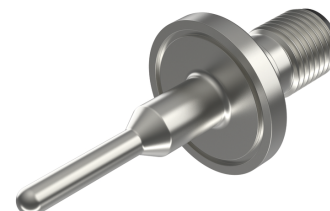
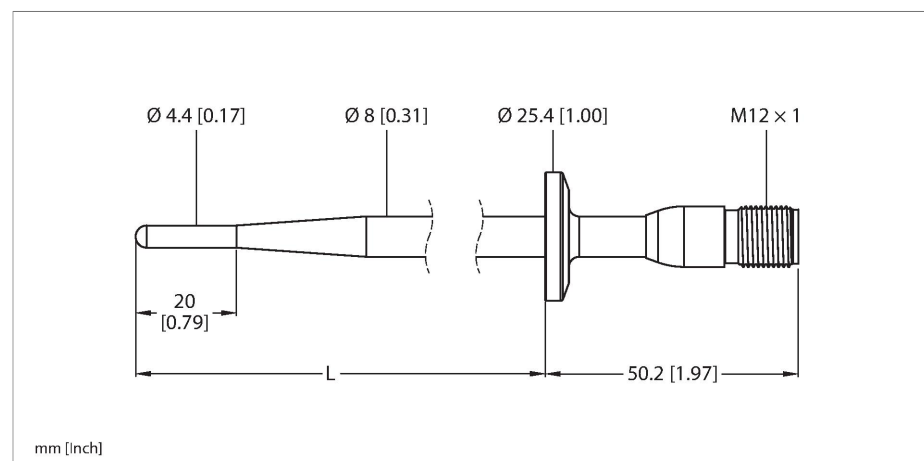


# TP-504A-TRI3/4-H1141-L035

## Temperature Detection – Probe



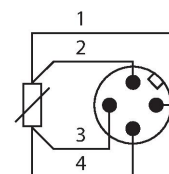
### Technical data

|                                 |                                                                     |
|---------------------------------|---------------------------------------------------------------------|
| Type                            | TP-504A-TRI3/4-H1141-L035                                           |
| ID                              | 9910429                                                             |
| <b>Temperature range</b>        |                                                                     |
| Measuring range                 | -50...120 °C                                                        |
|                                 | -58...248 °F                                                        |
| Accuracy                        | ±0.15 K + 0.002 •  t  (-30...300 °C)                                |
| Measuring element               | Pt100, DIN EN 60751, class A;<br>connection mode: 4-wire connection |
| Self-heating                    | 0.4 K/mW at 0 °C                                                    |
| Response time                   | t 0.5 = 3 s / t 0.9 = 10 s in water at 0.2 m/s                      |
| Immersion depth (L)             | 35 mm                                                               |
| Process Pressure                | 40 bar                                                              |
| <b>Mechanical data</b>          |                                                                     |
| Housing material                | Stainless steel, 1.4404 (AISI 316L)                                 |
| Roughness                       | R <sub>a</sub> ≤ 0.8 µm                                             |
| Process connection              | Tri-Clamp 3/4"                                                      |
| Electrical connection           | Connector, M12 × 1                                                  |
| Protection class                | IP67                                                                |
| <b>Environmental conditions</b> |                                                                     |
| Ambient temperature             | -40...+120 °C                                                       |
| <b>Tests/approvals</b>          |                                                                     |
| UL registration number          | E345414                                                             |

### Features

- Max. temperature connector: 120°C
- Connection mode: 4-wire connection
- Process connection Tri-Clamp 3/4"

### Wiring diagram



### Functional principle

Resistance thermometers are used for the detection and monitoring of temperatures to optimize and control a process. Typical applications are in machine and plant construction as well as in the process industry. The core element of the temperature probe is a temperature-dependent resistor.

## Technical data

### Reference conditions acc. to IEC 61298-1

|                      |                                            |
|----------------------|--------------------------------------------|
| Temperature          | 15...+25 °C                                |
| Atmospheric pressure | 860...1060 hPa abs.                        |
| Humidity             | 45...75 % rel.                             |
| Auxiliary power      | 24 VDC                                     |
| MTTF                 | 2283 years acc. to SN 29500 (Ed. 99) 20 °C |

## Technical data

|      |                           |
|------|---------------------------|
| Type | TP-504A-TRI3/4-H1141-L035 |
| ID   | 9910429                   |

### Temperature range

|                   |                                                                        |
|-------------------|------------------------------------------------------------------------|
| Measuring range   | -50...120 °C                                                           |
|                   | -58...248 °F                                                           |
| Accuracy          | $\pm 0.15 \text{ K} + 0.002 \cdot  t $ (-30...300 °C)                  |
| Self-heating      | 0.4 K/mW at 0 °C                                                       |
| Measuring element | Pt100, DIN EN 60751, class A;<br>connection mode: 4-wire connection    |
| Response time     | $t_{0.5} = 3 \text{ s}$ / $t_{0.9} = 10 \text{ s}$ in water at 0.2 m/s |
| Immersion depth L | 35 mm                                                                  |
| Outer diameter    | 8 mm                                                                   |
| Protection class  | IP67                                                                   |

### Environmental conditions

|                     |               |
|---------------------|---------------|
| Ambient temperature | -40...+120 °C |
|---------------------|---------------|

### Mechanical data

|                       |                                                                          |
|-----------------------|--------------------------------------------------------------------------|
| Housing material      | Stainless steel, 1.4404 (AISI 316L)                                      |
| Sensor material       | Stainless steel, 1.4404 (AISI 316L), $R_a \leq 0.8 \text{ } \mu\text{m}$ |
| Process connection    | Tri-Clamp 3/4"                                                           |
| Process Pressure      | 40 bar                                                                   |
| Electrical connection | Connector, M12 × 1                                                       |
| Core cross-section    | 4 mm <sup>2</sup>                                                        |

### Reference conditions acc. to IEC 61298-1

|                      |                     |
|----------------------|---------------------|
| Temperature          | 15...+25 °C         |
| Atmospheric pressure | 860...1060 hPa abs. |
| Humidity             | 45...75 % rel.      |
| Auxiliary power      | 24 VDC              |

Technical data

| Tests/approvals        |                                            |
|------------------------|--------------------------------------------|
| Approvals              | cULus                                      |
| UL registration number | E345414                                    |
| MTTF                   | 2283 years acc. to SN 29500 (Ed. 99) 20 °C |