

## Product description:

KSK Magnetic Sensor is a wireless detector of occupancy of parking spaces. It is specially dedicated for the use on external car parkings, in particular, located in the dense urban areas.

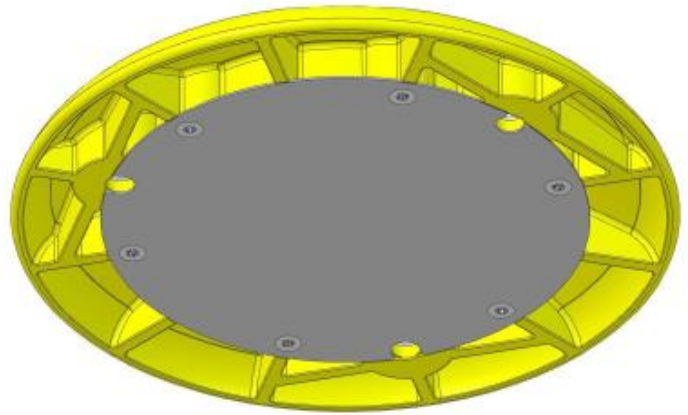
Each parking space needs to be equipped with a wireless sensor mounted directly on the existing surface.

Sensor detects the vehicle based on the continuous measurement of the natural magnetic field of the Earth and recording field disturbance caused by the vehicle. Information about the actual occupancy of the parking space is verified by radar sensor and obtained as the current register and directed by radio to the collecting device (using the LoRa network) using a private or a public IoT network.

The information about the occupancy of the parking space may be used by the manager of the parking and it can be presented using smartphone's app or the LED traffic sign display.

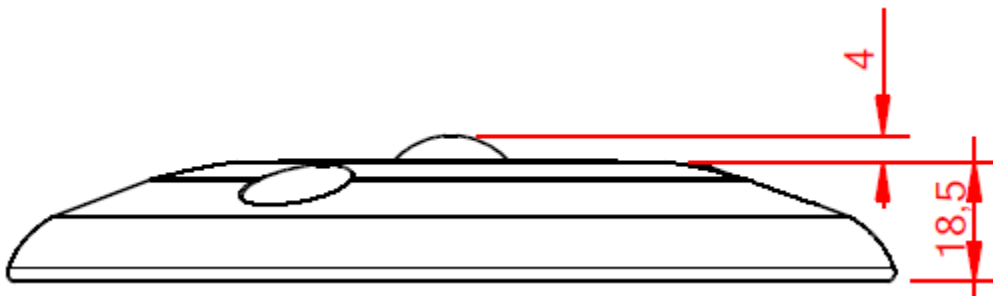
Installation of the sensors is not invasive, simple and fast. It causes no restrictions in the current functioning of the parking. Configuration of the sensors may be done by downlink frames sent from PC.

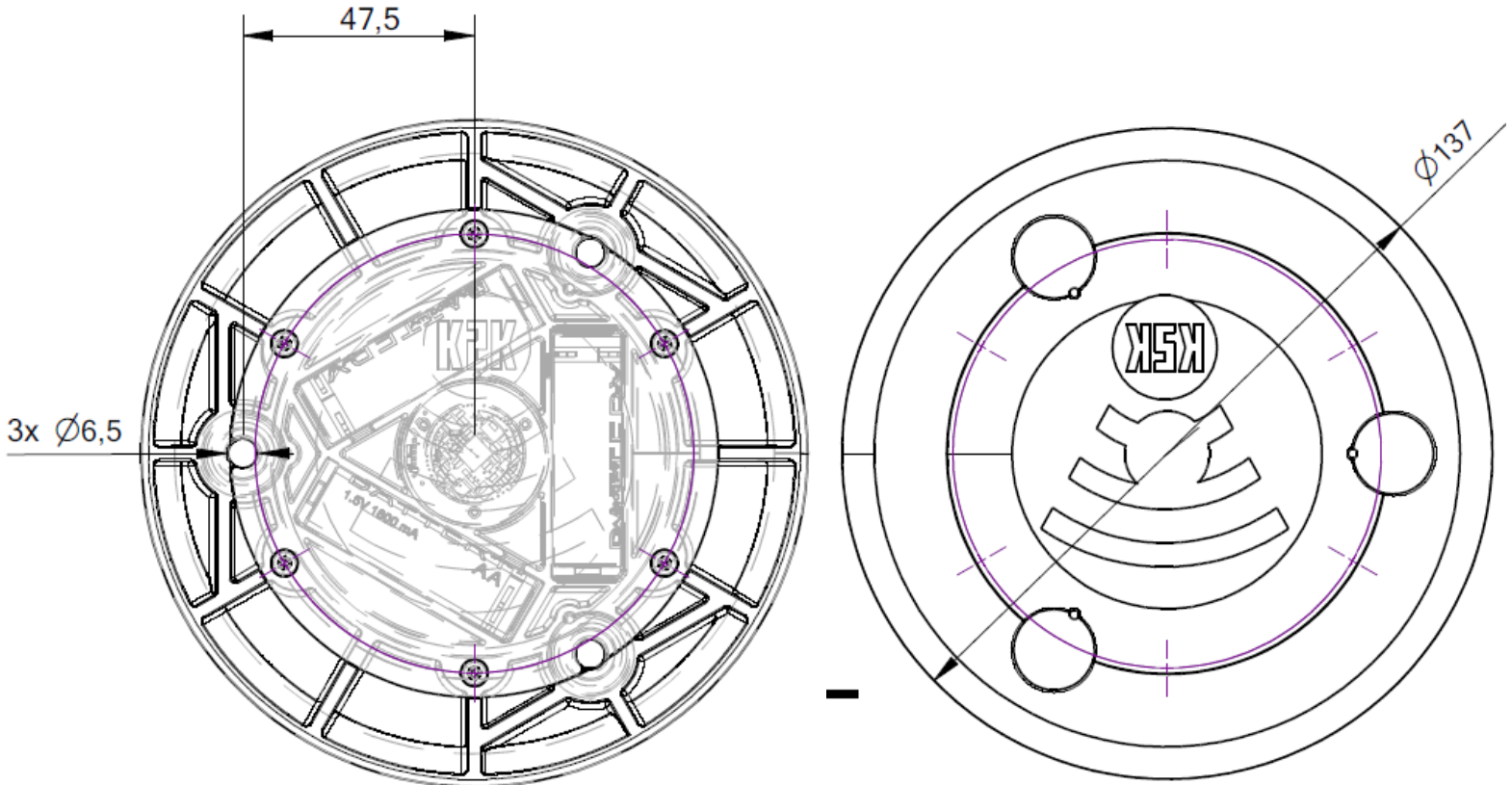
It is possible to integrate a magnetic sensor with mobile apps, active LED signs and other public space management and guidance systems.



**Technical specification:**

<b>Power supply:</b>	4,5 VDC (3 batteries AA 2100mA 1.5V)
<b>Current consumption:</b>	120mA (peak)
<b>Power circuit protection:</b>	1A
<b>Detection:</b>	Geomagnetic + radar
<b>Delay after detection:</b>	17 s
<b>Temperature effect:</b>	battery capacity drop in temp <-20C
<b>Settings:</b>	Possibility to configure device by downlink frames
<b>Housing:</b>	Housing made of polycarbonate and stainless steel
<b>Working conditions:</b>	-25° do +80° C;
<b>Dimensions:</b>	Height: 18.9 mm Diameter: 137 mm Mass: 205g
<b>Flammability class according to UL 94:</b>	V0
<b>Connection:</b>	Wireless connection LoRaWAN 868MHz and/or SigFox
<b>Ingress protection:</b>	IEC IP68
<b>Mechanical and vibration resistance:</b>	IEC 61984 and UL773 Mechanical: 3g, 11 ms half sinusoid, 18 shakes Vibration: 0.5 mm p-p, 10 to 60 Hz
<b>Communication protocol:</b>	LoRaWAN / SigFox





## Installation and service of the device:

The sensor base is attached to the substrate (e.g., concrete, asphalt). To do this, we recommend a two-component adhesive. We have already had good experience with the following adhesive: DELO®-PUR 9692 (universal 2-component polyurethane adhesive available in 50 ml and 200 ml cartridges).

The parking space must be free of dirt, dust, oil, water and other contaminants. For this purpose, at least one swept area should be prepared. However, it is recommended to clean the surface to remove contamination using a high-pressure cleaner and a burner. The installation must take place in the center of the parking space (intersection of the two diagonals) in order to ensure optimum sensor accuracy.



**Warning:** Defective seals can cause water to get into the sensor and damage it. The functionality of the parking lot sensor is not guaranteed if it is installed incorrectly.

- Make sure that the sealing rings on the cap and sensor are seated correctly!
- Do not install the sensors when it is raining.
- Do not use damaged components!
- Do not open the sensor housing!
- Only use original replacement parts!

**Warning:** Risk of explosion.

Extreme heat can damage the battery and the sensor.

Do not expose the sensor to temperatures above 85 °C!

Do not expose the sensor to open flames!

When using a gas burner (for example, when removing weeds), keep a distance of at least 1.5 m between the flame and the sensor!



### Disposal note

The sensor, as well as all the individual parts, must not be disposed of with household waste or industrial waste. You are obliged to dispose of the device at the end of its service life in accordance with the requirements of the WEEE Directive 2012/19/EU (in the European Union) or other applicable regulation in order to protect the environment and to reduce waste through recycling. For additional information and how to carry out disposal, please contact the certified disposal service providers.

The sensors contain a Li battery, which must be disposed of separately.

### Manufacturer Information

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### Markings:

The product is marked with the mark CE

## Warnings:

### **Improper use:**

KSK Developments allows the device to be used only as intended, i.e. to monitor sensor parameters.

KSK Developments is not responsible for any damage related to the use of the system contrary to its intended use.

### **Incorrect connection:**

The device is designed to work with a rated voltage of 4.5 V. Connecting a different voltage may cause irreparable damage to the equipment.

KSK Developments is not responsible for damages related to incorrect connection of the device

## About:

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