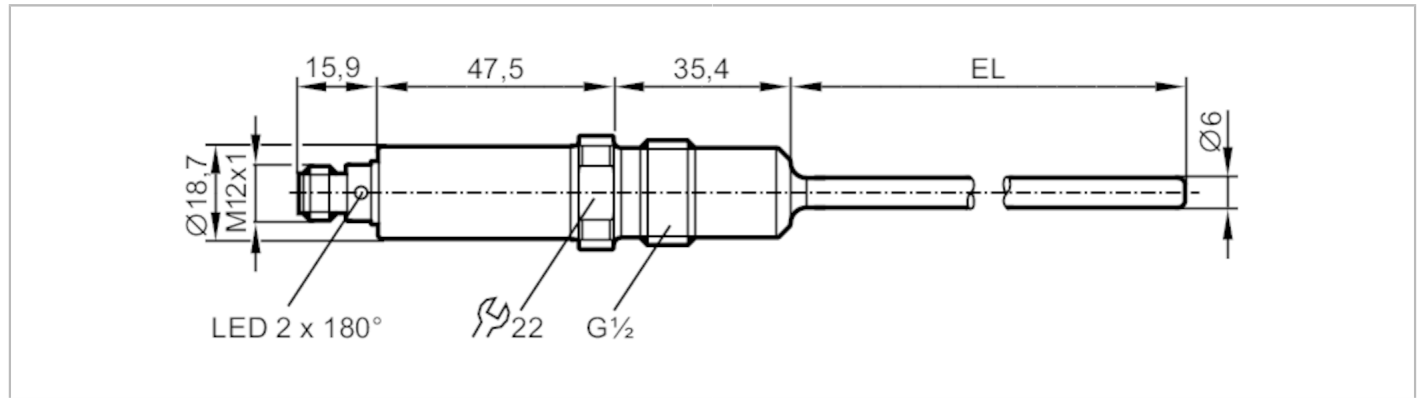


# TA2502



## Temperature transmitter

TA-030CLER12- - /US



EC 1935/2004

EHEDG Certified

FCM



### Product characteristics

|                              |  |
|------------------------------|--|
| Number of inputs and outputs | Number of analog outputs: 1                            |
| Measuring range [°C]         | -50...200  |
| Communication interface      | IO-Link  |
| Process connection           | threaded connection G 1/2 external thread sealing cone |
| Installation length EL [mm]  | 30   |

### Application

|  |   |
|--|---|
| Measuring element                              | 1 x Pt 1000; (to DIN EN 60751, class A) |
| Media  | liquids and gases                       |
| Pressure rating                                | 160 bar / 16 MPa                        |
| Vacuum resistance                              | -1000 mbar / -0.1 MPa                   |
| MAWP (for applications according to CRN) [bar] | 160                                     |

### Electrical data

|                             |   |
|-----------------------------|---|
| Operating voltage [V]       | 18...32 DC; (cULus - Class 2 source required) |
| Current consumption [mA]    | < 50  |
| Protection class            | III   |
| Reverse polarity protection | yes   |
| Power-on delay time [s]     | 2   |

### Inputs / outputs

|                              |                             |
|------------------------------|-----------------------------|
| Number of inputs and outputs | Number of analog outputs: 1 |
|------------------------------|-----------------------------|

### Outputs

|                            |  |
|----------------------------|--|
| Total number of outputs    | 1                                      |
| Output signal              | analog signal; IO-Link; (configurable) |
| Number of analog outputs   | 1                                      |
| Analog current output [mA] | 4...20                                 |
| Max. load [Ω]              | 250; ((18...19 V); 19...32 V: 300 Ω)   |
| Short-circuit protection   | yes                                    |
| Overload protection        | yes                                    |

### Measuring/setting range

|                      |           |
|----------------------|-----------|
| Probe length L [mm]  | 30        |
| Measuring range [°C] | -50...200 |

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|   |   |                         |
|---|---|-------------------------|
| Factory setting                                   | 0...200 °C  |                         |
| <b>Resolution</b>                                 |   |                         |
| Resolution of analog output [K]                   | 0.04  |                         |
| <b>Accuracy / deviations</b>                      |   |                         |
| Precision analog output [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)  |                         |
| <b>Reaction times</b>                             |   |                         |
| Dynamic response T05 / T09 [s]                    | < 0,5 / < 2   |                         |
| <b>Interfaces</b>                                 |   |                         |
| Communication interface                           | IO-Link   |                         |
| Transmission type                                 | COM2 (38,4 kBaud)   |                         |
| IO-Link revision                                  | 1.1   |                         |
| Profiles  | Smart Sensor - SSP 0  | Generic Profiled Sensor |
|   | Function  | Device identification   |
|   | Function  | Process data variable   |
| Min. process cycle time [ms]                      | 2.3   |                         |
| Supported DeviceIDs                               | <b>Type of operation</b>  | <b>DeviceID</b>         |
|   | default   | 446                     |
| <b>Operating conditions</b>                       |   |                         |
| Ambient temperature [°C]                          | -25...80  |                         |
| Note on ambient temperature                       | at medium temperature: < 160 °C   |                         |
|   | -25...60 °C   |                         |
|   | at medium temperature: < 200 °C   |                         |
| Storage temperature [°C]                          | -40...100   |                         |
| Protection  | IP 67; IP 68; IP 69K  |                         |
| <b>Tests / approvals</b>                          |   |                         |
| EMC   | DIN EN 61000-6-2  |                         |
|   | DIN EN 61000-6-3  |                         |
| Shock resistance                                  | DIN IEC 68-2-27   | 50 g (11 ms)            |
| Vibration resistance                              | DIN IEC 68-2-6  | 10 g (10...2000 Hz)     |
| MTTF [years]                                      | 232   |                         |
| Note on approval                                  | Factory certificate available as download at <a href="http://www.factory-certificate.ifm">www.factory-certificate.ifm</a> |                         |
| UL approval                                       | UL approval number  | K002                    |
| <b>Mechanical data</b>                            |   |                         |
| Weight [g]  | 180.5   |                         |
| Housing   | tubular   |                         |
| Dimensions [mm]                                   | Ø 18.7 / L = 128.8  |                         |
| Material  | stainless steel (1.4404 / 316L); PEI; FKM   |                         |
| Materials (wetted parts)                          | stainless steel (1.4404 / 316L) electropolished   |                         |
| Tightening torque [Nm]                            | 30...50   |                         |
| Process connection                                | threaded connection G 1/2 external thread sealing cone  |                         |
| Surface characteristics Ra/Rz of the wetted parts | Ra < 0.8 µm   |                         |
| Probe diameter [mm]                               | 6   |                         |

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Installation length EL [mm] 30

| Remarks       |  |
|---------------|--|
| Remarks       | MS = set measuring span<br>The values for accuracy apply to flowing water. |
| Pack quantity | 1 pcs.   |

### Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4



### Connection

