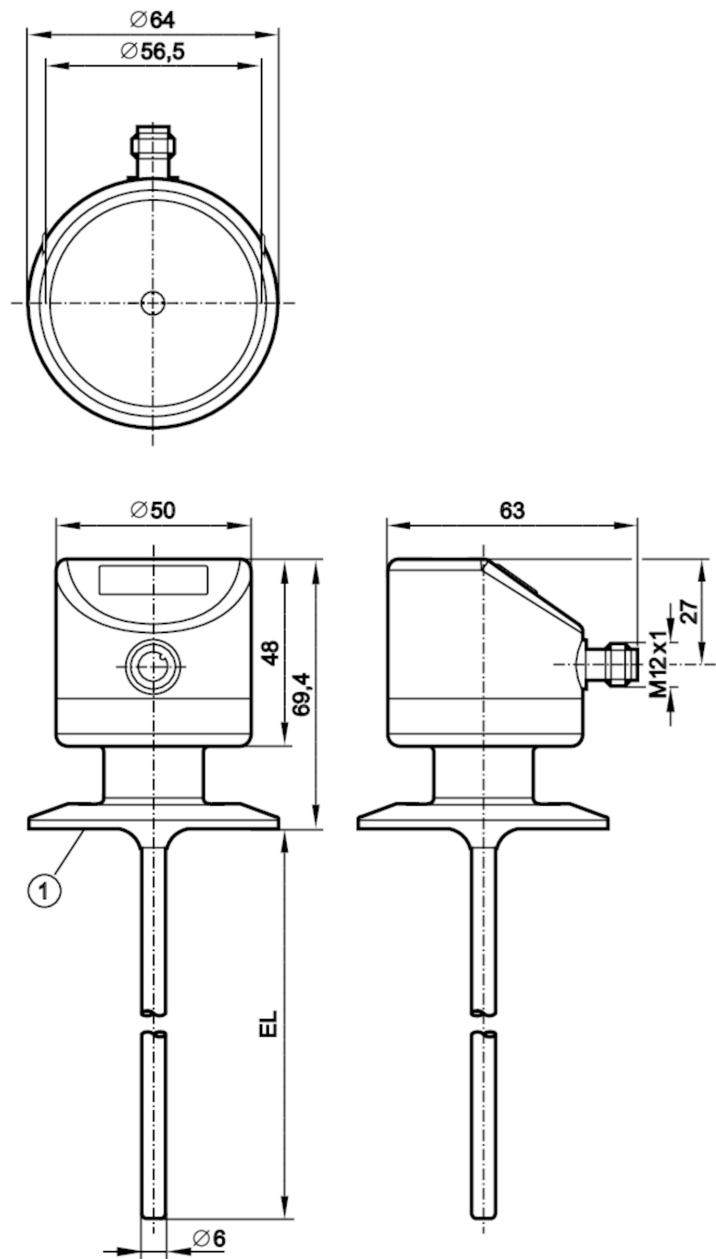


TD2943



Temperature transmitter with display

TD-150FFEC02-A-ZVG/US



1 2" Clamp ISO 2852  
EL = installation length



| Product characteristics      |                                         |              |
|------------------------------|-----------------------------------------|--------------|
| Number of inputs and outputs | Number of analogue outputs: 1           |              |
| Measuring range              | -50...150 °C                            | -58...302 °F |
| Communication interface      | IO-Link                                 |              |
| Process connection           | Clamp DN50 (2") DIN 32676 (ISO 2852)    |              |
| Installation length EL       | [mm]                                    | 150          |
| Application                  |                                         |              |
| Measuring element            | 1 x Pt 1000; (to DIN EN 60751, class A) |              |
| Media                        | liquids and gases                       |              |



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|                                                   |                                                                |                                         |
|---------------------------------------------------|----------------------------------------------------------------|-----------------------------------------|
| Pressure rating                                   | 100 bar                                                        | 10 MPa                                  |
| Vacuum resistance                                 | -1000 mbar                                                     | -0.1 MPa                                |
| 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]                                                            | 2                                       |
| Inputs / outputs                                  |                                                                |                                         |
| Number of inputs and outputs                      | Number of analogue outputs: 1                                  |                                         |
| Outputs                                           |                                                                |                                         |
| Total number of outputs                           | 1                                                              |                                         |
| Output signal                                     | analogue signal; IO-Link; (configurable)                       |                                         |
| Number of analogue outputs                        | 1                                                              |                                         |
| Analogue current output                           | [mA]                                                           | 4...20                                  |
| Max. load                                         | [Ω]                                                            | 300                                     |
| Short-circuit protection                          | yes                                                            |                                         |
| Overload protection                               | yes                                                            |                                         |
| Measuring/setting range                           |                                                                |                                         |
| Probe length L                                    | [mm]                                                           | 150                                     |
| Measuring range                                   | -50...150 °C                                                   | -58...302 °F                            |
| Factory setting                                   | 0...300 °F                                                     |                                         |
| Resolution                                        |                                                                |                                         |
| Resolution of analogue output                     | [K]                                                            | 0.04                                    |
| Resolution of display                             | [K]                                                            | 0.28                                    |
| Accuracy / deviations                             |                                                                |                                         |
| Precision analogue output                         | [K]                                                            | ± 0,3 + (± 0,1 % MS)                    |
| Temperature coefficient<br>[% of the span / 10 K] | 0,1; (in case of deviation from the reference condition 25 °C) |                                         |
| Response times                                    |                                                                |                                         |
| Dynamic response T05 / T09                        | [s]                                                            | 1 / 3                                   |
| Interfaces                                        |                                                                |                                         |
| Communication interface                           | IO-Link                                                        |                                         |
| Transmission type                                 | COM2 (38,4 kBaud)                                              |                                         |
| IO-Link revision                                  | 1.1                                                            |                                         |
| Profiles                                          | Smart Sensor - SSP 0                                           | Generic Profiled Sensor                 |
| Min. process cycle time                           | [ms]                                                           | 2.3                                     |
| Supported DeviceIDs                               | Type of operation<br>default                                   | DeviceID<br>376                         |
| Operating conditions                              |                                                                |                                         |
| Ambient temperature                               | [°C]                                                           | -25...80                                |
| Storage temperature                               | [°C]                                                           | -40...100                               |
| Protection                                        | IP 67; IP 68; IP 69K                                           |                                         |



## Temperature transmitter with display

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| 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) |
| 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 no.                                                                                                           | K001                |

| Mechanical data                                   |      |                                               |
|---------------------------------------------------|------|-----------------------------------------------|
| Weight                                            | [g]  | 488.5                                         |
| Materials                                         |      | stainless steel (316L/1.4404); PEI; FKM       |
| Materials (wetted parts)                          |      | stainless steel (316L/1.4404) electropolished |
| Process connection                                |      | Clamp DN50 (2") DIN 32676 (ISO 2852)          |
| Surface characteristics Ra/Rz of the wetted parts |      | Ra < 0.8 µm                                   |
| Probe diameter                                    | [mm] | 6                                             |
| Installation length EL                            | [mm] | 150                                           |

| Displays / operating elements |  |                                                                  |
|-------------------------------|--|------------------------------------------------------------------|
| Display                       |  | 7-segment LED display, 4-digit<br>display unit / status, °C / °F |

| 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



### Connection

