

# TD2231



## Temperature Transmitter with Display

TD-100CFED06-A-ZVG/US



EL = Installation length



EC 1935/2004 EHEDG Certified FCM FDA IO-Link

### Product characteristics

|                              |                             |              |
|------------------------------|-----------------------------|--------------|
| Number of inputs and outputs | Number of analog outputs: 1 |              |
| Measuring range              | -50...150 °C                | -58...302 °F |
| Process connection           | Diameter Ø 6 mm             |              |
| Installation length EL [mm]  | 100                         |              |

### Application

|                          |                                         |
|--------------------------|-----------------------------------------|
| Measuring element        | 1 x Pt 1000; (to DIN EN 60751, class A) |
| Media                    | liquids and gases                       |
| Pressure rating [bar]    | 160                                     |
| Vacuum resistance [mbar] | -1000                                   |

### 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                                             |

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| 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                        |                                                                                                                           |                     |
| Measuring range                                | -50...150 °C                                                                                                              | -58...302 °F        |
| Factory setting                                | -10...150 °C                                                                                                              |                     |
| Resolution                                     |                                                                                                                           |                     |
| Resolution of analog output [K]                | 0.04                                                                                                                      |                     |
| Resolution of display [K]                      | 0.1                                                                                                                       |                     |
| 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                                                                                                                       |                     |
| Operating conditions                           |                                                                                                                           |                     |
| Ambient temperature [°C]                       | -25...80                                                                                                                  |                     |
| 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]                                   | 407                                                                                                                       |                     |
| 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                |

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| Mechanical data                                   |      |                                                 |
|---------------------------------------------------|------|-------------------------------------------------|
| Weight                                            | [g]  | 257.5                                           |
| Dimensions                                        | [mm] | Ø 6                                             |
| Material                                          |      | stainless steel (1.4404 / 316L); PEI; FKM       |
| Materials (wetted parts)                          |      | stainless steel (1.4404 / 316L) electropolished |
| Process connection                                |      | Diameter Ø 6 mm                                 |
| Surface characteristics Ra/Rz of the wetted parts |      | Ra: < 0.8                                       |
| Probe diameter                                    | [mm] | 6                                               |
| Installation length EL                            | [mm] | 100                                             |

| 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



Connection

