User manual

EV Charging Cable Mode 2

IC-CPD (In-Cable Control and Protection Device)

Smart charging device for electric vehicles with real-time monitoring, app control and Wi-Fi connectivity.



Series: EVXxxB (Wi-Fi) | **Version:** Rev. 0.1 | **Language:** English (EN)

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01 · Safety Information

Any other use will be considered improper and may result in serious injury or property damage. The manufacturer and distributors accept no liability for damage caused by improper use. In addition, the device warranty becomes void in such cases.

⚠️ **WARNING:** Read these warnings before using the device. Failure to comply may cause electric shock, fire or serious property damage.

Safety Warnings

- **Damage during charging:** If damage occurs during charging, immediately disconnect the device from the power supply via the circuit breaker. Do not touch electrically live parts.
- **Explosive vapours:** Never operate the device near explosive vapours or gases. Internal operations may generate small electrical discharges.
- **Contact surfaces:** Never touch the contact surfaces of the device. Do not insert objects into the equipment connectors.
- **Modifications:** Do not attempt to modify or repair the device. Never open the housing or make changes to the adapters and/or extension cables.
- **Humidity and water:** Do not connect the device to sockets where water may enter. Do not immerse the device in water. Always cover the connectors with the protective caps when not in use.
- **Disconnecting during charging:** Never disconnect the connectors while the device is active. This may damage the contacts. Always stop the process using the vehicle controls first.
- **Children:** Do not allow children to play with the packaging material or the charging device.
- **End of life:** Do not dispose of the device with ordinary household waste — use a certified WEEE collection point.

ℹ️ **Standard:** This product complies with the EN IEC 62752:2024 standard and holds CE and RoHS certification.

02 · Product Information

Power and Vehicle Connectors

Power Connector

- UK plug (max. 13A)
- Schuko (max. 16A)
- CEE16/32 (single-phase)
- CEE16/32 (three-phase)

Vehicle Connector

- Type 1 (SAEJ1772 North American Standard)
- Type 2 (IEC62196-2 European Standard)
- Type GB (GB/T20234 Chinese Standard)
- NACS Tesla (SAE J3400)

Model number definition

EVX ① □□ ② □ ③ □ ④

	Classification	Symbol	Symbol meaning
①	Base type	EVX	EV charger X series
②	Rated power	03	Single-phase 16A
		07	Single-phase 32A
		10	Single-phase 40A
		11	Three-phase 16A
		22	Three-phase 32A
③	Charging modes	B	Mode 2
④	Charging interface	T2	Type2 (IEC62196-2)
		T1	Type1 (SAE J1772)
		GBT	GB (GB/T20234)
		NACS	Tesla (SAE J3400)

Electrical Specifications

Model	Rated Voltage	Max. Current	Max. Power	Cable
EVX03B (1F)	AC 110–240 V	16 A	3.7 kW	3×2.5 mm²
EVX07B (1F)	AC 110–240 V	32 A	7.4 kW	3×6 mm²
EVX10B (1F)	AC 110–240 V	40 A	9.6 kW	9 AWG
EVX11B (3F)	400 V AC	16 A	11 kW	5×2.5 mm²
EVX22B (3F)	400 V AC	32 A	22 kW	5×6 mm²

Protection

Overvoltage protection	Yes
Undervoltage protection	Yes
Overload protection	Yes
Short-circuit protection	Yes
Leakage protection	Yes
Overheating protection	Yes

Operating Environment and Mechanical Parameters

Protection rating	IP67
Operating temperature	–30°C to 55°C
Relative humidity	≤95% RH
Maximum altitude	≤2,000 m
Cooling	Natural
Standby consumption	<2 W
Charging cable	5 m (standard)
Dimensions (L×W×H)	195 mm × 91 mm × 49 mm
Weight	≤3 kg
Material / Colour	PC / Black
LCD screen	1.47 inches
RCMU	Type A (Type B optional)
Frequency	50/60 Hz

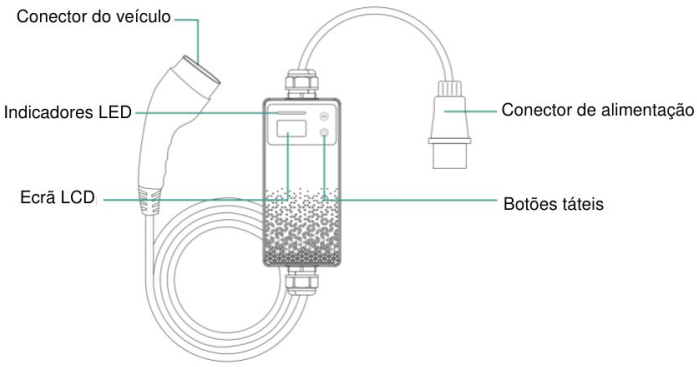
Functions and Connectivity

Wi-Fi / Bluetooth	Yes
Current adjustment	Yes
LED indicators	Yes
RFID	No (on this model)
Compatible app	EV-Charger (iOS and Android)

Standard	EN IEC 62752:2024
Certifications	CE, RoHS

02 · Product Overview

Diagram identifying all components. Refer to this map whenever the instructions mention specific parts of the device.



Component Legend

1. Vehicle Connector: connects to the vehicle charging port (Type 2 / Type 1 / GB/T / NACS Tesla, depending on the model).

2. Power Connector : connects to the wall power socket or charging station (Schuko 16A / UK 13A / CEE 16–32A, depending on the model).

3. LED Indicators : show the device status — see the LED status table below.

4. LCD Screen (1.47"): shows status, consumption (kWh), charging time, current, voltage, temperature and safety warnings.

5. Touch Buttons (×2): Button ⊕ to set the current / access the menu. Button ☽ for delayed charging / selecting settings.

LED Indicator States

Status	Powering on			Charging Standby	Setting Mode
Light Indicator	Light → Light → Light			Breathing	Light
Status	Delayed charging	Awaiting signal	Charging complete	Charging mode	Fault mode
Light Indicator	Breathing	Breathing	Light	Breathing	Flashing

Touch buttons



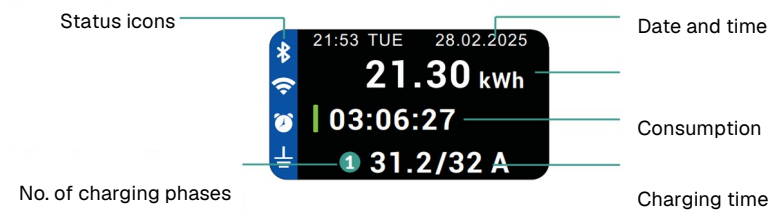
Set current / Menu / Change setting



Delayed Charging / Select Settings

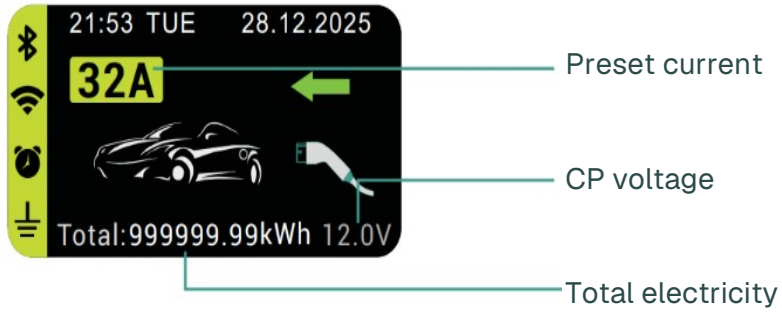
LCD screen

The device's LCD screen lets you view the status, safety warnings and settings.



Icon	Meaning	Icon	Meaning
	Bluetooth enabled		Reservation enabled
	Bluetooth connected		Earth connected
	Wi-Fi connected		

Status view



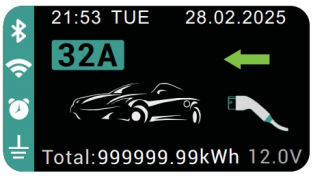
Charging Standby

Touch button

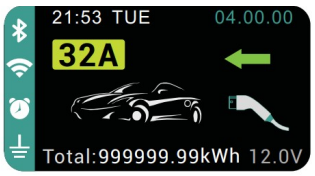
Enter the [Set Current] page.

Press and hold ~3s to enter [Settings].

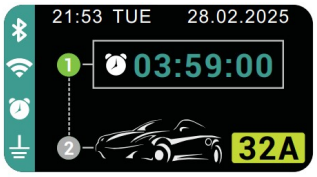
Enter the [Set Delay] page.



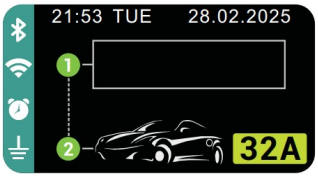
Set Current



Set Delay

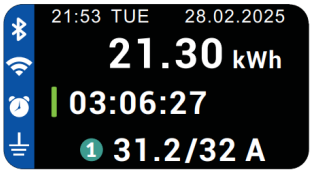


Delayed Charging / Reservation
During the delayed charging or reservation process, step 1 (green circle) flashes and step 2 turns grey.

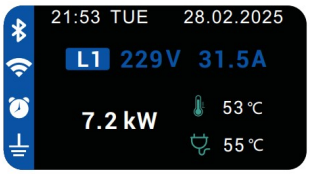


Awaiting Vehicle Signal
While waiting for the vehicle signal, step 1 (green circle) stays lit and step 2 flashes.

Status view



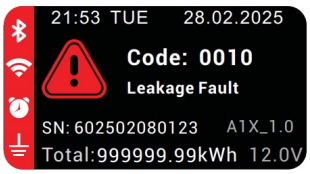
Charging Mode 1
Shows consumption, charging time, charging / preset current.
Touch button
Enter [Charging Mode 2].



Charging Mode 2
Shows voltage and current, charging power, temperature.
Touch button
Enter [Charging Mode 1].

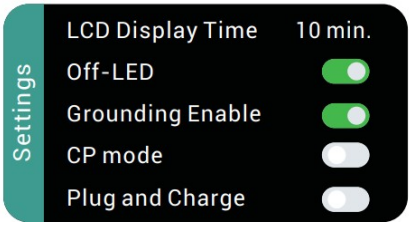


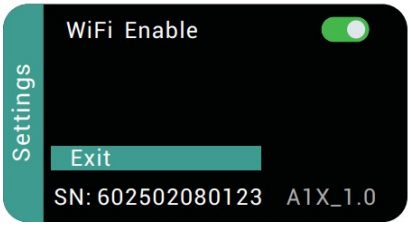
Charging Complete
Shows consumption and total charging time.



Fault Mode
Shows fault information and error codes.

Settings view





Description of button functions

Select the function items to set.

Set the selected functions. "Exit" returns to standby.

LED Display Time

Turns off the screen after the set time without touching the button or if the status does not change.

Off-LED

If Off-LED is enabled, the LED turns off simultaneously with the LCD.

Earth Enable

The charger is on a network without earth or with poor earthing; the earth check can be disabled.

CP Mode

Designed for compatibility with certain models that trigger an EV diode fault, allowing normal charging.

Plug and Charge

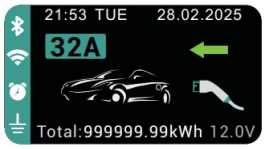
With Plug and Charge enabled, charging can start when the vehicle connector is plugged in, with no further authorisation required.

WiFi Enable

The device must be configured with the wireless network name and password via the APP. A static IP can also be set.

Set Current

1. Press the button “ ” (before connecting the vehicle-side connector to the vehicle charging inlet).

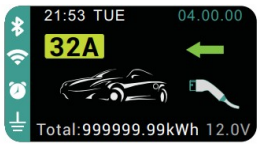


Light — The yellow LED lights up and the LCD screen shows the amperage, indicating that the device is ready to change the charging current.

2. Press the button “ ” as many times as necessary until the screen shows the desired amperage.
3. The setting will be saved automatically after ~3 seconds and the device enters standby. The top left corner shows the set amperage.

Delayed Charging

1. Press the button “ ” (before connecting the vehicle-side connector to the vehicle charging inlet).



Light — The yellow LED lights up and the LCD screen shows the time, indicating that the device is ready to change the delay time.

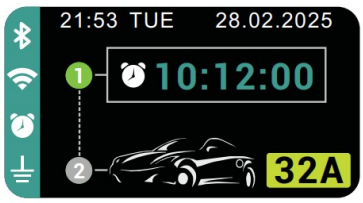
2. Press the button “ ” as many times as necessary until the screen shows the desired time.
3. The setting will be saved after ~3 seconds and the device starts the countdown. Wait for it to finish and, if already connected to the vehicle, it will enter charging mode.

Exit delayed charging

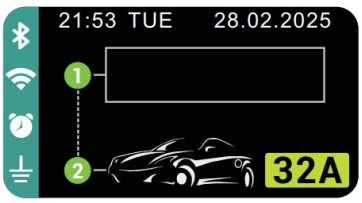
To exit delayed charging, press and hold the “ ” button for ~3 seconds. The device returns to charging standby.

Start charging

1. Plug the power plug into an earthed socket and wait for the device to enter standby.
2. Attach the vehicle connector to the charging port.
3. Enter the reservation page (if enabled). Use the APP to skip it.
4. Wait for the vehicle authorisation signal and enter charging mode.



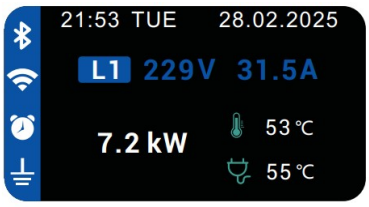
Charging with delay/reservation



Vehicle signal pending



Charging Mode 1



Charging Mode 2

Stop charging

1. Stop charging using the vehicle controls, which releases the coupling lock.
2. First unplug the vehicle connector, then unplug the plug from the socket or charging station.

Install the App

1. Download and install the app from Google Play or the App Store

2. Enable Bluetooth on your smartphone or tablet and enable the location permission in the EV-Charger app







Registration

You must register before using the APP.

Note: It is not technically possible to use the app without registration.

Please note the privacy policy regarding the processing of personal data.

1. Open the EV-charger app, select the language in the top right corner and click Register (Fig. 6)
2. Enter your email and click Get code. You will receive an email with a 6-digit code. Enter it in the Verification code field.
3. Enter a secure password
4. Click Register. The account is created and you are logged in automatically (Fig. 7).

Fig. 6

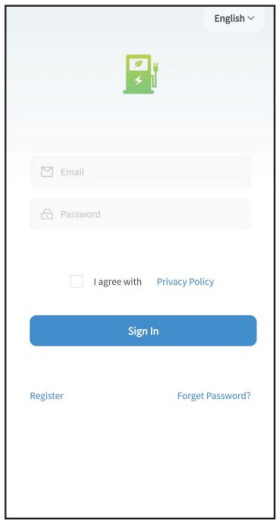
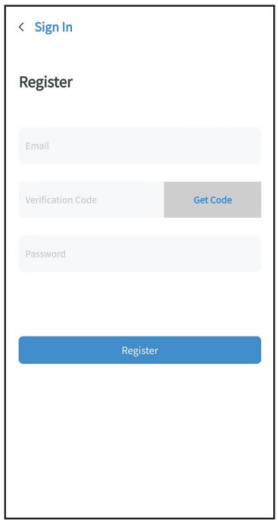


Fig. 7



Connect the charging station

The station is first connected via Bluetooth. Once the connection is established, it can be connected via WiFi.

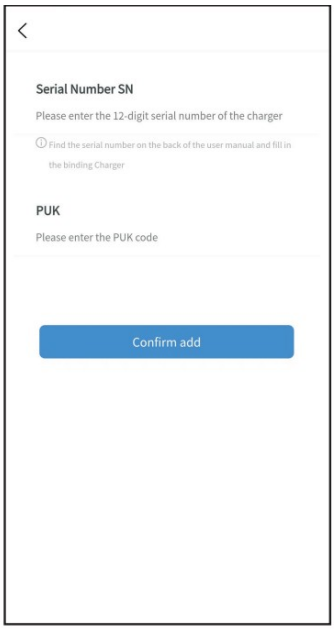
1. Switch on the station and keep your smartphone within range
2. Open the app and tap the QR symbol or the + (Fig. 8)
3. After scanning, enter the 6-digit PUK and click Confirm add (Fig. 9)
4. The app searches for and adds the station automatically.

Note: Accept the camera and location permissions.
Without these permissions, the code cannot be read.

Fig. 8



Fig. 9



WiFi Connection

Once the station is connected via Bluetooth, it will appear in the overview. To connect it to an existing WiFi network, proceed as follows:
1. Select the station on the overview page (Fig. 10).
2. Tap the WiFi symbol.
3. Enter the WiFi network name and password and click OK (Fig. 11).
4. The station will try to connect using the entered details.
5. When connected to WiFi, the WiFi symbol lights up on the display. Check by opening the station's WiFi menu.
6. Return to the overview by tapping the top left arrow and refresh by swiping from top to bottom.
7. The station is connected to WiFi when "Online" is displayed and the WiFi symbol on the status page is blue (Fig. 12).

Note: Leave DHCP enabled for automatic IP assignment.

Fig. 10

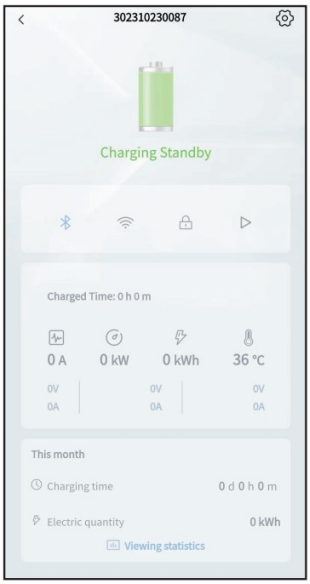


Fig. 11

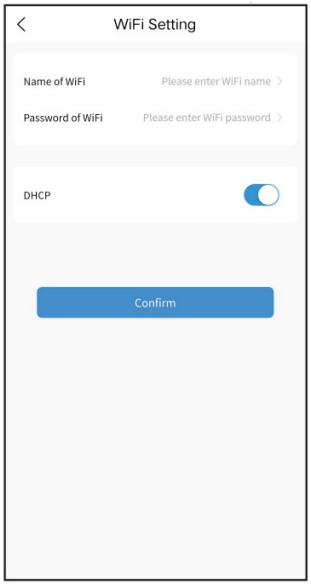
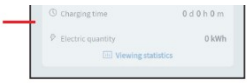


Fig. 12

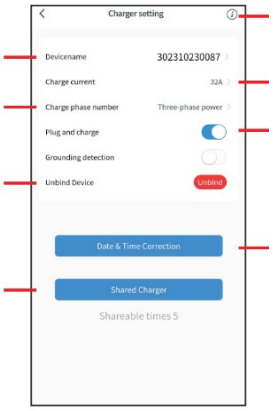


Stations overview



Add charging station

Added stations (list)



Notifications

Home

Profile

Station detail page

Settings

Back

Station name

Status

WiFi status
WiFi settings

Bluetooth status / on/off

Start/pause charging

Unlock status / PIN code

Transaction details

Statistics

Station settings

Charging station information

Station name

Maximum charging current

Number of phases

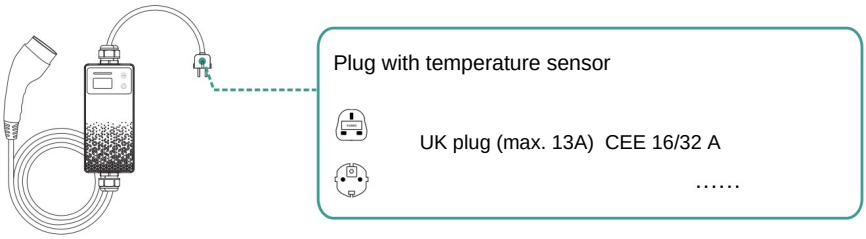
Charging without authentication (Plug and Charge)

Remove station

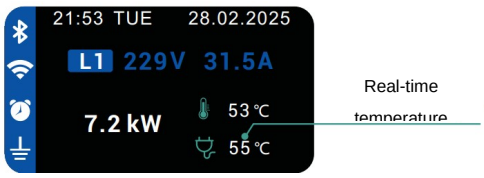
Set date and time

Share device

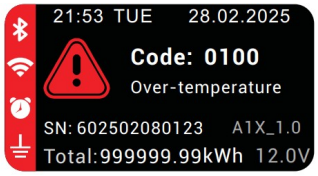
05 · Temperature control (optional)



The power plug contains an internal temperature sensor. This sensor is a negative temperature coefficient (NTC) thermistor, which provides the plug temperature variation in real time.



Charging Mode



Fault status

Control process

- When the plug temperature reaches 95°C and stays there for 10 sec., the protection is activated, charging stops and the LCD screen shows the overheating fault.
- After cooling below 75°C for 10 seconds, the device automatically restarts charging.

Fault resolution

- Check that the plug and socket are in firm contact.
- Check the socket cable diameter.
- Do not expose the device to sunlight, but do not cover it either.

06 · Troubleshooting

The device protects itself automatically in the event of a fault. Find the symptom in the table and follow the indicated solution.

Symptom / Code	Probable Cause	Solution
LED and LCD screen both off	No power or tripped circuit breaker	Check that the power supply is normal. Check whether the circuit breaker has tripped and reset it after resolving the problem.
LED on, LCD screen off	Loose LCD connection cable or damaged LCD	Check the internal LCD cable connection. If the problem persists, contact support.
Waiting for the vehicle signal for a long time	Battery full, car in reservation/delay, or poorly connected connector	Disconnect and reconnect the vehicle connector. Check the car controls.
Earth Fault — Code: 0001	Device without earth; poorly connected power cable	Check the power cable. Make sure the socket is earthed.
RCMU Fault — Code: 0002	Damaged RCMU (Residual Current Monitor)	The device must be returned to the factory for repair. Contact support.
Overvoltage — Code: 0004	Abnormal input voltage	Check that the input cable is correctly connected. Check the installation input voltage.
Undervoltage — Code: 0008	Input voltage below the minimum	Check that the cable is correctly connected. Check that the input voltage is normal.
Leakage Fault — Code: 0010	Damaged/wet connector or cable	Check whether the connector and cable are damaged or wet. It recovers after unplugging the connector from the power supply.
Overcurrent — Code: 0020	Poorly connected connector or faulty on-board charger	Check that the connector is correctly connected. Check that the vehicle's on-board charger is normal.
CP Voltage — Code: 0040	Problem with the EV connector or charging inlet	Check the connector and the socket. Disconnect and reconnect the vehicle connector.
Short-circuit — Code: 0080	Damaged/wet connector or cable	Check whether the connector and cable are damaged or wet.
Overheating — Code: 0100	Plug and socket not in firm contact, or insufficient ventilation	Check that the plug and socket are in firm contact. Check the cable diameter. Do not cover the device and do not expose it to direct sunlight.
EV Diode Fault — Code: 4000	Diode fault in the vehicle-side CP signal	Check the vehicle or go to the settings to enable CP Mode.

Technical support: If no solution resolves the problem, contact: support@miio.com

miio

Support: support@miio.com

Model: EVXxxB series (Wi-Fi) | Rev. 0.1 | Standard: EN IEC 62752:2024 | CE · RoHS