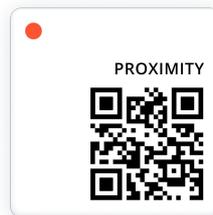# Wireless Proximity Sensor QR

The Wireless Proximity Sensor can detect objects that are removed or placed in front of the sensor. When status is changed, the sensor transmits a signal wirelessly with SecureDataShot™ to a Cloud Connector (Gateway) that again relays a message to a cloud service. At 15 minute heartbeat intervals, the Wireless Proximity Sensor transmits a message notifying the system that it is present and operational. The Wireless Proximity sensor also has touch functionality for simple installation and use.
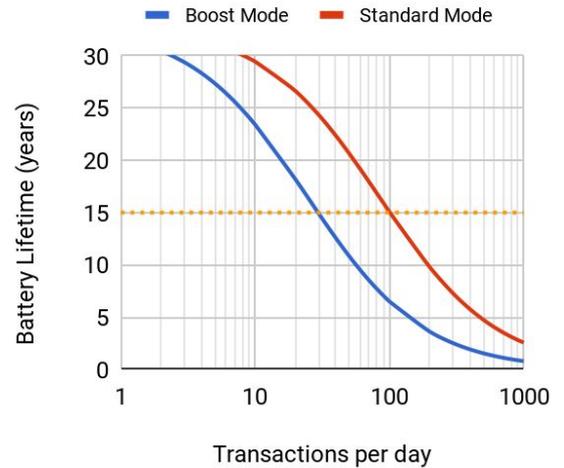
Features

- Detects proximity of objects, object away or object present
- Touch functionality
- Long lifetime, up to 15 years in default configuration and standard environment
- 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
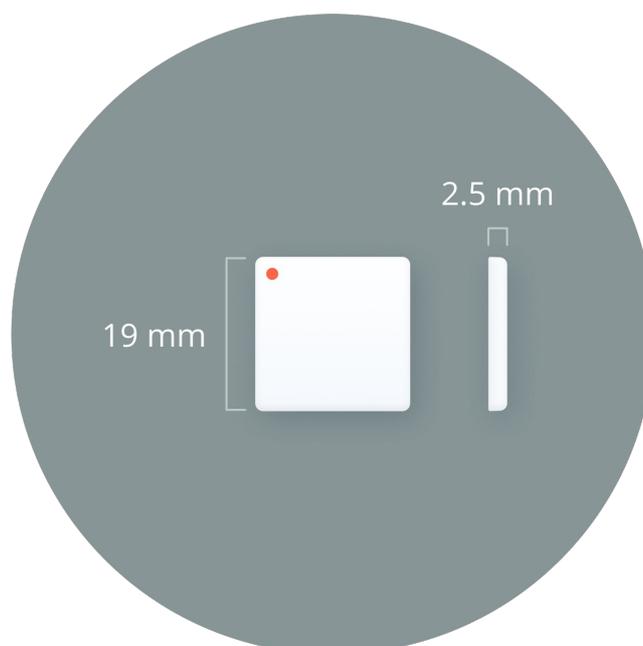
Specifications

Operating Conditions	
Temperature range	-40 to 85 °C
Recommended temp. range[1]	3 to 50 °C non condensing
Humidity at 25 °C	0 to 100% relative humidity

Recommended Storage Conditions	Cool and dry, near normal room temperature

Construction	Sealed, IP68
Material	Impact modified acrylic film

Typical Dimensions[2]	19 x 19 x 2.5 mm (±0.2 mm)
Typical Weight[2]	2.0 g (±0.3 g)

Lifetime	Up to 15 years [3], see graph

Certifications and Compliance	CE, WEEE, Batteries directive

Radio range	
Standard Mode	25 m indoor[4], up to 300 m free-space[4]
High Power Boost Mode	Up to 1000 m free-space[4]

Wireless Communication	EU: 868 MHz SRD/ISM band, SecureDataShot™

Proximity detection distance	0 to 5 mm [5]

Proximity response/recovery time	750 ms / 1500 ms

Sensor performance parameters

The Wireless Proximity 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	50 °C	85 °C
Sensor lifetime recommended temperature range[1]		5 y	15 y	7 y	
Sensor lifetime full temperature range[3]	1 w[3] / 3 y				4 mo
Typical communication recovery time (fresh battery)	1 min		0.5 s		
Typical communication recovery time (close to depleted battery)	10 min				

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 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): For robust proximity operation. Operation outside range can cause false detects, due to e.g. icing and condensation
(2): The backside tape is excluded
(3): Assuming a radio transaction every 15 minutes, operating at room temperature in default configuration. Lifetime will vary based on operating environment and rate of transmissions.
(4): 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.
(5): For conductive and semi-conductive materials. False detects are likely to occur outside the detection distance.
(6): The sensor will become unresponsive if placed at very low temperatures for extended periods of time. The sensor will resume operation when temperature is increased