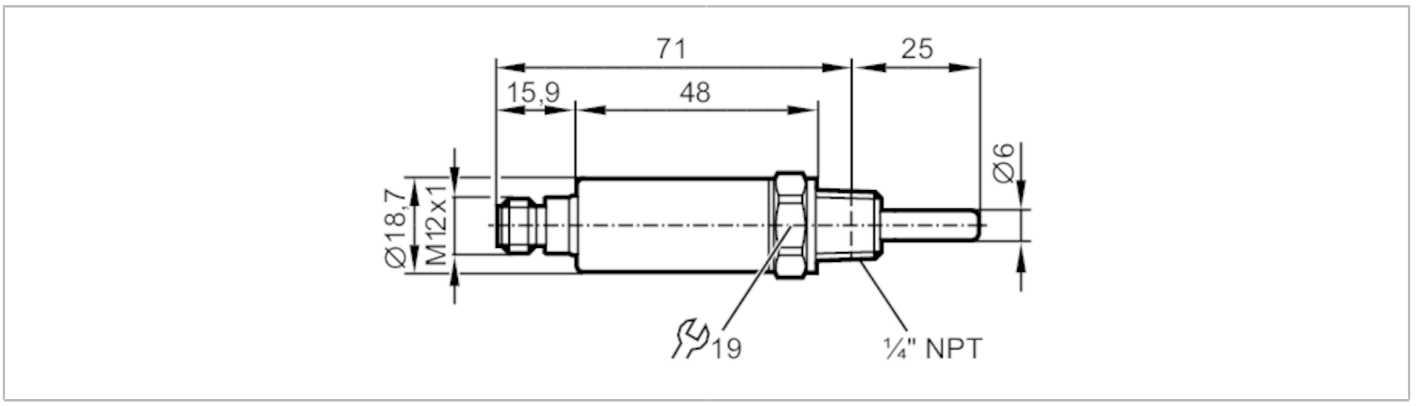
# TV7603

## Temperature sensor with IO-Link

TV7-025FLEN14-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 1/4" NPT external thread |
| Installation length EL | [mm] | 25 |
| **Application** | | |
| Special feature | | Gold-plated contacts |
| Measuring element | | 1 x Pt 1000; (to DIN EN 60751, class A) |
| Media | | liquids and gases |
| Pressure rating | | 400 bar \| 40 MPa |
| Note on pressure rating | | sensor<br>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 |

# TV7603

## Temperature sensor with IO-Link

TV7-025FLEN14-QFRVG/US

| | | | |
|---|---|---|---|
| **Measuring/setting range** | | | |
| Probe length L | [mm] | 17.1 | |
| 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 | |
| Profiles | | Smart Sensor - SSP 0 | Generic Profiled Sensor |
| | | Function | Device identification |
| | | Function | Process data variable |
| | | Function | Device diagnosis |
| Min. process cycle time | [ms] | 3.2 | |
| Supported DeviceIDs | | **Type of operation** | **DeviceID** |
| | | default | 778 |
| **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] | 543 | |
| UL approval | | UL approval no. | K019 |
| **Mechanical data** | | | |
| Weight | [g] | 75 | |
| Housing | | cylindrical | |

# TV7603

## Temperature sensor with IO-Link

TV7-025FLEN14-QFRVG/US

| | | |
|---|---|---|
| Dimensions | [mm] | Ø 18.7 / L = 96 |
| Materials | | stainless steel (316L/1.4404); FKM |
| Materials (wetted parts) | | stainless steel (316L/1.4404) |
| Process connection | | threaded connection 1/4" NPT external thread |
| Probe diameter | [mm] | 6 |
| Installation length EL | [mm] | 25 |

## Remarks

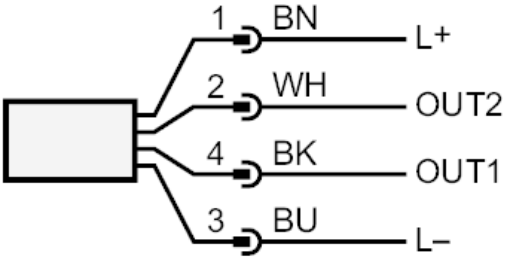
| | |
|---|---|
| Remarks | The values for accuracy apply to flowing water. |
| Pack quantity | 1 pcs. |

## Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, 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