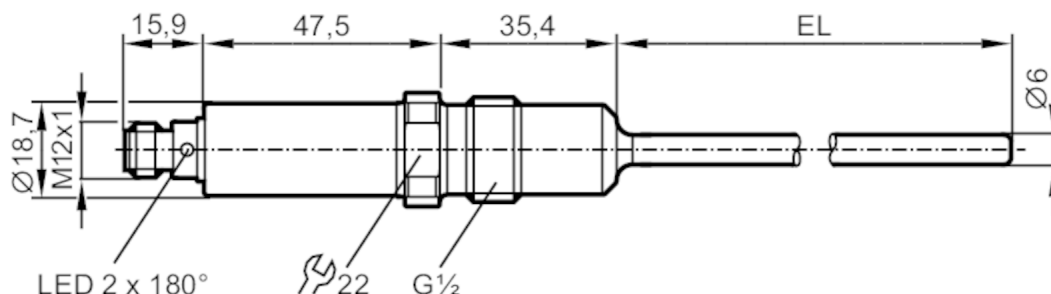


# TA2512



## Temperature transmitter

TA-050CLER12- - /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]  | 50                                                     |

### 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]  | 50        |
| Measuring range [°C] | -50...200 |

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|                                                   |                                                                                                                           |                         |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Factory setting                                   | 0...200 °C                                                                                                                |                         |
| Resolution                                        |                                                                                                                           |                         |
| Resolution of analog output                       | [K]                                                                                                                       | 0.04                    |
| Accuracy / deviations                             |                                                                                                                           |                         |
| Precision analog output                           | [K]                                                                                                                       | ± 0,3 + (± 0,1 % MS)    |
| Temperature coefficient                           | 0,1; (In case of deviation from the reference condition 25 ± 5 °C)                                                        |                         |
| [% of the span / 10 K]                            |                                                                                                                           |                         |
| Reaction times                                    |                                                                                                                           |                         |
| Dynamic response T05 / T09                        | [s]                                                                                                                       | < 0,5 / < 2             |
| Interfaces                                        |                                                                                                                           |                         |
| 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                               | Type of operation                                                                                                         | DeviceID                |
|                                                   | default                                                                                                                   | 446                     |
| Operating conditions                              |                                                                                                                           |                         |
| 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                                                                                                      |                         |
| Tests / approvals                                 |                                                                                                                           |                         |
| 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                    |
| Mechanical data                                   |                                                                                                                           |                         |
| Weight                                            | [g]                                                                                                                       | 183                     |
| Housing                                           | tubular                                                                                                                   |                         |
| Dimensions                                        | [mm]                                                                                                                      | Ø 18.7 / L = 148.8      |
| 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] 50

### Remarks

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

### Electrical connection

Connector: 1 x M12; coding: A



### Connection

