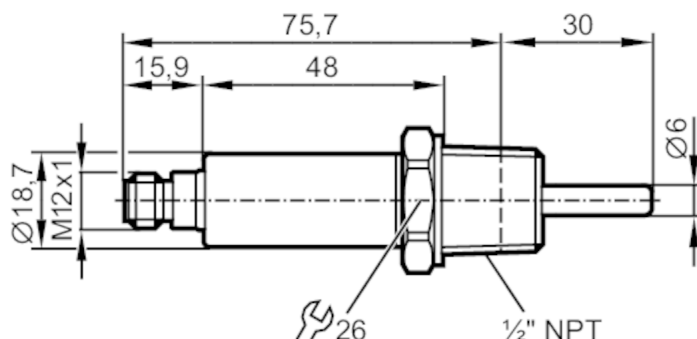


## Temperature sensor with IO-Link

TV7-030FLEN12-QFRVG/US



## Product characteristics

|                              |                              |
|------------------------------|------------------------------|
| Number of inputs and outputs | Number of digital outputs: 2 |
| Measuring range [°F]         | -58...302                    |
| Communication interface      | IO-Link                      |
| Process connection           | threaded connection 1/2" NPT |
| Installation length EL [mm]  | 30                           |

## Application

|                                                                              |                                         |
|------------------------------------------------------------------------------|-----------------------------------------|
| Special feature                                                              | Gold-plated contacts                    |
| Measuring element                                                            | 1 x Pt 1000; (to DIN EN 60751, class A) |
| Media                                                                        | liquids and gases                       |
| Pressure rating [bar]                                                        | 300                                     |
| Note on pressure rating                                                      | sensor                                  |
| When mounted in adapters the specifications of the adapter data sheet apply. |                                         |

## 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]     | 1                                       |
| Integrated watchdog         | yes                                     |

## Inputs / outputs

|                              |                              |
|------------------------------|------------------------------|
| Number of inputs and outputs | Number of digital outputs: 2 |
|------------------------------|------------------------------|

## Outputs

|                                                      |                                                    |
|------------------------------------------------------|----------------------------------------------------|
| Total number of outputs                              | 2                                                  |
| Output signal                                        | switching signal; IO-Link; (configurable)          |
| Electrical design                                    | PNP/NPN                                            |
| Number of digital outputs                            | 2                                                  |
| Output function                                      | normally open / normally closed; (parameterisable) |
| Max. voltage drop switching output DC [V]            | 2.5                                                |
| Permanent current rating of switching output DC [mA] | 100                                                |



## Temperature sensor with IO-Link

TV7-030FLEN12-QFRVG/US

| Measuring/setting range        |                                                                                                                          |                          |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Measuring range                | [°F]                                                                                                                     | -58...302                |
| Set point SP                   | [°F]                                                                                                                     | -57.6...302              |
| Reset point rP                 | [°F]                                                                                                                     | -58...301.6              |
| In steps of                    | [°F]                                                                                                                     | 0.1                      |
| Resolution                     |                                                                                                                          |                          |
| Resolution of switching output | [K]                                                                                                                      | 0.1                      |
| Accuracy / deviations          |                                                                                                                          |                          |
| Switch point accuracy          | [K]                                                                                                                      | ± 0,3                    |
| Temperature drift per 10 K     | [K]                                                                                                                      | 0.1 **)                  |
| Response times                 |                                                                                                                          |                          |
| Dynamic response T05 / T09     | [s]                                                                                                                      | 1 / 3; (to DIN EN 60751) |
| Software / programming         |                                                                                                                          |                          |
| Parameter setting options      | hysteresis / window; normally open / normally closed; switching logic; switch-on/switch-off delay; Damping; Display unit |                          |
| Interfaces                     |                                                                                                                          |                          |
| Communication interface        | IO-Link                                                                                                                  |                          |
| Transmission type              | COM2 (38,4 kBaud)                                                                                                        |                          |
| IO-Link revision               | 1.1                                                                                                                      |                          |
| Operating conditions           |                                                                                                                          |                          |
| Ambient temperature            | [°C]                                                                                                                     | -40...80                 |
| Note on ambient temperature    | at medium temperature: < 125 °C                                                                                          |                          |
|                                | -40...50 °C                                                                                                              |                          |
|                                | at medium temperature: < 150 °C                                                                                          |                          |
| Storage temperature            | [°C]                                                                                                                     | -40...100                |
| Protection                     | 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 EN 60068-2-6                                                                                                         | 20 g (10...2000 Hz)      |
| MTTF                           | [years]                                                                                                                  | 542.6                    |
| UL approval                    | UL Approval no.                                                                                                          | K019                     |
| Mechanical data                |                                                                                                                          |                          |
| Weight                         | [g]                                                                                                                      | 110                      |
| Materials                      | stainless steel (316L/1.4404); FKM                                                                                       |                          |
| Materials (wetted parts)       | stainless steel (316L/1.4404)                                                                                            |                          |
| Process connection             | threaded connection 1/2" NPT                                                                                             |                          |
| Probe diameter                 | [mm]                                                                                                                     | 6                        |
| Installation length EL         | [mm]                                                                                                                     | 30                       |
| Remarks                        |                                                                                                                          |                          |
| Remarks                        | The values for accuracy apply to flowing water.                                                                          |                          |
| Pack quantity                  | 1 pcs.                                                                                                                   |                          |

# TV7303



## Temperature sensor with IO-Link

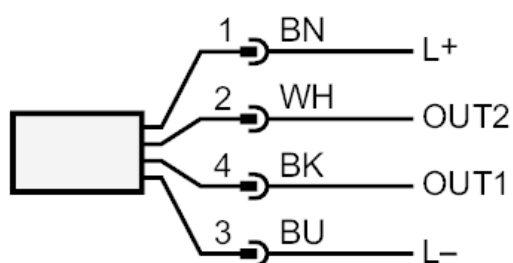
TV7-030FLEN12-QFRVG/US

### Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



### Connection



OUT1: switching output / IO-Link  
OUT2: switching output  
colours to DIN EN 60947-5-2

Core colours :

BK = black  
BN = brown  
BU = blue  
WH = white