

Wireless Industrial Temperature Sensor V2 EU

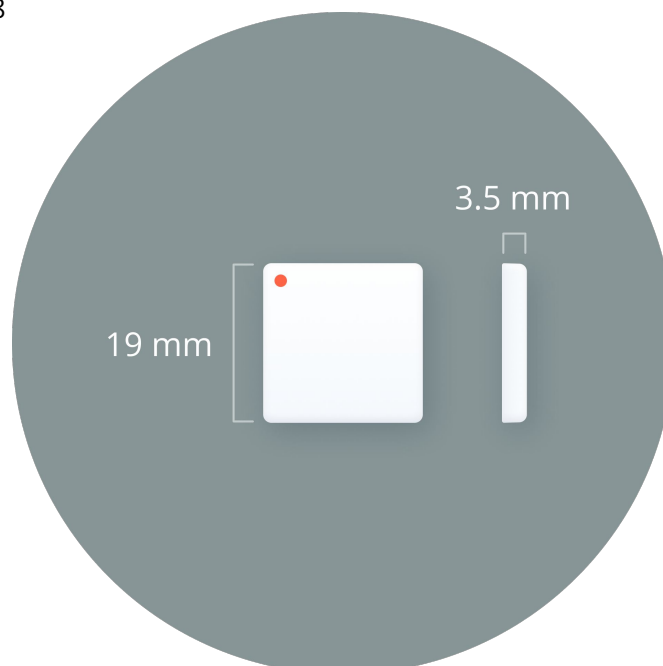


The Wireless Temperature Sensor V2 measures the surrounding temperature and wirelessly transmits the result to a Cloud service through a Cloud Connector (Gateway) using SecureDataShot™ technology. The device can be configured to measure the temperature at regular intervals and report the measurements every 15 minutes. The number of temperature measurements taken in each 15 minute interval can be configured from 1 up to 30, for a measurement interval down to 30 seconds.

The Wireless Temperature Sensor V2 has touch functionality for simple installation and use.

Features

- 0.05°C resolution, $\pm 0.2^\circ\text{C}$ typical accuracy at 25°C
- Configurable number of temperature measurements taken in each 15 minute interval, from 1 up to 30
- Long lifetime, up to 10 years at 70°C
- Robust design, IP68
- Touch functionality
- Wireless range 25 m typical indoor, similar to a WiFi network with an advanced WiFi router
- Wireless range line of sight up to 300 m in standard mode and up to 1000 m in high power Boost Mode



Specifications

Operating Conditions Temperature range Humidity at 25 °C	-40 to 85°C 0 to 100% relative humidity
Recommended Storage Conditions	Cool and dry, near normal room temperature
Construction Material	Sealed, IP68 Impact modified acrylic film
Typical Dimensions ⁽³⁾ Typical Weight ⁽³⁾	19 x 19 x 3.5 mm (±0.2 mm) 3.0 g (±0.5 g)
Lifetime	Up to 10 years at 70°C ⁽¹⁾
Certifications and Compliance	CE, UKCA, WEEE, Batteries directive
Radio range Standard Mode High Power Boost Mode	25 m indoor ⁽²⁾ , up to 300 m free-space ⁽²⁾ Up to 1000 m free-space ⁽²⁾
Wireless Communication	EU: 868 MHz SRD/ISM band, SecureDataShot™
Temperature resolution Temperature accuracy	0.05 °C resolution ±0.2°C typical, ±0.4 °C (15 °C < T < 45 °C) and ±0.7 °C (5 °C < T < 60 °C) worst case accuracy

Sensor performance parameters

The Wireless Temperature Sensor performance is temperature dependent. The sensor battery will have reduced current drive capabilities at low temperatures resulting in increased recovery time and reduced range in Boost Mode. Self discharge of the battery will reduce the lifetime significantly at high temperatures.

Temperature dependency	-40°C	-25°C	25°C	70°C	85°C
Sensor lifetime estimate over temperature range ⁽¹⁾	5 Y	7 Y	15 Y	10 Y	5 Y
Typical temperature accuracy	±0.6 °C	±0.3 °C	±0.2 °C	±0.2 °C	±0.3 °C

Water: The Sensor is waterproof, but should not be used in applications where the sensor is submerged. Long time exposure to water will result in water penetration and reduced sensor lifetime.

Magnetism, electric fields: The sensor shall not be exposed to strong magnetic fields. Magnets should not be used for mounting the sensor, as this will make the sensor unresponsive. Strong electric field fluctuations (e.g. fluorescent lamps and switching transformers) may trigger false touch events.

Environmental factors: The sensor is designed to handle heavy stress, but exposure to environmental factors such as strong sunlight, mechanical stress, solvents and extensive temperature variations will impact lifetime.

Footnotes

(1): Assuming a radio transaction every 15 minutes, operating in default configuration. Lifetime will vary based on operating environment, rate of transmissions and sample period.

(2): Based on standard ITU-R P.1238 (indoor) and ITU-R P.525 (free-space). Lifetime in Boost Mode is shorter than in Standard Mode.

(3): The backside tape is excluded

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