



Wheel Lock IOT

EV Vehicle Tracking Device

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Wheel Lock IOT Vehicle Tracking Device Documentation

Overview

The **wheel lock IOT** is an advanced IoT-enabled VTS (Vehicle Tracking System) device specifically for 2-wheeler electric vehicles (EVs). This compact, high-performance device is optimized for tracking and monitoring use cases such as insurance telematics, rental EV monitoring, public safety, delivery transport, and surveillance. The **wheel lock IOT** supports ignition control, wheel sensing, and wheel lock functionalities, along with integrated MOSFET control for EV ignition. Additionally, it includes FOTA (Firmware Over-The-Air) updates for remote software upgrades.

Introduction

Key Features

- **2G Connectivity:** Stable data transmission over GSM networks for consistent tracking.
- **High-Gain Antennas:** Built-in GNSS and GSM antennas for enhanced reception.
- **Integrated Battery Backup:** Ensures device continuity during power interruptions.
- **Ignition Control, Wheel Sensing, and Wheel Locking:** Provides essential tracking and control functions.
- **Compact Design:** Perfect for discreet installation in 2-wheeler EVs.
- **FOTA (Firmware Over-The-Air):** Remote firmware updates for enhanced device functionality.

Package Contents

- Wheel Lock IOT
- Wiring Harness
- Quick Installation Guide
- Warranty Card

Technical Specifications

Parameter	Details
Model	Wheel Lock IOT
Connectivity	2G (GSM)
Antennas	Internal high-gain GNSS and GSM antennas
Battery Backup	Integrated
Power Supply Range	9V DC to 90V DC
Bluetooth	Yes
Inputs	Ignition Control, Wheel Sensing, Wheel Lock
Output	Immobilization Control
PCB	4-Layer Design
Operating Temperature	-20°C to +70°C
Dimensions	Compact for 2-wheeler EV installations

Wiring and Connections

Wire Functions for Wheel Lock IOT

- **Red Wire:** Input Power Supply (9V DC to 90V DC)
- **Black Wire:** Ground
- **Yellow Wire:** Ignition Control
- **Green Wire:** Wheel Sensing
- **Blue Wire:** Wheel Lock

Installation Guide

Required Tools

- Wire cutters/strippers
- Insulated gloves
- Electrical tape
- Multimeter (optional)

Installation Steps

1. **Choose a Location:** Mount the device securely in a location like under the seat or in the storage compartment.
2. **Connect Power Wires:**
 - Attach the **Red** wire to the EV's power source.
 - Connect the **Black** wire to the vehicle's ground.
3. **Sensor Connections:**
 - **Yellow Wire** to ignition control.
 - **Green Wire** to wheel sensing.
 - **Blue Wire** to wheel lock.
4. **Secure Connections:** Confirm all connections are insulated and secured.

Device Setup and Mobile App Configuration

Device Activation

1. **Power On** the device with the vehicle's ignition.
2. Verify the indicator light for power and connectivity.

Bluetooth Pairing

1. Enable **Bluetooth** on your smartphone.
2. Pair with the **Wheel Lock IOT** device (within a 10-meter range).

Using the Wheel Lock IOT

Real-Time Tracking

- Open the app to view real-time vehicle location, speed, and status.

Ignition Control

- Use the app to remotely enable or disable the vehicle's ignition.

Wheel Lock Control

- The **Wheel Lock** option allows for secure wheel locking/unlocking from the app.

Geofencing

- Set up **geofencing** in the app to receive alerts when the vehicle enters or exits a specified area.

FOTA (Firmware Over-The-Air) Updates

- Firmware updates are available through the app, ensuring the latest features and security.

Maintenance and Troubleshooting

Common Issues and Solutions

- **Bluetooth Pairing Issues:** Confirm Bluetooth is on and that you're within 10 meters. Re-pair if needed.
- **No Data in App:** Verify stable 2G network and active subscription.
- **Device Not Responding:** Restart the device by switching the vehicle power off and on.

Maintenance Tips

- Regularly inspect wiring connections for wear.
- Update firmware as prompted to maintain device performance.
- Avoid exposing the device to extreme weather.