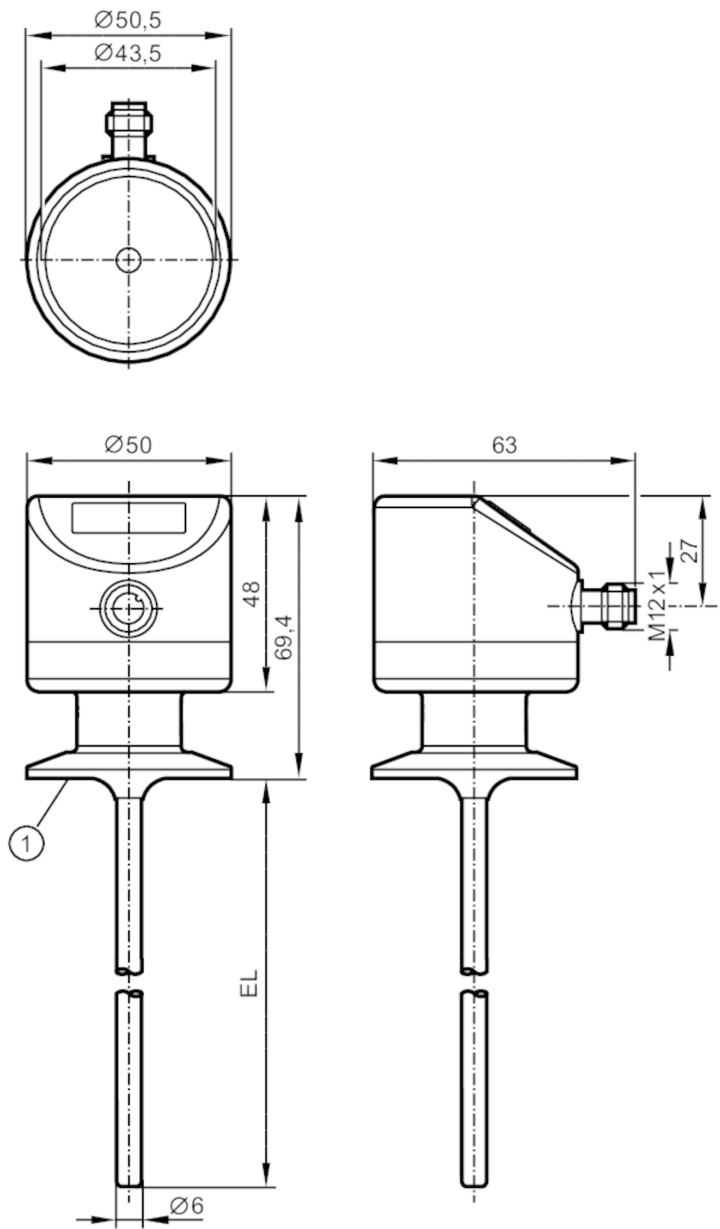


# TD2801



## Temperature transmitter with display

TD-030CFEC01-A-ZVG/US



1 1.5" 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 DN25...DN40 (1...1,5") DIN 32676 (ISO 2852) |              |
| Installation length EL       | [mm]                                              | 30           |
| Application                  |                                                   |              |
| Measuring element            | 1 x Pt 1000; (to DIN EN 60751, class A)           |              |
| Media                        | liquids and gases                                 |              |

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|                                                   |        |                                                                |
|---------------------------------------------------|--------|----------------------------------------------------------------|
| Pressure rating                                   | [bar]  | 100                                                            |
| Vacuum resistance                                 | [mbar] | -1000                                                          |
| MAWP (for applications according to CRN)          | [bar]  | 60                                                             |
| <b>Electrical data</b>                            |        |                                                                |
| 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                                                              |
| <b>Inputs / outputs</b>                           |        |                                                                |
| Number of inputs and outputs                      |        | Number of analogue outputs: 1                                  |
| <b>Outputs</b>                                    |        |                                                                |
| 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                                                            |
| <b>Measuring/setting range</b>                    |        |                                                                |
| Measuring range                                   |        | -50...150 °C      -58...302 °F                                 |
| Factory setting                                   |        | -10...150 °C                                                   |
| <b>Resolution</b>                                 |        |                                                                |
| Resolution of analogue output                     | [K]    | 0.04                                                           |
| Resolution of display                             | [K]    | 0.1                                                            |
| <b>Accuracy / deviations</b>                      |        |                                                                |
| 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) |
| <b>Response times</b>                             |        |                                                                |
| Dynamic response T05 / T09                        | [s]    | 1 / 3                                                          |
| <b>Interfaces</b>                                 |        |                                                                |
| Communication interface                           |        | IO-Link                                                        |
| Transmission type                                 |        | COM2 (38,4 kBaud)                                              |
| IO-Link revision                                  |        | 1.1                                                            |
| <b>Operating conditions</b>                       |        |                                                                |
| Ambient temperature                               | [°C]   | -25...80                                                       |
| Storage temperature                               | [°C]   | -40...100                                                      |
| Protection                                        |        | IP 67; IP 68; IP 69K                                           |
| <b>Tests / approvals</b>                          |        |                                                                |
| EMC                                               |        | DIN EN 61000-6-2<br>DIN EN 61000-6-3                           |



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|                      |                                                                                                                           |                     |
|----------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------|
| 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]         | 405                                                                                                                       |                     |
| 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]                                        | 331.5                                             |
| Materials                                         | stainless steel (316L/1.4404); PEI; FKM           |
| Materials (wetted parts)                          | stainless steel (316L/1.4404) electropolished     |
| Process connection                                | Clamp DN25...DN40 (1...1,5") DIN 32676 (ISO 2852) |
| Surface characteristics Ra/Rz of the wetted parts | Ra: < 0.8                                         |
| Probe diameter [mm]                               | 6                                                 |
| Installation length EL [mm]                       | 30                                                |

### Displays / operating elements

|         |                                                               |
|---------|---------------------------------------------------------------|
| Display | 7-segment LED display, 4-digit 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

