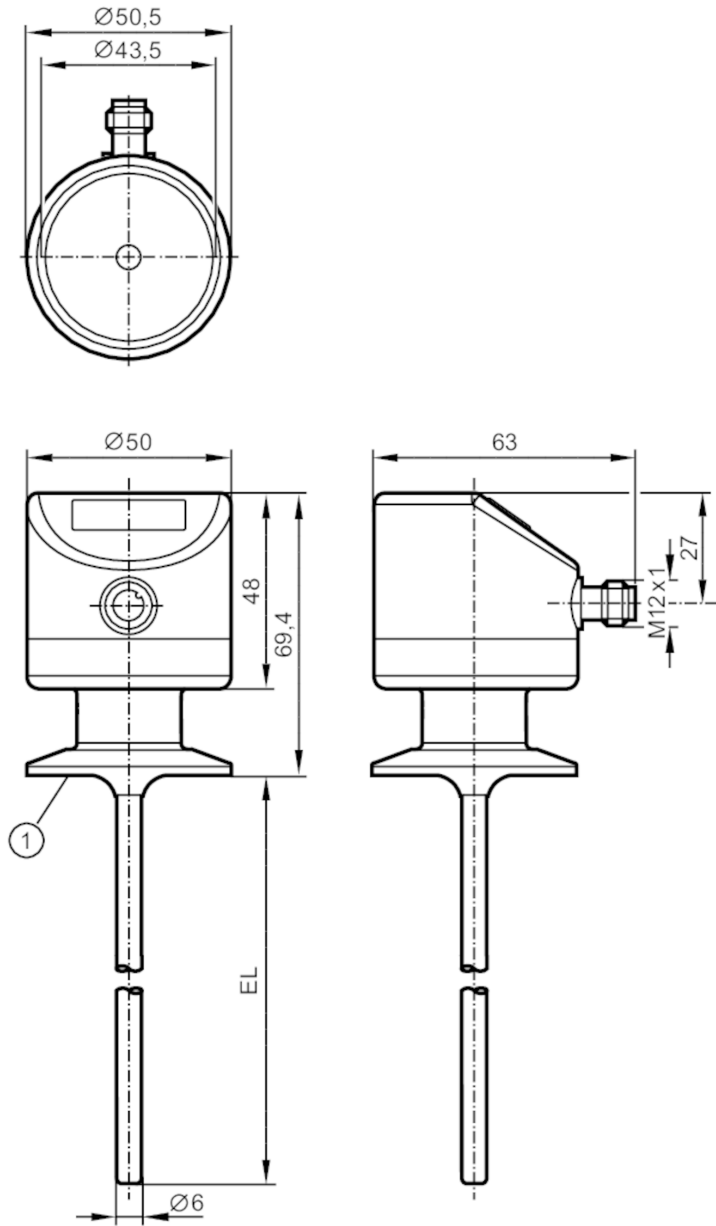


TD2813



Temperature Transmitter with Display

TD-050FFEC01-A-ZVG/US



1 1.5" Clamp ISO 2852  
EL = Installation length



| Product characteristics      |                                                   |              |
|------------------------------|---------------------------------------------------|--------------|
| Number of inputs and outputs | Number of analog outputs: 1                       |              |
| Measuring range              | -50...150 °C                                      | -58...302 °F |
| Communication interface      | IO-Link                                           |              |
| Process connection           | Clamp DN25...DN40 (1...1,5") DIN 32676 (ISO 2852) |              |
| Installation length EL       | [mm]                                              | 50           |
| 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                |
| MAWP (for applications according to CRN) [bar] | 70                                                             |                         |
| 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]                                  | 300                                                            |                         |
| Short-circuit protection                       | yes                                                            |                         |
| Overload protection                            | yes                                                            |                         |
| Measuring/setting range                        |                                                                |                         |
| Probe length L [mm]                            | 50                                                             |                         |
| Measuring range                                | -50...150 °C                                                   | -58...302 °F            |
| Factory setting                                | 0...300 °F                                                     |                         |
| Resolution                                     |                                                                |                         |
| Resolution of analog output [K]                | 0.04                                                           |                         |
| Resolution of display [K]                      | 0.28                                                           |                         |
| Accuracy / deviations                          |                                                                |                         |
| 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 °C) |                         |
| Reaction 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                                              | DeviceID                |
|                                                | default                                                        | 376                     |
| Operating conditions                           |                                                                |                         |
| Ambient temperature [°C]                       | -25...80                                                       |                         |
| Storage temperature [°C]                       | -40...100                                                      |                         |



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|            |                      |
|------------|----------------------|
| 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) |
| 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                                                                                                        | K001                |

## Mechanical data

|                                                   |      |                                                   |
|---------------------------------------------------|------|---------------------------------------------------|
| Weight                                            | [g]  | 335                                               |
| Housing                                           |      | tubular                                           |
| Dimensions                                        | [mm] | Ø 50.5 / L = 119.4                                |
| Material                                          |      | stainless steel (1.4404 / 316L); PEI; FKM         |
| Materials (wetted parts)                          |      | stainless steel (1.4404 / 316L) electropolished   |
| Process connection                                |      | Clamp DN25...DN40 (1...1,5") DIN 32676 (ISO 2852) |
| Surface characteristics Ra/Rz of the wetted parts |      | Ra < 0.8 µm                                       |
| Probe diameter                                    | [mm] | 6                                                 |
| Installation length EL                            | [mm] | 50                                                |

## Displays / operating elements

|         |                                |
|---------|--------------------------------|
| Display | 7-segment LED display, 4-digit |
|         | Display unit / status, °C / °F |

## 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



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### Connection

