



ETt 01

OEM Pressure Transmitter Low Cost

Applications

- ▶ mechanical and plant engineering
- ▶ general industrial applications

Characteristics

- ▶ ceramic sensor
- ▶ accuracy 1 % FSO according to IEC 60770
- ▶ nominal pressure ranges from 0 ... 1.6 bar up to 0 ... 250 bar

Technical Data



| | | | | | | | | | | | | | |
|--|--|-----|---|----|---------------|----|--|-----|-----|-----|-----|-----|--|
| Input pressure range | | | | | | | | | | | | | |
| Nominal pressure gauge [bar] | 1.6 | 2.5 | 4 | 6 | 10 | 16 | 25 | 40 | 60 | 100 | 160 | 250 | |
| Overpressure [bar] | 5 | 5 | 12 | 12 | 20 | 50 | 50 | 120 | 120 | 200 | 400 | 400 | |
| Burst pressure ≥ [bar] | 7 | 7,5 | 15 | 18 | 30 | 70 | 75 | 150 | 180 | 300 | 500 | 750 | |
| Vacuum resistance | unlimited | | | | | | | | | | | | |
| Output signal / Supply | | | | | | | | | | | | | |
| Standard | 2-wire: | | 4 ... 20 mA | | / | | V _S = 8 ... 32 V _{DC} | | | | | | |
| Options | 3-wire: | | 0 ... 10 V | | / | | V _S = 14 ... 30 V _{DC} | | | | | | |
| | 3-wire ratiometric: | | 10 ... 90% of V _S | | / | | V _S = 2.7 ... 5 V _{DC} | | | | | | |
| Performance | | | | | | | | | | | | | |
| Accuracy ¹ | ≤ ± 1 % FSO | | | | | | | | | | | | |
| Permissible load | 2-wire: | | R _{max} = [(V _S - V _{Smin}) / 0.02 A] Ω | | | | | | | | | | |
| | 3-wire: | | R _{min} = 10 kΩ | | | | | | | | | | |
| Influence effects | supply: | | 0.05 % FSO / 10 V | | | | | | | | | | |
| | load: | | 0.05 % FSO / kΩ | | | | | | | | | | |
| Response time | 2-wire: | | ≤ 10 msec | | | | | | | | | | |
| | 3-wire: | | ≤ 3 msec | | | | | | | | | | |
| Long term stability | ≤ ± 0.3 % FSO / year at reference conditions | | | | | | | | | | | | |
| Measuring rate | 1 kHz | | | | | | | | | | | | |
| ¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability) | | | | | | | | | | | | | |
| Thermal effects (Offset and Span) / Permissible temperatures | | | | | | | | | | | | | |
| Thermal error | ≤ ± 0.5 % FSO / 10 K (typ.) | | in compensated range | | -25 ... 85 °C | | | | | | | | |
| Permissible temperatures | medium: -25 ... 125 °C | | electronics / environment: | | -25 ... 85 °C | | storage: -40 ... 85 °C | | | | | | |
| Electrical protection | | | | | | | | | | | | | |
| Short-circuit protection | permanent | | 3-wire ratiometric: none | | | | | | | | | | |
| Reverse polarity protection | no damage, but also no function | | | | | | | | | | | | |
| Electromagnetic protection | emission and immunity according to EN 61326 | | | | | | | | | | | | |
| Mechanical stability | | | | | | | | | | | | | |
| Vibration | 10 g, 25 Hz ... 2 kHz | | according to DIN EN 60068-2-6 | | | | | | | | | | |
| Shock | 500 g / 1 msec | | according to DIN EN 60068-2-27 | | | | | | | | | | |

| Materials | | | | |
|---|---|---------------------------------|--|---------------------------|
| Pressure port / housing | stainless steel 1.4301 (304) | | | |
| Seals (media wetted) | FKM | others on request | | |
| Diaphragm | ceramics Al ₂ O ₃ 96 % | | | |
| Media wetted parts | pressure port, seals, diaphragm | | | |
| Miscellaneous | | | | |
| Weight | approx. 120 g | | | |
| Current consumption | 2-wire: max. 25 mA | | 3-wire ratiometric: typ. 1.5 mA | |
| | 3-wire voltage: max. 7 mA (short circuit current: max. 20 mA) | | | |
| Operational life | > 100 x 10 ⁶ cycles | | | |
| CE-conformity | EMC Directive: 2014/30/EU | | Pressure Equipment Directive: 97/23/EC (module A) ² | |
| ² This directive is only valid for devices with maximum permissible overpressure > 200 bar | | | | |
| Wiring diagrams | | | | |
| 2-wire-system (current) | | 3-wire-system (voltage) | | |
| | | | | |
| Pin configuration | | | | |
| Electrical connection | ISO 4400 | Micro (contact distance 9.4 mm) | M12x1 (4-pin), plastic | cable colours (DIN 47100) |
| Supply + | 1 | 1 | 1 | wh (white) |
| Supply - | 2 | 2 | 2 | bn (brown) |
| Signal + (for 3-wire) | 3 | 3 | 3 | gn (green) |
| Shield | ground pin | ground pin | 4 | ye/gn (yellow / green) |
| Electrical connections (dimensions in mm) | | | | |
| | | | | |
| ³ standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C) ⁴ different cable types and lengths available, permissible temperature depends on kind of cable | | | | |
| Mechanical connection (dimensions in mm) | | | | |
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