

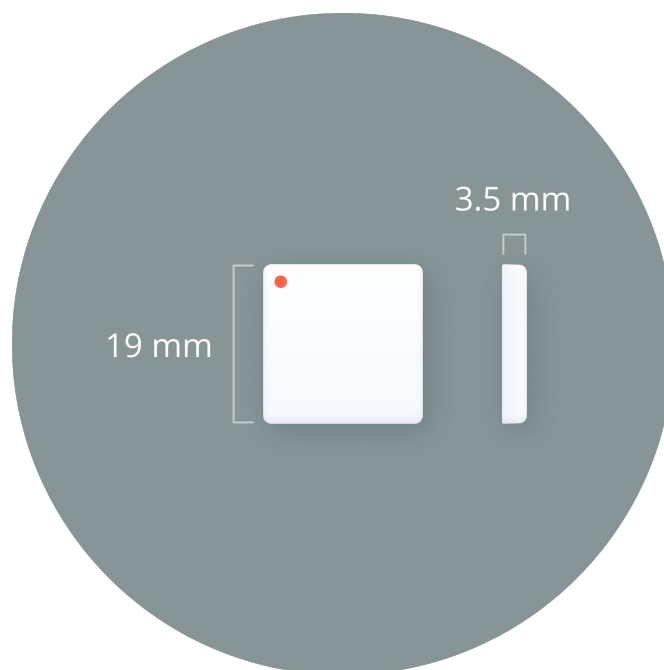
Wireless Industrial Temperature Sensor



The Wireless Industrial Temperature Sensor measures the surrounding temperature and wirelessly transmits the result to a Cloud Connector (Gateway) via SecureDataShot™ technology. The Cloud Connector will relay the temperature reading to a Cloud service. The readings are performed at 15 minute intervals. The Wireless Temperature Sensor has touch functionality for simple installation and use.

Features

- 0.05 °C resolution, 0.4 °C absolute accuracy at 25 °C
- Touch functionality
- Long lifetime, up to 10 years at 70 °C
- Robust design, IP68
- 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, 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	0.05 °C resolution, 0.4 °C worst case absolute accuracy at 25 °C

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
Absolute temperature accuracy	±1.5 °C	±1.0 °C	±0.4 °C	±0.4 °C	±0.9 °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 at 70 °C in default configuration. Lifetime will vary based on operating environment and rate of transmissions.

(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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