

Aranet T/RH sensor



- ① Measures temperature and relative humidity
- ② Up to 3 km / 1.9 mi range
- ③ IP42 class
- ④ Up to 10 years of battery life
- ⑤ Flexibility of installation



Business critical information for food manufacturing, warehouses / storage facilities, horticulture, building management and others.

Aranet T/RH sensor

Measures the temperature and relative humidity of the environment

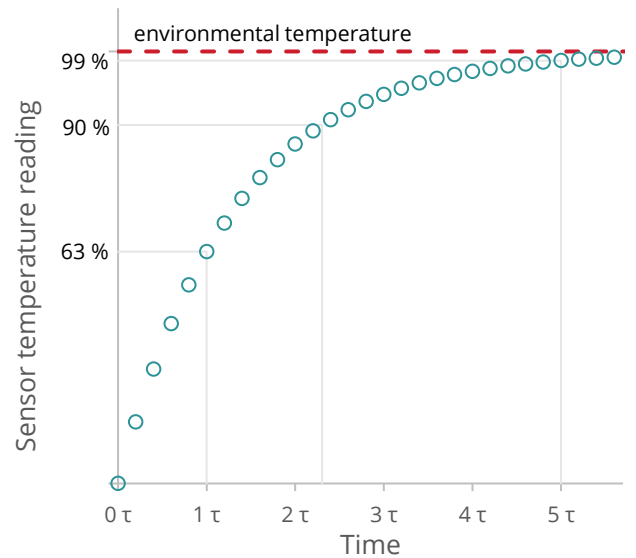
TDSPT001 (EU)

TDSPT0U1 (NA)

TDSPT0R1 (RU)

Sensor performance

	Temperature	Relative Humidity
Range	-40 °C to 60 °C (-40 °F to 140 °F)	0-100 %
Resolution	0.1 °C (0.1 °F)	1 %
Accuracy ¹	±0.3 °C (±0.5 °F)	± 2 %
Hysteresis	N/A	± 1 %
Long-term drift	0.03 °C/year (0.05 °F/year)	0.5 %/year
Time constant τ (63 %) ²	10 minutes	TBD



Radio parameters

Line of sight range	3 km (1.9 mi)
Supported ISM bands	EU868, NA915
Transmitter power	14 dBm
Data transmission interval ³	1, 2, 5 or 10 minutes
Data protection	XXTEA encryption
Compatible base stations	Aranet MINI, PRO

General

Ingress Protection code	IP42
Maximum operating temperature range	-40 °C to 60 °C (-40 °F to 140 °F)
Dimensions	111 x 44 x 25 mm (4.5 x 1.7 x 1.0 in)
Weight ⁴	65 g (2.3 oz)
Enclosure material	ASA plastic
Included in the box	2AAA alkaline batteries, polyester string

Power

2 AAA batteries

Type	Alkaline ⁵	Lithium ⁶
Operating temperature	-20 °C to 55 °C (-4 °F to 131 °F)	-40 °C to 60 °C (-40 °F to 140 °F)
TX interval	Battery lifetime at 20 °C (68 °F) ⁷	
1 minute	2.4 years	2.6 years
2 minutes	4.3 years	4.9 years
5 minutes	8.3 years	10 years
10 minutes	10 years	10+ years

Compliance

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

Aranet qualifies its T/RH sensor to work properly within ambient clean air. Qualification for use in harsh environment is the duty of the user of the sensor. Exposure to volatile organic compounds, acids or bases, etching substances such as H₂O₂, NH₃, shall be avoided.

¹ 95 % of the sensors measure within these typical limits in equilibrium state at time of sale. For evaluation of the total measurement error hysteresis and long-term drift has to be taken into account.

² Time constant is determined at 1 m/s airflow.

³ Due to regulatory requirements 1 minute data transmission interval is not available in Russia.

⁴ Weight with alkaline AAA Fujitsu LR03G07 Premium batteries.

⁵ AAA Fujitsu LR03G07 Premium batteries used for tests and calculations.

⁶ AAA Energizer L92 Ultimate Lithium batteries used for tests and calculations.

⁷ 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.