

## Mobilisis RPS NB-IoT

### Narrowband Radar Parking Sensor

#### Features

- Magnetometer and Radar parking occupancy detection
- Wireless communication via NB-IoT Cellular Network
- Real-time parking spot status
- Reliable detection in all weather conditions
- Easy integration with existing infrastructure
- Expected battery lifetime 5 years\*

\*with 15-30 parking sessions per day, also strongly depending on the coverage quality of the mobile telecom network

#### Product description

Mobilisis provides a state-of-the-art solution for managing open parking space at shopping malls and airports called Radar Parking Sensor (RPS – NB).

The NB-IoT abbreviation comes because of the technology used by the sensor to transmit data which significantly lowers the power consumption of device.

An onboard battery, backed by intelligent power management system, guarantees a long operational lifetime, with minimal maintenance. Integrated Bluetooth Low Energy communication module makes the system easily expandable and serviceable.

#### Detection

Combination of three-axis magnetometer, radar and sophisticated algorithm ensures precise detection even when snow, dirt or leaves are covering the sensor.

The sensor itself works in such a way that if the vehicle is parked in a parking space, the magnetometer detects a change in the magnetic field and automatically informs the radar that a change has occurred. Radar checks to see if the vehicle is indeed above the sensor, and if so, starts transmitting information via the base station (NB-IoT) to the sever. This detection method ensures very accurate vehicle detection which leads to up to 99% detection rate.



#### Deployment

Sensors are delivered in an inactive state thus conserving battery life during transport and storage. The sensors are activated and configured using an Android device via Bluetooth connection.

Each sensor comes with pre-installed SIM card supporting local carrier.

#### Smart parking Cloud

Smart parking cloud is a complete parking management solution that integrates multiple technologies that deliver the most advanced parking system available today. There's no need for additional software installation, as the interface is accessed via a web browser, such as Google Chrome or Mozilla Firefox. All sensors, including their real-time occupancy status, are visualized within the web interface using Google maps.

#### Application

- On-street and off-street parking spots
- Garages

Technical specifications		RPS – NB
<b>Detection method</b>		Magnetometer + Radar
<b>Bluetooth low energy capability</b>		Supports data exchange with external device via BLE
<b>Power supply</b>		Built in Hybrid Primary Li-SOCl <sub>2</sub> battery
<b>Voltage [V]</b>		3,6
<b>Capacity [Ah]</b>		17
<b>Mounting</b>		Flush with the road surface, Ceiling
<b>Detection accuracy rate</b>		99%
<b>Antenna</b>		External and Omnidirectional
<b>Snow plough resistant</b>		Yes
<b>Double encapsulation</b>		Yes <sup>1)</sup>
<b>Dimensions of overall enclosure</b>	<b>Bottom part</b>	Ø 50 mm
	<b>Length</b>	125 mm
	<b>Head</b>	Ø 75 mm
<b>Certification standards</b>		<b>IP68</b> (EN 60529:1991 + A1:2000 + A2:2013) <b>RED</b> (Draft EN 305 550; EN 300 328; EN 301 489-1; EN 301 489-17; Draft EN 301 489-52; EN 305 550-1; EN 305 550-2; EN 301 908-1; EN 62311; EN 62368-1; EN 62368-1/A11)
<b>Case Material</b>		ASA (Acrylonitrile Styrene Acrylate)
<b>Weight</b>		Without external housing: ~180g
		With external housing: ~235g
<b>Operating temperature [°C]</b>		-35...+65
<b>Storage temperature [°C]</b>		-40...+85
<b>SIM card<sup>2)</sup></b>		4FF Nano SIM

1) Allows easy replacement of the sensor when battery is empty

2) NB-IoT traffic with provided monthly data of 1 MB, PIN security deactivated.

