# T10-XXXX NTC

T10-0013/0113
Probe with ribbon cable

### Benefits

- NTC sensor
- No influence from the lead
- High temperature sensitivity

### Applications

- Dry ice
- Freezers
- Water baths

## DESCRIPTION

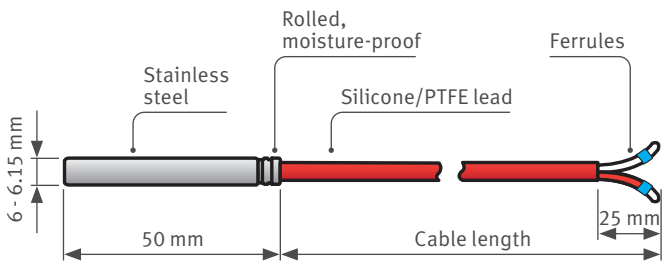
The T10 temperature sensors are NTC (Negative Temperature Coefficient) thermistors, meaning that the resistance of the NTC decreases with increasing temperature. The T10 temperature sensors are compatible with the RMS-MLOG-T10-868/915 data loggers.

The data logger temperature range is limited to -35...80°C. The RMS temperature portfolio covers a wide range of applications, from the coldest such as liquid nitrogen tanks and cryogenic freezers, refrigerators and cold rooms to hotter ones such as water baths, incubators, ovens and autoclaves.

Certain probes are also designed for specific applications for monitoring legionella within water pipes and monitoring room temperature. It is crucial when setting up your RMS-MLOG-T10-868/915 with the T10 temperature probe to configure the logger accordingly with the software as the characteristic curve of each NTC is stored in the firmware.

Please see below for the values of each probe. This list is not exhaustive and other probes, diameters and cable lengths are available on request.

**Dimensions**



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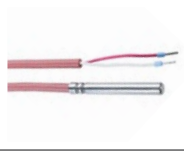
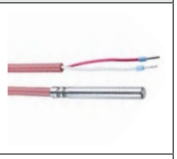
# TECHNICAL INFORMATION

| | T10-0001 | T10-0002 | T10-0003/0013/0113 | T10-0004 | T10-0005 | T10-0006 |
|---|---|---|---|---|---|---|
| |  |  |  |  |  |  |
| **Stored in RMS software as:** | T10-001 | T10-002/6 | T10-003/4 | T10-003/4 | T10-005 | T10-002/6 |
| **Application** | Cryotechnology | Freezers, dry ice... | Standard | Piping | Freezers, dry ice... | Standard |
| **Cable material** | PTFE | Silicone | Silicone | Silicone | PTFE | Silicone |
| **Sensor application range** | -196...-90 °C | -80...150 °C [1] | -50...120 °C [1] | -50...120 °C [1] | -90...50 °C | -80...150 °C [1] |
| **Calibration range [2] (look up chart)** | -200...-90 °C | -80...200 °C | -50...200 °C | -50...200 °C | -90...50 °C | -80...200 °C |
| **Cable application range** | -190...260 °C | -50...200 °C [1] | -50...200 °C [1,3] | -50...200 °C [1] | -190...260 °C | -50...200 °C [1] |
| **IP protection** | IP65 | IP65 | IP65 | IP65 | IP68 | IP65 |
| **Cable length (mm)** | 2000 | 2000 | 2000 | 2000 | 4000 | 4000 |
| **Cable diameter (mm)** | 4 | 6 | 6 | 6 | 4 | 6 |
| **Probe head material** | SS 316 | VA4 1.4571 | VA4 1.4571 | Brass | VA4 1.4571 | VA4 1.4571 |
| **Probe length (mm)** | 50 | 50 | 50 | 50 | 50 | 50 |
| **Probe diameter (mm)** | 6 - 6.15 | 6 - 6.15 | 6 - 6.15 | Duct wrap | 6 - 6.15 | 6 - 6.15 |
| **Sensor** | NTC1k | NTC10K | NTC10K | NTC10K | NTC1k | NTC10K |
| **Accuracy [2]** | | | | | | |
| **-196...-90 °C** | ±10 °C | | | | | |
| **25 °C** | | ±0,2 °C | ±0,4 °C | ±0,4 °C | | ±0,2 °C |
| **-80...-30 °C** | | ±1 °C | | | | ±1 °C |
| **-30...40 °C** | | ±0,5 °C | | | | ±0,5 °C |
| **40...70 °C** | | ±1 °C | | | | ±1 °C |
| **70...150 °C** | | ±3 °C | | | | ±3 °C |
| **-50...0 °C** | | | ±1 °C | ±1 °C | | |
| **0...30 °C** | | | ±0,5 °C | ±0,5 °C | | |
| **30...60 °C** | | | ±1 °C | ±1 °C | | |
| **60...90 °C** | | | ±1,5 °C | ±1,5 °C | | |
| **90...120 °C** | | | ±3,2 °C | ±3,2 °C | | |
| **-80...50 °C** | | | | | ±1 °C | |
| **-90...-80 °C** | | | | | ±1.5 °C | |
| **R25 & B: -200...-165 °C** | 54 & 666 | | | | | |
| **R25 & B: -185...-145 °C** | 26 & 776 | | | | | |
| **R25 & B: -145...-90 °C** | 8 & 1045 | | | | | |
| **R25 & B: -200...-120 °C** | 21 & 787 | | | | | |
| **R25 & B: -80...-40 °C** | | 13000 & 3500 | | | | 13000 & 3500 |
| **R25 & B: -40...-30 °C** | | 9950 & 3800 | | | | 9950 & 3800 |
| **R25 & B: -10...150 °C** | | 10100 & 4030 | | | | 10100 & 4030 |
| **R25 & B: -50...-10 °C** | | | 11100 & 3610 | 11100 & 3610 | | |
| **R25 & B: -10...-50 °C** | | | 9800 & 3890 | 9800 & 3890 | | |
| **R25 & B: 50...120 °C** | | | 10300 & 4065 | 10300 & 4065 | | |
| **R25 & B: -90...-40 °C** | | | | | 1500 & 2900 | |
| **R25 & B: -60...0 °C** | | | | | 1100 &3170 | |
| **R25 & B: -20...50 °C** | | | | | 100 & 3400 | |

[1] Down to -80 °C possible, but the cable could break on movement.

[2] Accuracy is only guaranteed in the sensor application range, applications outside the range can cause drift or damage. To improve the accuracy, it is possible to carry out an adjustment to improve the measurement accuracy when using the data logger and NTC.

[3] Ribbon cable application range / dimensions: -60...105 °C / 200 x 15 mm (L x W)