

## 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.

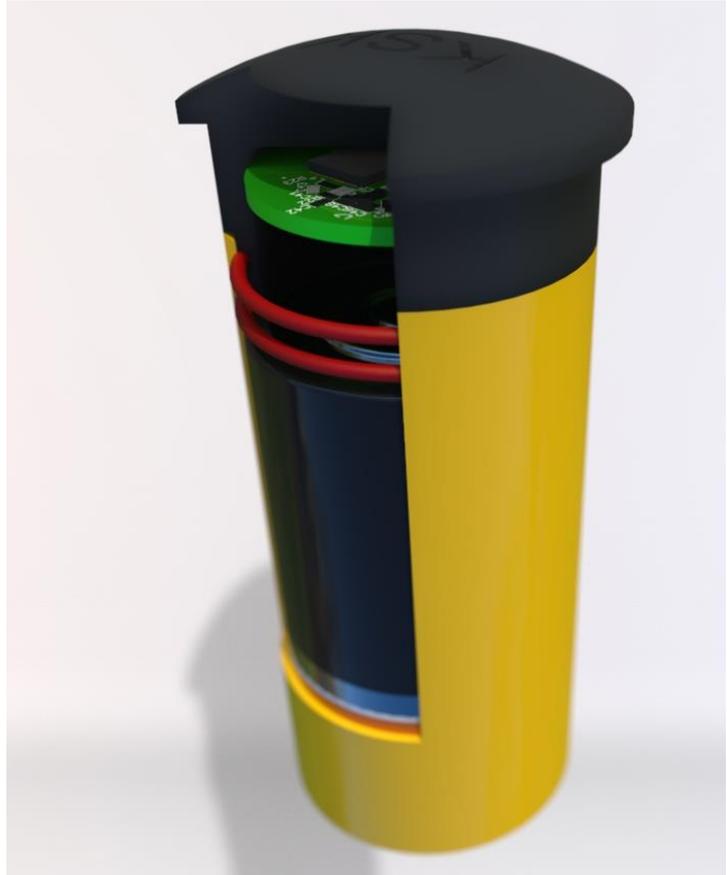
Each parking space needs to be equipped with a wireless sensor mounted directly on the existing surface.

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.



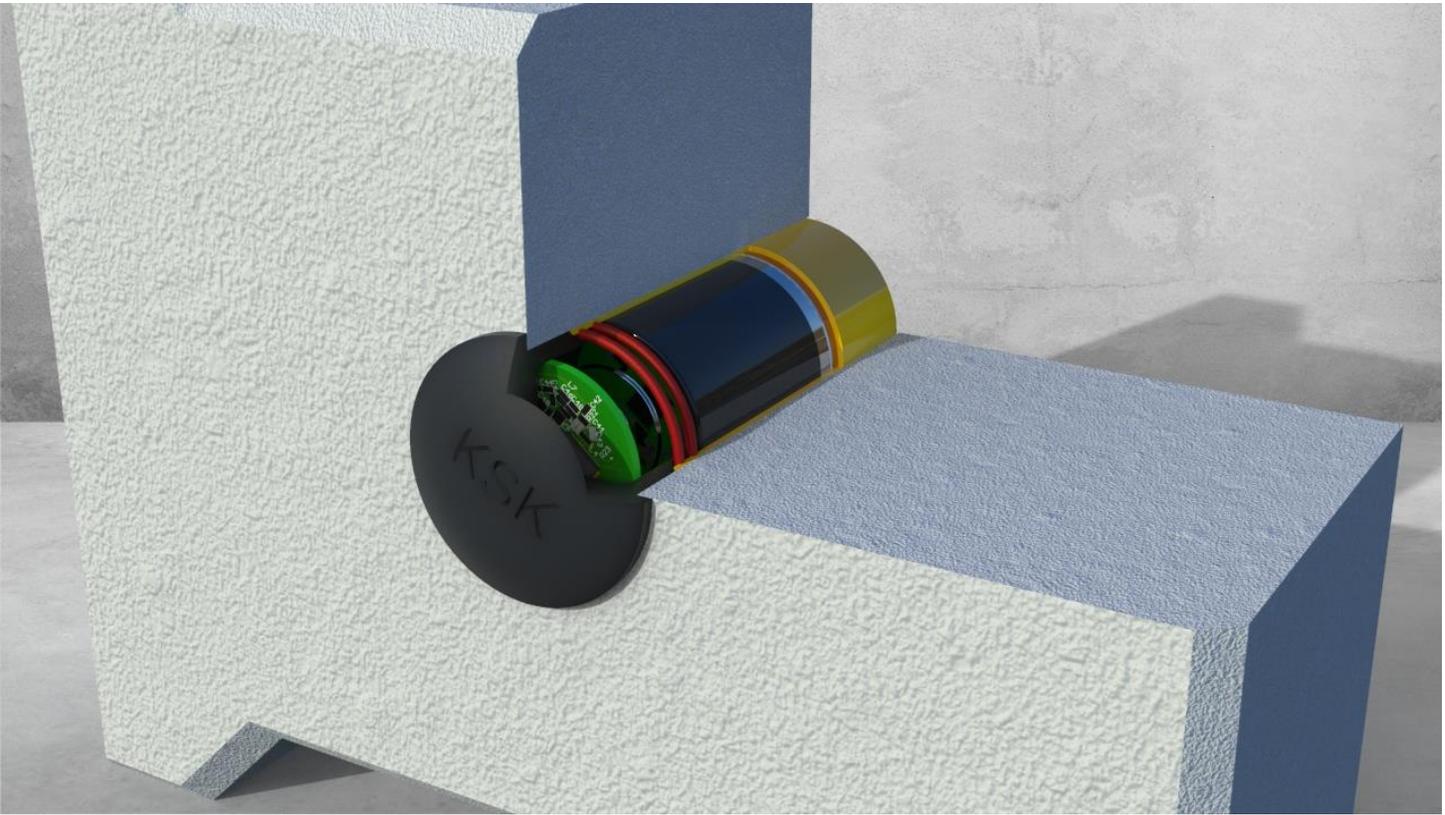
## Technical specification:

<b>Power supply:</b>	3,6 VDC
<b>Current consumption:</b>	120mA (peak)
<b>Power circuit protection:</b>	1A
<b>Detection:</b>	Geomagnetic + radar

# Radar occupancy sensor

## KSK-150420\_P

<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: 80 mm Diameter: 35 mm
<b>Flammability class according to UL 94:</b>	V0
<b>Connection:</b>	Wireless connection LoRaWAN 868MHz
<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

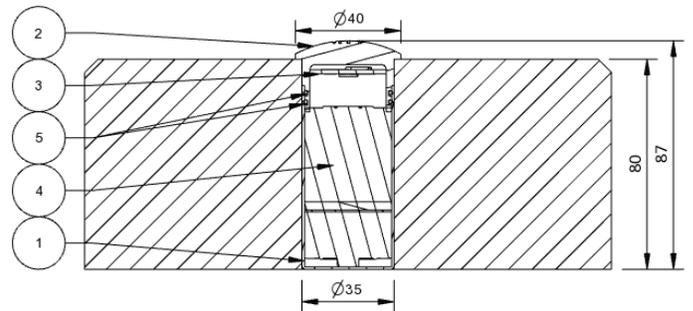
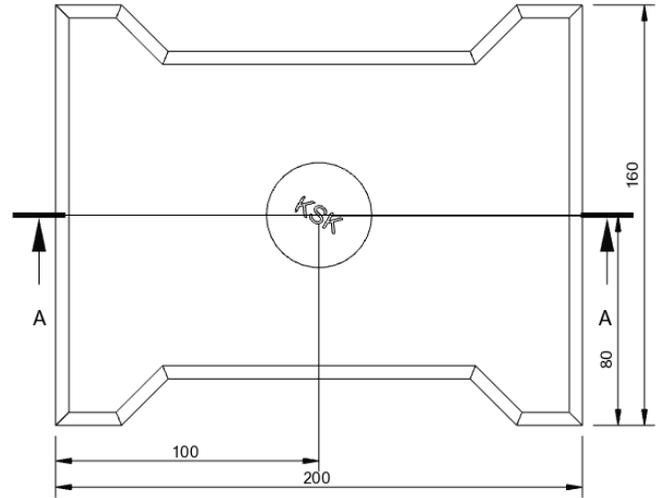


Installation and service of the device:

The device is mounted in a single cube with a standard thickness of 80mm. You should drill a 35mm diameter hole with a trepan drill and then seal the surface with bituminous mass to prevent erosion of the ankle. Then insert the sensor into the prepared hole.

To replacing the battery (4) just remove the plug (2), remove the old sealant, clean the hole, remove the battery with a ribbon (3) and then reassemble the set.

It is essential to make sure that the housing surfaces (1) and (2) are free of any contamination. Otherwise, sealing with O-rings (5) will not be effective. Reassembly does not require any interfering works with the surface. However, special attention should be paid to keeping the sealing surfaces clean. At the final stage, just like during assembly, protect the edge with bituminous mass.



## 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 3.6 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:**

This document is for a system developed by the company KSK Developments sp. z o.o.

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