# Instruction Manual

EVCTP2232SRF/EVCTP2232TRF

EVCTP1116SRF/EVCTP1116TRF

V2024#V1

# CONTENTS

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# 1, Introduction

Thank you for choosing Pheilix. Of course, we think you have made an excellent choice and are sure you will be incredibly happy with the features, benefits, and quality of your Pheilix products. These instructions will help you to familiarise yourself with Pheilix. By reading the instructions, you will be sure to get the maximum benefit from your device.

## Safety

The device is an AC EV charger, intended to be installed in a fixed location and permanently connected to the AC supply network. It is a Class 1 item of electrical equipment in accordance with IEC 61140. The unit is designed for indoor or outdoor use at a location with restricted access and should be mounted vertically either surface (wall) mounted or on the dedicated pole mount supplied separately by Pheilix.

The device has been manufactured in accordance with the state of the art and the recognised safety standards. However, incorrect operation or misuse may result in:

• Injury or death to the operator or third parties

• Damage to the device and other property of the operator

• Inefficient operation of the device

All persons involved in commissioning, maintaining, and servicing the device must:

• Be suitably qualified

• Have knowledge of and experience in dealing with electrical installations

• Read and follow these operating instructions carefully

• Always disconnect the device from the supply before wiring

The device is not to be used by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the device by a person responsible for their safety.

Pheilix comes in either tethered or untethered variants. The untethered version should only be used with a dedicated Type 2 cable which is compliant with EN 62196-1 and EN 62196-2. Adapters, extension cables and conversion cables must not be used with either version of the Pheilix.
** Failure to install and operate the Pheilix in accordance with these instructions may damage the unit and invalidate the manufacturer's warranty.

## 2, Box Content

Socket Outlet Version

1x Pheilix unit

1x Mounting bracket

3x RFID cards

3x Security Screws M5*10mm

1x Instruction Manual

1x Warranty

1x Qualified Certification

2x Keys for Enclosure Lock

1x Wrench

3x Screws M5*14mm

4x Expansion bolts 10*120mm

1x Rubber plug

Tethered Version

1x Pheilix unit with 5m tethered

1x Mounting bracket

1x Cable hook

3x RFID cards

3x Security Screws M5*10mm

1x Instruction Manual

1x Warranty

1x Qualified Certification

2x Keys for Enclosure Lock

1x Wrench

6x Screws M5*14mm

4x Expansion bolts 10*120mm

1x Rubber plug

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# 3, Overview Diagram
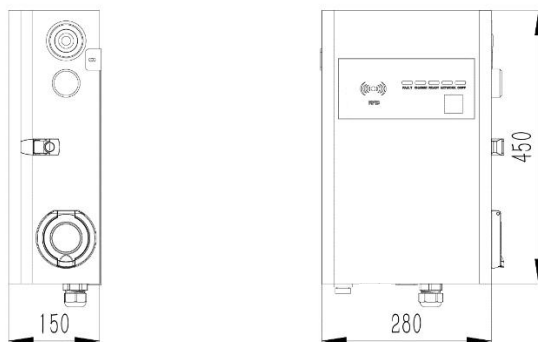


# 4, LED Indicator Lamp Signal instruction

**Network** : Internet connection indication, **Green**

**Ocpp** : Ocpp platform connection indication, **Green**

**Fault** : Fault status indication, **Red**

**Charge** : Charging status indication, **Green**

**Ready** : Charging status ready indication, **Blue**

## 5, Performance

| Model | EVCTP2232SRF/EVCTP2232TRF |
|---|---|
| Rated Voltage | 415V Three phase |
| Rated Current | 32A |
| Rated Power | 22kW |
| Charging Mode | Mode 3 (IEC EN61851-1) |
| Charging Interface | Type 2 socket/ 5m tethered(IEC62196) |
| Housing case | Stainless steel |
| Mounting Location | Outdoor /Indoor (permanent mounting) |
| Installation | Wall mounted/ Standby pile |
| Communication | WiFi, Ethernet/RJ45 , Blue tooth(4G optional) |
| Communication protocol | OCPP1.6 |
| APP Monitoring | Powered by Pheilix smart (IOS, Android) |
| RFID Reader | Standard |
| DLB function | Optional |
| Solar/battery Monitoring | Optional |
| Zero Emission | Optional |
| Display | RGB Led indicator as standard |
| Operation | App monitoring +RFID cards as standard |
| IP Grade | IP65/socket IP54 |
| Impact Grade | IK10 |
| Operation Temperature | -25°C ~ +50°C |
| Operation Humidity | 5% ~ 95% without condensation |
| Operation Attitude | <2000m |

## 6, Installation Instruction

### 6.1, Wall Mounting Installation

• Choose a suitable location for the unit by checking the signal on a mobile phone to ensure a Wi-Fi connection can be established. Should the signal strength not be sufficient, the system may require a Wi-Fi booster or hard-wired RJ45（Recommend using Ethernet connection for commercial devices）

• Put the bracket on the wall, mark the wall where the holes are indicated

• Drill holes into the wall on the marked position, place the wall plugs (8*40mm)provided into the drilled holes
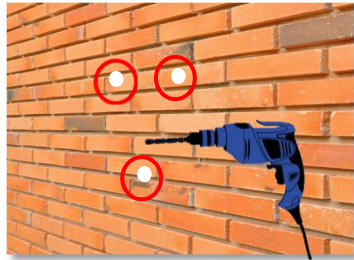


• Place the bracket back to the wall and drive into the self-drilling screws(ST4.8*38mm) into the wall plug

• Fix the EV charger unit into the bracket and ensure the embedded nuts on the enclosure body match the holes on the bracket (The enclosure and bracket have 3 Nuts/Holes, 2 on each side and 1 on the bottom)

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• Tighten the security screws of the 3 bracket positions (M5*10mm) and finish the wall mounting installation



## 6.2, Standby Pile Installation

• Finish a concrete foundation construction acc the drawing
• The concrete foundation with fillister for input cable/network cable conduit
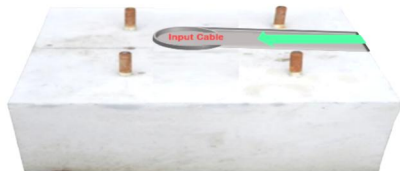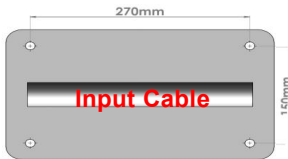


• Arrange the input cable come from the conduit reserved at the concrete foundation
• Put in the input cable into the standby pile from the bottom
• Take out he input cable from the hole at the pile body
• Install the standby pile onto the Bolts position at the foundation
• Tightened all 4 expansion bolts and finish pile installation

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• There are 3 embedded nuts on the Pile (see red mark position)

• Put the bracket onto the pile and make holes on the bracket match the embedded positions on the pile

• Fix the bracket onto the standby pile with M5*14mm screws

• Put the Charger unit into the fixed bracket and ensure the embedded nuts on the enclosure body match the holes on the bracket (The enclosure and bracket have 3 Nuts/Holes, 2 on each side and 1 on the bottom)

• Tighten the security screws of the 3 bracket positions (M5*10mm) and finish the standby pile installation

## 7, Electrical Installation

### 7.1, Warning

• WARNING! An electric shock can be fatal; electrical connection work may only be carried out by a competent person

• The earth conductor must be correctly installed and reliably connected

### 7.2, Power Supply

The Three phase should be connected to a 380V/415V nominal AC supply. The supply should run from a dedicated 40A circuit breaker.

• We recommend the use of Type A RCBO 40A IEC 61009-1 30mA, 6KA

• We recommend the use of SPD not exceed 2.5KV(If main MCU already installed, Then not need)

The Pheilix features an integral 30mA Type-A RCD with 6mA DC leakage detection in accordance with IEC 62955. Local wiring regulations should consulted to confirm whether an additional upstream RCD is also required.

### 7.3, Earthing

The Pheilix unit must be earthed in accordance with local regulations.

When installed on a PME (TNC-S) electrical system it is necessary to protect the consumer from a potential electric shock that could occur if the combined Neutral and Earth (PEN) conductor on the supply becomes damaged or disconnected.

Pheilix includes an additional automatic disconnection device which satisfies the requirements of BS7671:2018 Amendment 1:2020 722.411.4.1 (v) (the 18th Edition IET Wiring Regulations).

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This protection device

a) monitors the supply to identify if there is a problem with the PEN conductor and

b) disconnects the supply if a situation arises where the end user might suffer an electric shock

**This means that the Pheilix unit can be installed without the need for an additional earth rod.**

However, if the customer or local regulations require that an earth rod is installed (for instance as part of a TT earthed system) then this should be connected to the dedicated terminal on the unit)

## 7.4, Wiring

**Main power supply input cable size : 5x6mm²**

**Earth = Green / Yellow cable**

**Neutral = Blue cable**

**Live (L1) = Brown cable**

**Live (L2) = Black cable**

Live (L3) = Grey cable



- Ensure the power source sub-distribution board is OFF.
- Adaptors or conversion adapters are not allowed to be used
- Cord extension sets are not allowed to be used
- Open the enclosure and insert cable through the installed cable gland
- Tightened the screws to the indicated input position
- Tightened the cable gland with the lock nut to ensure the input cables are fixed well
- Lock the enclosure

**\*\*\* Do not overtighten the electrical terminals. The recommended torque setting for the electrical terminals is 2.0Nm**

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# 8, DLB RS485 MODBUS/CT installation (Optional)

Current Transformers (CTs) are used to measure current at various places of the installation. For example, the Grid connection point, the solar/wind inverter, or a static battery system.
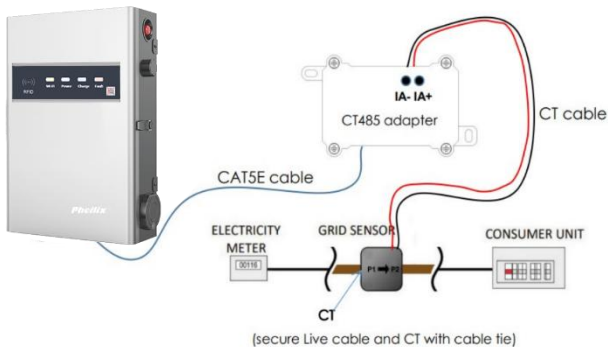


• Fix the CT on the position as above instruction and connect the Cat5 cable to the reserved RJ45 port on RS485 Modbus adaptor(Load balancing)
• Fix CT on solar circuit and connect the Cat5 cable to the reserved RJ45 port on RS485 Modbus adaptor(Solar monitoring)
• Fix CT on Battery circuit and connect the Cat5 cable to the reserved RJ45 port on Modbus adaptor(Energy storage monitoring)

Installation of a CT to monitor the total power of load is required for DLB functionality. Other CTs are also optional and can be purchased separately. The number and location of CTs used within an installation will vary according to the devices installed and the user requirements.

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Pheilix Smart APP 2.0
# Instruction Manual

## 9, APP Use Condition

➢ Support for Android 10 and above systems.

➢ Support for IOS 11 and above systems

➢ Need to access the Internet, support 3G and above network; support WIFI access to the Internet.

## 10, APP Download

➢ Search for "Pheilix Smart" on Google Play Store and download it.

➢ Search for "Pheilix Smart" on the App Store and download it.

## 11, Register and Login

After the user downloads and installs Pheilix Smart App, opening the app will enter to login page. If the user already has a Pheilix Smart account, they can directly enter the user name and password to log in. For non-users registration is required first.

1. Open the app, enter the login page and press the [Register] link at the bottom of the login page.
2. Go to the register page and fill in e-mail address.

3. Press the [Get verification code] button, and the verification code will be sent to the e-mail. If you find that the mailbox does not receive the verification code, please check the correctness of the mailbox and whether the verification code is blocked by the mailbox assistant.

\*\* The verification code expires after　10 minutes,　You can press the [Get verification code] button to obtain the new verification code.

4. Fill in account name, password and confirm password, and the system will check the uniqueness of the account and email. The registered email and account name cannot be registered twice. The password verification rules must include capital letters, lower case letters, numbers and special symbols, and the length is 6-20 digits.

5. Please check the Terms of Service and agree.

6. Finally, Press the [Register] button to complete the registration process.

## Forgot Password

1. Press to Forgot password on the login page, enter the forgot password page, set the new password again.

2, Retrieve your password needs to verify your previous mailbox, you need to obtain the latest verification code for verification.

3. After filling verification code and new password, Press [Reset Password] to complete resetting

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## 12, Pair the Charger(Pair the Unit ID)

1. Press the [+] in the upper right corner of My Device page or the current account is not bound to any charger, directly press the Add device button in the middle of the page to scan the QR code of the charger(QR code at the side label of the unit) to complete the binding of the charger.



2. Scan the QR code of the charger and press [Bind], and the page prompts the bind successful and return to the superior page.

## 13, Configure Network

To use the smart function of the unit , users need to configure the network for the charger first.

➢ Connect the prepared Ethernet cable to the RJ45 Ethernet port of the unit

➢ Connect the unit to the local or mobile Wifi internet

Follow the steps below to set wifi connection:

1.  Press the emergency stop button, then turn off the power and then turn it on

2.  The fault light remains red and the network light flashes green, then the EV charger unit enters the configuration wifi mode

3.  Press the [WiFi Config] button on the "My Device" page.

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4.Press the [Confirm] button directly. The APP will automatically determine the charger's networking mode, and enter the corresponding networking mode page.



5.Select the WiFi you want to configure (iOS version does not support scanning nearby WiFi lists,you need to manually fill in the WiFi name)

6.Enter the password and press "OK". Wait for the charger to successfully connect to the WiFi after receiving a prompt. If the connection fails due to incorrect WiFi name or connection password, please repeat the networking operation.

7. When the internet connected successfully , The network and ocpp indicator will show Green

8. Then , release the emergency stop button, you can start the first time charging

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## 14, Set Smart Charging

Press the [Settings] button on My Device page to enter the Settings page.

Maximum Power Setting for Home Load Balancing (Available for Household Charger & RS485 adaptor and CT clamp need to be installed for this function to take effect.)
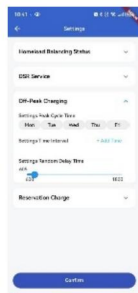
### 14.1, DLB Setting steps:

1 Open [Homeload Balancing Status]

2 Fill in the maximum home load current (32-1000A), and press [Confirm] to complete the setting

### 14.2, Off-Peak Charging setting steps:

1. Open the [Off-Peak Charging]

2. Set the date of peak charging (weekly cycle)

3. Edit or add peak hours and set the delay time (the delay time range is 0-30 minutes,users can only edit for 600-1800 seconds)

4. Press [Confirm] to complete the setting
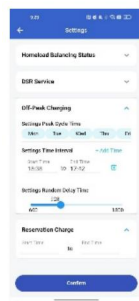
## 15, Start & Stop Charging Via App

➢Plug in the gun to the EV

➢Press the [Start Charge] button to start charging directly(Off-peak time)

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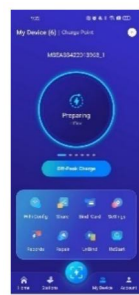
Or Press [Off-Peak Charge] button enter to [Start Charge Now] button and override the off-peak charge setting and start charging now(Peak time)

➢ Press [Stop Charging] button, the unit will stop the charging

## 16, Start /Stop Charging Via RFID Cards

➢ Bind the RFID cards with App

Press [My Cards] button on Account page, then press [Bind Card] button to enter the bind card page. You can enter the card number or scan the card to bind the card.

➢ Bind the RFID cards with EV charger unit

1. Press the [Bind Card] button in My Device page
2. Select the card that needs to be bound and press the button on the right
3, The status of the card changed from Unbind to Bind means the binding is successful
4. After successful binding, the card can start charging on the charger, Both working at On-line and off-line status

➢ Plug in the gun to the EV

➢ Tap 1 time the RFID card on the unit to start the charge

➢ Tap 1 time again the RFID card on the unit to stop the charge

** Charging via RFID cards , App side will show the unit in charging status

** Swipe the RFID cards 2 times will override the " Off-peak" setting.

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## 17, Share the unit to Others

➢ Press [Share] button on My Device page to enter the Share page

➢ Enter the username or email of the user to share and press [OK]. (The users should be registered on Pheilix Smart App

➢ After successful sharing, jump to My share list page. Users can delete share on this page.

## 18, Charging Records

➢ Press [ Records ] on My Device page to view the current charger charging records

➢ User can also view all the charging records in the Account page. (may installed x2 units)

➢ Users can export the charging record to mail address on My Orders page

## 19, Alarm

➢ 1. Show the fault alarm information of the charger under the App home page

➢ 2. Show only the last 3 fault information

➢ 3. For more alarm information, please consult the operator

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# 20, Troubleshooting

| State | Explanation | Charging authority | Scintillation period (s) | White(blue) light | Green light | Red light |
|---|---|---|---|---|---|---|
| Available | No gun inserted,and no fault condition | NO | ∞ | Always On | Off | Off |
| Reserved | The charger has been reserved | NO | 2 | Flahing，D=1/2 | Flahing,D=1/2 | Off |
| Preparing | CountDown | NO | 3 | Flahing，D=1/3 | Flahing,D=1/3 | Off |
| SuspendedEVSE | PeakTime | YES | 3 | Flahing，D=2/3 | Off | Off |
| SuspendedEV | The gun is connected,but the S2 switch is not closed at the vehicle end | NO | 3 | Flahing，D=1/3 | Off | Off |
| Preparing | The gun is connected, and the S2 switch is closed at the vehicle end, waiting for authentication | YES | 2 | Flahing，D=1/2 | Off | Off |
| Charging | The charger is charging | YES | 2 | Off | Flahing,D=1/2 | Off |
| Finishing | This charge has been completed | NO | ∞ | Off | Always On | Off |
| Unavailable | The charger is in self-checking state | NO | ∞ | Always On | Off | Always On |
| Faulted | LNRCDFailure | NO | 3 | Off | Off | Flahing,D=1/3 |
| | PERCDFailure | NO | 3 | Off | Off | Flahing,D=2/3 |
| | EmergencyStop | NO | ∞ | Off | Off | Always On |
| | GroundFailure | NO | 3 | Flahing，D=2/3 | Off | Flahing,D=1/3 |
| | LNReverse | NO | 3 | Flahing，D=1/3 | Off | Flahing,D=2/3 |
| | OverCurrentFailure | NO | 3 | Flahing，D=1/3 | Off | Flahing,D=1/3 |
| | PowerSwitchFailure | NO | 3 | Flahing，D=1/3 | Flahing,D=1/3 | Flahing,D=1/3 |
| | RCDSelftestFailure | NO | 2 | Off | Off | Flahing,D=1/2 |
| | EVCommunicationError | NO | 2 | Off | Off | Flahing,D=1/2 |
| | ConnectorLockFailure | NO | 3 | Off | Flahing,D=1/3 | Flahing,D=2/3 |
| | EVCommunicationError | NO | 3 | Off | Flahing,D=2/3 | Flahing,D=1/3 |
| | OverCurrentFailure | NO | 3 | Off | Off | Flahing,D=1/3 |
| | UnderVoltage | NO | 3 | Off | Off | Flahing,D=2/3 |
| | OverVoltage | NO | | | | |
| | HighTemperature | NO | 3 | Off | Flahing,D=1/3 | Flahing,D=1/3 |
| | PowerMeterFailure | NO | | | | |
| | N12Loss | NO | | | | |
| | ReaderFailure | YES | | | | |
| | FLASHFailure | YES | | | | |
| | CT485Failure | YES | | | | |
| | CANFailure | YES | | | | |
| Warning | DoorOpen | YES | only warning,the light state is same to working state | | | |
| | RTCBatteryLoss | YES | | | | |
| | PeakTime | YES | | | | |
| | CountDown | YES | | | | |
| | TsensorLoss | YES | | | | |

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# PHEILIX

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