



Pressure sensors
Pressure transmitter

PBT-RK100SM2SSSAMA0Z



Model Name > [PBT-RK100SM2SSSAMA0Z](#)
Part No. > [6043888](#)



Product may differ from illustration

At a glance

- Gauge pressure measurement ranges from 0 ... 1 kg/cm² up to 0 ... 600 kg/cm²
- A large variety of available process connections
- No moving parts: No mechanical wear, fatigue-proof, maintenance-free
- Circularly welded, hermetically sealed stainless steel membrane
- Output signal 4 ... 20 mA, 0 ... 5 V or 0 ... 10 V
- Electrical connection M12x1, L-connector acc. to DIN 175301-803 A or flying leads

Your benefits

- Compact size takes up less space
- Simple and cost-saving installation
- Available in a wide selection of configurations, enabling a perfect match to individual customer requirements
- Robust design enables higher reliability
- Excellent price/performance ratio



Features

| | |
|----------------------|---|
| Pressure type: | Gauge pressure |
| Measuring range: | 0 kg/cm ² ... 100 kg/cm ² |
| Process temperature: | 0 °C ... +80 °C |
| Output signal: | 4 mA ... 20 mA |
| Gauge pressure: | 0 bar ... 1 bar up to bar ... 600 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 |
| Medium: | Liquid and gaseous media |

Performance

| | |
|-------------------------------------|--|
| Accuracy: | ≤ ± 0,6 % of Span (with non-linearity 0.25 % and with signal output 0 ... 5 V), ≤ ± 1 % of span (with non-linearity 0.25 %), ≤ ± 1,0 % of Span (with non-linearity 0.5 %), (Including non-linearity, hysteresis, zero point and full scale error (corresponds to error of measurement according to IEC 61298-2)) |
| Non-linearity: | ≤ ± 0.5 % ((Best Fit Straight Line, BFSL) according to IEC 61298-2) |
| Response time: | < 4 ms |
| Long-term drift/one-year stability: | ≤ 0.1 % of span according to IEC 61298-2 |
| Rated temperature range: | 0 °C ... +80 °C |
| Service life: | Minimum 100 Mio. life cycles |
| Non-repeatability: | ≤ 0.1 % of span |

| | |
|-------------------------------------|---|
| Hysteresis: | ≤ 0.16 % of span |
| Signal noise: | ≤ 0.3 % of span |
| Adjustment accuracy of zero signal: | ≤ 0.5 % of span typ., ≤ 0.8 % of span max. (with non-linearity 0.5 %) |

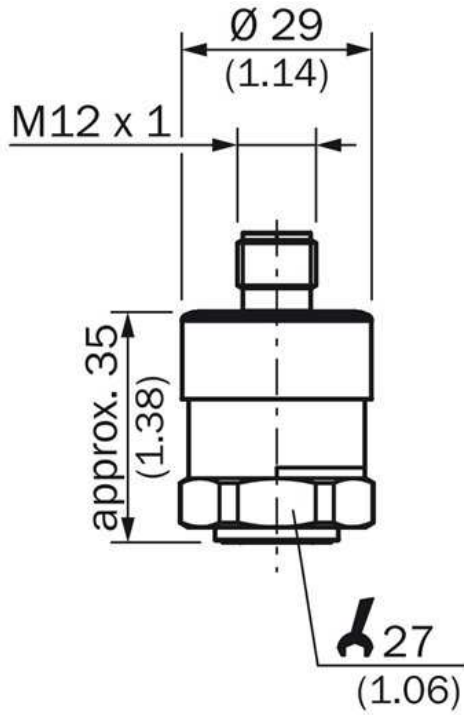
Mechanics/electronics

| | |
|------------------------------|--|
| Process connection: | M20 x 1.5 |
| Wetted parts: | Pressure connection: stainless steel 316L, Pressure sensor: stainless steel 316L (for measurement ranges from 0 bar ... 10 bar rel stainless steel 13-8 PH) |
| Seal: | Stainless steel |
| Pressure port: | Standard |
| Housing material: | Stainless steel 316L |
| Enclosure rating: | IP 67 |
| Electrical connection: | Round connector M12 x 1, 4-pin, IP 67 |
| Power consumption: | Max. 8 mA for voltage output signal, Signal current (max. 25 mA) for current output |
| Electrical safety: | Short-circuit protection: QA towards M, Protection class: III, Overvoltage protection: 32 V DC, 36 V DC with 4 mA ... 20 mA, Reverse polarity protection: L+ towards M |
| Protection class III: | ✓ |
| Weight sensor: | Ca. 80 g |
| Internal transmission fluid: | Silicone oil (only with pressure ranges < 0 bar ... 10 bar and ≤ 0 bar abs ... 25 bar abs) |
| Isolation voltage: | 500 V DC |
| CE-conformity: | Pressure equipment directive: 97/23/EC, EMC directive: 2004/108/EC, EN 61 326-2-3 |
| Reference conditions: | Reference conditions: According to IEC 61298-1 |

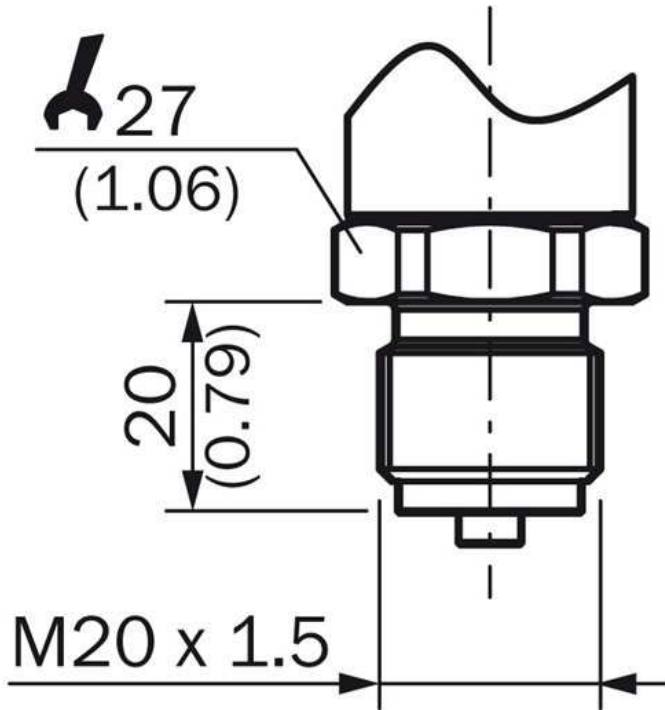
Ambient data

| | |
|----------------------|--|
| Storage temperature: | -20 °C ... +80 °C |
| Ambient temperature: | 0 °C ... +80 °C |
| Shock load: | 500 g according to IEC 60068-2-27 (mechanical shock) |
| Vibration load: | 10 g according to IEC 60068-2-6 (vibration under resonance), 20 g optional |
| Relative humidity: | 45 % ... 75 % |

Dimensional drawing housing



Dimensional drawing process connection



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