

TD2907



Temperature transmitter with display

TD-030CFEC02-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]  | 30                                      |              |
| 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]                                                           | 30                                      |
| Measuring range               | -50...150 °C                                                   | -58...302 °F                            |
| Factory setting               | 0...100 °C                                                     |                                         |
| Resolution                    |                                                                |                                         |
| Resolution of analogue output | [K]                                                            | 0.04                                    |
| Resolution of display         | [K]                                                            | 0.1                                     |
| Accuracy / deviations         |                                                                |                                         |
| Precision analogue output     | [K]                                                            | ± 0,3 + (± 0,1 % MS)                    |
| Temperature coefficient       | 0,1; (in case of deviation from the reference condition 25 °C) |                                         |
|                               | [% of the span / 10 K]                                         |                                         |
| 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                                              | DeviceID                                |
|                               | default                                                        | 374                                     |
| Operating conditions          |                                                                |                                         |
| Ambient temperature           | [°C]                                                           | -25...80                                |
| Storage temperature           | [°C]                                                           | -40...100                               |
| Protection                    | IP 67; IP 68; IP 69K                                           |                                         |



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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)            |
| 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]                                                                                     | 378.75                                                                                                                    |                                |
| Housing                                                                                        | cylindrical                                                                                                               |                                |
| Dimensions [mm]                                                                                | Ø 64 / L = 99.4                                                                                                           |                                |
| 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]                                                                    | 30                                                                                                                        |                                |
| 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

