



Pressure sensors  
Pressure transmitter

PBT-RM040SM2SS0AMA0Z



**Model Name** > [PBT-RM040SM2SS0AMA0Z](#)  
**Part No.** > [6041293](#)



**At a glance**

- Gauge pressure measurement ranges from 0 ... 0.1 MPa up to 0 ... 60 MPa
- 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 MPa ... 40 MPa
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:	$\leq \pm 0,6 \%$ of Span (with non-linearity 0.25 % and with signal output 0 ... 5 V), $\leq \pm 1 \%$ of span (with non-linearity 0.25 %), $\leq \pm 1,0 \%$ 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:	$\leq \pm 0.5 \%$ ((Best Fit Straight Line, BFSL) according to IEC 61298-2)
Response time:	< 4 ms
Long-term drift/one-year stability:	$\leq 0.1 \%$ of span according to IEC 61298-2
Rated temperature range:	0 °C ... +80 °C
Service life:	Minimum 100 Mio. life cycles
Non-repeatability:	$\leq 0.1 \%$ 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

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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:	Without seal
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

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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 %

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