

SBPSMWBAT



Dupline® Carpark 3 wireless magnetic sensor



Benefits

- Small compact magnetic sensor for both the flush-mounted base SBPWSHA and the surface-mounted base SBPWSHB
- Wireless communication by use of wiDup (2,4Ghz, IEEE 802.15.4, Proprietary application layer)
- Powered by an internal battery with a lifetime of up to 8 years
- Easy to install and no maintenance is needed
- Wide temperature range: -40 to +75°C
- Approved by (RED/FCC wireless certifications)

Description

The Carpark 3 wireless magnetic sensor can detect the presence of a car when the car is parked above the sensor.

By using the Earth's magnetic field, the sensor can detect if a car is parked above it and send the information wirelessly to a nearby repeater.

Applications

Parking Guidance Systems

Main functions

- The wireless sensor SBPSMWBAT detects presence of a car in the parking space

Features

Power Supply

Rated operational voltage	3.6 VDC powered by internal Primary Lithium-thionyl chloride battery cell embedded in the product
Battery lifetime	Up to 8 years
Standard compliance	IEC60950/UL60950 (information technologies)

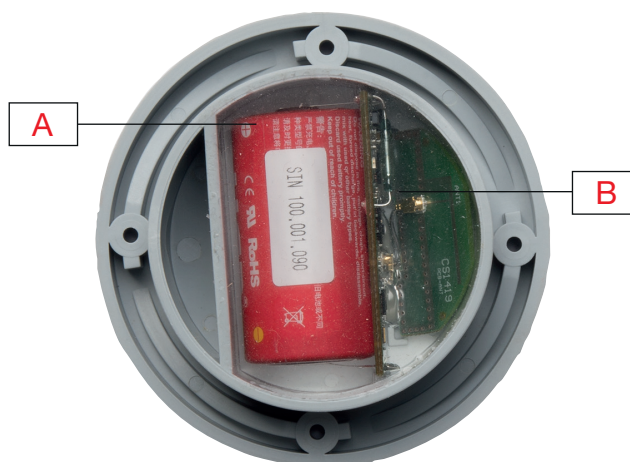


Fig. 1 Battery and LED

A	Battery with SIN number written on top of it	B	Red LED blinking in sequences depending on the status
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Consumption

The device works in cycles. Every cycle has a period of 4 seconds. In every cycle, the device can exclusively sample or transmit, or transmit and listen. These operations have a limited duration, and the rest of the cycle is spent in sleep mode.

Environmental

Operating temperature	-40 to 75°C
Storage temperature	(max 30°C is advised)
Humidity	0-100% Relative humidity

For indoor and outdoor usage

LED indication

The LED is visible only when the lid is removed

Red LED	OFF	Power OFF
	ON	During configuration
	Short blinking	Sending data to a wireless base
	Long blinking	Module not configured

Mechanics

Housing

Casing	RTP 0199 x 134531 A Polypropylene, glass fibre reinforced
Colour	Grey, RAL7043
Dimensions (HxWxD)	89.0 x 89.0 x 30.7 mm
Weight	230 g
Tightening torque	0.5 Nm

Compatibility and conformity

EMC

Immunity	Electrostatic discharges EN 61000-4-2
	Radiated radio frequency EN 61000-4-3
	Power frequency magnetic fields EN 61000-4-8
Emission	Radiated emissions CISPR 22 (EN55022), cl. B

Approvals

Standards	IEEE 802.15.4
Approvals	   FCC ID: SNJCPO I.T.E. E345706 HVIN: 1 IC: 7118D-CPO POLL. 2

Mode of operation

Mode of operation

The SBPSMWBAT wireless sensor in combination with either the flush-mounted base SBPWSHA or the surface-mounted base SBPWSHB can be used in areas where cables are difficult or expensive to install as well as in areas where traditional ceiling-mounted ultrasonic sensors are not an option.

In combination with the flush-mounted base SBPWSHA, the module is mounted to align with the surface and uses the Earth's magnetic field to determine if a car is present or not.

The module can also be mounted with the surface-mounted base SBPWSHB. This installation is more accessible as the base just needs to be glued to the surface of the parking space. See fig. 2 and 3



Fig. 2 SBPWSHA with SBPSMWBAT



Fig. 3 SBPWSHB with SBPSMWBAT

The sensor communicates wirelessly with a base module which must be placed in a cabinet within a maximum of 50 metres in the open air. The base module can operate with up to 150 wireless sensors; they just need to be within range to achieve reliable communication. See fig. 4

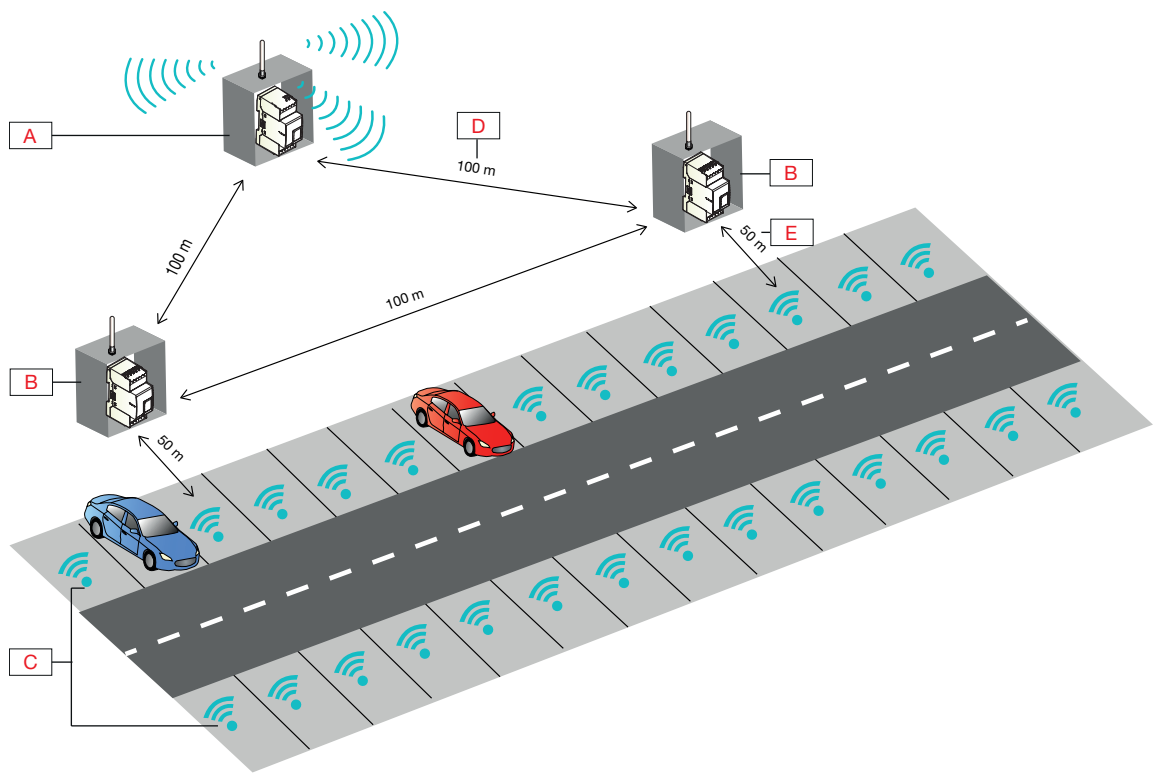


Fig. 4 Overview

A	Wireless base	D	Up to 100 m transmission in the open air between wireless repeaters and wireless base unit
B	Wireless repeater	E	Up to 50 m transmission in the open air between wireless repeaters and sensors
C	Wireless sensors		

The sensor and base must be mounted at least 260 cm away from the nearby base and sensor to avoid activation error caused by tightly parked vehicles.

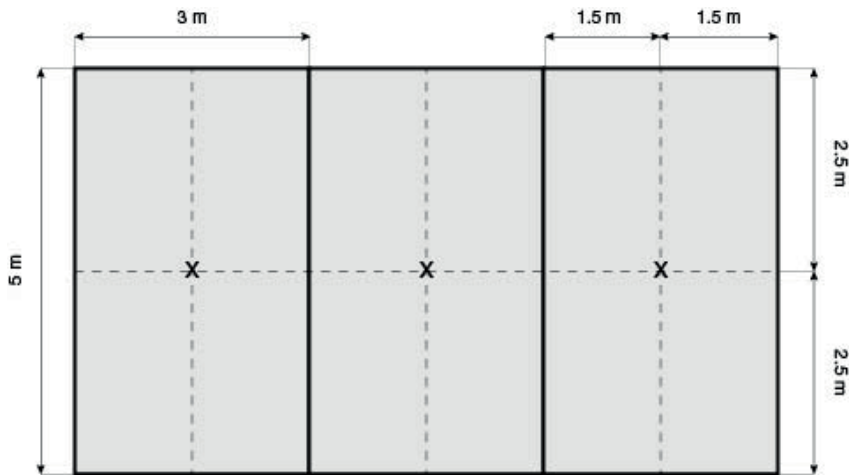


Fig. 5 x= Sensor position

The wireless sensor is ready for use, and no special handling is required.



Each sensor has a unique SIN number. When the configuration is finished, the sensor's SIN number is visible in the Carpark 3 configuration software.

The sensor has a built-in red LED. This LED is mounted on the rear side of the sensor, so it is not visible when the sensor is installed in the base. The LED indicates the status of the sensor and can be used before and during installation. The different LED status indications are described in the section "LED".

The installer must use the SBP configuration tool to discover and assign a position to the wireless sensors.

The sensors must be entered in consecutive order; otherwise, you will not know their position in the parking lot. Calibration is essential and can only be performed when the parking space is empty. When the sensor is assigned a position and calibrated, it is fully operational.

When the two parts are to be assembled, it is vital that they are dry and clean. Even though the sensor is moulded and protected, there is a high risk of water penetration if this precaution is not observed.

The tightening torque as described in the section "Housing" must be respected.

References

Accessories

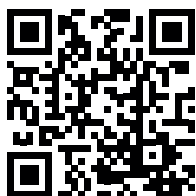
Item	Item number
Anti-vandal torq bit T10	44849
4 M3*16 T10 screws	44823

Product selection key



SBPSMWBAT

Code	Option	Description
SB	-	Smart Building
P	-	Parking
S	-	Sensor
M	-	Magnetic
W	-	Wireless
BAT	-	Battery



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