

# Aranet T/RH probe (ammonia resistant)



aranet

- ① Designed for chemically harsh environment
- ② Measures temperature and relative humidity
- ③ IP67 casing
- ④ Up to 3 km / 1.9 mi range
- ⑤ Flexibility of installation

The wireless and battery-powered sensor provide very accurate temperature and relative humidity measurements in harsh environments like livestock and poultry farms.



**Aranet T/RH probe (ammonia resistant)**

TDSPT409 (EU)

Measures the temperature and relative humidity of the environment

TDSPT4U9 (NA)

TDSPT4R9 (RU)

**Sensor performance**

	Temperature	Relative Humidity
Range	-40 °C to 85 °C (-40 °F to 185 °F)	0-100 %
Resolution	0.1 °C (0.1 °F)	0.1 %
Accuracy <sup>1</sup>	±0.3 °C <sup>2</sup> (±0.5 °F)	± 2 % <sup>3</sup>
Hysteresis	N/A	± 1 %
Long-term drift	0.05 °C/year (0.09 °F/year)	0.5 %/year <sup>4</sup>

**Radio parameters**

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

**General**

Ingress Protection code	IP67
Maximum operating temperature range	-40 °C to 60 °C (-40 °F to 140 °F)
Dimensions	Ø 35 x 120 mm (Ø 1.4 x 4.7 in)
Weight <sup>6</sup>	100 g (3.5 oz)
Enclosure material	ASA plastic
Included in the box	1 AA alkaline battery, polyester string

**Power 1 AA battery**

	Alkaline <sup>7</sup>	Lithium <sup>8</sup>
Type	Alkaline <sup>7</sup>	Lithium <sup>8</sup>
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) <sup>9</sup>	
1 minute	1.3 years	1.7 years
2 minutes	2.3 years	3.0 years
5 minutes	4.8 years	6.8 years
10 minutes	8.2 years	10+ years

**Compliance**

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

<sup>1</sup> 99 % 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.

<sup>2</sup> Temperature accuracy is provided for a range 0 ... +60 °C.

<sup>3</sup> Humidity accuracy is provided at temperature +23 °C for a range 0 ... 80 % RH.

<sup>4</sup> Relative humidity drift value is provided at laboratory conditions: +23 °C and 30 % RH to 70 % RH. At temperatures higher than +50 °C over a longer period of time, an increased long-term drift can occur.

<sup>5</sup> Due to regulatory requirements 1 minute data transmission interval is not available in Russia.

<sup>6</sup> Weight with alkaline AA Fujitsu LR6G07 Premium battery.

<sup>7</sup> AA Fujitsu LR6G07 Premium battery used for tests and calculations.

<sup>8</sup> AA Energizer L91 Ultimate Lithium battery used for tests and calculations.

<sup>9</sup> 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.