TEKZIPARK
QUICK START GUIDE

Abstract
This document will assist any person who wants to get started quickly on using the TEKZIPARK smart parking sensor.

TEKZIPARK Terms of Usage

The device is designed to be used for detecting parking space occupancy states. This product is not intended for incorporation into finished appliances that are made commercially available as single functional units to end users.

This product uses the WISOL Sigfox module which is SIGFOX verified.

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

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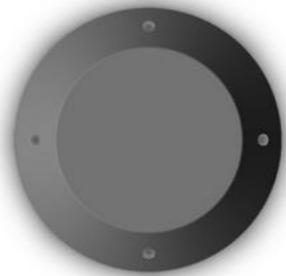
Contents

1. Device Specifications

LPWAN	Sigfox
Operating Zones	RCZ1 - Europe, Oman, Iran, South Africa, Tunisia, UAE RCZ2 - USA/Mexico/Brazil RCZ3 - Japan RCZ4 - Australia/New Zealand/South East Asia/Rest of South America
Power	Built-in Lithium batteries (3.6V), expected lifetime of 10 years*
Antenna	Internal included
Detection	Magnetometer
Mounting	Surface
Protection	IP68**
Operating temperature	-20 to +65 °C
Body	Polycarbonate
Firmware Update	Over the air upgrade of firmware using built in BLE capability
Beacon Scanner	Ability to scan BLE beacons enabling recording of vehicle identity.
Battery Life	10 years
Dimensions	270mm diameter, 45mm height

*Under estimated number of transmissions per day @ 44.
** Under correct installation conditions

2. Payload Format

		Data Byte							
		Bit							
		7	6	5	4	3	2	1	0
Byte1	Description	*Occupancy Status*	*Deflection*	*Battery Status*	*Unused*	*Payload Type*			
	Interpretation	0 - Vacant 1 - Occupied	0 - Deflection below threshold 1 - Deflection above threshold	0 - Low Battery 1 - Good battery		0000 - Parking Status change 0001 - Keep Alive Frame 0010 - Reset Frame 0011 - Keep Alive transient 0100 - 1111 - Unused			
Byte2		Temperature Byte							
		Bit							
		7	6	5	4	3	2	1	0
	Description	*Temperature*							
	Interpretation	Integer value of temperature in signed form							
Byte3		Deflection value							
		Bit							
		7	6	5	4	3	2	1	0
	Description	*Deflection value*							
	Interpretation	Integer value of magnetic deflection from initial state							

Example

| 2018-08-13 00:04:00	202400 ASCII: $.	⬦	▂▃▄▅	⬆	*20 ; 24 ; 00 – Vacant, Deflection below threshold, Good battery, Parking status change; 36degC; Nil deflection from initial magnetic field.*
2018-08-13 00:02:00	62217e ASCII: b!~	⬦	▂▃▄▅	⬆	*62 ; 21 ; 7e – Vacant, Deflection above threshold, Good battery, Reset; 33degC; Deflection of 126 from initial magnetic field.*

Based on specific customer requirements, additional bytes upto a maximum of 12 bytes per payload can be included in the payload to capture additional parametric information.

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3. Powering on and running the device

a. Make sure that the device is located in a place where there is Sigfox coverage.
b. Place the device in its intended location.
c. Power on the device by inserting the jumper in the pins as shown below

d. Once device is powered on close the top cover of the casing. Make sure the arrows on the bottom areas
e. of both the parts of the casing match.
f. Place a strong magnet on top of the casing at the location as shown (yellow circle) and keep it there for 5
g. seconds. This step will reset the device and initialize it to its current location and orientation.
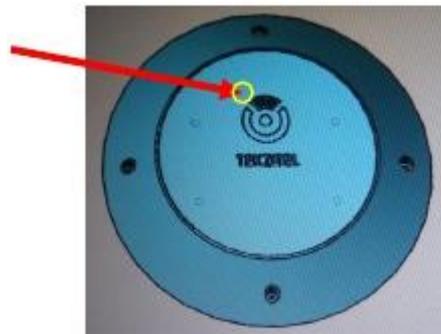
h. After reset the device will go into BLE advertising mode for 5 minutes to allow for any new firmware upgrade. (BLE device name is "TEKZIPARK")
i. Please wait for 5 minutes if no firmware upgrade is required.
j. After BLE advertising finishes, the device will now start to initialize and adjust to the new environment
k. and be ready for use after a minute.

**Important – Any change in location or orientation of the device needs a device reset using a magnet. This is required to initialize it with the changed situation.