [1)]
Display:	14-segment-LED, blue, 4-digits, height 9 mm, electronically turnable by 180°, Update: 1,000, 500, 200, 100 ms (adjustable), Accuracy: ≤ 1 % of span ± 1 digit
Output signal:	IO-Link/PNP + 4 mA ... 20 mA
Rotatable housing:	Display against housing with electrical connection: 330 °, Housing against process connection: 320 °
Maximum ohmic load RA:	≤ 0.5 kΩ
Gauge pressure:	0 bar ... 1 bar up to 0 bar ... 25 bar
Absolute pressure:	0 bar ... 1 bar up to 0 bar ... 25 bar
Compound pressure:	-1 bar ... 0 bar up to -1 bar ... +24 bar
Overpressure safety:	2-fold
Zero point adjustment:	Max. + 3 % of span
Medium:	Liquid and gaseous media

[1] Only for process connection G 1 hygienic

Performance

Accuracy:	≤ ± 1 % of span (Including non-linearity, hysteresis, zero point and full scale error (corresponds to error of measurement according to IEC 61298-2))
Non-linearity:	≤ ± 0.5 % (of span (Best Fit Straight Line, BFSL) according to IEC 61298-2)
Setting accuracy of switching outputs:	≤ ± 0.5 % of span
Response time:	3 ms
Long-term drift/one-year stability:	≤ ± 0.2 % of span according to IEC 61298-2
Temperature coefficient in rated temperature range:	Typical TC of zero: In the temperature range 0 °C ... 20 °C: 0.7 % of span ⁄ 10 K. In the temperature range 20 °C … 80 °C: 0.2 % of span⁄10 K. typical TC of span: In the temperature range 0 °C … 80 °C: 0.1 % of the span⁄10 K
Rated temperature range:	0 °C ... +80 °C

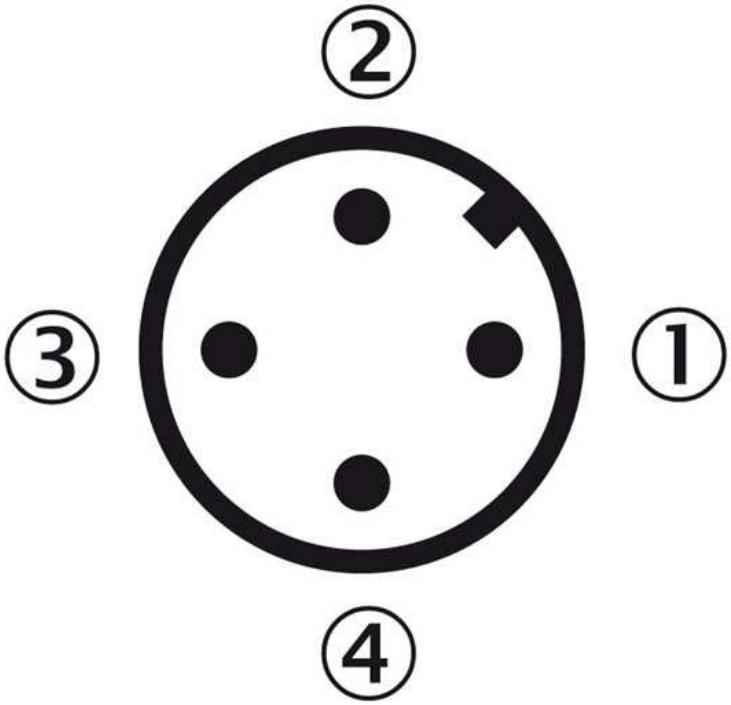
Mechanics/electronics

Process connection:	G 1 hygienic flush-mounted
Wetted parts:	Stainless steel 1.4435⁄316L
Seal:	Wetted parts: EPDM, Not wetted parts: EPDM
Housing material:	Display window: PC, Plastic head: PC + ABS, Buttons: TPE-E, Lower body: stainless steel 304
Enclosure rating:	IP 65⁄IP 67
Electrical connection:	Round connector M12 x 1, 4-pin
Power consumption:	Max. 70 mA
Electrical safety:	Short-circuit protection: QA, Q1, Q2 towards M, Protection class: III, Overvoltage protection: 40 V DC, Reverse polarity protection: L+ towards M
Protection class III:	✓
Internal transmission fluid:	Medical white oil, FDA compliant according to CFR 172.878 and 21 CFR 178.3620(a), compliant to USP, EP, and JP
Total current consumption:	Max. 170 mA (incl. switching current)
Isolation voltage:	500 V DC
CE-conformity:	EMC directive: 2004/108/EC, EN 61326-2-3

Ambient data

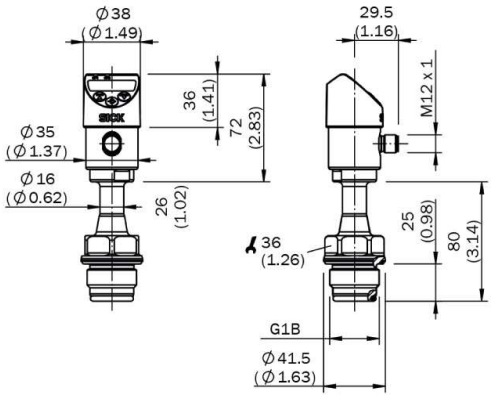
Storage temperature:	-20 °C ... +80 °C
Ambient temperature:	-20 °C ... +80 °C
Shock load:	50 g according to IEC 60068-2-27 (mechanical shock)
Vibration load:	10 g according to IEC 60068-2-6 (vibration under resonance)
Relative humidity:	45 % ... 75 %

Connection type



|1| L+: Positive supply connection
|2| QA: Analog output
|3| M: Negative supply connection
|4| C/Q1: Switching output 1 (with IO-Link: communication / switching output 1)

Dimensional drawing



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