

# M3B EN-series AC EV Charging Station

User Manual



#### NOTE:

- THIS USER MANUAL DESCRIBES THE INSTALLATION, USE AND MAINTENANCE OF M3B EN-SERIES AC EV CHARGING STATION. THIS MANUAL IS INTENDED FOR INSTALLATION AND MAINTENANCE PERSONNEL
- FAILURE TO READ THIS MANUAL CAREFULLY BEFORE INSTALLATION, MAINTENANCE AND OPERATION MAY LEAD TO IMPROPER OPERATION
- FAILURE TO FOLLOW THE SAFETY NOTES MAY LEAD TO A DANGER OF DEATH, INJURY AND DAMAGE TO THE DEVICE, SUPPLIER CANNOT ACCPEPT ANY LIABILITY FOR CLAIMS RESULTING FROM THIS.
- LOCAL REGULATIONS MUST BE ADHERED TO DURING INSTALLATION AND USE OF THIS DEVICE.
- NO DIY THIS DEVICE <u>MUST</u> BE INSTALLED BE A SUITABLY QUALIFIED ELECTRICAL INSTALLER.



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# **1 ABBREVIATIONS**

Abbreviation	Description	
IEC	International Electrotechnical Commission	
EV	Electric Vehicle, this can be a BEV (battery EV) or	
	PHEV (plug-in hybrid EV)	
EVSE	Electric Vehicle Supply Equipment (IEC61851-1)	
Kw	Kilo Watt (unit of Power)	
Α	Ampere (unit of Current)	
V	Volt (unit of Voltage)	
Hz	Hertz (unit of Frequency)	
LCD	Liquid Crystal Display	
LED	Light-emitting Diode	
Арр	Mobile Device Application	
RFID	Radio Frequency Identification	
CMS	Central Management System; Manages EVSE and	
	has the information for authorizing users for using	
	its EVSE.	
OCPP	Open Charge Point Protocol	
	A standard open protocol for communication	
	between EVSE and a Central System and is	
	designed to accommodate any type of charging	
	technique. (www.openchargealliance.org)	
IP	Ingress Protection	
PE	Protective Earthing	
HMI	Human-Machine Interface	
RCCB	Residual Current Circuit Breaker	
MCB	Miniature Circuit Breaker	
MCCB	Molded Case Circuit Breaker	
PPE	Personal Protective Equipment	
PCBA	Printed Circuit Board Assembly	

## 2 SAFETY NOTES

#### 2.1 Safety Signs

The following warning signs, mandatory signs and information signs are used in the user manual, on and in the M3B EV Charging Station:

#### 2.1.1 Warning Signs



CAUTION: Warning of electrical hazards. This sign is intended to alert the user that severe personal injury or substantial property damage can result if the device is not operated as instructed



ATTENTION: Warning of danger spot or dangerous situation.

This sign is intended to alert the user that minor personal injury or material damage can result, if the device is not operated as instructed.



CAUTION: Warning of electromagnetic field.



CAUTION: Warning of combustion.

## 2.1.2 Prohibiting signs



No access unauthorized persons.



No access for persons wearing pacemakers.

#### 2.1.3 Mandatory Signs



Use protective footwear and PPE.

#### 2.2 Environment



EV charging station should be installed an incombustible material such as metal (metal bracket included in mounting hardware), otherwise hazardous fire may result.



EV charging station should not be installed in an area that contains explosive gas; otherwise, hazardous blast may result.



Leave no flammable or explosive substances near the EV charging station; otherwise, hazardous blast/fire may result.



EV charging station should be installed in a place with no conductive dust or insulation- destructive gas or vapor.



EV charging station should be installed in a place where no violent vibration and impact occurs; for proper ventilation mount the charging station vertically.



The installation foundation shall be higher than the ground level, and drainage around station shall be adequate to prevent standing water, otherwise hazard to persons and equipment may exist.

#### 2.3 Installation



Appropriate protective footwear and PPE must be worn during installation.



Installation and wiring should be done only by personnel with professional qualifications to install electrical equipment; otherwise, hazardous electrical shock may result.



Ensure input power supply is entirely disconnected prior to wiring; otherwise, hazardous electrical shock may result.



Earth terminal of EV charging station must be grounded securely; otherwise, hazardous electric shock may result.



The lead nose of the charging station must be securely attached or there is risk of damaging the equipment.



Leave no metals such as bolt/ washers inside the EV charging station; otherwise, hazardous shock/ blast or fire may result.



Main loop terminal of the EV charging station should be firmly connected with the wiring ends; otherwise, damage to property may result.



Bare parts of wiring ends of electrical cables must be wrapped with insulating tape; otherwise, hazardous fire, shock or property loss may result.



If applicable, load limitation must be set below circuit limit in EVSE configuration by installer prior to first use; otherwise, circuit overload may occur.

#### 2.4 Operating



Strictly forbidden for minors or persons of restricted capacity to approach or operate the charging station to avoid injury.



Forced charging is strictly forbidden when the electric vehicle or charging station fails.



At any time, in case of emergency (such as fire, smoke, abnormal noise, water inflow etc.), on the premise of ensuring personal safety, please switch off upstream isolator or press the red "emergency stop" button or of the charging station and immediately stay away from the charging station. Then contact supplier or seek qualified electrical advice.



PHEV / EV can only be charged when engine off and stationary.



Do not charging during rainy and thunderous weather.



Do not use extension cable with this device.

#### 2.5 Maintenance



Personnel must always use protective footwear and suitable PPE during maintenance work.



Accessory replacement must be done **only** by qualified personnel, thrums or metals are prohibited to be left in the controller, otherwise, hazardous blast and fire may result.



After replacing main PCBA, parameters must be adjusted and matched before operation; otherwise, property loss may result.



Routine visual safety inspections of the charging station, cable and connector be conducted at least once per week. In commercial settings the charging station should be tested by qualified personnel at least once per year.



Keep charging connector clean and dry and wipe with a clean, dry cloth if soiled.

Do not use if connector shows signs of damage.

# **3 STANDARDS**

#### 3.1 Reference standard

The M3B EN-series AC EV charging station is designed according to IEC standards and complies with relevant Australian Standards. The standards of this product includes;

- **IEC 61851-1:2017**, Electric vehicle conductive charging system Part 1: General requirements.
- **IEC 62196-2:2016**, Plugs, socket-outlets, vehicle connectors and vehicle inlets Conductive charging of electric vehicles Part 2: Dimensional compatibility and interchangeability requirements for AC pin and contact-tube accessories.
- **IEC 60364-7:2018**, Low-voltage electrical installations Part 7-722: Requirements for special installations or locations Supplies for electric vehicles.

# 3.2 Charging mode

#### According to **IEC 61851-1(3.1.9; 6.2.3)**;

Mode 3 is a method for the connection of an EV to an AC EV supply equipment permanently connected to an AC supply network, with a control pilot function that extends from the AC EV supply equipment to the EV. EV supply equipment intended for Mode 3 charging shall provide a protective earthing conductor to the EV socket-outlet and/ or to the vehicle connector. The M3B EN-series product is an EVSE that conforms to Mode 3.

# 3.3 Charging connection

According to **IEC 61851-1 (3.1.12)**, the M3B EN-series product is an EVSE that conforms to the CASE C connection (shown as fig 3-1)

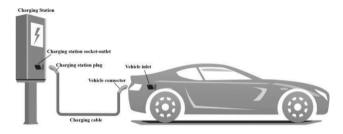


Fig. 3-1 Schematic diagram of CASE B connection

## 3.4 Charging connector

- The charging connector of M3B EN-series products meet IEC
   62196-2, type 2 (Schematic diagram shown as Fig 3-2).
- The charging object of M3B EN-series provides a Type 2 socket which can be connected to the vehicle using either a Type 2 to Type 2 (IEC 62196-2)/ or Type 2 to Type 1 (J1772) EV charging cable.

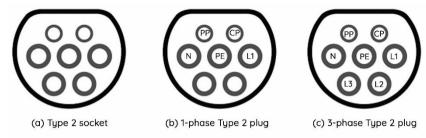


Fig 3-2 Schematic diagram of Type 2 charging socket and plug

# **4 PRODUCT INFORMATION**

#### 4.1 General

Shape and dimensions of the M3B EN-series wall box is show as Fig 4-1



Fig 4-1 Shape and dimensions of M3B

M3B EN-series AC EV charging station provides a friendly easy to use HMI, with the corresponding control, metering and communicating functions belonging to a next generation smart AC power supply device for EVs.

M3B EN-series is ideal for household EV charging as well as various alternative situations such as parking lots, apartment buildings, community locations, business carparks & public EV charging locations.

# 4.2 Technical specifications

# 4.2.1 Electrical parameters

	M3B132EN	M3B316EN	M3B332EN
Rated maximum	7kW	11kW	22kW
_power			
Input voltage AC	230V ± 10%	400V =	± 10%
Power phases	Single	Thi	ree
Rated max current	32A	16A	32A
Input cable	3 x 6mm <sup>2</sup>	5 x 4mm <sup>2</sup>	5 x 6mm <sup>2</sup>
recommended size			
RCCB	40A, 2-pole	25A, 4-pole	40A, 4-pole
recommended			
Rated frequency	50/60Hz		
Branch Breaker	Dedicated circuit		
Input circuit	L1 / N / PE	L1/ L2/ L	3/ N/ PE
terminal			

# 4.2.2 Functional description

Charging mode	Mode 3
Charging control	Local: automatic "plug 'n charge", RFID
	Remote: smart phone control app
	(optional), OCPP (optional)
Display screen	4.3 inch LCD screen (display current
	charging, voltage, energy, charging time,
	state and fault information etc)
Indicator lights	4 LED lights (indicate 4 status include
	power, connect, charging and fault)
Communication	Ethernet (RJ-45 interface), WiFi 2.4GHz,
interface	RS-485 (internal debug interface)
Communication	OCPP 1.6 (optional)
protocol	
Safety protection	Emergency stop button, surge protection,
	over temperature, over/under voltage, over
	current, ground protection

## 4.2.3 Physical parameters

Mounting	Wall- mounted (hardware supplied)
Charging connector	IEC 62196-2, Type 2 socket
Charging cable length	N/A
Dimensions (HxWxD),	410mm x 260mm x 410mm (as shown in
wallbox	Fig 3-1)
Net weight	M3B1 ≤8kg - M3BW3 ≤9kg
Colour and material	Front panel: Black, Tempered glass
	Back cover, White, pressed metal plate
Enclosure rating –	IP54
Ingress protection	
Enclosure rating -	IK08
Impact resistance	

#### 4.2.4 Ambient conditions

Altitude	≤ 2000m
Storage temperature	-40 – 75°c
Operating	-30 – 55°c
temperature	
Relative humidity	≤ 95%RH, No water droplet
	condensation
Vibration	< 0.5G, No acute vibration or impaction
Installation location	Indoor or outdoor, well-ventilated area,
	no flammable or explosive gases nearby

# 4.2.5 Nameplate

M3B EN-series charging stations have a nameplate located on the left side of the wallbox shell. This label includes information such as model number, unit serial number, user warnings and electrical specifications.

# **5 INSTALLATION INSTRUCTIONS**

## 5.1 Transport or movement

When transporting or moving this unit, please pay attention to the following points to ensure product safety;

- a) This product is electrical equipment. It should be handled with care to avoid violent vibration or impact.
- b) The front panel of the product is a glass panel, which cannot be used as a stressed part for handling.
- c) The back cover of the product is a sheet metal part, which should be well protected to avoid impact.
- d) The charging station shall not be transported by dragging the charging connector and its charging cable.

#### 5.2 Unpacking

## 5.2.1 Packing List

The package contains the following items:

- 1 x Charging station M3B wallbox,
- 2 x RFID cards (optional)
- 1 x set of wall- mounting accessories
- 1 x user manual

If any of these items are missing, contact your supplier.

# 5.2.2 Inspection and confirmation

When unpacking, please carefully confirm the following points:

- a) Whether the accessories are missing according to the packing list.
- b) Whether there is any damage during transportation. If any damage or missing parts are found, please do not install or start the machine, contact your supplier.
- c) Whether the model and specification of the machine's nameplate are consistent with the order requirements.

Please keep packing materials until satisfied product is operating and no damage in transit has occurred.

#### 5.3 Installation preparation

## 5.3.1 Safety notes for installation

Refer to 2.3 for additional safety notes.



**NO DIY**. Installation and wiring should be done by a licensed qualified professional, otherwise hazardous electric shock may result.



Make sure input power supply is entirely disconnected before wiring; otherwise, hazardous electric shock may result.

#### 5.3.2 Mounting position

For optimal lifespan and operational safety of this product the following should be followed when mounting this EV charging station. Ref Fig 5-1.

- This unit may be wall or pole mounted, when mounting ensure that object being fixed to is solid to prevent any movement of unit even when bumped.
- Base of EV charging station wallbox shall be a recommended 1000-1400mm (minimum 500mm) from the ground.
- Mount charging station upright and ensure adequate area around the wallbox to ensure proper ventilation. (min 200mm around all sides)
- Position unit close enough for comfortable connect to vehicle connector without the need to suspend charging cable in the air, also consider potential for charging station to be positioned where it cannot be accidently bumped whilst parking.
- Ensure unit is install in accordance with local regulations (eg: dedicated circuit, isolator or any other requirements, consult a qualified electrical installer for installation requirements).
- Use provided mounting bracket when mounting charging station to wall or pole.
- This product is rated for indoor or outdoor use, for maximum lifespan mount unit away from direct sunlight and under shelter from weather.

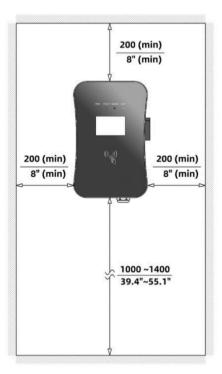


Fig. 5-1 Minimum space requirements for wall mounting

#### 5.4 Installation

#### 5.4.1 Install mounting bracket

Identify the wall and station sides of bracket; wall side has 2 locator holes on end of bracket, station side has 2 locator pins on inside of the top of the bracket piece.

As per the below figure, drill 4 mounting holes of 10mm diameter and 50mm deep at the appropriate height, spaced 130mm x 70mm apart (use bracket as template for screw location for ease of install) and secure the wall side portion of the mounting bracket to the wall with the expansion screws provided, ensure locator holes are at the top of the bracket.

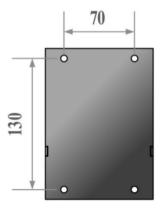


Fig. 5-2 Install the accessories on the wall

Screw the station side of mounting bracket to back of EV charging station using the threaded screws provided.

#### **5.4.2 Wiring**

- 1) Remove the wiring Input Terminal Box cover plate located at the bottom of the back of the charging station.
- 2) Pass input cable through the Input Cable Interface, connect the power cable to the Input Terminals as required for specific unit (single or three phase) Neutral, Live wiries and PE wire, then secure cable so as not to pull on connectors when installed.
- 3) If using hardwired network connection, pass network connection cable through Input Cable Interface and connect to RJ-45 network connection point.
- 4) Replace the Input Terminal Box cover plate ensuring seal is clean of debris.

Note: It is recommended to use flame retardant rubber copper core cable as the input cable with appropriate capacity per 4.2.1.

#### 5.4.3 Mount wallbox

- 1) Align wallbox mounting accessory with mounting plate attached to wall, slide wallbox down aligning pins on wallbox plate to holes in wall plate.
- 2) Insert the two set screws on the sides of the mounting plate to lock wallbox into place.
- 3) Tidy supply cabling to ensure cable is tidy & secured.

# **6 OPERATION**

#### 6.1 Power on

After the charging station is installed and confirmed to be correct. power on the station and switch on the RCCB, the "POWER" indicator light shall turn on and the station enters standby state. If this does not occur check power supply is correct.

## 6.2 Human-machine interface (HMI)

#### 6.2.1 HMT information

As shown in Fig 6.1, the M3B EN-series product is configured with multiple human-machine interfaces.



- 1 LED indicators
- 4 Emergency stop button
- 2 LCD screen
- 5 Connector socket cover
- 3 RFID reader
- 6 Charging cable connector

Fig 6-1 HMI of AC EV Charging Station

#### 6.2.2 LED indicators

The LED indicators on the panel are used to indicate the status of the charging station and the various combinations of indicators are described as below.

Power	Connect	Charging	Fault	
Green	Green	Red	Yellow	Connotation
ON	OFF	OFF	OFF	Standy state
OFF	ON	OFF	OFF	Charging adaptor is properly connected to vehicle
OFF	Flashing	OFF	OFF	Starting charge
OFF	OFF	Flashing	OFF	Charging
OFF	OFF	OFF	Flashing	Fault. Get the fault code by the cycle flashing sequence.
Flashing	ANY	ANY	ANY	Unit is connected to CMS

#### 6.2.3 LCD screen

The M3B EN-series includes a 4.3-inch LCD screen, which is mainly used to display various status information of the charging station.

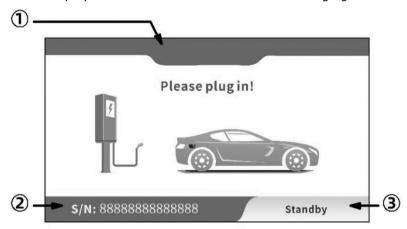


Fig. 6-2 Display of icons and instructions

In Fig-6-2 there are three areas to the display icons and instruction, with the specific meanings as follow:

NO. Area ①	lcon	Connotation
1	No icon	Off-line or no network
2	<u>(j.</u>	Connected a network through Wifi
3		Exchange data with CMS through Wifi
4	모	Connected a network through Ethernet
5	望	Exchange data with CMS through Ethernet
Area ②		
6	<b>S/N:</b> 8888888888888888	The serial number of the charging station
Area ③		
7	Standby	Current state of the charging station
8	Connect successful	Charging connector is properly connected to EV
9	Charging…	Charging state
10	Charging finished	Finished, please follow the instructions on the screen
11	E-stop state	The emergency stop button is pressed
12	Failure to start	Failure to start, please follow the instructions on the screen
13	System failure	Fault state, please follow the instructions on the screen

Fig 6-3 show the LCD screen display during normal charging process:

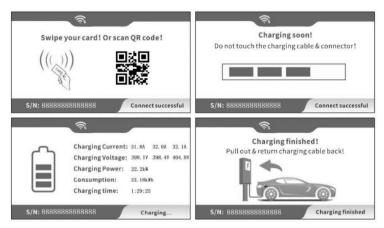


Fig. 6-3 Display of normal charging

Note: if Plug 'n charge active, first step is skipped

If the charging process fails or an equipment failure is detected the LCD display will show an error message as shown in Fig 6-4:



Fig. 6-4 Display of fault state

#### 6.2.4 RFID reader (optional)

When equipped the M3B EN-series product comes with RFID cards (fob or credit card style) to securely activate the charging sequence: To activate charging when RFID secure charging is activated:







Fig. 6-5 RFID card

- 1) Plug in the vehicle to be charged,
- 2) Tap the RFID card against the central RFID logo on the wallbox, the wallbox will acknowledge card with a 'double beep' sound and begin the charging process.

The RFID card function can be configured on/off via two methods:

- Hold the RFID card against the reader for the wallbox will commence with a 'double beep' then a series of 7 single 'beeps', finalizing in the Power, Charging and Fault indicators flashing with a series of 5 single 'beeps' to confirm the activation/ deactivation of the RFID function.
- Alternatively, the RFID function can be switched on/off via the EVSE Configuration page (WiFi models only) – Refer to EVSE Configuration for further details.

This RFID function *does not* require internet access to function.

#### 6.2.5 Emergency stop button

This button is used to stop charging in the case of an emergency.

At any time in case of emergency (such as fire, smoke, abnormal noise, water inflow, etc), on the premise of ensuring personal safety, please press this button, and immediately stay away from the charging station. And contact the supplier for advice.

#### 6.2.6 Charging connector and empty socket

M3B EN-series AC EV charging station is equipped with a Type 2 charging connector.

When the charging station is not in use, please plug the charging connector in the empty socket provided on the side of the charging wallbox in order to protect the connector from damage and debris.

Always ensure charging connector is clean, dry and free from debris **prior** to each use.

# **6.3 EVSE Configuration** (WiFi models)

EVSE Configuration is included with all WiFi capable models of the M3B EN-series AC EV charging stations. This function grants access to the following features:

- WiFi configuration
- Plug n' Play / RFID function on/off
- Unit details
- App control / OCPP function (optional)
- Digital current limiting function

# 6.3.1 Accessing EVSE hotspot

To access the EVSE configuration page you must connect to the unit's hotspot, using the following steps:

- 1) Switch on the AC EV charging station power off and back on using the RCCB or an isolator (if installed) if unit is already powered on,
- 2) Upon powerup the charging station will generate a temporary WiFi hotspot (this will automatically shut down after 2.5mins if no connection is detected),
- 3) Using a WiFi capable device such as a mobile phone or tablet, search for the WiFi hotspot, it shall appear as: EVSE-XXXXXXXX (X =numbers corresponding to individual units software serial number).

- 4) Connect to the WiFi hotspot Note: your device may attempt an internet connection test and display an error, then request you to confirm if you wish to remain connected to WiFi without internet function, you *must* select to stay connector or hotspot will be lost,
- 5) Using an internet browser search the IP address 192.168.4.1. **Note:** this may not work, or be intermittent on some browsers, if this occurs use the "Chrome" or "QQ Browser" to access the EVSE Configuration page as these browsers have been tested to function correctly.
- 6) The below EVSE configuration login page shall appear, login using the set password (default password: 12345678).



Fig 6-6 EVSE I;ogin

 Once password is verified the EVSE configuration page shall be displayed per Fig 6-7 below.

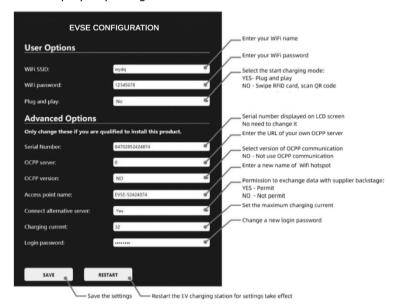


Fig 6-7 EVSE configuration page

#### 6.3.2 Charging station configuration

As show previously the unit configuration settings are split into two sections

User Options: Input the WiFi networks SSID & password Select Plug and Play either Yes or No

Plug and Play is the automatic charging authority which will commence charging as soon as a station is connected to a vehicle, if you wish to keep authorized access only (either via RFID or App) leave on the default setting.

Advanced Options: Most functions under this section should not be changed unless under guidance of a gualified installer.

Login Password refers to the station EVSE configuration page login, this *may* be changed, however it is recommended to keep the default password as there is no built-in reset function if a password is misplaced (this is to ensure security in a public location).

A **qualified installer** *may* alter the Charging current setting if required due to local load limitations.

**Note:** this setting should remain below the dedicated circuit capacity of the charging stations power source, this setting will limit the charger's capacity. The app contains an additional ability to alter charging capacity for user purposes (eg: to slow charging rate to maximize use of solar energy), if the app setting is set higher than the EVSE configuration setting then the charging current shall be limited to the lower of the two settings.

Once all settings have been input as required:

- 1) select SAVE,
- 2) then select RESTART.

The unit shall restart itself using the new settings provided, disconnecting the user from the EVSE configuration page. **Note:** Adjustments to Plug and play function require SAVE only.

#### 6.3.3 Connect to vehicle and test settings

Once configuration is complete connect to vehicle and test configuration settings are calibrated correctly for your needs. Refer to section *6.5 Charging Operation* for how to use instructions.

# 6.4 OCPP function (optional)

Refer to section 6.3.1 for EVSE OCPP configuration settings and your OCPP network provider for network connection details.

## 6.5 App control (optional)

If fitted, the M3B EN-Series AC EV charging station can be controlled remotely via an app on your mobile device.

#### To setup the app:

1) Download the WE-E Charge App (by Weeyu) from the Apple App Store or Google Play Store.



Fig 6-8 App logo on Google Play Store

- 2) Register your details with the app (refer to app for latest terms and conditions of use) to login.
- 3) Set up your profile within the app.
- 4) Ensure your AC EV charging station is connected to the internet via WiFi or Ethernet connection and set to "Plug and Play": "No" or "Off" (this is the default setting which required RFID to commence charging).
- 5) Plug in EV station connector to vehicle.
- 6) Using the app add a charger by scanning the QR code on the LCD display (on some units the QR code can also be found on the exterior of the packaging).



Fig 6-10 QR Code on LCD display

- Once paired you can now access control functions within the app such as charging scheduling, history & current limitation (features may be added or removed as new app versions are released).
- 8) Additional users to control this station can be added to the app using the same process on a second device.

  Note: once the charger is bound to an app user, that user will need to grant permission for additional users to connect to charging station.

**Note:** The WE E-Charge app is provided by a third-party provider, changes may occur to the app over time affecting available functions.

#### 6.6 Charging operation

#### 6.6.1 Start charging

To commence charging:

- 1) Park your EV in place, turn off & ensure park brake is on.
- Pick up charging connected from empty socket of EV charging station.
- 3) As shown in Fig 6-9, plug the charging connector into the AC charging socket of the charging station and the EV, the "connect" LED light on the charging station shall light up.



Fig 6-9 Plug into EV socket

- 4) If "Plug and Play" mode is selected Yes/ On in the EVSE configuration, the charging process shall begin automatically.
- 5) If "Plug and Play" mode is selected No/ Off, then the swipe card screen shall appear. To begin charging either swipe RFID card (optional), or if App is connected, open app and select start charge.

#### 6.6.2 Stop charging

There are several modes for stopping vehicle charging under normal circumstances.

Once vehicle battery is at limit charging process will stop automatically.

To manually stopping charging:

- 1) Instruct unit to stop charging:
  - Plug and Play mode: charging engage the stop charge / charging connector release button on your vehicle (consult vehicle manual for details).
  - RFID activation: Swipe RFID card to stop charging.
  - App control: Open app and select stop charging.
- 2) The "Charging" indicator light on the station will turn off.
- 3) Remove charging connector from vehicle (vehicle release button may require pressing if not done so already).

 Place charging connector back into empty socket on side of AC EV charging station.

#### 6.6.3 Abnormal stop charging

If charging stops abnormally check for which of the following reasons triggered a cease charging.

- Emergency stop: If the emergency stop button has been pressed, charging will cease immediately and an emergency stop message shall appear on the LCD display, refer section 6.2.3 LCD Screen for display example. Refer to section 7
   Fault Handling and Maintenance for troubleshooting.
- Forced fault stop: A fault stop has been initiated by the vehicles onboard charging system, consult your vehicle user manual for further information.
- Automatic fault stop: If the charging station detects a fault it shall cease charging and display a fault message, refer to section 7 Fault Handling and Maintenance for further information.

# 7 FAULT HANDLING / MAINTENACE

## 7.1 Fault handling

The charging station has built in automatic protections in the event of a fault occurring. The fault diagnosis and handling methods are as follows.

**Note:** if required, any handling of input electrical cabling/connections must be done by a qualified electrician.

Fault information	Fault	Handling Method
Both the LED indicator lights and screen are not on	-	- Check if circuit breaker is tripped, and close the breaker after troubleshooting; - Check if the power connection is correct, supply cable is loose immediately switch off breaker and contact an installer; - If still no power contact supplier or electrician to check power supply.
Fault light flash slowly once and fast once	CP voltage anomaly	Fault code 11: Check that the connector is properly connected to the vehicle, unplug and reconnect connector to try charging again.

Fault light flash slowly once and fast twice	Emergency stop	Fault code 12: The E-stop button is pressed, after troubleshooting, rotate the button to reset it, the fault state will exit.
Faulty light flash slowly once and fast 3 times	Input under voltage	Fault code 13: Check that the input cable is reliably connected, that the parent grid is properly connected, and that the grid voltage is normal.
Fault light flash slowly once and fast 4 times	Input over voltage	Fault code 14: Check whether the input cable is connected correctly and that the grid voltage is normal.
Fault light flash slowly once and fast 5 times	Over-temperature protection	Fault code 15: Check whether charging station is covered or installed in a high temperature environment.
Fault light flash slowly once and fast 6 times	Metering fault	Fault code 16: Power off and restart the device.
Fault light flash slowly once and fast 7 times	Leakage protection	Fault code 17: Check whether the charging adaptor and its cable are damaged or wet. Recover after pulling out the adaptor.
Fault light flash slowly once and fast 8 times	Output shortage	Fault code 18: Check whether the charging adaptor and its cables are damaged or wet.
Fault light flash slowly once and fast 9 times	Output over current	Fault code 19: Check whether charging connector is correctly connector to vehicle and check if vehicle on-board charger is operating normally.
Fault light flash slowly twice and fast once	Electric vehicle response timeout	Fault code 21: Make sure that the charging adaptor is properly connected to the car, pull out and retry, or the car is full charge.
Fault light flash slowly twice and fast twice	No diode at EV end	Fault code 22: This EV does not meet IEC standards and cannot be charged.
Fault light flash slowly twice and fast 3 times	Relay sticking	Fault code 23: The device is damaged and needs to be returned to the factory for repair.

Fault light flash slowly twice and fast 4 times	Leakage detection circuit fault	Fault code 24: The device is damaged and needs to be returned to the factory for repair.
Fault light flash slowly twice and fast 5 times	Earth fault	Fault code 25: Charging station is not grounded, input power cable needs to be checked.

If fault persists after troubleshooting complete, contact your supplier for advice

#### 7.2 Maintenance

To ensure the long-term stable operation of the equipment, please maintain the equipment regularly according to operating environment.

- Have an electrician conduct a safety check yearly when used in a commercial setting or as required otherwise.
- Visually inspect unit at least once per week for any signs of damage or wear.
- Keep area around charging station clear of debris.
- Clean charging station with damp cloth to remove any dirt build up, do not use chemical cleaners on charging equipment.
- Check charging cable and connector before each use to ensure no damage has occurred.
- Keep charging connector securely stored in empty socket on side of unit when not in use to prevent damage.

# **8 WARRANTY**

Please refer to separate warranty document provided with this unit for warranty details.

Warranty details can also be accessed via our website.

This product is supplied for use within Australia only by Anzu Charging Services.

For service please contact 1300 870 037 during normal business hours, or visit our website at www.anzucharqinq.com.au.

# This product is proudly imported and distributed by



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