

# **Instruction Manual (Installation, Operation, and Maintenance)**



**JC-9932-240(180)-CT**

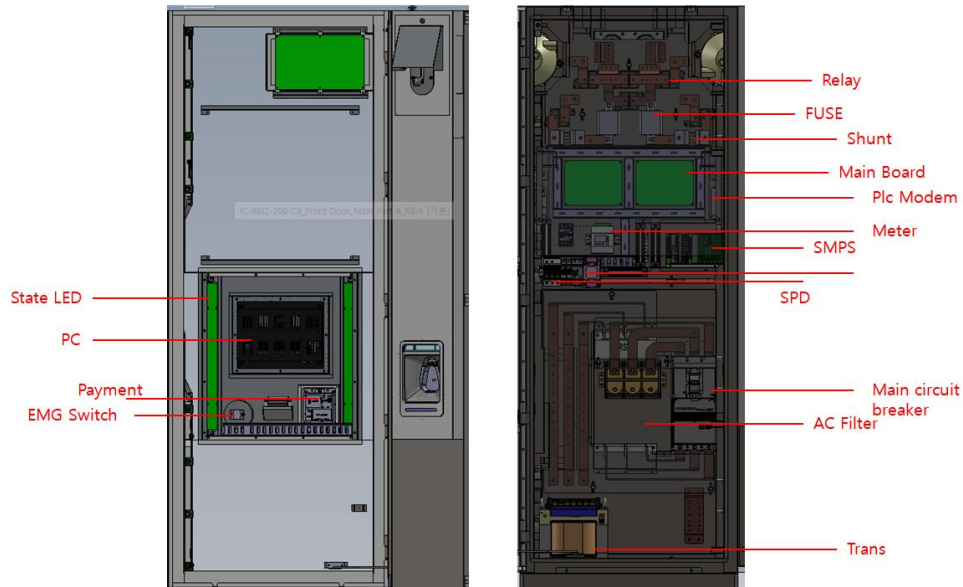
**EV SIS**

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# 1. INTRODUCTION

## 1.1 Features



### ① Touch screen

- The operation status of the product is displayed on the LCD screen.

### ② Emergency switch

- Switch that forcefully stops the product in case of an emergency. When the switch is pressed, the product will stop operate.

### ③ Payment terminal

- Device that authenticates users and transacts payments.

### ④ Circuit breaker (MCCB)

- Device that cuts off and applies power (3 phase 4 wire 480V)

### ⑤ Meter

- Device that measures the amount of electricity used

### ⑥ Circuit Breaker for Control Power (Control Power MCB)

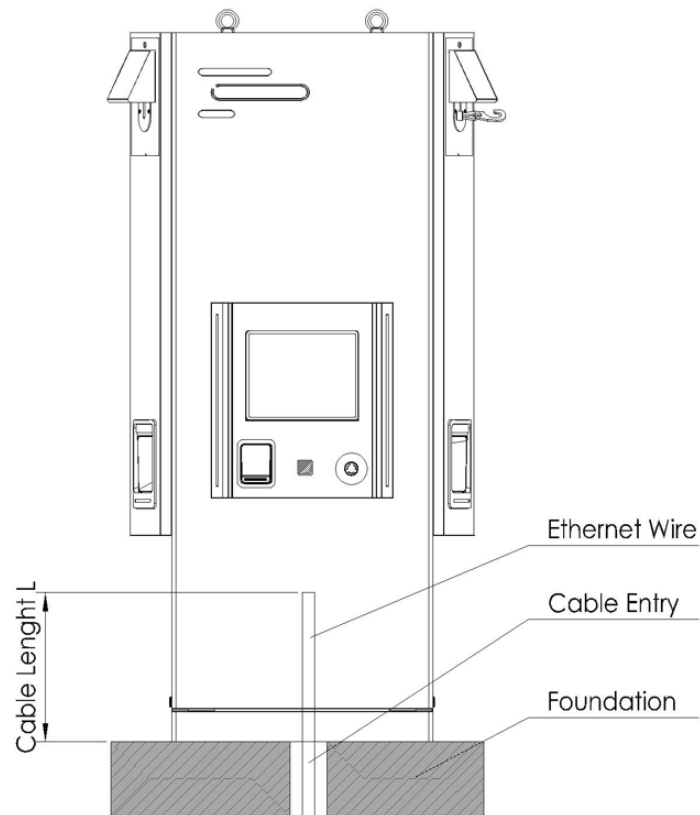
- Device that terminates control power inside the product.

## 2. PRODUCT INSTALLATION

- Installation Overview

|                                      |                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Electrical Input Requirements</b> | Input voltage: 3Ø3W, 480VAC, 60Hz                                                                                                                                                                                                                                                                                                                                        |
|                                      | Full Load Amperage (Input): 180kW – 240 Amps / 240kW – 320 Amps (at rated power)                                                                                                                                                                                                                                                                                         |
|                                      | Breaker Capacity: 400 Amps                                                                                                                                                                                                                                                                                                                                               |
| <b>Location</b>                      | This charger has 3 doors (i.e. front, left, and right). For proper air circulation and cooling, a distance of 27.5 inches on the front side and 20 inches on the left and right sides should always be maintained. The clearance also allows the door to be opened for maintenance procedures.                                                                           |
|                                      | For relocation or lifting of the charger and mounting pad, a forklift or crane may be used. Provisions for such an action have been included in this document.                                                                                                                                                                                                           |
|                                      | Charger Dimensions : 41.1(W) x 74.8(H) x 26.9(D) inch                                                                                                                                                                                                                                                                                                                    |
| <b>Concrete Base</b>                 | A flat concrete base with a vertical gradient of no more than 5% will be provided, with a provision for electrical service wires to exit the concrete pad in the location as defined in this document.                                                                                                                                                                   |
| <b>Mounting Pad</b>                  | The mounting pads shall be made of concrete cement with approximate dimensions of 35.4 inch(W)* 35.4 inch(H) to accommodate the weight and dimensions of the base. Using a spring washer, nut, and an anchor stud, place the charger on the concrete mounting pad.                                                                                                       |
| <b>Barricade (Bollards)</b>          | A suitable bollard must be fitted to restrict the access of the electric vehicle (EV) to the charger. Bollard locations must be in accordance with local regulations.                                                                                                                                                                                                    |
| <b>Cables</b>                        | The input cable must be copper (3P). Flexible copper is proper. Refer to the table listed on the next page for cable gauge requirements.                                                                                                                                                                                                                                 |
|                                      | Depending on the situation and cable type, the cables must be embedded in the ground with the proper cable ducts.                                                                                                                                                                                                                                                        |
| <b>Grounding</b>                     | Reliable, protective grounding must be provided at all times. It is recommended to have a separate, dedicated ground exclusively for the charger in order to ensure the highest degree of safety. The ground resistance should be less than or equal to 4Ω. Copper cable in accordance with the NEC shall be used to connect the charger housing to the external ground. |
| <b>Breaker</b>                       | A breaker (3P) with suitable current capacity, dependent upon the charger rating provided, is required. This shall be in accordance with the NEC, typically 1.25 times the full load amperage.                                                                                                                                                                           |
| <b>Miscellaneous</b>                 | Copper lugs (flat type) for the input cable and earth cable should be provided and shall be sized dependent on the size of the cable.                                                                                                                                                                                                                                    |
| <b>Additional notes</b>              | Do not let any flammable, explosive or flammable materials, chemicals, flammable vapors, and/or other dangerous goods within close proximity of the charger.                                                                                                                                                                                                             |
|                                      | The charger is rated IP54. In areas which see flooding, heavy rain, storms, snow, or other harsh weather conditions, recommends erecting a canopy over and above the charger for the equipment's protection.                                                                                                                                                             |
|                                      | Confirm beforehand that the intended installation site has a load capacity sufficient to support this equipment.                                                                                                                                                                                                                                                         |
|                                      | Charging cable length : 18.06 ft (5.5M)                                                                                                                                                                                                                                                                                                                                  |

- Consider the location of cable holes and bolts when preparing the foundation and cabling.

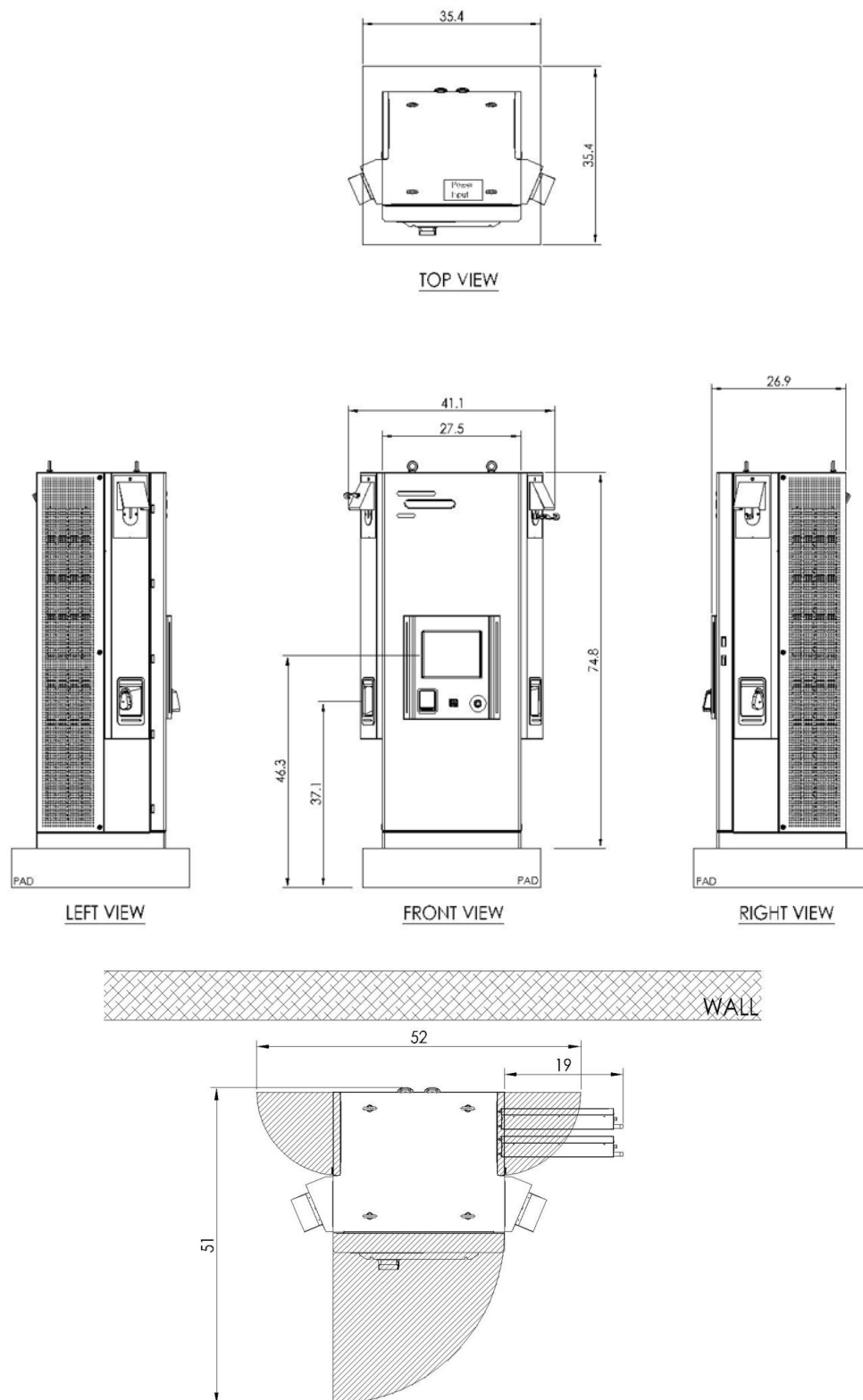


## 2.1 Recommended Tools

- The following tools are recommended for DC Fast Charger installation.
  - ① Electric hammer drill (10mm)
  - ② Anchor bolt (10 x 75mm) \* 4ea
  - ③ Spanner (17mm)
  - ④ Copper tube terminal M12 – 300 KCML for AC Input(240kW) \* 3ea
  - ⑤ Copper tube terminal M12 – 4/0AWG for AC Input(180kW) \* 3ea
  - ⑥ Copper tube terminal M10 –2/0AWG \* 1ea
  - ⑦ Ferrule crimper
  - ⑧ Hex wrench (10mm)
  - ⑨ Torque wrench, Electric impact wrench
  - ⑩ Electric cutter, Scissor, knife

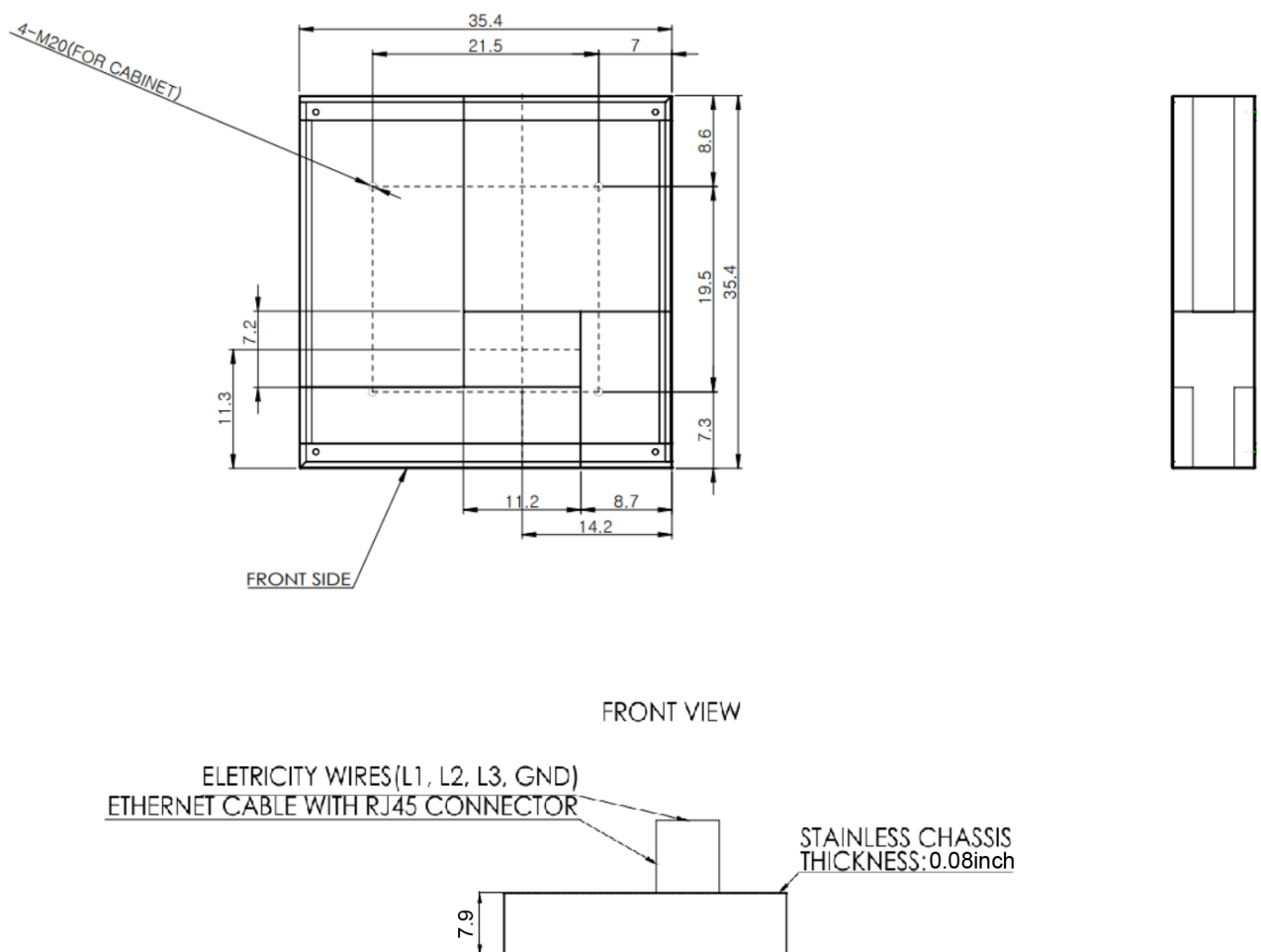
## 2.2 Space Requirements

- Measurement (inch)



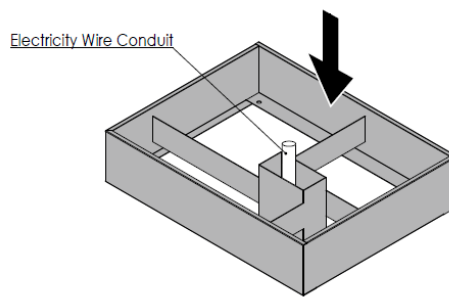
## 2.3 Installing the Foundation

- Construct the stainless steel chassis as the foundation according to the illustration below.
- Fill the base frame with concrete and mount the charger to the concrete base.
- Ensure the location of the cable inlet and the four drill holes (21.5 x 19.5 inch) to secure the cabinet is correct as shown below.
- Unless otherwise agreed, the base will not be included with the product.

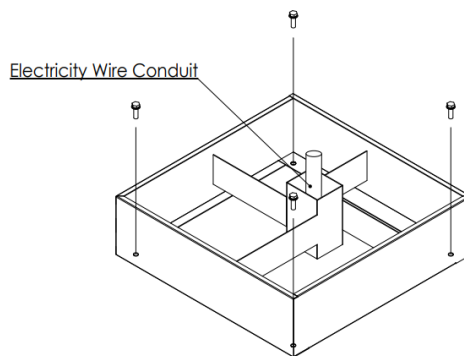


- Recommended Cable / Hole
  - Electricity Cable: Ethernet cable, Power cable
  - Cable Hole: 4.6 x 3.8 inch

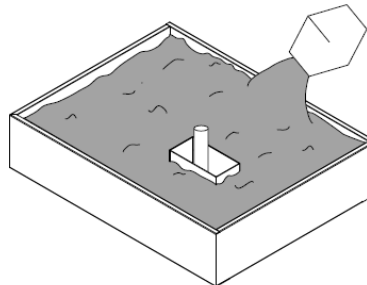
- ① Place the stainless steel chassis on a clean and flat surface.



- ② Secure the chassis to the floor with four screws.



- ③ Install the electrical wiring and Ethernet cables in each conduit.
- ④ Pour concrete into the stainless steel chassis until it is level with the top edge.



- ⑤ Smooth the concrete surface until all of the bubbles are removed.
- ⑥ Wait until the concrete is properly cured before installing the charger.
- ⑦ Drill four anchor bolt holes in the corners of the 21.5 x 19.5 inch area as shown in the template.

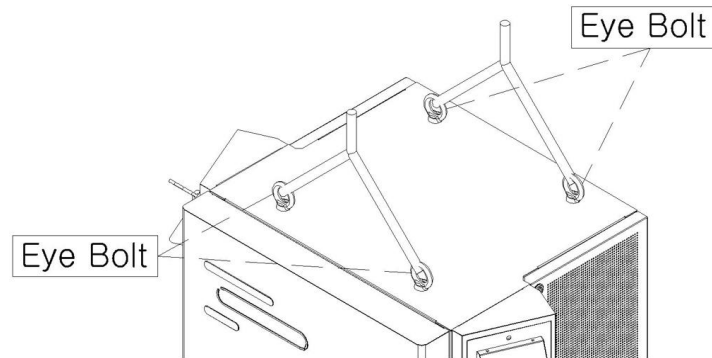


## 2.4 Terminal Wiring

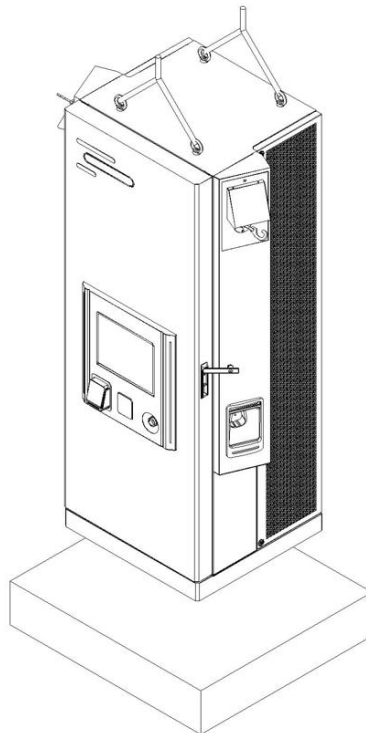
- **Precautions for the main circuit wiring**
- Use insulated crimp terminals for power input and output terminals. Wire debris may cause abnormalities or malfunctions.
- If the wiring needs to be changed due to nonconformity, make sure that the input power is turned off before rewiring takes place. It is dangerous to begin rewiring immediately after turning off the power since the capacitor inside the charger is charged with high voltage.
- To prevent electric shock, be sure to ground the product using the special type 3 grounding method. The grounding resistance should be 10  $\Omega$  or less.
- Connect the product to the dedicated ground terminal. Do not use the case or chassis as a grounding terminal.
- For the grounding wire, use a wire with a thickness of 10 mm<sup>2</sup> or more, and wire it as short as possible.
- Apply the specified torque for the terminal screws. If the screw is loose, it may cause a short circuit or malfunction. If the screw has been excessively tightened, it may cause a short circuit or malfunction due to damage to screws or terminal blocks.
- Use 167°F, 600V copper wire or higher for the input wire.
- Install in accordance with the power supplier's specifications and electrical safety regulations for detailed specifications.

- **Installation steps**

- ① Remove the cover at the bottom of the charger by removing the four brackets.
- ② Connect and secure the hoist rope to the two eye bolts.

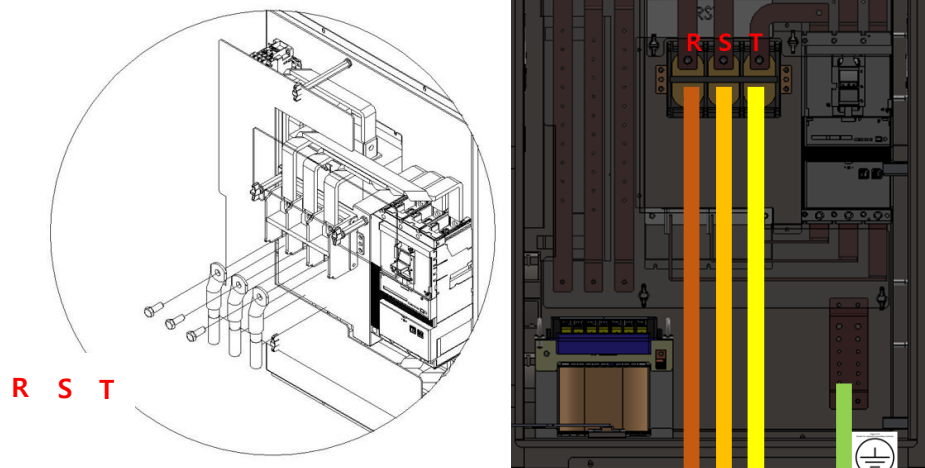


- ③ Lift the charger from the palette to the base mount assembly.
- ④ Align the charger with a pre-punched hole in the base frame. And fix it with bolts and washers.



- ⑤ Reassemble the bracket.
- ⑥ Open the front door and remove the cover.
  - ※ You need a key to open the front door. The key is included in the accessory pack.
- ⑦ Connect the AC input.
  - 480 VAC (3 Phase + Earth), 60 Hz and 180kW – 240 Amps / 240kW – 320 Amps current.

- When you open the front door of the product, you will find the terminal block located in the bottom (first tier).
- Ensure that each input line is correctly connected to its corresponding terminal (RST).
- The grounding of the fast charger should be done independently.



- **Input terminal and wiring specifications**

- Input[R,S,T] wiring M12 – 300 KCML(240kW) / 4/0 AWG(180kW)
- Input volt : Hexagonal head – Other Connections 20.3N
- Ground wiring : M10 –2/0AWG

⑧ Reassemble the cover

### 3. OPERATING INSTRUCTIONS

#### 3.1 Charging sequence by authentication method

##### 3.1.1 PIN code / Membership card



- ① Select the charging port.
- ② Select either the PIN code or the membership card method.
- ③ PIN code: Enter the PIN code and click the OK button.
- ④ Membership card: Scan the membership card.
- ⑤ 'Authentication in progress' will be displayed.
- ⑥ If authentication is successful, move to step 6.
- ✖ If authentication fails
  - Return Home: Moves to screen ①.
  - Retry: Moves to screen ③.
- ⑦ Plug the connector into the vehicle.
- ⑧ 'Connection in progress' will be displayed.
- ⑨ Click the 'Stop Charging' button to finish your charging session.
- ⑩ Information about your charging session will be displayed.
- ⑪ After disconnecting the connector, the screen will move back to ①.

### 3.1.3 Credit card



- ① Select the charging port.
- ② Select the credit card method.
- ③ If receipt is need, please enter the phone number to receive.
- ④ Scan/insert the credit card.
- ⑤ The authentication screen will be shown.
- ⑥ The successful authentication screen will be shown.
- ⑦ Plug the connector into the vehicle.
- ⑧ 'Connection in progress' will be displayed.
- ⑨ Click the 'Stop Charging' button to finish your charging session.
- ⑩ Information about your charging session will be displayed.
- ⑪ After disconnecting the connector, the screen will move back to ①.

### 3.1.4 QR code

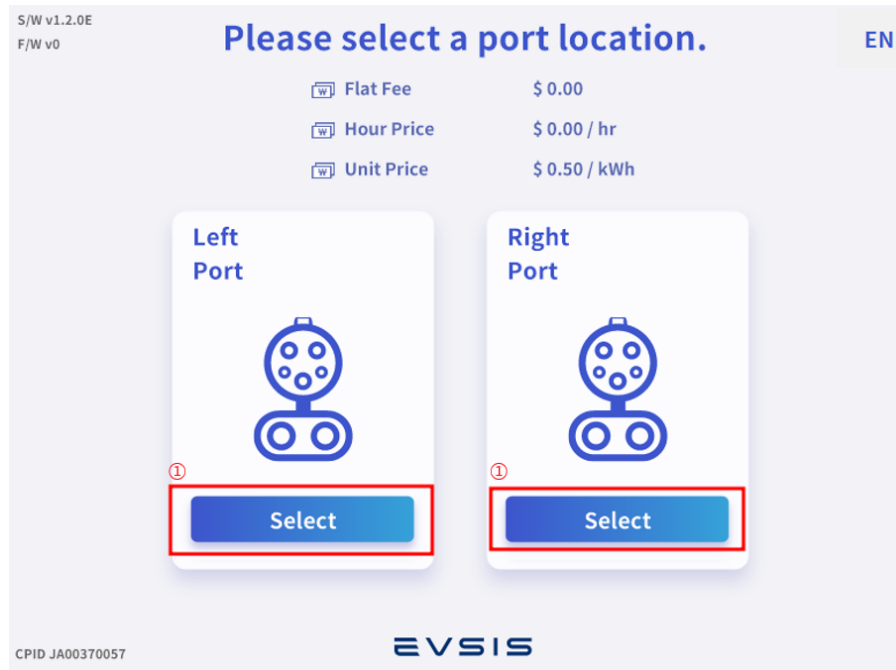


- ① Select the charging port.
- ② Select the QR authentication process.
- ③ The authentication screen will be shown.
- ④ The successful authentication screen will be shown.
- ⑤ Plug the connector into the vehicle.
- ⑥ 'Connection in progress' will be displayed.
- ⑦ Click the 'Stop Charging' button to finish your charging session.
- ⑧ Information about your charging session will be displayed.
- ⑨ After disconnecting the connector, the screen will move back to ②.

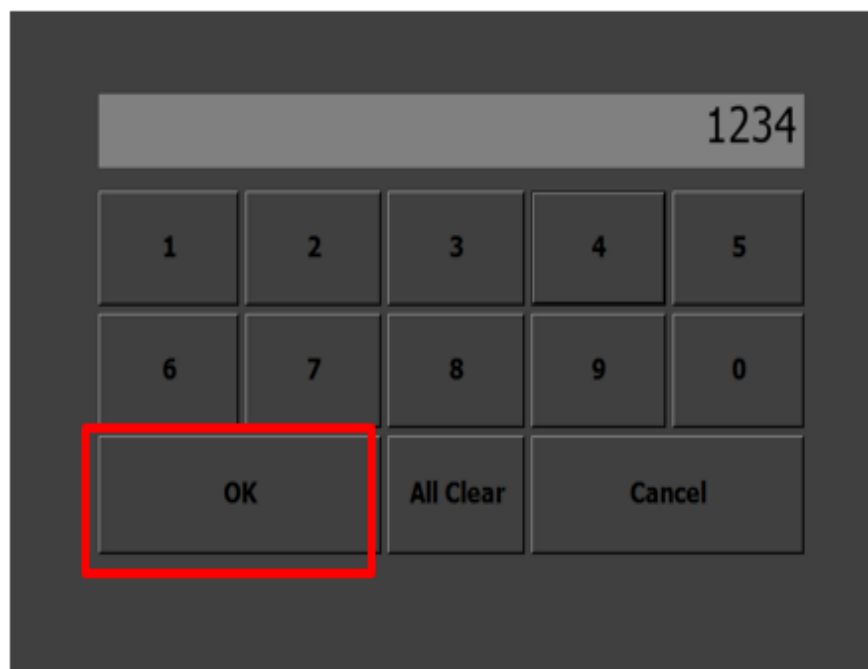
## 3.2 UI settings

### 3.2.1 Configuration - Charger

- ① Double-click the EVSIS logo at the bottom of the home screen.



- ② Enter the number [1234] and click the OK button.
  - Your password can be changed in UI settings.



- ③ Setting the charger preferences

- Click 'setting charger preferences' on the screen to set the charger's default settings.

DSP Version 0    Nayax Test    Payter Test    DSPReset    Heartbeat    [EVSIS EV Charger Control Management]

Version 1.2.0E 2024-09-03    FW Update 1ch = false    FW Update 2ch = false    defaultPr    SetUserP    Running    FinalCost

**Setting charger preferences**    Display the charger UI program    FAULT    UI Sequence Reset

Meter    Load Test    Configuration

UI Start Time: 2024-09-24 06:16:50.000    Network Status: 2024-09-24 15:16:54.549 Connected

DSP400 Receive Data: ch:0 16    STOP\_OK PageReady

Shared memory for communication: ch:0 0    AUTH\_READY PageReady

RF Card Serial Status    Config Counter : 1    Max Power : 30 kW DC

DSP:Read successful [200]    Unit Price : \$ 0.50 / kWh

Power Serial Status    Meter\_1 : 3.3774 kWh

TEST:    Meter\_2 : 0.0030kWh

ch1 timeout\_timer: 0    ch2 timeout\_timer: 0    CHARGING    NONE

ch1 ButtonCmd: 0    ch2 ButtonCmd: 0    ch2:    mac proc: False / join: False

MacAddress    check2

☐ I/O Test(EN)    ☐ I/O Test(KO)

☐ add 1line    ☐ StopLog    LogClear    LogWindowSizeUp

```
{ "context": "Sample.Periodic", "measurand": "Voltage", "unit": "V", "value": "0", "timestamp": "2024-09-24T06:20:56Z", "transactionId": "98449" }
2024-09-24 15:20:56.895 [Transceiver] RECV>[3,"b4ca9c79-2163-430b-9cc7-783c5a8f0dea",{}]
2024-09-24 15:21:16.480 [Transceiver] SEND>[2,"18e72278-7334-43d2-86ed-e31aeb396e7a","MeterValues",
{"connectorId": 1, "meterValue": [{"sampledValue":
[{"context": "Sample.Periodic", "measurand": "Energy.Active.Import.Register", "unit": "Wh", "value": "3347.0"},
{"context": "Sample.Periodic", "measurand": "SoC", "unit": "Percent", "value": "0"},
{"context": "Sample.Periodic", "measurand": "Current.Import", "unit": "A", "value": "0"},
{"context": "Sample.Periodic", "measurand": "Current.Offered", "unit": "A", "value": "80"},
{"context": "Sample.Periodic", "measurand": "Power.Active.Import", "unit": "kW", "value": "0.000"},
{"context": "Sample.Periodic", "measurand": "Power.Offered", "unit": "kW", "value": "30.000"},
{"context": "Sample.Periodic", "measurand": "Voltage", "unit": "V", "value": "0"}], "timestamp": "2024-09-24T06:21:16Z", "transactionId": "98449"}]
2024-09-24 15:21:16.893 [Transceiver] RECV>[3,"18e72278-7334-43d2-86ed-e31aeb396e7a",{}]
```

LineCount:54    Open SaAgentLog    Open OcnpLog    Open LocalFolder    EXIT    SoftReset    HardReset

☐ Charging Profile FileLog (For 5sec)    ☐ Topmost

#### ④ Electric vehicle charger settings screen

[Electric vehicle charger setting screen]

Exit    Show On-Screen Keyboard    Save

☐ Use FreeVend    ☐ Use FlatFee, HourPrice

☒ Use Member

☒ Use Pin number (if checked, also check Use M    ☐ Use Payter (Cloud)

☒ Use Credit Card    ☐ Use Receipt display (PhoneNumber)

☐ Use VerificationCode (ChargingStop)

☐ Visible FlatFee, HourPrice(Charging)    ☐ Use PnC

PASSWORD: 1234

DSP\_COM: 5 (Enter numbers only)

RF\_COM: 1 (Enter numbers only)

**RF Reader**

☐ Payter(Local)    ☐ DP-680    ☐ Apollo    ☒ NONE

Max Output Power (kW): 240 (Enter numbers only)

Max Output Current (A): 375 (Enter numbers only)

Payter Serial Number: P68

CPO Name:

Price Configuration

**Max Channel**

☐ 1ch    ☒ 2ch

**Screen Size**

☒ 12, 1inch    ☐ 24inch

**PowerMeter**

☒ Read (v2,25)    ☐ Calc

**Vendor**

☒ JOAS    ☐ EVSIS

**Connector Type Select**

**DSP Protocol**

☐ v1,x    ☐ v2,x    ☒ v3,x    ☐ Dispenser

**OCPP v1.6 Setting**

ServerURL : \_\_\_\_\_

CPID : \_\_\_\_\_    Serial Num : \_\_\_\_\_

Auth\_ID : \_\_\_\_\_    Model name : \_\_\_\_\_

Auth\_PASS : \_\_\_\_\_

☒ Use OCPP    ☒ Use SSL    ☒ Use BasicAuth



- ⑤ After changing the default settings on the screen, click the Save button and then click the Exit button.

**[Electric vehicle charger setting screen]**

Exit
Show On-Screen Keyboard
Save

PASSWORD:

DSP\_COM:  (Enter numbers only)

RF\_COM:  (Enter numbers only)

**RF Reader**

☐ Payer(Local)
 ☐ DP-680
 ☐ Apollo
 ☒ NONE

Max Output Power (kW):  (Enter numbers only)

Max Output Current (A):  (Enter numbers only)

Payer Serial Number:

CPO Name:

Price Configuration

**OCPP v1.6 Setting**

ServerURL :   
 CPID :  Serial Num :   
 Auth\_ID :  Model name :   
 Auth\_PASS :

☒ Use OCPP
 ☒ Use SSL
 ☒ Use BasicAuth

☐ Use FreeVend
 ☐ Use FlatFee, HourPrice

☒ Use Member
 ☐ Use Payer (Cloud)

☒ Use Pin number (if checked, also check Use M
 ☐ Use Receipt display (PhoneNumber)

☒ Use Credit Card
 ☐ Use PnC

☐ Use VerificationCode (ChargingStop)
 ☐ Use PnC

☐ Visible FlatFee, HourPrice(Charging)

**Max Channel**

☐ 1ch  
☒ 2ch

**Screen Size**

☒ 12,1inch  
☐ 24inch

**PowerMeter**

☒ Read (v2,26)  
☐ Calc

**Vendor**

☒ JOAS  
☐ EVSIS

**Connector Type Select**

**DSP Protocol**

☒ v1,x
 ☐ v2,x
 ☒ v3,x
 ☐ Dispenser

- ⑥ Click SoftReset to apply settings. (The UI will automatically restarts.)

**[EVSIS EV Charger Control Management]**

DSP Version 0

Nayax Test Payer Test DSPReset Heartbeat

Version 1.2.0E 2024-09-03

FW Update 1ch = false FW Update 2ch = false defaultPr SetUserP Running FinalCost

Setting charger preferences

Display the charger UI program

FAULT

UI Sequence Reset

Meter

Load Test

Configuration

DSPMonitoring (Connector 1)

UI Start Time: 2024-09-24 06:16:50.000  
 DSP400 Receive Data: ch:0 16  
 Shared memory for communication: ch:0 0  
 RF Card Serial Status  
 DSP:Read successful [200]  
 Power Serial Status  
 TEST:  
 ch1 timeout\_timer: 0 ch2 timeout\_timer: 0  
 ch1 ButtonCmd: 0 ch2 ButtonCmd: 0

Network Status: 2024-09-24 15:16:54.549 Connected  
 STOP\_OK PageReady  
 AUTH\_READY PageReady  
 Config Counter : 1  
 Unit Price : \$ 0.50 / kWh  
 Meter\_1 : 10.0654 kWh  
 Meter\_2 : 0.0030kWh  
 CHARGING  
 ch2:  
 MacAddress

Max Power : 30 kW DC  
 NONE  
 mac proc: False / join: False  
 check2

DSPMonitoring (Connector 2)  
 SmartCharging DSPMonitoring (Connector 1)  
 SmartCharging DSPMonitoring (Connector 2)

☐ I/O Test(EN)
 ☐ I/O Test(KO)

☐ add 1line
 ☐ StopLog

LogClear

LogWindowSizeUp

```
{
  "context": "Sample.Periodic",
  "measurand": "Voltage",
  "unit": "V",
  "value": "0"},
  "timestamp": "2024-09-24T06:28:16Z"},
  "transactionId": "98449"}
2024-09-24 15:28:17.036 [Transceiver] RECV>[3,"047aa02b-d6ce-4380-893e-53d89c3ebfe8",{}]
2024-09-24 15:28:36.631 [Transceiver] SEND>[2,"c0849398-7b58-44e9-a798-711bf6ac92b8",{"MeterValues",
{"connectorId": "1", "meterValue": [{"sampledValue":
{"context": "Sample.Periodic", "measurand": "Energy.Active.Import.Register", "unit": "Wh", "value": "10004.6"},
{"context": "Sample.Periodic", "measurand": "SoC", "unit": "Percent", "value": "0"},
{"context": "Sample.Periodic", "measurand": "Current.Import", "unit": "A", "value": "0"},
{"context": "Sample.Periodic", "measurand": "Current.Offered", "unit": "A", "value": "80"},
{"context": "Sample.Periodic", "measurand": "Power.Active.Import", "unit": "kW", "value": "0.000"},
{"context": "Sample.Periodic", "measurand": "Power.Offered", "unit": "kW", "value": "30.000"},
{"context": "Sample.Periodic", "measurand": "Voltage", "unit": "V", "value": "0"}]},
"timestamp": "2024-09-24T06:28:36Z"},
"transactionId": "98449"}
2024-09-24 15:28:37.038 [Transceiver] RECV>[3,"c0849398-7b58-44e9-a798-711bf6ac92b8",{}]
```

LineCount:106

Open SaAgentLog

Open OcppLog

Open LocalFolder

EXIT

SoftReset

HardReset

☐ Charging Profile FileLog (For 5sec)

☐ Topmost

- Detailed information on the configuration setting screen

**[Electric vehicle charger setting screen]**

Exit Show On-Screen Keyboard Save

☐ Use FreeVend
 ☐ Use FlatFee, HourPrice

☒ Use Member

☒ Use Pin number (if checked, also check Use M
 ☐ Use Payter (Cloud)

☒ Use Credit Card
 ☐ Use Receipt display (PhoneNumber)

☐ Use VerificationCode (ChargingStop)

☐ Visible FlatFee, HourPrice(Charging)
 ☐ Use PnC

PASSWORD: 1234

DSP\_COM: 5 (Enter numbers only)

RF\_COM: 1 (Enter numbers only)

**RF Reader**

☐ Payter(Local)
 ☐ DP-680
 ☐ Apollo
 ☒ NONE

Max Output Power (kW): 240 (Enter numbers only)

Max Output Current (A): 375 (Enter numbers only)

Payter Serial Number: P68

CPO Name:

Price Configuration

**Max Channel**

☐ 1ch
 ☒ 2ch

**Screen Size**

☒ 12, 1inch
 ☐ 24inch

**PowerMeter**

☒ Read (v2,26)
 ☐ Calc

**Vendor**

☒ JOAS
 ☐ EVSIS

Connector Type Select

**DSP Protocol**

☒ v1,x
 ☐ v2,x
 ☒ v3,x
 ☐ Dispenser

**OCPP v1.6 Setting**

ServerURL :

CPID :

Auth\_ID :

Auth\_PASS :

☒ Use OCPP
 ☒ Use SSL
 ☒ Use BasicAuth

Serial Num :

Model name :

- ① PASSWORD: Password required to enter the settings screen
- ② DSP\_COM: Charger Control Board - UI Communication Serial port number (Default: 5)
- ③ RF\_COM: Payment/RF Terminal Serial port number (Default: 1)
- ④ RF Reader: Set according to the RF Terminal in use (Payter Cloud: NONE)
- ⑤ Maximum Output Power (kW): Setting for the maximum output power (Default: 240)
- ⑥ Maximum output current (A): Setting for the maximum output current (Default: 375)
- ⑦ Authentication method
  - Use FreeVend: Using FreeVend Mode
  - Use Member: Using the membership card tagging authentication method.
  - Use Pin number: Using PinCode authentication Method (Only available when checking "Use Member")
  - Use Credit Card: Using Credit card mode.
  - Use VerificationCode (ChargingStop): Stop charging only after scanning or entering the PIN of the membership card.

- ⑧ Use FlatFee, HourPrice: Set whether to use FlatFee, HourPrice (When checking, HourPrice Configuration Available)
- ⑨ Use PnC: Using Plug and Charge
- ⑩ Use Payter (Cloud): Check when using the Payter Cloud method.
- ⑪ Max Channel: Number of charger ports (Default: 2ch)
- ⑫ Screen Size: PC Screen size (Default: 12.1inch)
- ⑬ PowerMeter (Default: Read MeterValue)
- ⑭ Connector Type Select : Select connector type of charger (Default: Air-Cooling / CCS)

[Electric vehicle charger setting screen]

Exit Show On-Screen Keyboard Save

☐ Use FreeVend
 ☐ Use FlatFee, HourPrice

☒ Use Member
 ☐ Use Payter (Cloud)

☒ Use Pin number (if checked, also check Use M
 ☐ Use Receipt display (PhoneNumber)

☐ Card
 ☐ Use PnC

ationCode (top)  
 Fee, Charging)

**Connector Type Select**

1ch
 ☒ Air-Cooling (Default)
 ☐ Water-Cooling

Type
 ☒ CCS
 ☐ CHAdeMO
 ☐ AC3
 ☐ NACS

2ch
 ☒ Air-Cooling (Default)
 ☐ Water-Cooling

Type
 ☒ CCS
 ☐ CHAdeMO
 ☐ AC3
 ☐ NACS

Close

Screen Size
 ☒ 12.1inch
 ☐ 24inch

PowerMeter
 ☒ Read (v2,26)
 ☐ Calc

Vendor
 ☒ JOAS
 ☐ EVSIS

Connector Type Select

☐ v2,x
 ☒ v3,x
 ☐ Dispenser

Auth\_ID : 
 Model name :

Auth\_PASS :

☒ Use OCPP
 ☒ Use SSL
 ☒ Use BasicAuth

### 3.2.2 Configuration – OCPP

**[Electric vehicle charger setting screen]**

Exit Show On-Screen Keyboard Save

☐ Use FreeVend
 ☐ Use FlatFee, HourPrice

☒ Use Member
 ☐ Use Payter (Cloud)

☒ Use Pin number (if checked, also check Use M)
 ☐ Use Receipt display (PhoneNumber)

☒ Use Credit Card
 ☐ Use VerificationCode (ChargingStop)

☐ Visible FlatFee, HourPrice(Charging)
 ☐ Use PnC

PASSWORD:

DSP\_COM:  (Enter numbers only)

RF\_COM:  (Enter numbers only)

**RF Reader**  
☐ Payter(Local)
 ☐ DP-680
 ☐ Apollo
 ☒ NONE

Max Output Power (kW):  (Enter numbers only)

Max Output Current (A):  (Enter numbers only)

Payter Serial Number:

CPO Name:

Price Configuration

**Max Channel**  
☐ 1ch
 ☒ 2ch

**Screen Size**  
☒ 12.1inch
 ☐ 24inch

**PowerMeter**  
☒ Read (v2,26)
 ☐ Calc

**Vendor**  
☒ JOAS
 ☐ EVSIS

Connector Type Select

**DSP Protocol**  
☐ v1,x
 ☐ v2,x
 ☒ v3,x
 ☐ Dispenser

**OCPP v1.6 Setting**

ServerURL :

CPID :

Auth\_ID :

Auth\_PASS :

Serial Num :

Model name :

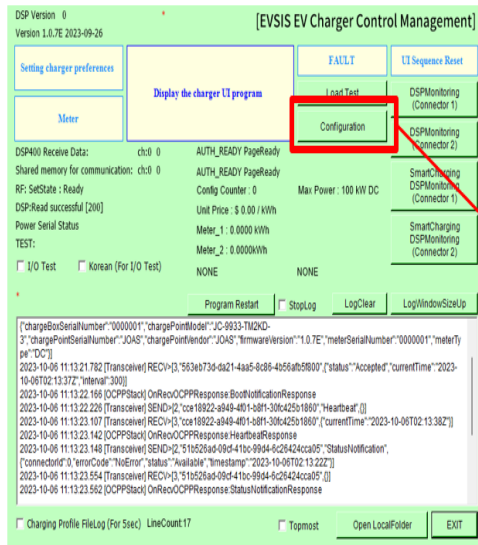
☒ Use OCPP
 ☒ Use SSL
 ☒ Use BasicAuth

- ① ServerURL: OCPP ServerURL
- ② CPID: ChargerPoint ID
- ③ Auth\_ID: Basic Authentication ID (Setting up when using Basic Authentication among OCPP server connection methods)
- ④ Auth\_PASS: Basic Authentication Password (Setting up when using Basic Authentication among OCPP server connection methods)
- ⑤ Serial Num: Serial number of the charger
- ⑥ Model name: Model name of the charger
- ⑦ Use OCPP: Click when using OCPP (default: CHECKED)
- ⑧ Use SSL: Use SSL when connecting to server.  
→ Ensure the option is checked if the server URL starts with "ws-", or unchecked if it starts with "wss"
- ⑨ Use BasicAuth: When connecting to the server, use Basic Authentication  
→ When checking, Auth\_ID and Auth\_PASS must be entered.

**\* After completing the settings, click the Save button and then click the Exit button.**

### 3.2.3 Configuration – QR Code URL Setting

- ① Click the Configuration button on the screen



| key                               | value                                                                                    |
|-----------------------------------|------------------------------------------------------------------------------------------|
| MeterValuesAlignedDataMaxLength   | 8                                                                                        |
| MeterValueSampleInterval          | 20                                                                                       |
| MeterValuesSampledData            | Current,Import, Current,Offered, Energy,Active,Import,Register, Power,Active,Import, Pc  |
| MeterValuesSampledDataMaxLength   | 8                                                                                        |
| NumberOfConnectors                | 2                                                                                        |
| QrCodeUrl                         | http://www.naver.com                                                                     |
| QrCodeUrl2                        | http://www.naver.com                                                                     |
| ReserveConnectorZeroSupported     | false                                                                                    |
| ResetRetries                      | 3                                                                                        |
| SendLocalListMaxLength            | 100                                                                                      |
| StopTransactionOnEVSideDisconnect | true                                                                                     |
| StopTransactionOnInvalidId        | true                                                                                     |
| StopTxnAlignedData                | Current,Import, Current,Offered, Energy,Active,Import,Register, Energy,Active,Import,Int |
| StopTxnAlignedDataMaxLength       | 8                                                                                        |
| StopTxnSampledData                | Current,Import, Current,Offered, Energy,Active,Import,Register, Power,Active,Import, Pc  |

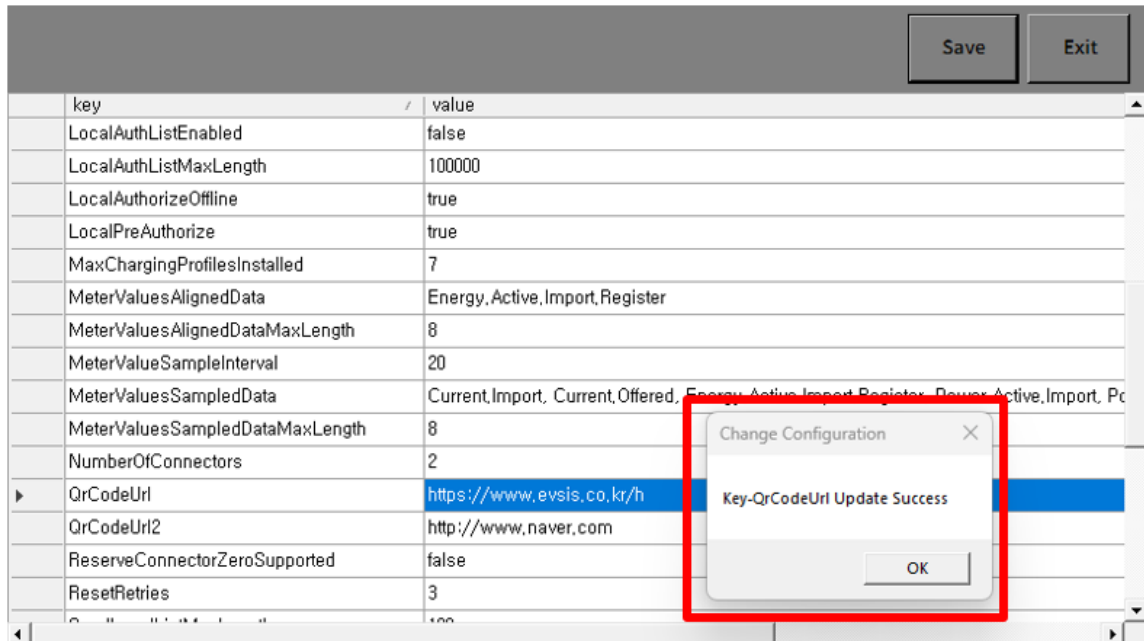
- ② Click QrCodeUrl from among the items under Key and change the address.

| key                               | value                                                                                   |
|-----------------------------------|-----------------------------------------------------------------------------------------|
| LocalPreAuthorize                 | true                                                                                    |
| MaxChargingProfilesInstalled      | 7                                                                                       |
| MeterValuesAlignedData            | Energy, Active, Import, Register                                                        |
| MeterValuesAlignedDataMaxLength   | 8                                                                                       |
| MeterValueSampleInterval          | 20                                                                                      |
| MeterValuesSampledData            | Current,Import, Current,Offered, Energy,Active,Import,Register, Power,Active,Import, Pc |
| MeterValuesSampledDataMaxLength   | 8                                                                                       |
| NumberOfConnectors                | 2                                                                                       |
| QrCodeUrl                         | https://www.evsis.co.kr/h                                                               |
| QrCodeUrl2                        | http://www.naver.com                                                                    |
| ReserveConnectorZeroSupported     | false                                                                                   |
| ResetRetries                      | 3                                                                                       |
| SendLocalListMaxLength            | 100                                                                                     |
| StopTransactionOnEVSideDisconnect | true                                                                                    |
| StopTransactionOnInvalidId        | true                                                                                    |

- QrCodeUrl: Left Port QR Code Url
- QrCodeUrl2: Right Port QR Code Url

※ Leave it blank if it doesn't use QR Code.

- ③ After entering the URL, click the Save button at the top right → MessageBox - Click OK button → Exit



### 3.3 SIM Card Installation



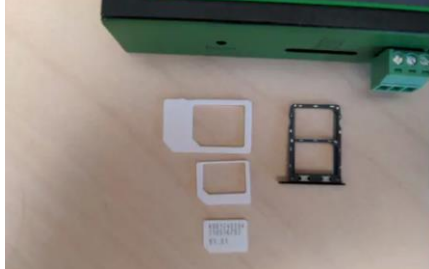
- ① If the modem is ordered with a data plan, an activation instruction sheet will be included with a SIM card. Insert the SIM card into the modem as shown above, ensure that the SIM card is in the "SIM 1" position. Follow the data plan activation instructions provided to activate the data plan.
- ② Connect the DIN rail to either the left or right side of the modem using the included bracket and screws.
- ③ Locate a suitable location to install the cell modem. If installing in a Powered Enclosure Kit (PEK), mount it on the DIN rail.
- ④ If using a PEK or other suitable enclosure, use the 2x short SMA extension cables to connect from the Cellular1 and Cellular2 connectors on the modem to create a bulkhead connector on the enclosure.
- ⑤ Connect the antennas to the bulkhead connectors on the enclosure or directly to the cell modem if not using an enclosure.
- ⑥ Connect the power cord to the cellular modem.
- ⑦ Connect the Gauge meter via Ethernet to a LAN port on the modem.

### 3.3.1 Instructions

- ① Use the SIM card remover tool to eject the SIM card tray.

| 1-1. SIM Card remover tool                                                        | 1-2. Insert the SIM card removal tool into the SIM card ejection port              |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |

- ② Remove the SIM card from the SIM card holder. The SIM card has 2 outer shells that must be removed prior to inserting it into the holder.

| 2-1. Full SIM card                                                                 | 2-2. SIM card with 2 outer shells removed                                           |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |

- ③ Insert the SIM card (with no outer shells) into the lower (SIM 1) position of the SIM card holder tray and insert it back into the IR302 modem.

| 3-1. SIM Card in holder before inserted                                              |
|--------------------------------------------------------------------------------------|
|  |



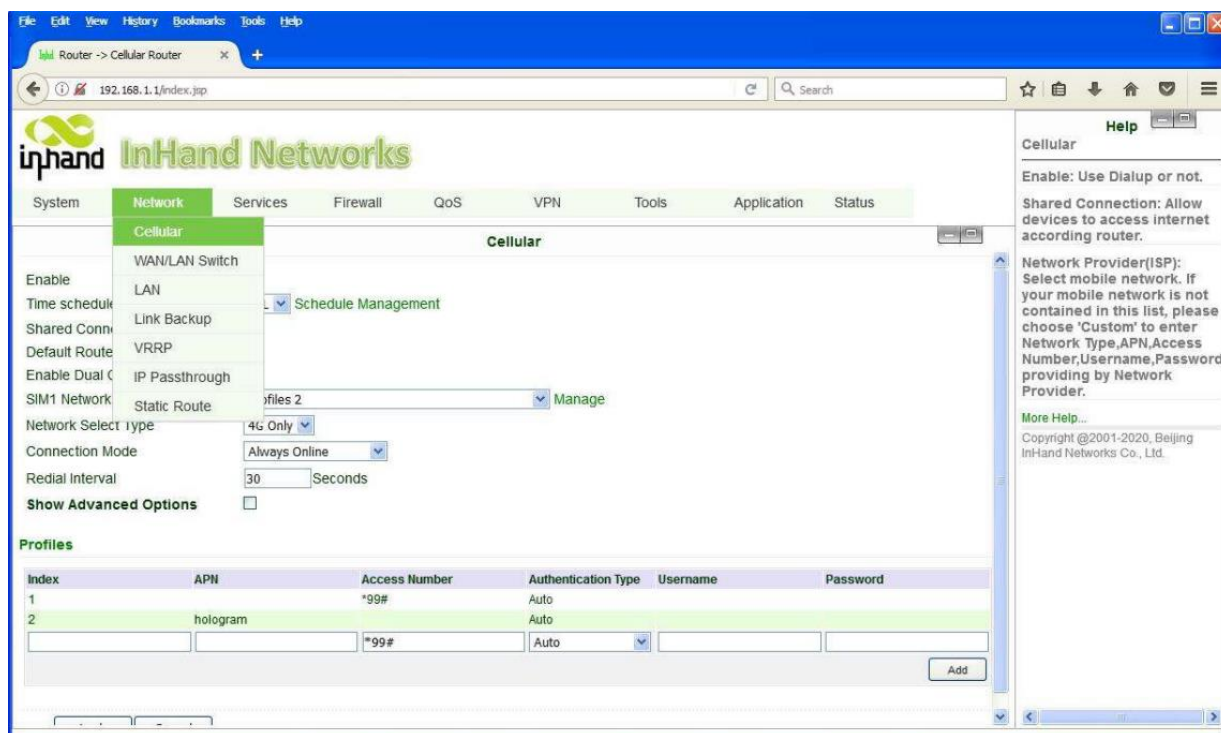
### 3.3.2 Router setting (InHand IR302)

- ① Insert the SIM card into slot 1 and attach 4G antennas to the Main and AUX connectors, and then power cycle the device. When replacing or inserting the SIM card, the device must be powered off to avoid data loss or damaging the equipment.
- ② Connect the LAN2 port with your PC.
- ③ 3. Fill in the IP of the router on the browser (you can find the IP on the router's label).

IP: 192.168.2.1

User name / password : adm / 123456

- ④ Go to 'network >>Cellular,' select 'profile 1' under the 'network provider (ISP).'



- ⑤ Fill in the SIM card information in the Profiles table down below: APN, User Name, Password, (User Name and Password are not mandatory). Then click 'ok' and 'Apply.'

**Cellular**

Enable: ☒   
Time schedule: ALL   
Shared Connection(NAT): ☒   
Default Route: ☒   
Enable Dual Cellular Interface: ☐   
SIM1 Network Provider: Profiles 2   
Network Select Type: 4G Only   
Connection Mode: Always Online   
Redial Interval: 30 Seconds   
Show Advanced Options: ☐

**Profiles**

| Index | APN      | Access Number | Authentication Type | Username | Password |
|-------|----------|---------------|---------------------|----------|----------|
| 1     |          | *99#          | Auto                |          |          |
| 2     | hologram | *99#          | Auto                |          |          |

Add

- Below are the most commonly used APN names

| Common Access Point Names (APN) by Carrier                                  |                   |                            |           |
|-----------------------------------------------------------------------------|-------------------|----------------------------|-----------|
| Network                                                                     | APN               | Username                   | Password  |
| AT&T                                                                        | broadband         |                            |           |
|                                                                             | psmtneorm         | (Business Plan, call AT&T) |           |
|                                                                             | i2gold            | (Business Plan, call AT&T) |           |
|                                                                             | isp.cingular      | isp@cingulargprs.com       | cingular1 |
|                                                                             | ispda.cingular    | ispda@cingulargprs.com     | cingular1 |
|                                                                             | wap.cingular      | wap@cingulargprs.com       | cingular1 |
| T-Mobile (3G)                                                               | epc.t-mobile.com  |                            |           |
|                                                                             | fast.t-mobile.com |                            |           |
|                                                                             | b2b.t-mobile.com  |                            |           |
| Verizon                                                                     | vzwinternet       |                            |           |
|                                                                             | inetgsm.vzw3g.com | 10dig#@vzw3g.com           | vzw       |
|                                                                             | vzmverison        |                            |           |
|                                                                             | NE01.VZWSTATIC    | (for region North East)    |           |
|                                                                             | WE01.VZWSTATIC    | (for region North west)    |           |
|                                                                             | SO01.VZWSTATIC    | (for region South)         |           |
|                                                                             | MW01.VZWSTATIC    | (for region Midwest)       |           |
|                                                                             | NW01.VZWSTATIC    | (for region North West)    |           |
| Some SIM cards require some specific APNs, please confirm with your Carrier |                   |                            |           |

|        |                        |          |     |
|--------|------------------------|----------|-----|
| Rogers | lteinternet.apn        |          |     |
|        | ltemobile.apn          |          |     |
|        | gnet.apn               |          |     |
|        | internet.apn           |          |     |
|        | internet.com           |          |     |
|        | vpn.com                |          |     |
|        |                        | wapuser1 | wap |
| Bell   | staticip.apn           |          |     |
|        | ltestaticip.apn        |          |     |
|        | internet.com           | wapuser1 | wap |
| Telus  | inet.bell.ca           |          |     |
|        | pda.bell.ca            |          |     |
|        | isp.telus.com          |          |     |
|        | sp.telus.com           |          |     |
|        | vpn.telus.net          |          |     |
|        | staticipwest.telus.com |          |     |
|        | staticipeast.telus.com |          |     |
|        | internet.com           | wapuser1 | wap |

**Some SIM cards require some specific APNs, please confirm with your Carrier**

- ⑥ The IP address of the router needs to be set. Select LAN under Network.

The screenshot shows the InHand Networks web interface. The 'Network' tab is selected, and the 'LAN' sub-tab is active. The 'Type' is set to 'LAN'. The 'IP Address' is set to '192.168.1.1' and the 'Netmask' is set to '255.255.255.0'. The 'MTU' is set to '1500'. The 'LAN Mode' is set to 'Auto Negotiation'. The 'Multi-IP Settings' section is empty. The 'Apply' button is visible at the bottom.

- ⑦ Select Static IP for type and enter the Static IP address that will become the router's IP address on the LAN.

The screenshot shows the InHand Networks web interface for configuring a Cellular Router. The 'LAN' tab is selected. The 'Type' is set to 'Static IP'. The 'MAC Address' is 00:18:05:18:0F:27. The 'IP Address' is 192.168.1.1 and the 'Netmask' is 255.255.255.0. The 'MTU' is set to 'Default' (1500) and the 'LAN Mode' is 'Auto Negotiation'. The 'Multi-IP Settings' section is empty. The 'Apply' and 'Cancel' buttons are at the bottom.

- ⑧ Select Port Mapping (aka 'Port Forwarding' in some routers) under Firewall (may be found in other menus in other routers).

The screenshot shows the InHand Networks web interface for configuring a Cellular Router. The 'Firewall' tab is selected, and the 'Port Mapping' option is chosen from the dropdown menu. The 'Port Mapping' table shows a single entry for port 8080. The 'Apply' and 'Cancel' buttons are at the bottom.

| Enable | Proto | Source    | Service | Internal Port | Log | External Interface(Optional) | External Address(Optional) | Description |
|--------|-------|-----------|---------|---------------|-----|------------------------------|----------------------------|-------------|
| Yes    | TCP   | 0.0.0.0/0 | 8080    | 8080          | No  |                              |                            |             |

- ⑨ Select TCP, leave 0.0.0.0/0 for source, enter 8080 for both source port and internal port, and enter the static IP address of Babel Buster or another local device that port 8080 should get forwarded to. Be sure to change the HTTP port from 80 to 8080 in Babel Buster. A port other than 8080 may be used, but port 80 may NOT be used as the router itself will be using port 80 for its web UI.

Router -> Cellular Router

192.168.1.1/index.jsp

**InHand Networks**

System Network Services Firewall QoS VPN Tools Application Status

**Port Mapping**

| Enable                              | Proto | Source    | Service Port | Internal Address | Internal Port | Log                      | External Interface(Optional) | External Address(Optional) | Description |
|-------------------------------------|-------|-----------|--------------|------------------|---------------|--------------------------|------------------------------|----------------------------|-------------|
| Yes                                 | TCP   | 0.0.0.0/0 | 8080         | 192.168.1.160    | 8080          | No                       |                              |                            |             |
| <input checked="" type="checkbox"/> | TCP   | 0.0.0.0/0 | 8080         |                  | 8080          | <input type="checkbox"/> |                              |                            |             |

Apply Cancel

**Help**

**Port Mapping**

Portmap(virtual server)

External Interface: Specify the interface which packet input from, support Wan and L2TP,PPTP,OpenVPN tunnels.

External Address: Set the destination IP address of input packet.

By default, External Interface and External Address are not specified, imply that match all packets inputted from all Wan interfaces

[More Help...](#)

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- ⑩ Check the network status, 'Status >> Network connection.'

### 3.3.3 Factory Reset

- ① Power on the modem and allow it at least 60 seconds to fully start running. Locate the Reset button next to the SIM card tray.



- ② Use a push-pin or paperclip to hold down the "Reset" button on the side of the modem for 10 seconds. The status LED will turn off and back on again. Release the reset button.
- ③ Push the reset button again for 2 seconds and release. The Status LED should alternate on and off.
- ④ The LEDs will all turn off, and the modem will restart with the normal start-up LED sequence.
- ⑤ Use the configuration steps below to reconfigure the modem for T-Mobile plans provided by eGauge Systems.

## 4. MAINTENANCE INSTRUCTIONS

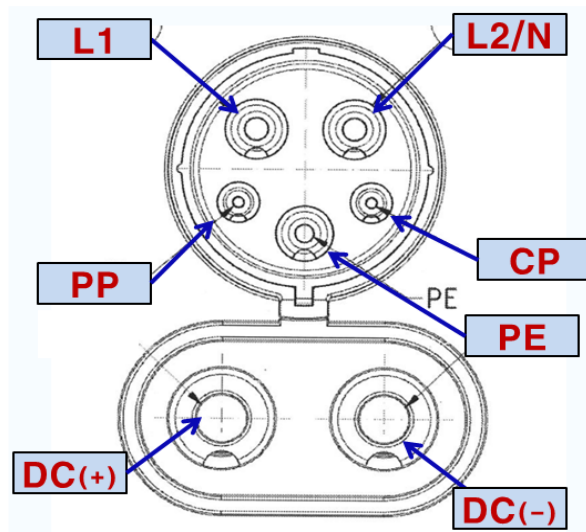
### 4.1 Part roles

| No | Item                  | Picture                                                                             | Description                     |
|----|-----------------------|-------------------------------------------------------------------------------------|---------------------------------|
| 1  | Circuit Breaker       |    | Power off                       |
| 2  | Earth leakage breaker |    | Blocking in case of leakage     |
| 3  | Watt- hour meter      |    | Calculation of charging wattage |
| 4  | Emergency stop switch |  | Emergency stop                  |
| 5  | PLC                   |  | Charger-vehicle communication   |
| 6  | RELAY                 |  | Switch ON/OFF (Low capacity)    |
| 7  | Door sensor           |  | Door status check               |
| 8  | AC FILTER             |  | Frequency improvment            |

| No | Item            | Picture                                                                               | Description                    |
|----|-----------------|---------------------------------------------------------------------------------------|--------------------------------|
| 9  | Power module    |    | Convert AC to DC               |
| 10 | Surge protector |    | Charger protection from surge  |
| 11 | MCB             |    | Power off                      |
| 12 | PCB             |  | PCB                            |
| 13 | SMPS            |  | DC Power supply (12[V], 5[V])  |
| 14 | PC              |  | Status display                 |
| 15 | MC              |  | Switch ON/OFF (Large capacity) |
| 16 | Shunt resistor  |  | Measure the amount of current  |



## 4.2 Description of CCS Connector

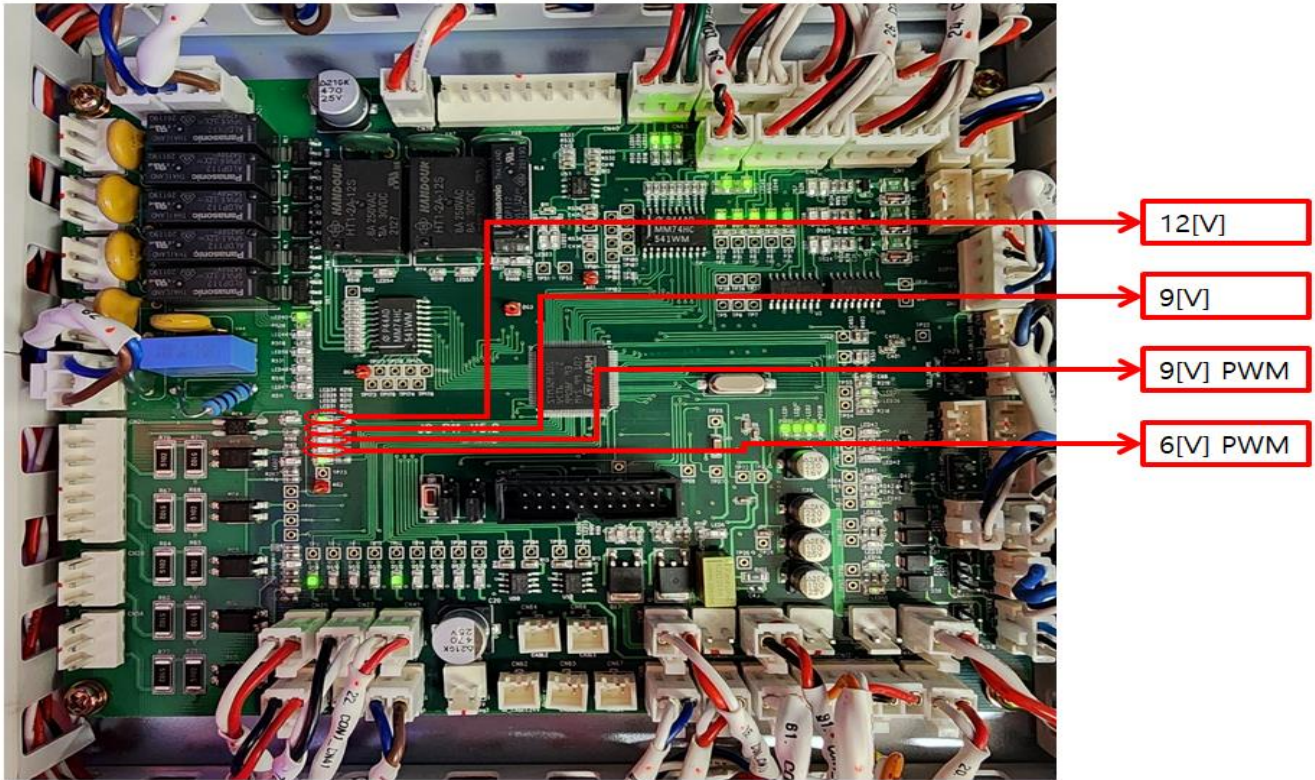


- ① L1 (AC Power)
  - AC 220V Power
- ② L2/N (AC Power)
  - AC 220V Connect with power line and neutral line
- ③ PE: Protective Earth
  - Charging equipment, vehicle chassis ground connection
- ④ CP: Control-pilot Pin
  - Control line for charging status
- ⑤ PP: Proximity-detection Pin
  - Connector detects the proximity
- ⑥ DC(+), DC(-)
  - DC current



### 4.3 Description of CP voltage sequence

#### PCB1 Board / (JC-P13-V9.0)



#### < CP Voltage Sequence >

→ Can be checked by LED of PCB1 or PCB2

- ① Basic status: Waiting for charging - 12[V]
- ② Connecting the charging cable to the vehicle - 9[V]
- ③ User authentication by tagging a card on the charger - 9[V] PWM
- ④ Charging progress - 6[V] PWM

12[V] → 9[V] → 9[V] PWM → 6[V] PWM → end of charge → 12[V]

## 4.4 Troubleshooting

| Code  | Sort       | Error message                    | Description                                                                                                                                                                                                                                          |
|-------|------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       |            |                                  | Action Plan                                                                                                                                                                                                                                          |
| 42300 | EVSE<br>CP | Emergency stop button pressed    | Emergency stop button pressed.                                                                                                                                                                                                                       |
|       |            |                                  | <ol style="list-style-type: none"> <li>1. Release the E-stop button.</li> <li>2. If the error code continues to display, check the assembly status of the E-stop button.</li> <li>3. Check the wiring connection of CN15 on the Main PCB.</li> </ol> |
| 42304 | EVSE<br>CP | Relay 1 Contact error or Welding | Output relay (GPR-M400-A) Welding or contact error<br>Splice error when an error occurs while waiting status.<br>Contact error if error occurs after charging starts.                                                                                |
|       |            |                                  | <ol style="list-style-type: none"> <li>1. Check the wiring connection of CON1_CN1 / CON2_CN1 on the Main PCB.</li> <li>2. Replace the Relay if necessary.<br/>(re-test required, report required)</li> </ol>                                         |
| 42305 | EVSE<br>CP | Relay 2 Contact error or Welding | Output relay (GPR-M400-A) Welding or contact error<br>Splice error when an error occurs while waiting status.<br>Contact error if error occurs after charging starts.                                                                                |
|       |            |                                  | <ol style="list-style-type: none"> <li>1. Check the wiring connection of CON1_CN2 / CON2_CN2 on the Main PCB.</li> <li>2. Replace the Relay if necessary.<br/>(re-test required, report required)</li> </ol>                                         |
| 42306 | EVSE<br>CP | Relay 3 Contact error or Welding | Output relay (GPR-M400-A) Welding or contact error.<br>Splice error when an error occurs while waiting status.<br>Contact error if error occurs after charging starts.                                                                               |
|       |            |                                  | <ol style="list-style-type: none"> <li>1. Check the wiring connection of CON1_CN3 on the Main PCB.</li> <li>2. Replace the Relay if necessary.<br/>(re-test required, report required)</li> </ol>                                                    |
| 42307 | EVSE<br>CP | Relay 4 Contact error or Welding | Output relay (GPR-M400-A) Welding or contact error.<br>Splice error when an error occurs while waiting status.<br>Contact error if error occurs after charging starts.                                                                               |

|       |            |                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------|------------|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       |            |                                                          | <ol style="list-style-type: none"> <li>1. Check the wiring connection of CON1_CN4 on the Main PCB.</li> <li>2. Replace the Relay if necessary.<br/>(re-test required, report required)</li> </ol>                                                                                                                                                                                                                                               |
| 42308 | EVSE<br>CP | Fuse P OPEN                                              | <p>Fuse (RS306-1-T5Z-500A1250V-D) broken.</p> <ol style="list-style-type: none"> <li>1. Check the wiring connection of CON1_CN25 / CON2_CN25 on the Main PCB.</li> <li>2. Replace the Fuse if necessary.</li> </ol>                                                                                                                                                                                                                             |
| 42310 | EVSE<br>CP | Internal overtemperature                                 | <p>Overheating has been detected inside the charger.</p> <ol style="list-style-type: none"> <li>1. Check the temperature of Power module.</li> <li>2. Replace the Power module if necessary.</li> </ol>                                                                                                                                                                                                                                         |
| 42311 | EVSE<br>CP | Module - Control Board<br>Communication Error            | <p>CAN Communication Error</p> <ol style="list-style-type: none"> <li>1. Check the communication status of the control board LED.</li> <li>2. If the LED on the control board is OFF, Check the wiring connection of CN48 on the Main PCB.</li> <li>3. Control board or module needs to be replaced if CAN communication is a problem.</li> </ol>                                                                                               |
| 42312 | EVSE<br>CP | Control Board 1 - Control Board 2<br>Communication Error | <p>RS485 Communication Error between Control PCB 1 - Control PCB 2 Board.</p> <ol style="list-style-type: none"> <li>1. Check the wiring connection of CON1_CN28 / CON2_CN28 on the Main PCB.</li> <li>2. Update the F/W of Main PCB.</li> <li>3. Check the LED status of the Main PCB.</li> <li>4. Replace the Control Board if necessary.</li> </ol>                                                                                          |
| 42313 | EVSE<br>CP | HMI 485 Communication Error                              | <p>RS485 Communication Error between Main PCB - HMI(PC)</p> <ol style="list-style-type: none"> <li>1. Check the power of PC.</li> <li>2. Check the wiring connection of COM5 on the PC, CON1_CN52 on the Control Board.</li> <li>3. Check the LED status of the Main PCB.</li> <li>4. Check the setting of UI communication port number.</li> <li>5. Check the F/W, UI version.</li> <li>6. Replace the PC or Main PCB if necessary.</li> </ol> |
| 42400 | EVSE<br>CP | SPD Error                                                | Excessive voltage from the power input unit causes SPD to be activated.                                                                                                                                                                                                                                                                                                                                                                         |

|       |            |                                                              |                                                                                                                                                                                                                                                                                                   |
|-------|------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       |            |                                                              | <ol style="list-style-type: none"> <li>1. Check the status bar on the front of the SPD.</li> <li>2. If the status bar is green, check the wiring connection of CON1_CN8 on the Control Board.</li> <li>3. Replace the SPD if necessary.</li> </ol>                                                |
| 42414 | EVSE<br>CP | CP Door Open                                                 | Front door opening or door sensor failure.                                                                                                                                                                                                                                                        |
|       |            |                                                              | <ol style="list-style-type: none"> <li>1. Check the status of the door.</li> <li>2. Check the door sensor if an error occurs when the charging door is closed.</li> <li>3. Check the wiring connection of CON1_CN26 on the Main PCB.</li> <li>4. Replace the door sensor if necessary.</li> </ol> |
| 42600 | EV         | (Combo-Vehicle Error) Bad charging coupler lock status       | The vehicle has not detected the Charge cord connector locked into the inlet or failure where connector cannot be unlocked from the charging inlet.                                                                                                                                               |
|       |            |                                                              | <ol style="list-style-type: none"> <li>1. It may occur if the cable binding is unstable.</li> <li>2. If an error comes from a particular vehicle, check the inlet of vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol>               |
| 42601 | EV         | (Combo-Vehicle Error) Charging current deviation Error       | Indication that vehicle has stopped the charging session after detecting that the charging station is not able to maintain the current request.                                                                                                                                                   |
|       |            |                                                              | Check the faulty module.                                                                                                                                                                                                                                                                          |
| 42602 | EV         | (Combo-Vehicle Error) Charging voltage range/deviation Error | Indication that vehicle has stopped the charging session after detecting that the RESS is either under or above normal operating voltage range.                                                                                                                                                   |
|       |            |                                                              | Check the faulty module.                                                                                                                                                                                                                                                                          |
| 42603 | EV         | (Combo-Vehicle Error) Charging system compatibility Error    | If the vehicle determines that the charging station is incompatible. Using this value is optional; as an alternative, the vehicle can use EVReady in DC_EVStatusType equal to "FALSE".                                                                                                            |

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|       |    |                                                           | <ol style="list-style-type: none"> <li>1. Determine whether the error persists with specific vehicles.</li> <li>2. Determine whether the error is recurring from the charger.</li> <li>3. Check the charger ID, timestamp, vehicle, and circumstances of the error.</li> <li>4. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |
| 42604 | EV | (Combo-Vehicle Error) Vehicle battery temperature problem | The vehicle battery is too hot or cold to start the charging session.                                                                                                                                                                                                                                                                                                     |
|       |    |                                                           | <ol style="list-style-type: none"> <li>1. Determine whether the error persists with specific vehicles.</li> <li>2. Determine whether the error is recurring from the charger.</li> <li>3. Check the charger ID, timestamp, vehicle, and circumstances of the error.</li> <li>4. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |
| 42605 | EV | (Combo-Vehicle Error) Check vehicle gear status           | Check the Position of gear, vehicle is not in "P" status.                                                                                                                                                                                                                                                                                                                 |
|       |    |                                                           | <ol style="list-style-type: none"> <li>1. Determine whether the error persists with specific vehicles.</li> <li>2. Determine whether the error is recurring from the charger.</li> <li>3. Check the charger ID, timestamp, vehicle, and circumstances of the error.</li> <li>4. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |
| 42606 | EV | (Combo-Vehicle Error) Vehicle Status/BMS Error            | Vehicle RESS Malfunction, Any non-recoverable fault or error condition of the Vehicle RESS.                                                                                                                                                                                                                                                                               |
|       |    |                                                           | <ol style="list-style-type: none"> <li>1. Determine whether the error persists with specific vehicles.</li> <li>2. Determine whether the error is recurring from the charger.</li> <li>3. Check the charger ID, timestamp, vehicle, and circumstances of the error.</li> <li>4. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |

|       |         |                                                          |                                                                                                                                                                                                                                                                                                                                                                           |
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| 42608 | EV      | (Combo Error) Output Leakage-current occur               | Leakage current detected on DC output line when charging.                                                                                                                                                                                                                                                                                                                 |
|       |         |                                                          | <ol style="list-style-type: none"> <li>1. Check for any leakage in the input power line (3-phase, 3-wire).</li> <li>2. Check the wiring connection of CON1_CN22 / CON2_CN23 on the Main PCB.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol>                                                                        |
| 42609 | EVSE CP | (Combo Error) Vehicle - Controlboard Communication Error | CAN Communication Error                                                                                                                                                                                                                                                                                                                                                   |
|       |         |                                                          | <ol style="list-style-type: none"> <li>1. Determine whether the error persists with specific vehicles.</li> <li>2. Determine whether the error is recurring from the charger.</li> <li>3. Check the charger ID, timestamp, vehicle, and circumstances of the error.</li> <li>4. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |
| 42610 | EVSE CP | (Combo Error) Connector over temperature                 | PT1000 Sensor Reading Exceeds 90°C.                                                                                                                                                                                                                                                                                                                                       |
|       |         |                                                          | <ol style="list-style-type: none"> <li>1. Measure the coupler temperature.</li> <li>2. Check the wiring connection of CN63 on the main PCB.</li> <li>3. Replace the coupler if necessary.</li> </ol>                                                                                                                                                                      |
| 42612 | EVSE CP | (Combo Error) Overvoltage                                | Overvoltage detection during charging.                                                                                                                                                                                                                                                                                                                                    |
|       |         |                                                          | <ol style="list-style-type: none"> <li>1. Check the charger ID, timestamp, vehicle, and circumstances of the error.</li> <li>2. Immediate on-site visit, inspection required.</li> </ol>                                                                                                                                                                                  |
| 42613 | EVSE CP | (Combo Error) Overcurrent                                | Overcurrent detection during charging.                                                                                                                                                                                                                                                                                                                                    |
|       |         |                                                          | <ol style="list-style-type: none"> <li>1. Check the charger ID, timestamp, vehicle, and circumstances of the error.</li> <li>2. Immediate on-site visit, inspection required.</li> </ol>                                                                                                                                                                                  |
| 42615 | EVSE CP | (Combo Error) Output Leakage-current occur               | Leakage current detected on DC output line when charging                                                                                                                                                                                                                                                                                                                  |
|       |         |                                                          | <ol style="list-style-type: none"> <li>1. Check the charger ID, timestamp, vehicle, and circumstances of the error.</li> <li>2. Immediate on-site visit, inspection required.</li> </ol>                                                                                                                                                                                  |

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| 42701 | PLC modem | PLC SequenceError           | PLC modem has received an unexpected request message from the EVCC.                                                                                                                                                                            |
|       |           |                             | <ol style="list-style-type: none"> <li>1. Error that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |
| 42702 | PLC modem | PLC ServiceIDInvalid        | FAILED_ServiceIDInvalid                                                                                                                                                                                                                        |
|       |           |                             | <ol style="list-style-type: none"> <li>1. Error that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |
| 42703 | PLC modem | PLC UnknownSession          | The SessionID in any request message except the SessionSetupReq message sent by the EVCC is not equal to the SessionID randomly selected by PLC modem.                                                                                         |
|       |           |                             | <ol style="list-style-type: none"> <li>1. Error that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |
| 42704 | PLC modem | PLC ServiceSelectionInvalid | FAILED_ServiceSelectionInvalid                                                                                                                                                                                                                 |
|       |           |                             | <ol style="list-style-type: none"> <li>1. Error that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |
| 42705 | PLC modem | PLC PaymentSelectionInvalid | The selectedPaymentOption in the paymentServiceSelectedReq message sent by the EVCC was not offered in the supportedPaymentOption list by the EVSE.                                                                                            |
|       |           |                             | <ol style="list-style-type: none"> <li>1. Error that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |

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| 42712 | PLC modem | PLC WrongChargeParameter      | The EVChargeParameter in the ChargeParameterDiscoveryReq sent by the EVCC is not valid. E.g. Wrong parameter set, the maximum limit value of the EV is smaller than the minimum limit value of the EVSE.                                       |
|       |           |                               | <ol style="list-style-type: none"> <li>1. Error that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required</li> </ol>  |
| 42713 | PLC modem | FAILED_TariffSelectionInvalid | The SATupleID in the PowerDeliveryReq message sent by the EVCC is invalid.                                                                                                                                                                     |
|       |           |                               | <ol style="list-style-type: none"> <li>1. Error that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required</li> </ol>  |
| 42714 | PLC modem | PLC TariffSelectionInvalid    | The ChargingProfile in the PowerDeliveryReq message sent by the EVCC violates the power limitations provided in the ChargingSchedule presented by PLC modem.                                                                                   |
|       |           |                               | <ol style="list-style-type: none"> <li>1. Error that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |
| 42801 | PLC modem | PLC NoChargeServiceSelected   | The selectedService list in the PaymentServiceSelectionReq message sent by the EVCC does not contain the mandatory "EVCharging" service.                                                                                                       |
|       |           |                               | <ol style="list-style-type: none"> <li>1. Error that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |



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| 42802 | PLC modem | PLC WrongEnergyTransferMode      | The selectedEnergyTransferMode in the ChargeParameterDiscoveryReq message sent by the EVCC is not valid. E.g. Inconsistent with the supportedEnergyTransferMode list sent by PLC modem.                                                                                                                            |
|       |           |                                  | <ol style="list-style-type: none"> <li>1. Error that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol>                                                                     |
| 42806 | PLC modem | PLC TIMEOUT_CommunicationSetup   | Error that may occur when a non-PnC supported vehicle selects PnC mode.                                                                                                                                                                                                                                            |
|       |           |                                  | <ol style="list-style-type: none"> <li>1. Check if the vehicle attempting to charge supports PnC.</li> <li>2. Error that may occur only once.</li> <li>3. Check if the error occurs with a specific vehicle.</li> <li>4. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |
| 42807 | PLC modem | PLC TIMEOUT_Sequence             | PLC modem did not receive any request message from the EVCC for 60s.                                                                                                                                                                                                                                               |
|       |           |                                  | <ol style="list-style-type: none"> <li>1. Errors that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol>                                                                    |
| 42808 | PLC modem | PLC TIMEOUT_NotificationMaxDelay | The EVCC failed to perform the appropriate action within the NotificationMaxDelay timeout in response to the EVSENotification flag sent by PLC modem. E.g. StopCharging, ReNegotiation.                                                                                                                            |
|       |           |                                  | <ol style="list-style-type: none"> <li>1. Errors that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol>                                                                    |
| 42809 | PLC modem | PLC WrongCPLevel                 | The measured CP voltage level from PLC modem did not match the defined voltage range of the current charging state. May also indicate E-Stop from the EV from "CableCheck" to "Charging".                                                                                                                          |

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|       |           |                      | <ol style="list-style-type: none"> <li>1. Errors that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol>  |
| 42811 | PLC modem | PLC HLCErr           | An error occurred during data interpretation. It may also indicate E-Stop from the EV from "High Level Comm." to "ChargeParameterDiscovery".                                                                                                     |
|       |           |                      | <ol style="list-style-type: none"> <li>1. Errors that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol>  |
| 42812 | PLC modem | PLC HeartbeatErr     | The EVSE Controller failed to update the evseHeartbeat value for 500ms.                                                                                                                                                                          |
|       |           |                      | Visually inspect the Main PCB and replace it if necessary.                                                                                                                                                                                       |
| 42813 | PLC modem | PLC EVSECANInit      | The EVSE Controller failed the CAN data verification during "Ready" state.                                                                                                                                                                       |
|       |           |                      | <ol style="list-style-type: none"> <li>1. Errors that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol>  |
| 42814 | PLC modem | FAILED_NoNegotiation | <p>The appprotocol list in the SupportedProtocolReq message sent from the EVCC is not valid.</p> <p>Another case exists; The EVSE has decided to force DIN SPEC 70121. but EVCC does not Support DIN SPEC 70121 and only supports ISO 15118.</p> |
|       |           |                      | <ol style="list-style-type: none"> <li>1. Errors that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol>  |

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| 42815 | PLC modem | TIMEOUT_WeldingDetection  | The EVCC failed to perform the welded contactor check within 20 seconds.                                                                                                                                                                                                                                                                                                                                    |
|       |           |                           | <ol style="list-style-type: none"> <li>1. Errors that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol>                                                                                                                                                             |
| 42900 | PLC modem | PLC Reset Error           | PLC modem operating abnormally. (Idle Wait -> Idle Error)                                                                                                                                                                                                                                                                                                                                                   |
|       |           |                           | <ol style="list-style-type: none"> <li>1. Reboot the PLC Modem.</li> <li>2. Replace the PLC Modem if necessary.</li> </ol>                                                                                                                                                                                                                                                                                  |
| 42901 | EV        | SLAC timeout Error        | When the expected data from the vehicle is not received. (Idle -> LLE timeout)                                                                                                                                                                                                                                                                                                                              |
|       |           |                           | <ol style="list-style-type: none"> <li>1. Check if a non-PnC supported vehicle attempted PnC charging.</li> <li>2. Verify that the cable is properly connected before starting the charge.</li> <li>3. Error that may occur only once.</li> <li>4. Check if the error occurs with a specific vehicle.</li> <li>5. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |
| 42902 | PLC modem | PLC CP Error              | When normal CP Voltage is not confirmed. (9V PWM response x)                                                                                                                                                                                                                                                                                                                                                |
|       |           |                           | Replace the PLC Modem if necessary.                                                                                                                                                                                                                                                                                                                                                                         |
| 42903 | EV        | Protocol No timeout Error | When the expected data from the vehicle is not received. (LLC -> HLC timeout / SupportedAppProtocolReq)                                                                                                                                                                                                                                                                                                     |
|       |           |                           | <ol style="list-style-type: none"> <li>1. Check if a non-PnC supported vehicle attempted PnC charging.</li> <li>2. Verify that the cable is properly connected before starting the charge.</li> <li>3. Error that may occur only once.</li> <li>4. Check if the error occurs with a specific vehicle.</li> <li>5. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |

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| 42904 | EV | Charging Type timeout Error    | When the expected data from the vehicle is not received. (DIN or ISO no response)                                                                                                                                                               |
|       |    |                                | <ol style="list-style-type: none"> <li>1. Errors that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |
| 42905 | EV | SessionSetup timeout Error     | When the expected data from the vehicle is not received. (supportedAppProtocol -> SessionSetup timeout)                                                                                                                                         |
|       |    |                                | <ol style="list-style-type: none"> <li>1. Errors that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |
| 42906 | EV | ServiceDiscovery timeout Error | When the expected data from the vehicle is not received. (SessionSetup -> ServiceDiscovery timeout)                                                                                                                                             |
|       |    |                                | <ol style="list-style-type: none"> <li>1. Errors that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |
| 42907 | EV | PaymentSelection timeout Error | When the expected data from the vehicle is not received. (ServiceDiscovery -> PaymentSelection timeout)                                                                                                                                         |
|       |    |                                | <ol style="list-style-type: none"> <li>1. Errors that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |
| 42908 | EV | Authorization timeout Error    | When the expected data from the vehicle is not received. (HLC -> Authorization timeout)                                                                                                                                                         |
|       |    |                                | <ol style="list-style-type: none"> <li>1. Errors that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |
| 42909 | EV | Discovery information Error    | When the expected data from the vehicle is not received. (Abnormal value identified in the charge parameter step)                                                                                                                               |

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|       |            |                          | <p>1. Errors that may occur only once.</p> <p>2. Check if the error occurs with a specific vehicle.</p> <p>3. If the error persists regardless of the vehicle, an on-site visit is required.</p> |
| 42910 | EV         | Discovery timeout Error  | When the expected data from the vehicle is not received. (Authorization -> Discovery timeout)                                                                                                    |
|       |            |                          | <p>1. Errors that may occur only once.</p> <p>2. Check if the error occurs with a specific vehicle.</p> <p>3. If the error persists regardless of the vehicle, an on-site visit is required.</p> |
| 42911 | EV         | CableCheck timeout Error | When the expected data from the vehicle is not received. (Discovery -> CableCheck timeout error)                                                                                                 |
|       |            |                          | <p>1. Errors that may occur only once.</p> <p>2. Check if the error occurs with a specific vehicle.</p> <p>3. If the error persists regardless of the vehicle, an on-site visit is required.</p> |
| 42912 | EV         | Cable Check CP Error     | When the expected data from the vehicle is not received. (6V PWM no response)                                                                                                                    |
|       |            |                          | <p>1. Errors that may occur only once.</p> <p>2. Check if the error occurs with a specific vehicle.</p> <p>3. If the error persists regardless of the vehicle, an on-site visit is required.</p> |
| 42913 | EVSE<br>CP | Cable Check 1 Error      | Abnormal Voltage Detected During CableCheck Stage (Module voltage did not increase)                                                                                                              |
|       |            |                          | Check the faulty module.                                                                                                                                                                         |
| 42914 | EVSE<br>CP | Cable Check 2 Error      | Abnormal Voltage Detected During CableCheck Stage (Module voltage did not discharge)                                                                                                             |
|       |            |                          | Check the faulty module.                                                                                                                                                                         |
| 42915 | EV         | PreCharge timeout Error  | When the expected data from the vehicle is not received. (CableCheck -> PreCharge/Charging timeout error)                                                                                        |
|       |            |                          | <p>1. Errors that may occur only once.</p> <p>2. Check if the error occurs with a specific vehicle.</p> <p>3. If the error persists regardless of the vehicle, an on-site visit is required.</p> |

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| 43001 | PLC<br>modem | FAULT_HPGPLinkDown | SECC detected the EVCC left HPGP logical network.                                                                                                                                                                                               |
|       |              |                    | <ol style="list-style-type: none"> <li>1. Errors that may occur only once.</li> <li>2. Check if the error occurs with a specific vehicle.</li> <li>3. If the error persists regardless of the vehicle, an on-site visit is required.</li> </ol> |