

18.605 G

Submersible OEM-Pressure Transmitter

Applications

- ▶ level measurement in water and fuel oil tanks

Characteristics

- ▶ piezoresistive stainless steel sensor
- ▶ accuracy 0.5 % FSO according to IEC 60770
- ▶ nominal pressure ranges from 0 ... 1 mH₂O up to 0 ... 10 mH₂O



Technical Data



| Input pressure range | |
|------------------------------|--|
| Nominal pressure gauge [bar] | 0.1 0.25 0.4 0.6 1 |
| Level [mH ₂ O] | 1 2.5 4 6 10 |
| Overpressure [bar] | 1 1 1 3 3 |
| Burst pressure ≥ [bar] | 1.5 1.5 1.5 5 5 |
| Vacuum resistance | unlimited |

| Output signal / Supply | |
|------------------------|--|
| Standard | 2-wire: 4 ... 20 mA / V _S = 8 ... 32 V _{DC} |
| Option 3-wire | 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 | P _N > 160 mbar: ≤ ± 0.5 % FSO P _N ≤ 160 mbar: ≤ ± 1 % FSO |
| Permissible load | 2-wire: R _{max} = [(V _S - V _{S min}) / 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 | ≤ ± 0.2 % FSO / year at reference conditions |
| Measuring range | 1 kHz |

¹ accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)

| Thermal effects (Offset and Span) / Permissible temperatures | |
|--|---|
| Thermal error | ≤ ± 0.3 % FSO / 10 K in compensated range 0 ... 70 °C |
| Permissible temperatures | medium / electronics / environment / storage: -10 ... 70 °C |

| Electrical protection | |
|-------------------------------|---|
| Short circuit protection | permanent 3-wire ratiometric: none |
| Reverse polarity protection | no damage, but also no function |
| Electromagnetic compatibility | emission and immunity according to EN 61326 |

| Mechanical stability | |
|--|---|
| Vibration | 10 g, 25 Hz ... 2 kHz according to DIN EN 60068-2-6 |
| Shock | 100 g / 1 msec according to DIN EN 60068-2-27 |
| Materials (media wetted) | |
| Housing | stainless steel 1.4301 (304) |
| Seals | FKM |
| Diaphragm | stainless steel 1.4435 (316 L) |
| Cable sheath | PVC (oil resistant) |
| Miscellaneous | |
| Weight | approx. 120 g (without cable) cable: 25 g / m |
| Cable length | 3 m, 6 m, 9 m or 12 m; others on request |
| Suitable for following media | water, fuel oil |
| Current consumption | 2-wire: max. 25 mA 3-wire ratiometric: typ. 1.5 mA 3-wire voltage: typ. 5 mA (short circuit current: max. 20 mA) |
| Ingress protection | IP 68 |
| CE-conformity | EMC Directive: 2014/30/EU |
| Wiring diagrams | |
| 2-wire-system (current) | 3-wire-system (voltage) |
| | |
| Pin configuration | |
| Electrical connections | cable colours (IEC 60757) |
| Supply + | wh (white) |
| Supply - | bn (brown) |
| Signal + (only for 3-wire) | gn (green) |
| Shield | gnye (green-yellow) |
| Dimensions (in mm) | |
| <p style="text-align: center;">G1/4" DIN 3852 with PVC cable (with air tube)</p> | |

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Ordering code 18.605 G

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| Input | [mH ₂ O] | [bar] | | | | | | | | | | | | | | | | | | |
|------------------------------|---|-------|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|---------|
| | 1.0 | 0.1 | 1 | 0 | 0 | 0 | | | | | | | | | | | | | | |
| | 2.5 | 0.25 | 2 | 5 | 0 | 0 | | | | | | | | | | | | | | |
| | 4 | 0.4 | 4 | 0 | 0 | 0 | | | | | | | | | | | | | | |
| | 6 | 0.6 | 6 | 0 | 0 | 0 | | | | | | | | | | | | | | |
| | 10 | 1.0 | 1 | 0 | 0 | 1 | | | | | | | | | | | | | | |
| | customer | | 9 | 9 | 9 | | | | | | | | | | | | | | | consult |
| Pressure | | | | | | | | | | | | | | | | | | | | |
| | bar | | | | | | | | | | | | | | | | | | | B |
| | mH ₂ O | | | | | | | | | | | | | | | | | | | M |
| | customer | | | | | | | | | | | | | | | | | | | 9 |
| Output | | | | | | | | | | | | | | | | | | | | |
| | 4 ... 20 mA / 2-wire | | | | | | | | | | | | | | | | | | | 1 |
| | 0 ... 10 V / 3-wire | | | | | | | | | | | | | | | | | | | 3 |
| | 10 ... 90% of V _S / 3-wire ratiometric | | | | | | | | | | | | | | | | | | | R |
| | customer | | | | | | | | | | | | | | | | | | | 9 |
| Accuracy | | | | | | | | | | | | | | | | | | | | |
| P _N > 160 mbar: | ≤ ± 0.5 % FSO | | | | | | | | | | | | | | | | | | | 5 |
| P _N ≤ 160 mbar: | ≤ ± 1 % FSO | | | | | | | | | | | | | | | | | | | 8 |
| | customer | | | | | | | | | | | | | | | | | | | 9 |
| Electrical connection | | | | | | | | | | | | | | | | | | | | |
| | PVC-cable | | | | | | | | | | | | | | | | | | | 1 |
| | customer | | | | | | | | | | | | | | | | | | | 9 |
| Cable length | | | | | | | | | | | | | | | | | | | | |
| | 3 m | | | | | | | | | | | | | | | | | | | 0 |
| | 6 m | | | | | | | | | | | | | | | | | | | 0 |
| | 9 m | | | | | | | | | | | | | | | | | | | 0 |
| | 12 m | | | | | | | | | | | | | | | | | | | 0 |
| | customer | | | | | | | | | | | | | | | | | | | 9 |
| Mechanical connection | | | | | | | | | | | | | | | | | | | | |
| | G1/4" DIN 3852 | | | | | | | | | | | | | | | | | | | 3 |
| | customer | | | | | | | | | | | | | | | | | | | 9 |
| Seals | | | | | | | | | | | | | | | | | | | | |
| | FKM | | | | | | | | | | | | | | | | | | | 1 |
| | customer | | | | | | | | | | | | | | | | | | | 9 |
| Special version | | | | | | | | | | | | | | | | | | | | |
| | standard | | | | | | | | | | | | | | | | | | | 0 |
| | customer | | | | | | | | | | | | | | | | | | | 9 |

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