



## OC32 bike lock specifications

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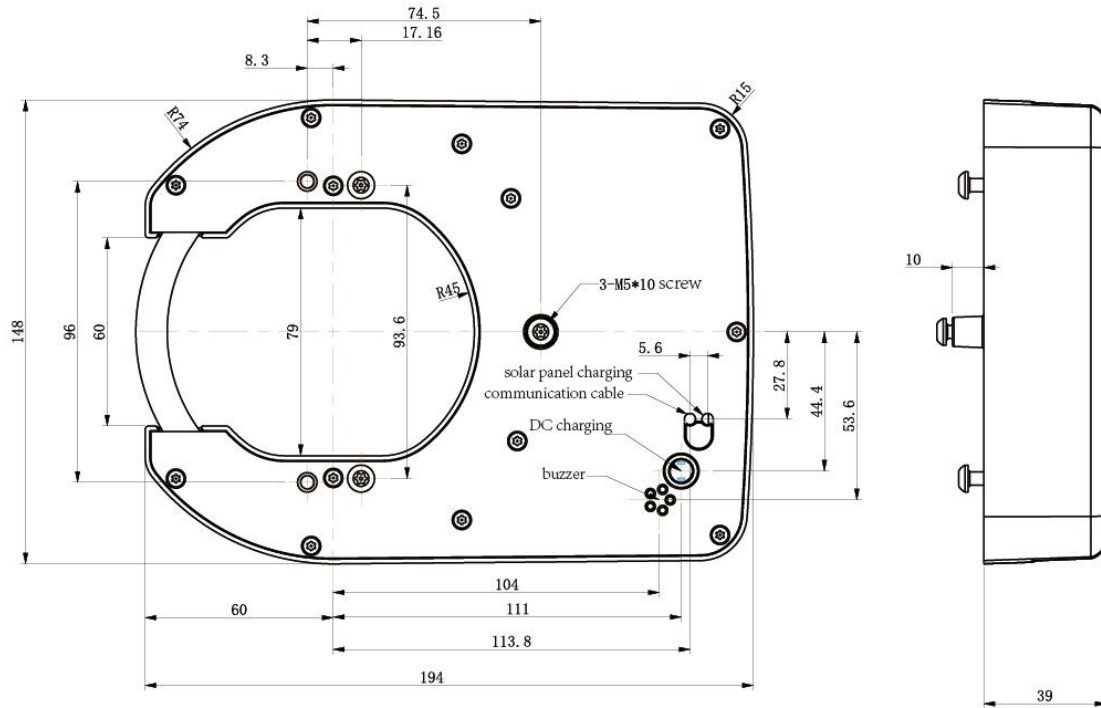
## 1.Product introduction

### 1.1 Product overview

OC32 Horseshoe lock is a GPS positioning terminal for sharing bicycles and electric vehicles. The terminal has 4G network remote control, GPS real-time positioning, Bluetooth communication, vibration detection, anti-theft alarm and other functions. The terminal uses 4G or Bluetooth to interact with the background and mobile phone APP to achieve real-time vehicle control and status reporting.

### 1.2 Product appearance drawing





### 1.3 Basic parameters of the equipment

#### 1.3.1 Machine parameters

<b>Connect moped:</b>	UART communication
<b>Indicator light:</b>	Blue light on : the lock network is connected to the server; Adapter charging status: charging red light is on, full blue light is on
<b>Beep:</b>	Buzzer, loudness>65DB When the bike / ebike is locked, the mobile vehicle alarms and the lock is closed
<b>Unlock method:</b>	Network/Bluetooth
<b>Locking method:</b>	manual lock
<b>DC charging:</b>	6VDC/3A
<b>Moped communication Line 5V requirements:</b>	5VDC±10% , 500MA , long-term output is required, not controlled by switch lock
<b>Built-in battery:</b>	Rechargeable lithium battery : 3.7V/8000mAh/6400mAh optional (the terminal is normally connected to the server , it will be standby for 1-2 months at 25℃ )
<b>Waterproof level:</b>	IP66



<b>Shell material:</b>	shell: PA66+30%GF;bottom shell: aluminum alloy
<b>Standby current:</b>	<5mA
<b>Working temperature:</b>	-10℃ ~ +60℃
<b>Working humidity:</b>	10 ~ 95%
<b>Storage temperature:</b>	-40℃ ~ +80℃
<b>SIM card:</b>	size: medium card (Micro-SIM)
<b>Overall dimensions:</b>	Length, width and height : 194mm × 148mm × 39mm
<b>Color:</b>	black (can be customized according to customer requirements)
<b>Weight:</b>	0.85KG
<b>Mounting screw:</b>	M5 diameter
<b>Power adapter:</b>	6VDC/3A (British, American, Australian, optional)

### 1.3.2 4G performance Support frequency band

<b>2G frequency band</b>	GSM/GPRS/EDGE 850/950/1800/1900MHz
<b>4G frequency band</b>	Japan version: FDD-LTE B1/B3/B8/B18/B19/B26 North American version: UMTS/HSDPA/HSPA+B2/B5, FDD-LTE B2/B4/B12 European version: GSM/GPRS/EDGE 900/1800MHz, UMTS/HSPA+B1/B5/B8, FDD-LTE B1/B3/B5/B7/B8/B20/B38/B40/B41 ANZ version: GSM/GPRS/EDGE 850/900/1800/1900MHz, UMTS/HSPA+B1/B2/B5/B8 FDD-LTE B1/B2/B3/B4/B5/B7/B8/B28/B40

### 1.3.3 GPS performance

<b>Positioning:</b>	support GPS、GLONASS、BD(optional)
<b>Sensitivity:</b>	-160dBm
<b>Start-up time:</b>	Cold start is less than 120 seconds, hot start is less than 30 seconds (open area, sunny day without obstruction, including coordinate optimization time)
<b>Positioning accuracy:</b>	≤15m (open ground, no shelter in sunny days)
<b>Positioning conditions:</b>	The number of searched stars ≥4, and the signal-to-noise ratio is greater than 30dB

### 1.3.4 Bluetooth performance

<b>Ble version :</b>	BLE4.0
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<b>Receiving sensitivity</b>	-90dBm
<b>Max communication distance:</b>	≥10meters (open area)

### 1.3.5 RFID performance (optional)

<b>Work frequency:</b>	13.56MHz
<b>Protocol :</b>	ISO/IEC14443A

## 2 Function description

Function details	Function description
<b>Positioning:</b>	Support single positioning and continuous positioning mode (continuous positioning mode is not recommended for connecting bicycles, which consumes high power), and remotely issue instructions to obtain current vehicle position information. Support GPS, GLONASS and BD (optional).
<b>2G/4G communication:</b>	Through server commands, you can remotely obtain the vehicle's location, battery power, temperature and other information; remotely set the vehicle's maximum riding speed, low battery alarm value, etc. (requires controller support).
<b>WIFI positioning:</b>	WIFI auxiliary positioning (optional)
<b>Serial communication:</b>	Communicate with the controller through the serial port, the lock is the master and the controller is the slave.
<b>Bluetooth unlock:</b>	Supports Bluetooth 4.0 communication. When the mobile phone APP scans the QR code on the lock, it sends an instruction to the server through the user's mobile phone network. After receiving the instruction, the server issues an unlock instruction to the APP, and the APP then issues instructions to the lock via Bluetooth to unlock the lock .
<b>Network unlocking:</b>	When the mobile phone APP scans the QR code on the lock, the APP sends an instruction to the lock, and the lock uploads the instruction to the server through the network. After receiving the instruction, the server issues an unlock instruction to the lock to unlock the lock.
<b>Upgrade:</b>	OTA & BLE ,The lock supports remote firmware upgrade through the server and controller firmware upgrade (controller support is required).
<b>Vibration detection:</b>	There is an acceleration sensor in the lock to detect vehicle vibration. When the lock is in the locked state, and vehicle vibration is detected, the lock will actively send instructions to notify the server.
<b>Fault reporting:</b>	Vehicle faults can be reported to the server through the lock (controller support is required).

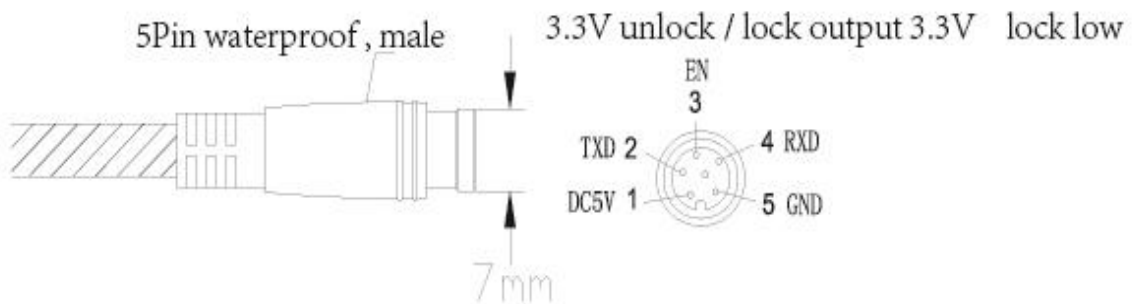
### 3 Wire

#### 3.1 Wire parameters

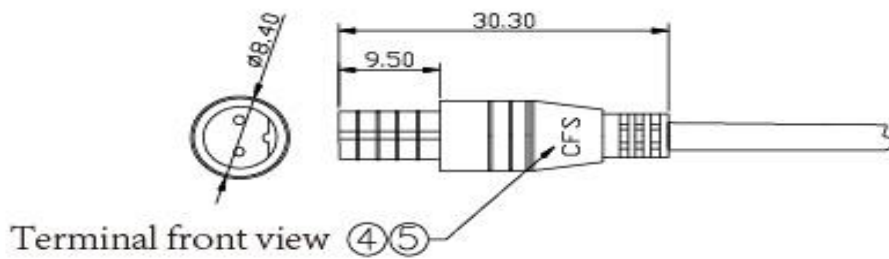
Waterproof cable skin material:	PVC
Waterproof cable outer diameter:	4.0mm

#### 3.2 Interface definition

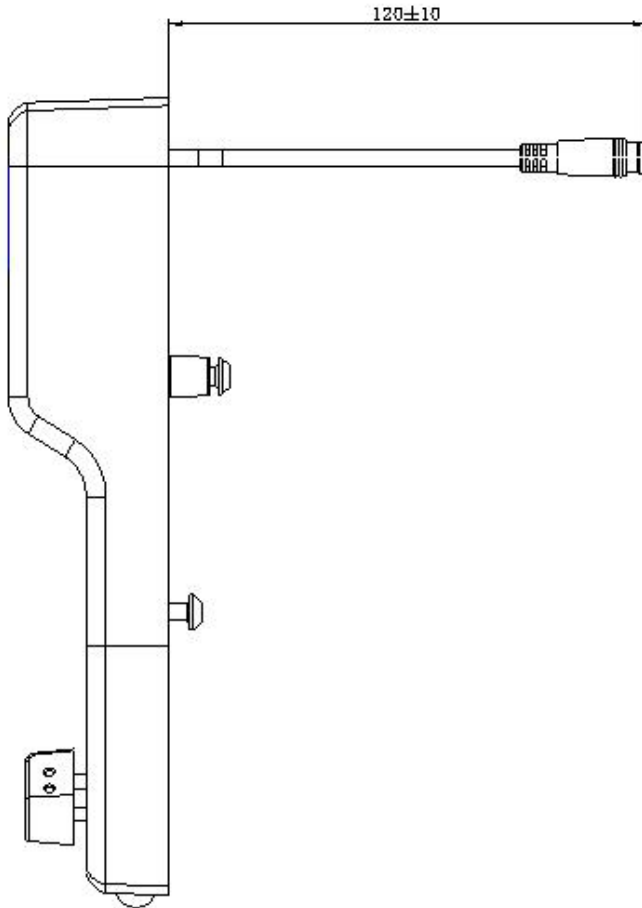
connect moped



connect solar panel



### 3.3 Exposed length of communication cable



#### Major features:

1. GPS+GLONASS+Wifi Precise positioning
2. LTE + BLE+ RFID stable communication
3. Optional 8000mAh/6400mAh battery
4. Support OTA and BLE upgrade
5. Support to connect battery lock and cable lock
- 6, Ebike:Communication with ebike controller ,Control its power on/off
- 7 .Ebike:Monitor battery power and report to server
- 8, Ebike :Powered by ebike battery
- 9, Ebike : Remotely limit the speed ,Support GEO Fence
- 10, Bike: Powered by solar panel.