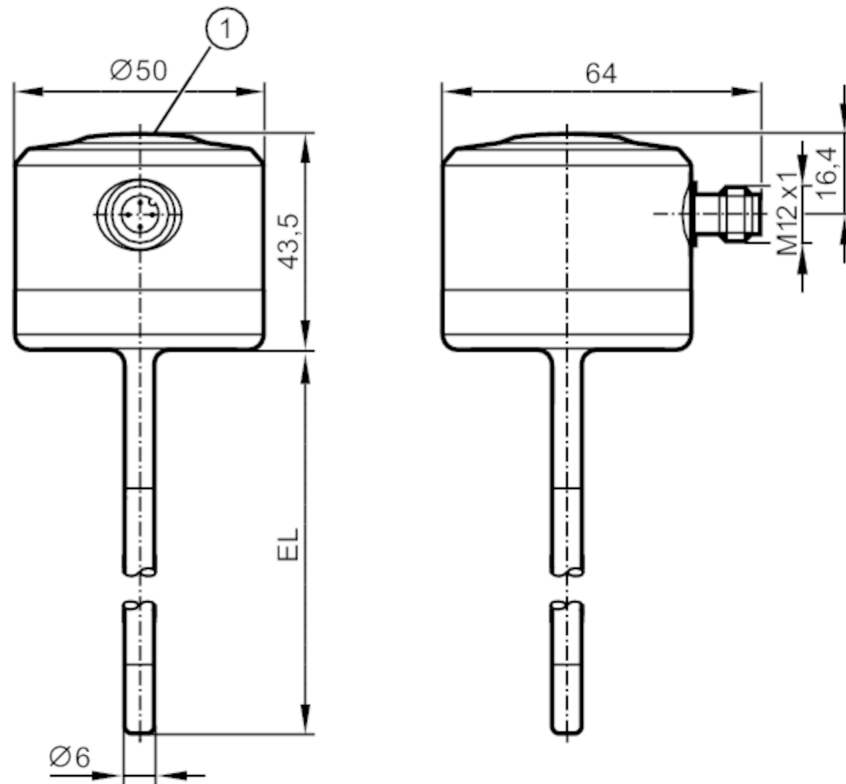


TCC241



Temperature transmitter

TCC150K1ED06-A-DKG/US



1 LED



Product characteristics

| | | |
|------------------------------|---|--------------|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analogue outputs: 1 | |
| Measuring range | -25...160 °C | -13...320 °F |
| Process connection | diameter Ø 6 mm | |
| Installation length EL [mm] | 150 | |

Application

| | |
|-----------------------|----------------------|
| Special feature | Gold-plated contacts |
| Measuring element | 1 x Pt 1000 |
| Reference element | 1 x NTC |
| Media | liquids and gases |
| Pressure rating [bar] | 160 |

Electrical data

| | |
|-----------------------------|---|
| Operating voltage [V] | 18...32 DC; ("supply class 2" to cULus) |
| Current consumption [mA] | 10; (24 V) |
| Protection class | III |
| Reverse polarity protection | yes |
| Power-on delay time [s] | 6 |
| Integrated watchdog | yes |

Inputs / outputs

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



Temperature transmitter

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| Outputs | |
|--|---|
| Total number of outputs | 2 |
| Output signal | analogue signal; IO-Link; calibration check status |
| Electrical design | PNP/NPN |
| Number of digital outputs | 1 |
| Output function | normally closed; (diagnostic signal) |
| Max. voltage drop switching output DC [V] | 2 |
| Permanent current rating of switching output DC [mA] | 100 |
| Diagnostic output | calibration check status and error diagnostics |
| Number of analogue outputs | 1 |
| Analogue current output [mA] | 4...20 |
| Max. load [Ω] | $(U_b - 15 \text{ V}) \times 50$ |
| 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 | -10...150 °C / 14...302 °F |
| Calibration check limit [K] | 0.5...3 |
| In steps of [K] | 0.05 |
| Resolution | |
| Resolution of analogue output [K] | 0.05 |
| Accuracy / deviations | |
| Precision analogue output [K] | $\pm 0,2$ |
| Precision IO-Link [K] | $\pm 0,2$ |
| Temperature coefficient analogue output [% of the span / 10 K] | $< \pm 0,02$; (in case of deviation from the reference condition $25 \pm 5 \text{ °C}$) |
| Temperature coefficient IO-Link [% of the span / 10 K] | $< \pm 0,01$; (in case of deviation from the reference condition $25 \pm 5 \text{ °C}$) |
| Response times | |
| Dynamic response T05 / T09 [s] | 1,5 / 4 |
| Software / programming | |
| Parameter setting options | Display unit; scaling of the analogue output; calibration check limit; switching logic diagnostic output; simulation mode |

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| Interfaces | | |
|---|---|---------------------|
| Communication interface | IO-Link | |
| Transmission type | COM2 (38,4 kBaud) | |
| IO-Link revision | 1.1 | |
| SDCI standard | IEC 61131-9 CDV | |
| Profiles | Digital Measuring Sensor, Common Profile, Blob Transfer | |
| SIO mode | yes | |
| Required master port type | A | |
| Process data analogue | 1 | |
| Process data binary | 1 | |
| Min. process cycle time [ms] | 4.4 | |
| IO-Link resolution temperature [K] | 0.01 | |
| Supported DeviceIDs | Type of operation | DeviceID |
| | Default | 1129 |
| Operating conditions | | |
| Ambient temperature [°C] | -25...70 | |
| Note on ambient temperature | max. internal device temperature: 125 °C | |
| Storage temperature [°C] | -40...100 | |
| 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 | 35 g (10...2000 Hz) |
| MTTF [years] | 329 | |
| Note on approval | factory certificate available as download at www.factory-certificate.ifm | |
| UL approval | UL Approval no. | K021 |
| | File number UL | E217884 |
| Mechanical data | | |
| Weight [g] | 374.9 | |
| Dimensions [mm] | Ø 50 / L = 193.5 | |
| Materials | stainless steel (1.4404 / 316L); PEI; FKM; PFA | |
| Materials (wetted parts) | stainless steel (1.4404 / 316L); PEEK | |
| Process connection | diameter Ø 6 mm | |
| Surface characteristics Ra/Rz of the wetted parts | Ra: < 0.8 | |
| Probe diameter [mm] | 6 | |
| Installation length EL [mm] | 150 | |
| Remarks | | |
| Remarks | MS = set measuring span operating voltage "supply class 2" according to cULus | |
| Pack quantity | 1 pcs. | |
| Electrical connection | | |
| Connector: 1 x M12; Contacts: gold-plated | | |

TCC241

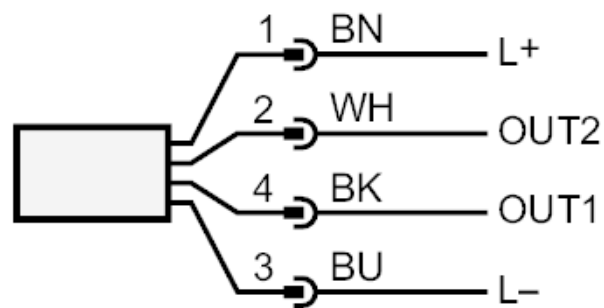


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Connection



OUT2: analogue output

OUT1: Diagnostic output / IO-Link