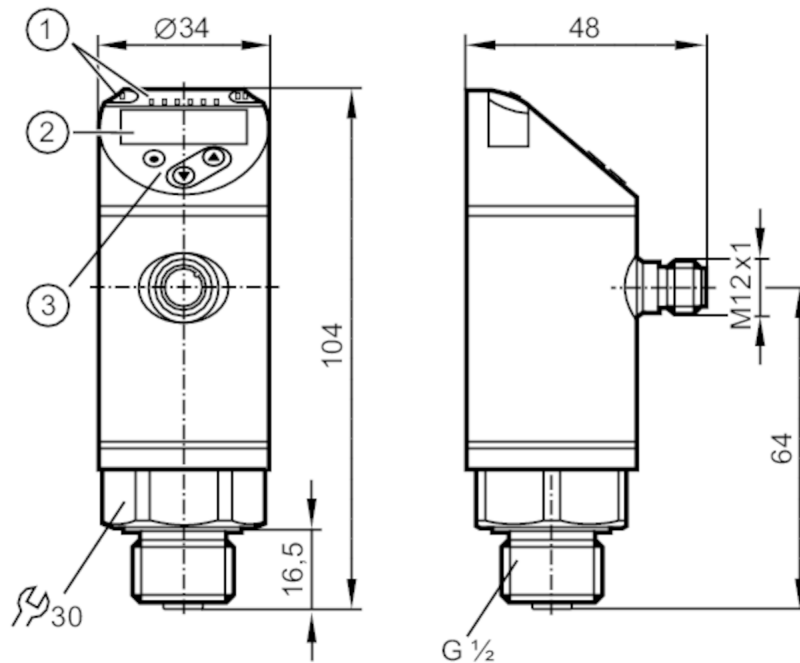




Evaluation unit with display for PT100/Pt1000 temperature sensors

TR-000KDBM12-QFPKG/US/



- 1 LEDs Display unit / switching status
- 2 alphanumeric display 4-digit red/green
- 3 programming buttons



Product characteristics

| | | |
|------------------------------|---|----------------|
| Number of inputs and outputs | Number of digital outputs: 2 | |
| Measuring range | -100...600 °C | -148...1112 °F |
| Process connection | threaded connection G 1/2 external thread | |

Application

| | |
|-----------------|---|
| Special feature | Gold-plated contacts |
| Application | for Pt100 and Pt1000 measuring elements |

Electrical data

| | | |
|-----------------------------|------|---|
| Operating voltage | [V] | 18...32 DC; ("supply class 2" to cULus) |
| Current consumption | [mA] | < 50 |
| Protection class | | III |
| Reverse polarity protection | | yes |
| Power-on delay time | [s] | 1 |
| Integrated watchdog | | yes |

Inputs / outputs

| | |
|------------------------------|------------------------------|
| Number of inputs and outputs | Number of digital outputs: 2 |
|------------------------------|------------------------------|



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| Outputs | | |
|---|------|--|
| Total number of outputs | | 2 |
| Output signal | | switching signal; IO-Link; (configurable) |
| Electrical design | | PNP/NPN |
| Number of digital outputs | | 2 |
| Output function | | normally open / normally closed; (parameterisable) |
| Max. voltage drop switching output DC | [V] | 2.5 |
| Permanent current rating of switching output DC | [mA] | 250 |
| Short-circuit protection | | yes |
| Type of short-circuit protection | | pulsed |
| Overload protection | | yes |
| Measuring/setting range | | |
| Measuring range | | -100...600 °C -148...1112 °F |
| Set point SP | | -99.8...600 °C -147.6...1112 °F |
| Reset point rP | | -100...599.8 °C -148...1111.6 °F |
| In steps of | | 0.1 °C 0.1 °F |
| Resolution | | |
| Resolution of switching output | [K] | 0.1 |
| Resolution of display | [K] | 0.1 |
| Accuracy / deviations | | |
| Switch point accuracy | [K] | ± 0,3 + (± 0,1 % MS) |
| Display accuracy | [K] | ± 0,3 + (± 0,1 % MS) |
| Temperature coefficient [% of the span / 10 K] | | 0,1; (in case of deviation from the reference condition 25 ± 5 °C) |
| Response times | | |
| Response time | [ms] | 390 |
| Software / programming | | |
| Parameter setting options | | hysteresis / window; normally open / normally closed; switching logic; switch-on/switch-off delay; Damping; Display unit |
| Interfaces | | |
| Communication interface | | IO-Link |
| Transmission type | | COM 2 (38,4 kBaud) |
| IO-Link revision | | 1.1 |
| Operating conditions | | |
| Ambient temperature | [°C] | -25...80 |
| Storage temperature | [°C] | -40...100 |
| Protection | | IP 67 |

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| Tests / approvals | | |
|----------------------|------------------|---------------------|
| EMC | DIN EN 61000-6-3 | |
| | DIN EN 61000-6-2 | |
| Shock resistance | DIN IEC 68-2-27 | 50 g (11 ms) |
| Vibration resistance | DIN EN 60068-2-6 | 20 g (10...2000 Hz) |
| MTTF [years] | 252 | |
| UL approval | UL Approval no. | K012 |

| Mechanical data | | |
|--------------------|--|--|
| Weight [g] | 198 | |
| Materials | stainless steel (1.4404 / 316L); stainless steel (1.4301 / 304); PBT+PC-GF30; PBT-GF20; PC | |
| Process connection | threaded connection G 1/2 external thread | |

| Displays / operating elements | | |
|-------------------------------|------------------|---|
| Display | Display unit | 2 x LED, green |
| | switching status | 2 x LED, yellow |
| | measured values | alphanumeric display, red/green 4-digit |

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

Electrical connection

Connector: 1 x M12; Contacts: gold-plated



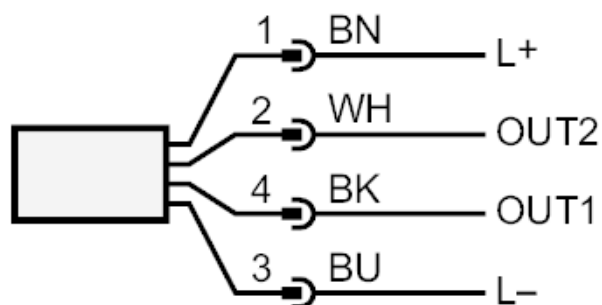
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Connection



OUT1: switching output / IO-Link

OUT2: switching output

colours to DIN EN 60947-5-2