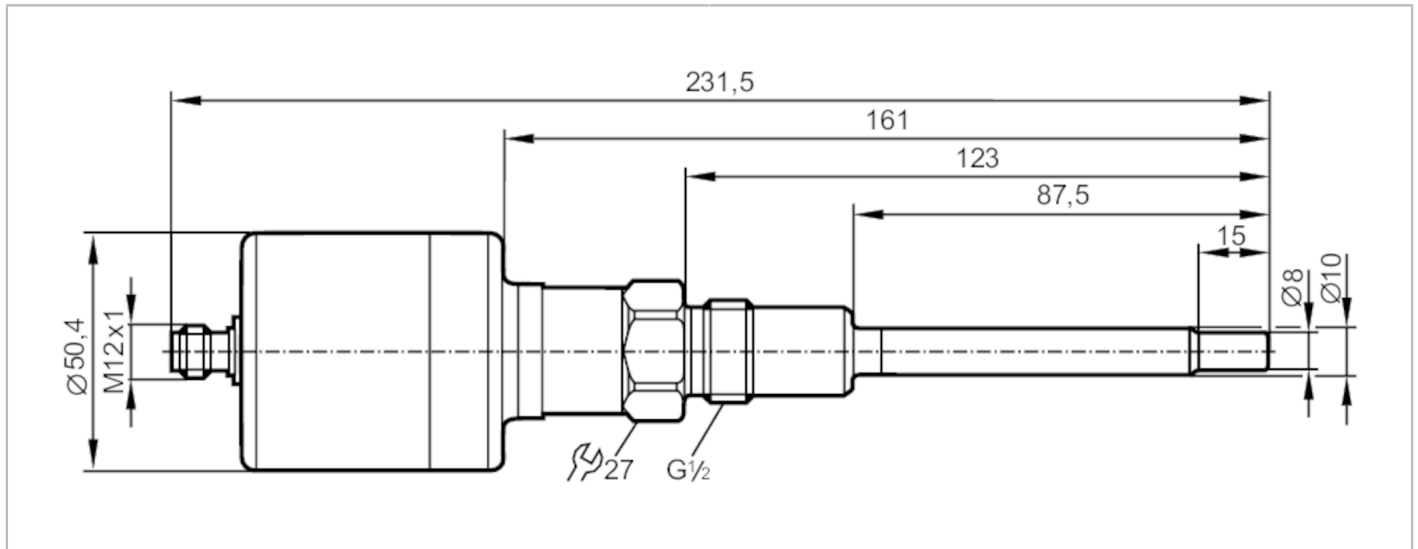


TAD191



Temperature transmitter

TAD088KLER12-A-DKG/US



EC 1935/2004 EHEDG Certified



Application

| | |
|---------------------------------|--|
| Measuring element | 1 x Pt 1000 + 1 x NTC; (thermically coupled, with backup function (temperature measuring even if one element fails)) |
| Media | liquids and gases |
| Pressure rating [bar] | 50 |
| Minimum installation depth [mm] | 25 |

Electrical data

| | |
|-----------------------------|---|
| Operating voltage [V] | 18...32 DC; ("supply class 2" to cULus) |
| Current consumption [mA] | 6; (24 V) |
| Protection class | III |
| Reverse polarity protection | yes |
| Power-on delay time [s] | 8 |
| Integrated watchdog | yes |

Inputs / outputs

| | |
|------------------------------|---|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analogue outputs: 1 |
|------------------------------|---|

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| Outputs | | |
|---|------|---|
| Total number of outputs | | 2 |
| Output signal | | switching signal; analogue signal; IO-Link; (configurable) |
| Electrical design | | PNP/NPN |
| Number of digital outputs | | 1 |
| Output function | | normally open / normally closed / diagnostic signal; (parameterisable) |
| Max. voltage drop switching output DC | [V] | 2 |
| Permanent current rating of switching output DC | [mA] | 150; (200 (...60°C); 250 (...40 °C)) |
| Diagnostic output | | diagnostic output for drift and fault monitoring |
| Number of analogue outputs | | 1 |
| Analogue current output | [mA] | 4...20 |
| Max. load | [Ω] | (U _b - 15 V) x 50 |
| Short-circuit protection | | yes |
| Type of short-circuit protection | | pulsed |
| Overload protection | | yes |
| Measuring/setting range | | |
| Measuring range | | -25...160 °C -13...320 °F |
| Note on measuring range | | scalable |
| Factory setting | | 0...150 °C / 32...302 °F |
| Drift warning | | 0.2...5 °C 0.4...9 °F |
| Drift alarm | | 0.2...5 °C 0.4...9 °F |
| In steps of | | 0.05 °C 0.1 °F |
| Resolution | | |
| Resolution of analogue output | [K] | 0.05 |
| Accuracy / deviations | | |
| Precision analogue output | [K] | ± 0,2 (-10...130°C); ± 0,3 (130...140°C); ± 0,3 ± 0,1% MS (-25...-10/140...160°C); (probe completely inserted into the measured medium up to the sealing chamfer) |
| Temperature coefficient [% of the span / 10 K] | | < ± 0,01; (in case of deviation from the reference condition 25 ± 5 °C) |
| Response times | | |
| Dynamic response T05 / T09 | [s] | 3 / 6 |
| Software / programming | | |
| Parameter setting options | | drift warning/drift alarm threshold; Fail-Safe; Display unit; scaling of the analogue output; redundancy switching; performance diagnostic output; switching logic; normally open / normally closed |

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| Interfaces | |
|------------------------------|--|
| Communication interface | IO-Link |
| Transmission type | COM1 (4,8 kBaud) |
| IO-Link revision | 1.1 |
| SDCI standard | IEC 61131-9 CDV |
| IO-Link device ID | 323 d / 00 01 43 h |
| Profiles | Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis |
| SIO mode | yes |
| Required master port type | A |
| Process data analogue | 1 |
| Process data binary | 1 |
| Min. process cycle time [ms] | 18.8 |

| Operating conditions | |
|--------------------------|---------------|
| Ambient temperature [°C] | -25...70 |
| Storage temperature [°C] | -40...85 |
| Protection | IP 68; IP 69K |

| Tests / approvals | | |
|----------------------|---|---------------------|
| EMC | DIN EN 61000-6-2 | |
| | DIN EN 61000-6-3 | |
| Shock resistance | DIN EN 68000-2-27 | 50 g (11 ms) |
| Vibration resistance | DIN EN 60068-2-6 | 20 g (10...2000 Hz) |
| MTTF [years] | 213 | |
| Note on approval | Including free 5-point calibration certificate. | |

| Mechanical data | |
|---|---|
| Weight [g] | 373.8 |
| Materials | stainless steel (1.4404 / 316L); PEI; FKM |
| Materials (wetted parts) | stainless steel (1.4404 / 316L) |
| Tightening torque [Nm] | 30...50 |
| Process connection | threaded connection G 1/2 external thread |
| Surface characteristics Ra/Rz of the wetted parts | Ra: < 0.6 |
| Installation length EL [mm] | 87.5 |

| Remarks | |
|---------------|-------------------------|
| Remarks | MS = set measuring span |
| Pack quantity | 1 pcs. |

Electrical connection

Connector: 1 x M12; Contacts: gold-plated



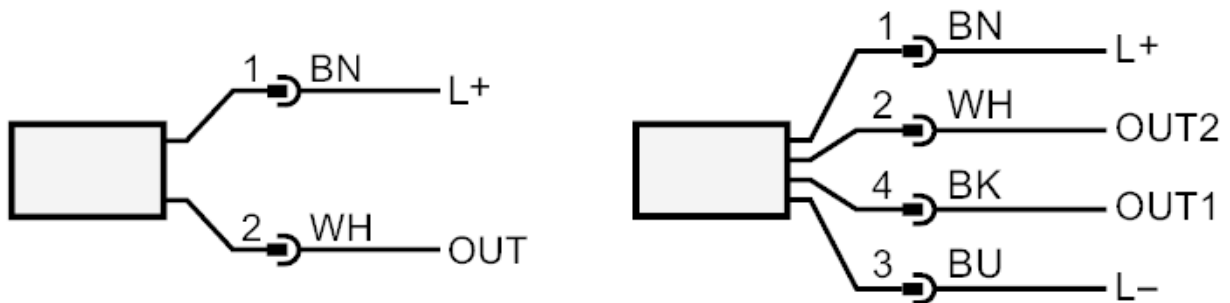
TAD191



Temperature transmitter

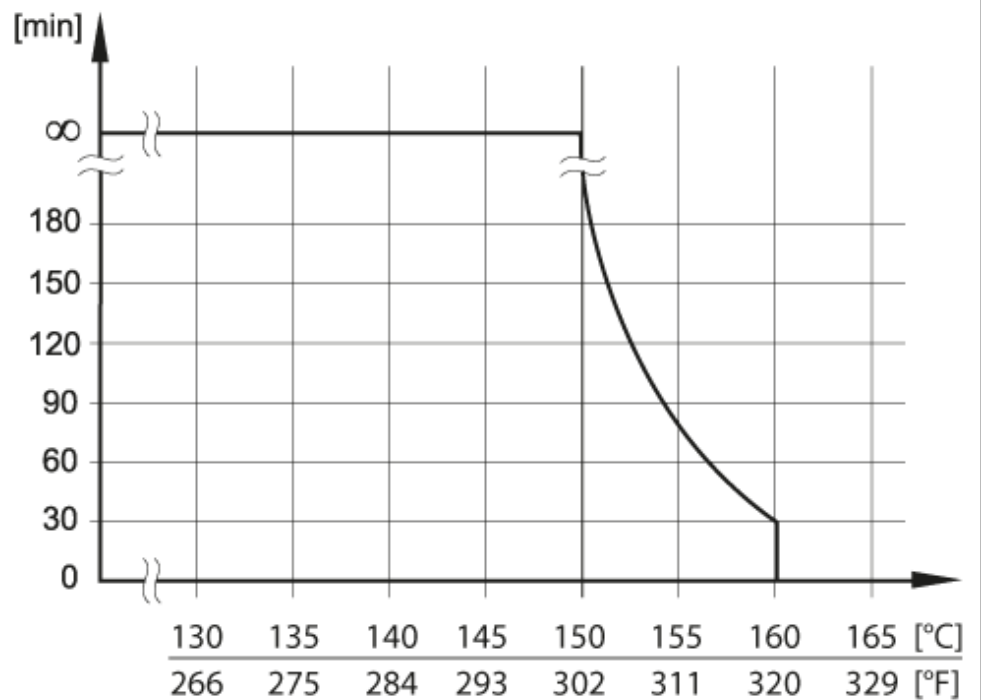
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Connection



- connection for 2-wire operation
- OUT: analogue output
- connection for 3-wire operation
- OUT2: analogue output
- OUT1: diagnosis / IO-Link

Diagrams and graphs



maximum operating time depending on the medium temperature