

# T-Probe

Measures temperature through a sensor probe connected to the transmitter body via a cable. This device, belonging to the PRO sensor series, includes Aranet Sub-GHz ISM band radio which wirelessly transmits sensor measurements to the Aranet PRO base station.



## Product numbers

Probe length	European Union	United States, Asia
0.3 m	TDSPT002.003	TDSPT0U2.003
1 m	TDSPT002.010	TDSPT0U2.010
5 m	TDSPT002.050	TDSPT0U2.050
10 m	TDSPT002.100	TDSPT0U2.100

## Temperature measurement performance

Range	-55–105 °C	-67–221 °F
Resolution	0.1 °C	0.1 °F
Accuracy (-55 to 10 °C)	±2.0 °C	±3.6 °F
Accuracy (-10 to 85 °C)	±0.5 °C	±0.9 °F
Accuracy (85 to 105 °C)	±2.0 °C	±3.6 °F
Time constant $\tau$	10 min	

- 95 % of the sensors perform within the specified accuracy limits at the time of purchase, assuming they are in an equilibrium state.
- Measurement time constant  $\tau$  is determined at 1 m/s airflow. This constant refers to the time it takes for the sensor reading to reach 63 % of a new steady-state value in response to a step change in the environment. It essentially represents the speed at which the sensor adjusts to changes in the measured quantity.

## Temperature probe specifications

Probe material	Stainless steel	
Cable insulation material	Polyvinyl chloride (PVC)	
Probe dimensions	∅6×40 mm	∅0.24×1.6 in
Cable length	0.3 / 1 / 5 / 10 m	1.0 / 3.3 / 16.4 / 33 ft

## General specifications

Ingress protection rating	IP68	
Maximum operating temperature	-40–60 °C	-40–140 °F
Dimensions	∅35×120 mm	∅1.4×4.7 in
Weight (incl. battery, 1 m probe)	88 g	3.1 oz
Enclosure material	ASA plastic	
Packaging includes	1 pc AA alkaline battery, polyester string for hanging the device	

## Battery lifetime

Measurement interval	Alkaline battery lifetime	Lithium battery lifetime
1 min	1.8 years	2.4 years
2 min	3.2 years	4.3 years
5 min	6.3 years	9.0 years
10 min	9.5 years	>10 years

- Battery lifetime data has been obtained by mathematical extrapolation and is provided for descriptive purposes only and is not intended to make or imply any guarantee or warranty.
- Battery lifetime tests and calculations performed assuming device is at 20 °C (68 °F) and using *Fujitsu Premium LR6G07* (alkaline) and *Energizer Ultimate Lithium L91* (lithium) AA batteries as reference.
- The operating temperature range may vary based on the battery type used. Generally, the range for alkaline batteries is between -20–50 °C (-4–122 °F), whereas for lithium batteries, it is -20–60 °C (-40–140 °F).

## Aranet radio parameters

Line of sight range	3 km	1.9 mi
Transmitter power	14 dBm	25 mW
Data transmission interval	1, 2, 5 or 10 min	
Data protection	XXTEA encryption	

## Compliance information

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- CE** Conformité Européenne
  - FC** Federal Communications Commission (USA)
  - IC** Innovation, Science and Economic Development Canada
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