



MOKO SMART LW005-MP LoRaWAN Smart Plug User Guide

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MOKO SMART LW005-MP LoRaWAN Smart Plug



About this Manual

The purpose of this manual is to outline how to use MKLoRa APP for LW005-MP parameters configuration.

MKLoRa APP

For the detailed operation of the MKLoRa app to configure and read device information, please refer to the following instructions:

Install MKLoRa APP

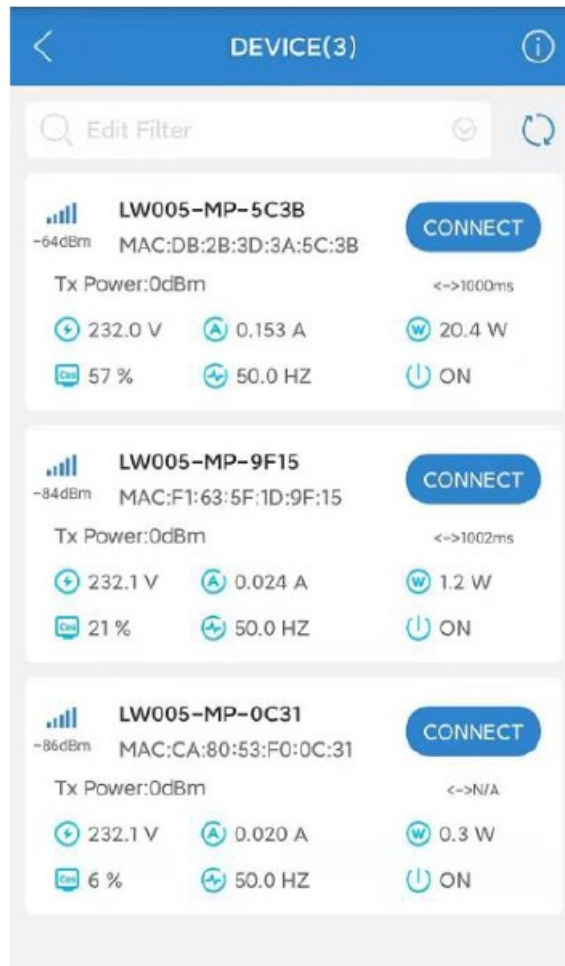
User can get the APP download link by search“MKLoRa”in your phone APP store: Please allow Bluetooth to be enabled during the installation process. This APP communicates with the device via Bluetooth, and it only supports above android 4.4 and IOS 9.0 system.

Note: After the successful installation of the APP, the APP will request some mobile phone permissions, such as Bluetooth access permissions. Please click “OK”, otherwise the APP will not work well.

Connect to LW005-MP

After the device is turned on, the device Bluetooth will start broadcasting. Open the MKLoRa APP and choose LW005-MP on device option interface, then you can search the LW005-MP device by click the refresh icon. The default broadcast name of the device: LW005-MP-XXXX(XXXX is the last 4 bit of device MAC address). The Edit Filter at the top can help user filter the keywords and RSSI. RSSI ranges from -127dBm to 0dBm;

- The distance between the phone and the device should be kept within 10m without wall obstruction. Otherwise, the device will not be searched. After searching for the device, click the “CONNECT” to connect the device that you want to configure.
- Then you should enter the password, the default login password is “Moko4321

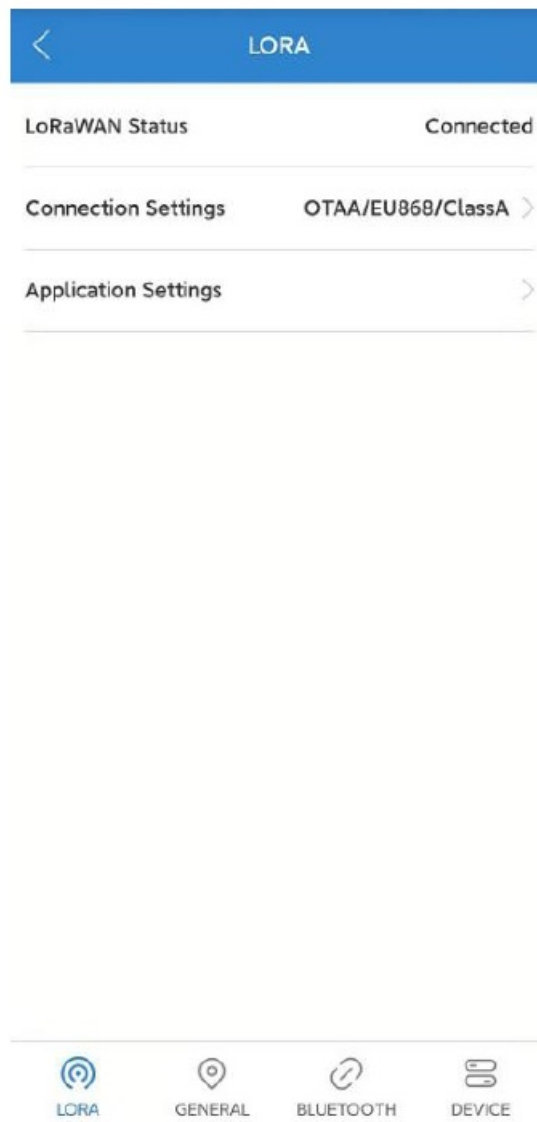


Note: If a password is not entered within one minute, the login box will disappear, you should click “CONNECT” again.

Note: If there is no action within 3 minutes after login, the system will automatically login out.

Configure LW005-MP Parameters

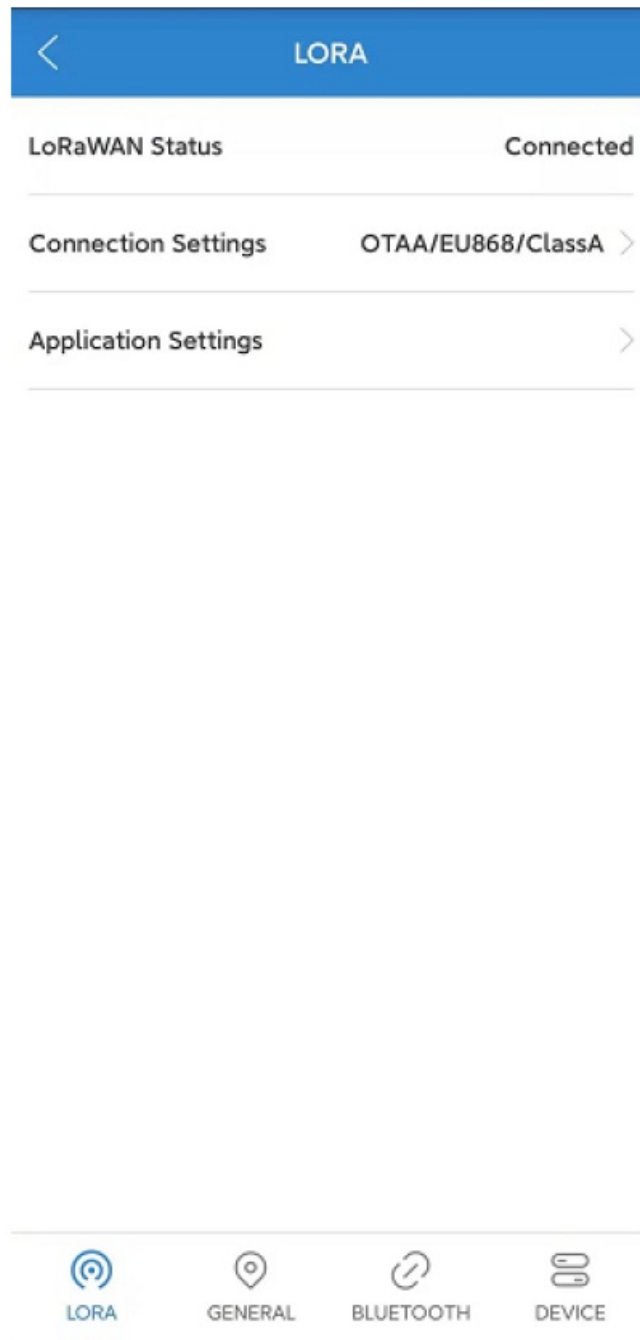
When you log into the device successfully, you will enter the main page. There are four parts of the parameter configuration: LORA, GENERAL, BLUETOOTH and DEVICE



LORA Parameters

In this page, user can configure parameter for LoRa Part

- **LoRaWAN Status:** Indicates the status of the LoRaWAN network connection.
- **Connection Settings:** Configure LoRaWAN network parameters.
- **Application Settings:** Configure LoRaWAN application parameters



Connection Settings

- **LoRaWAN Mode:** LoRaWAN join-in mode selection
- **DevEUI/AppEUI/AppKey:** Network parameters in OTAA mode

Connection Settings

LoRaWAN Mode: OTAA

DevEUI: db2b3dffff3a5c3b

AppEUI: 70b3d57ed0026b87

AppKey: 2b7e151628aed2a6abf7158809cf4

- **DevEUI/AppEUI/DevAddr/AppKey/NwkSKey:** Network parameters in ABP mode.
- **Region/Subnet:** Device frequency band selection, AS923/ AU915 /CN470 /CN779 /EU433 /EU868 /KR920 /IN865 /US915 /RU864 can be set.
- **Device Type:** LoRaWAN device mode; it can be set Class A or Class C, the default is Class C.
- **Message Type:** Uplink payload type, it can be set unconfirmed or confirmed, the default is confirmed

Connection Settings

LoRaWAN Mode: ABP

DevEUI: db2b3dffff3a5c3b

AppEUI: 70b3d57ed0026b87

DevAddr: 3d3a5c3b

AppSKey: 2b7e151628aed2a6abf7158809cf4

NwkSKey: 2b7e151628aed2a6abf7158809cf4

Region/Subnet: EU868

Device Type: Class A

Message Type: Unconfirmed

Advanced Setting(Optional) ☐

Note: Please do not modify advanced settings unless necessary.

- **Advanced Setting:** Some advanced parameter settings, if not necessary, it is not recommended to modify.
- **Duty-Cycle:** It is only used for EU868, CN779, EU433 and RU864. The default is off

- **DR for join:** It is only used for CN470, CN779, EU433, EU868, KR920, IN865, RU864. DR selection for Join Request of OTAA mode. The default is DR0, it ranges from DR0 to DR5
- **CH:** Channel Setting, Generally, the default is fine
- **Uplink Strategy:** Option1: ADR on, ADR mechanism following the standard protocol stack.
- **Option2:** ADR off. The device will choose the DR to send the payload within the set DR range, and will try to ensure that the time taken to send the payload is the same every time.
- **Max retransmission times:** Maximum number of retransmissions when selecting a confirmation frame to transmit an uplink Payload. The default is 3 times. The value ranges from 0 -7 times

Advanced Setting(Optional)

Note:Please do not modify advanced settings unless necessary.

Duty-cycle
☐

*It is only used for EU868,CN779,EU433 and RU864. Off: The uplink report interval will not be limit by region frequency. On:The uplink report interval will be limit by region frequency.

DR For Join

*It is only used for CN470, CN779, EU433, EU868,KR920, IN865, RU864

CH

*It is only used for US915,AU915,CN470

Uplink Strategy

ADR
☒

Max retransmission times

Note: If the data length of the current payload exceeds the transmission capacity of the selected DR, it will automatically make the DR plus one.

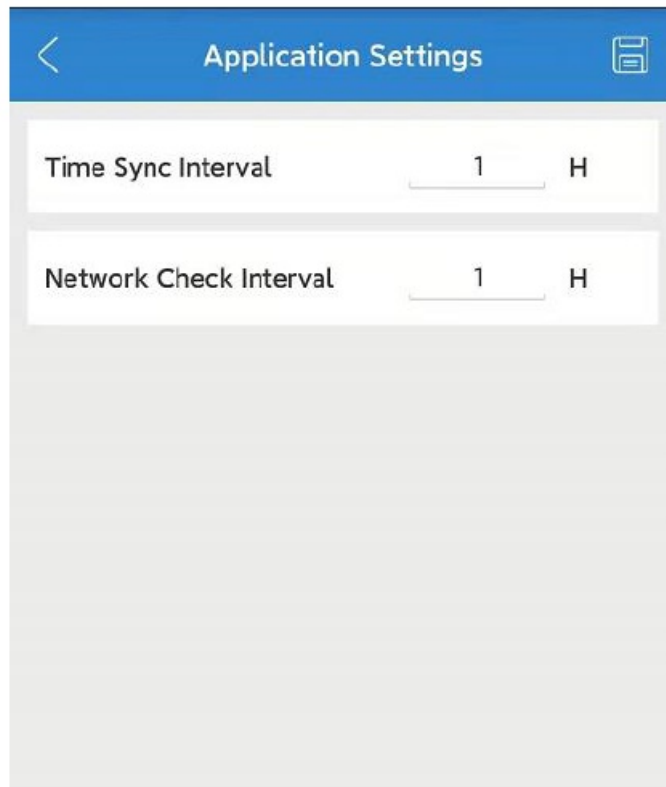
Note: Please do not modify advanced settings unless necessary

Application Settings

- **Time Sync Interval:** It is used to sync the device time via MAC command. The default is 1, means that the device's time will be synchronized every 1 hour via LoRaWAN MAC commands.

The value ranges from 0 -255H. 0 means disable.

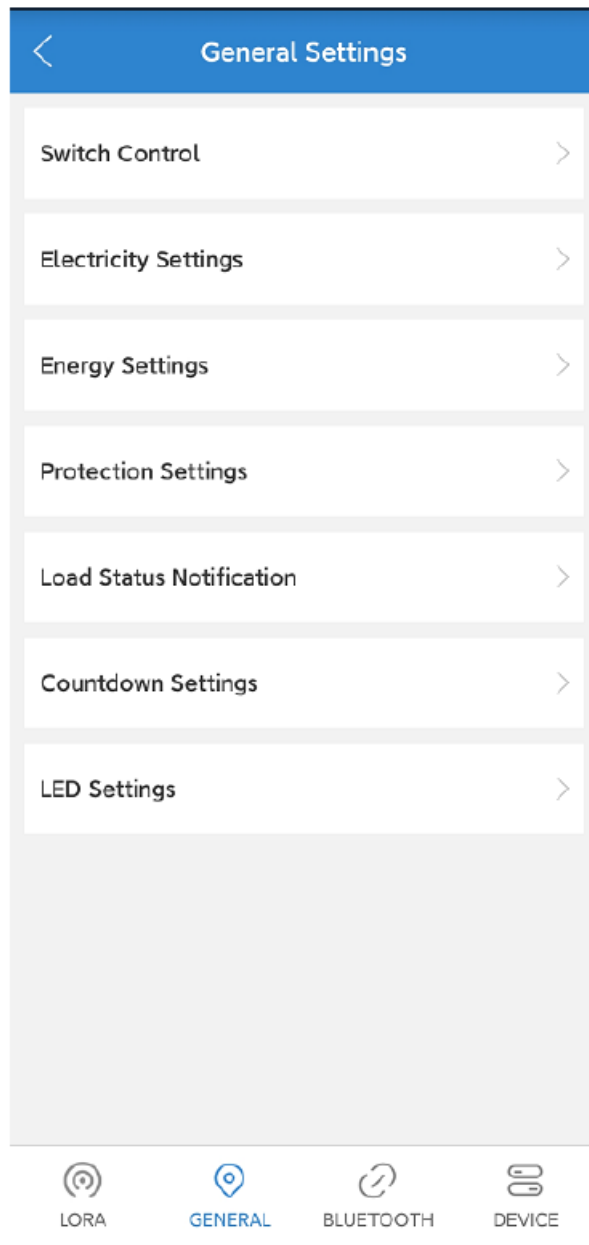
- **Network Check Interval:** The device will periodically check the LoRaWAN network status via MAC command. The default is 1, means that the device will check the network status every 1 hour via LoRaWAN MAC commands.
- The value ranges from 0 -255H. 0 means disable.



The screenshot displays a mobile application interface titled "Application Settings". It features a blue header bar with a back arrow on the left and a save icon on the right. Below the header, there are two settings cards. The first card is labeled "Time Sync Interval" and has a numeric input field containing the value "1" followed by a unit selector set to "H". The second card is labeled "Network Check Interval" and also has a numeric input field containing the value "1" followed by a unit selector set to "H". The background of the settings area is a light gray gradient.

General Settings

In this page, user can configure general parameters



Switch Control

ON/OFF: User can control the AC output of the LW005-MP.

Report Interval: The report interval of switch payloads.

- The default is 30, the unit is s.
- The value ranges from 10 -600s

Switch Control

ON/OFF ☒

Report Interval 30 s
*The report interval of switch payloads

Power On Default Mode Off

Electricity Settings

Report Interval: The report interval of electricity payloads. The default is 10, the unit is s. The value ranges from 5 -600s

Electricity Settings

Report Interval 10 s
*The report interval of electricity payloads

Energy Settings

- **Report Interval:** The report interval of energy payloads.
The default is 1, the unit is minutes. The value ranges from 1 -60 minutes. It can't be less than Energy Save Interval.
- **Energy Save Interval:** The save interval of energy data.
The default is 1, the unit is minutes. The value ranges from 1 -60 minutes.
- **Power Change Value:** When the percentage change in power exceeds power change value, device will immediately store the energy data. The default is 15%, it ranges from 1% to 100%.
- **Total Energy:** Historical total accumulated energy data of LW005

<
Energy Settings

Report Interval
1
Min

*The report interval of energy payloads

Energy Save Interval
1
Min

Power Change Value
15
%

*When the percentage change in power exceeds power change value, device will immediately store the energy data.

Total Energy
3690.0
KWH

Protection Settings

When the plug detects that the measured voltage/current/power exceeds the safe range for a period of time, it will automatically turn off the switch.

The rated current and voltage of different plug types are not the same, so the power, voltage and current threshold configurations are also different, please set the threshold value according to the plug types

<
Over-Load Protection

Over-Load Protection

Over-Load Threshold
4416
W

Time Threshold
4
S

<
Over-Voltage Protection

Over-Voltage Protection

Over-Voltage Threshold
253
V

Time Threshold
4
S

<
Sag-Voltage Protection

Sag-Voltage Protection

Sag-Voltage Threshold
207
V

Time Threshold
4
S

<
Over-Current Protection

Over-Current Protection

Over-Current Threshold
192
x0.1 A

Time Threshold
4
S

Type	Parameter	Description
Over-load protection	Power threshold	EU/FR plug: Default: 4416, range: 10-4416 (unit: W)
		US plug: Default: 2160, range: 10-2160(unit: W)
		UK plug: Default: 3588, range: 10-3588 (unit: W)
	Time threshold	Default: 4, range: 1-30 (unit: second)
Over-voltage protection	Voltage threshold	EU/FR plug: Default: 253, range: 231-264 (unit: V)
		US plug: Default: 132, range: 121-138 (unit: V)
		UK plug: Default: 253, range: 231-264 (unit: V)
	Time threshold	Default: 4, range: 1-30 (unit: second)
Sag-voltage protection	Voltage threshold	EU/FR plug: Default: 207, range: 196-229 (unit: V)
		US plug: Default: 108, range: 102-119 (unit: V)
		UK plug: Default: 207, range: 196-229 (unit: V)
	Time threshold	Default: 4, range: 1-30 (unit: second)
Over-current protection	Current threshold	EU/FR plug: Default: 19.2, range: 0.1-19.2 (unit: A)
		US plug: Default: 18, range: 0.1-18 (unit: A)

Load Status Notification

The screenshot shows a mobile application interface for configuring 'Load Status Notification'. At the top is a blue header bar containing a back arrow, the title 'Load Status Notification', and a save icon. Below the header, the settings are organized into four sections: 1. 'Load Status' with a plug icon. 2. 'Load Start Notification' with a toggle switch that is currently turned on. 3. 'Load Stop Notification' with a toggle switch that is currently turned on. 4. 'Load Status Threshold' with a numeric input field containing the value '5' and a unit label 'x0.1 W'.

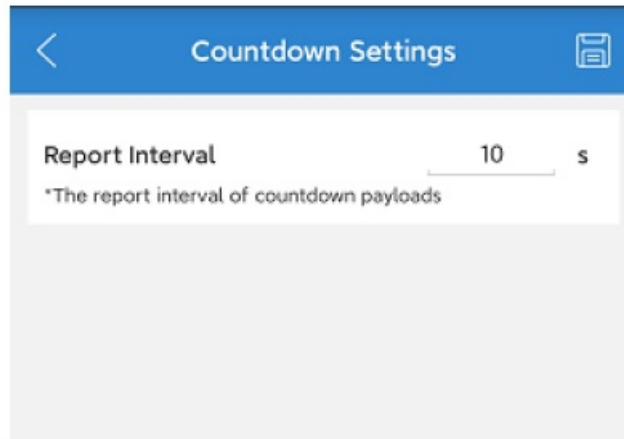
- **Load Status:** The load status of LW005-MP.
- **Load Start Notification:** When the plug detects that the load starts working, it will immediately report a

notification to the server. The default is ON.

- **Load Stop Notification:** When the plug detects that the load stops working, it will immediately report a notification to the server. The default is ON.
- **Load Status Threshold:** The power when no load is connected to LW005-MP. The default is 0.5W. It ranges from 1-10, the unit is 0.1W.

Count Down Settings

Report Interval: The report interval of countdown payloads. The default is 10s, it ranges 10-60s.



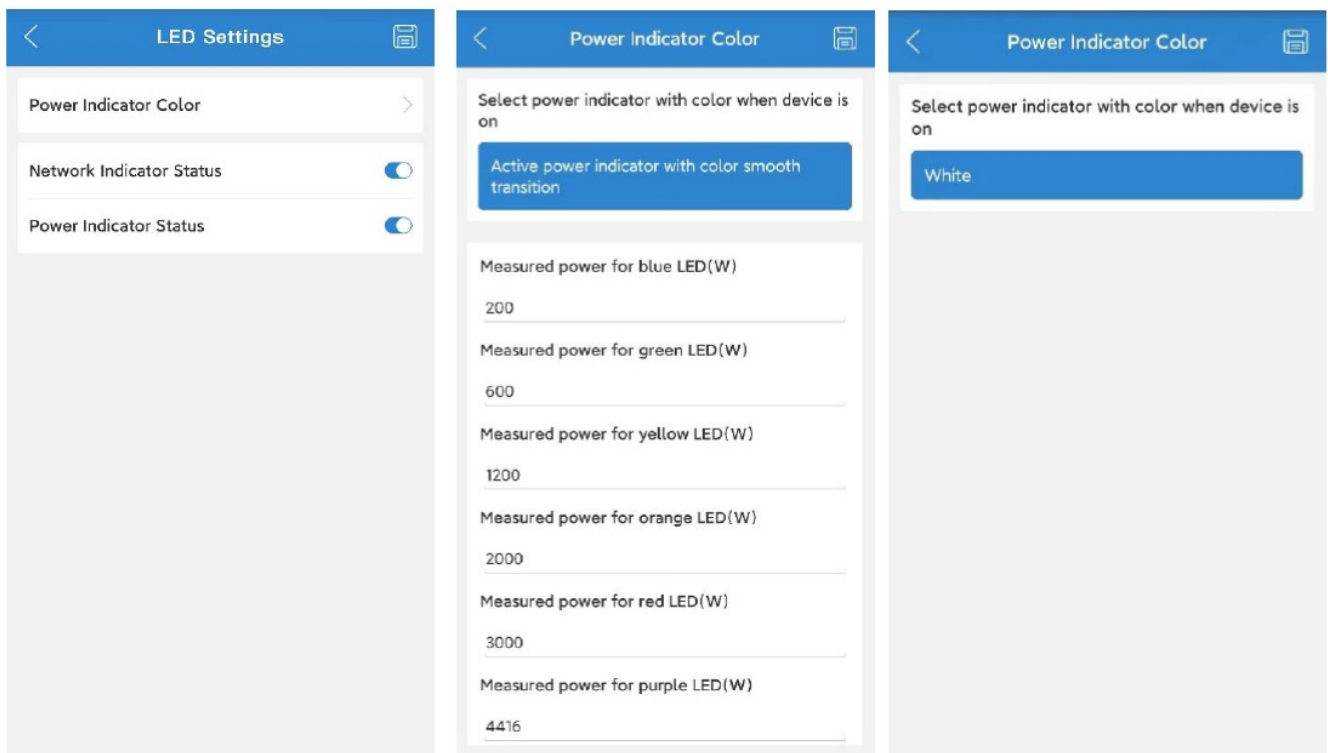
Countdown Settings

Report Interval 10 s

*The report interval of countdown payloads

LED Settings

On this page, you can set the power indicator color and the function switch of the two indicators. The max power of different plug types isn't the same, so the configuration ranges of the power indicator is also different, please set the measured power value according to the plug types



LED Settings

Power Indicator Color

Network Indicator Status

Power Indicator Status

Power Indicator Color

Select power indicator with color when device is on

Active power indicator with color smooth transition

Measured power for blue LED(W)

200

Measured power for green LED(W)

600

Measured power for yellow LED(W)

1200

Measured power for orange LED(W)

2000

Measured power for red LED(W)

3000

Measured power for purple LED(W)

4416

Power Indicator Color

Select power indicator with color when device is on

White

Parameter	Description
Power indicator color	Range: 0 – Active power indicator with color direct transition 1 – Active power indicator with color smooth transition 2 – White, 3 – Red, 4 – Green, 5 – Blue, 6 – Orange, 7 – Cyan, 8 – Purple Default: 1- Active power indicator with color smooth transition
	The measured power setting rules: EU/FR plug: $1 \leq P(\text{blue LED}) < P(\text{green LED}) < P(\text{yellow LED}) < P(\text{orange LED}) < P(\text{red LED}) < P(\text{purple LED})$ 4416 US plug: $1 \leq P(\text{blue LED}) < P(\text{green LED}) < P(\text{yellow LED}) < P(\text{orange LED}) < P(\text{red LED}) < P(\text{purple LED})$ 2160 UK plug: $1 \leq P(\text{blue LED}) < P(\text{green LED}) < P(\text{yellow LED}) < P(\text{orange LED}) < P(\text{red LED}) < P(\text{purple LED})$ 3588
Network indicator status	The default is Enable, when it is disabled, the LED will be OFF
Power indicator status	The default is Enable, when it is disabled, the LED will be OFF

Bluetooth Settings

- **ADV Name:** The advertising name of the device, up to 16 characters.
- **ADV Interval:** Bluetooth advertising interval. The default is 1000ms. It ranges from 1-100, the unit is 100ms.
- **Connectable:** User can select the connectable state or the unconnectable state. The default is connectable state.

When the device is on unconnectable state, the device only can be connected via Bluetooth in the first three minutes of power on.

- **Login Password:** Does the user need to enter the login password when using the app to connect to the device. The default is need.
- **Change Password:** User can change the login password, up to 8 characters.
- **Tx Power:** Bluetooth Tx power. The default value is 0 dBm and Tx Power can be configured as one of the following data -40dBm -20dBm -16dBm

Bluetooth Settings

ADV Name

LW005-MP-5C3B

ADV Interval

10

x 100ms

Connectable

Login Password

Change Password

Tx Power

0dBm

LORA

GENERAL

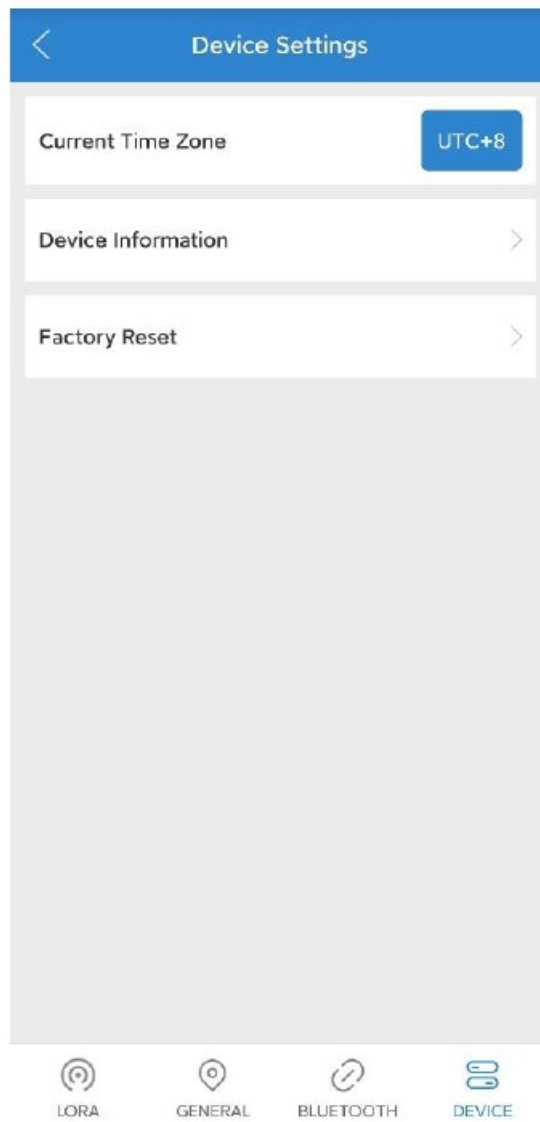
BLUETOOTH

DEVICE

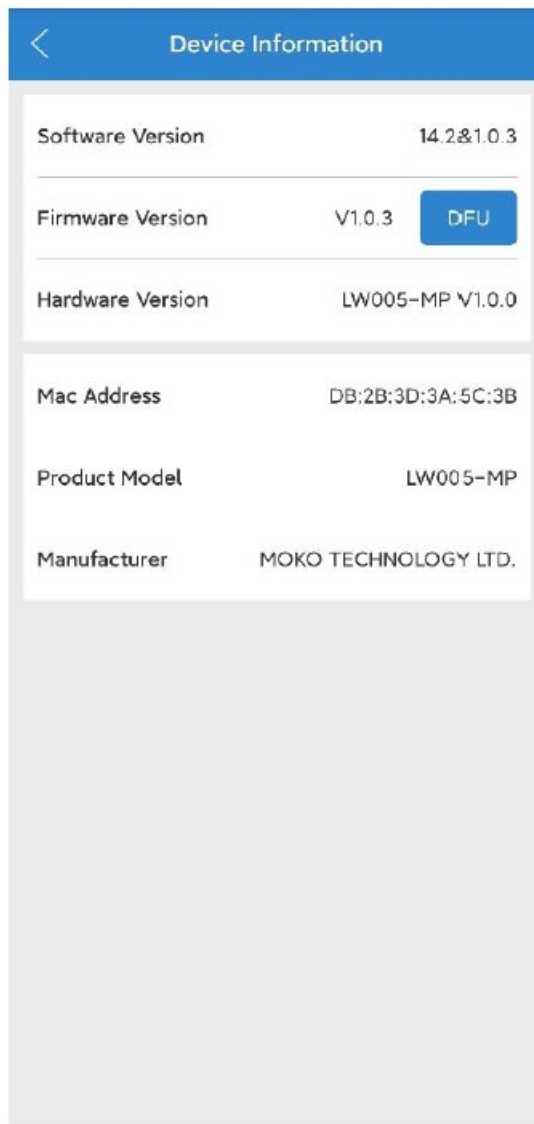
Device Settings

Current Time Zone: Selection of the time zone in which the current device is located.

The value ranges from UTC-12:00 to UTC+14:00, every half hour is a level. The default time zone is UTC+8.



Device Information



- DFU (Update Firmware): To update the firmware via the DFU should use the upgrade package that MOKO provides with ZIP format.
- If you use an android phone, place the ZIP file of firmware upgrade package into the phone folder, select the upgrade package file from the OTA page of the APP, and click to upgrade.
- If you use an iPhone, user need to share the upgrade package file with
- MKLoRa via computers and iTunes tools. Then select the upgrade package file from the OTA page of the APP, and click to upgrade

Revision History


Version	Description	Editor	Date
1.0	Initial version	Allen	2021-12-20

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Documents / Resources

 <p>Download LW005-MP LoRaWAN Smart Plug</p>	<p>MOKO SMART LW005-MP LoRaWAN Smart Plug [pdf] User Guide LW005-MP LoRaWAN Smart Plug, LW005-MP, LoRaWAN Smart Plug, Smart Plug, Plug</p>
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References

- [🏠 Home - MOKOSmart #1 Smart Device Solution in China](#)
- [🏠 Home - MOKOSmart #1 Smart Device Solution in China](#)
- [🏢 Your IoT Devices ODM & JDM Partner - MOKOSmart #1 Smart Device Solution in China](#)