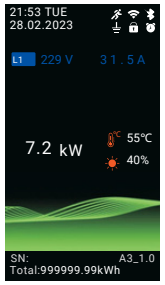
FALADAY ENLARGE

AC EV Charging Station

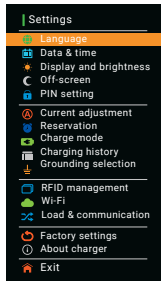
LCD DISPLAY

Charging Standby

During Charging



During Charging



Settings

- Date andTime,Charging time,Consumption(kWh)
- Charging voltage /current / power,Total electricity(kWh),Temperature
- Multi national language selection
- Current adjustable from 6Ato 32Ain steps of 1A
- Appointment for charging (based on week and time)
- Screen automatically turns off/on (based on human movement)
- Automatic adjustment of screen brightness (based on ambient brightness)
- APPremote control (Bluetooth and WIFI)
- Charging mode (RFID/APP/Password/Plug and Play)
- Charging history (up to 30 records)
- Load control, adjustable phase number and current (ModBusTCP)

Model: FALADAY ENLARGE	
Input/Output voltage	AC 230V
Input frequency	50/60Hz
Max.output power	1-Phase up to 7.36kW(@230V 32A)
Max.output current	32Afor 1-Phase IEC
Standard	61851 ; GB/T18487
Certificate	CE, RoHS

Protection	
Over voltage protection	Yes
Under voltage protection	Yes
Over load protection	Yes
Short circuit protection	Yes
Leakage protection	Yes
Over-temp protection	Yes
Lightning protection	Yes

Function andAccessory	
LED indicators	Yes
LCD screen	3.0-inch
RCD	Type B(AC 30mA+DC 6mA)
Current adjustment	Yes
WIFI/Bluetooth	Yes (WIFI 2.4GHz)
Emergency stop button	Yes
Relay adhesion detection	Yes
RFID manageable	Yes

Working environment	
Protection degree	IP65
Operation temperature	-30℃～60℃
Relative humidity	≤95%RH
Operating elevation limit	≤2000m
Cooling	Natural air cooling
Standby power consumption	<5W

Mechanical parameters	
Charging cable	5m
Control box	(Standard configuration)
Weight	HxWxD=180mm*180mm*70mm
Colour	≤6kg Black/White
Material	PC(Flame retardant, UV resistant)

AC EV Charging

Faladay Enlage
User Manual

Important:
Read this User Manual before you start using the device!

CONTENTS

SAFETY INFORMATION

Any other use will be deemed improper and may result in severe injury or damage to property.The manufacturer and dealers will not accept any liability for damage caused by improper use. What's more, the device warranty becomes void in such cases.

WARNING

Failure to observe these warnings can lead to electric shock or fire, or damage the charging device.

◆If damage occurs while charging, disconnect the charging device immediately from the power mains, if possible by switching off the mains fuse/circuit breaker. Do not touch any electrically live parts.

◆Never operate the device near ex-plosive vapours or gases, switching operationswithin the device can generate tiny electric.

◆Never touch the contact surfaces of the charging device. Do not insert any objects into the chargingequipment connector faces.

◆Do not attempt to modify or repair your charging device in any way yourself. Never open the housing, and do not make any changes to the adapters and/or extension cables.

◆Do not plug the device into power outlets through which water could ingress the device. Do not immersethe charging device in water.

◆Never disconnect the device connectors while the device is electrically live (i. e. while charging a vehicle),Asthis can lead to fouling of the connector plug contacts and damage the charging electronics. Always stop the charging process first at the controls inside the vehicle.

◆Protect the plug connectors and power sockets against humidity and moisture.Always keep the plugs and the vehicle end coupling dry. Unplugged connectors are not watertight.Always cover them with the protective caps when not in use.

◆Do not let children play with the packaging material or the charging device.

PRODUCT INFORMATION

Power andVehicleconnector

NO PLUG


NEMA14-50


CEE16/32(3-phase)


Type 1(SAEJ1772 NorthAmerican Standard)


Type 2 (IEC62196-2 European Standard)


Type GB (GB/T20234 China Standard)

Model number definition

EVE □□ □ □
① ② ③ ④

	Classification	Symbol	Meaning of the symbol
①	Basic type	EVE	E series EV charger
②	Rated power	07	1-phase 32A
		11	3-phase 16A
		12	1-phase 48A
		22	3-phase 32A
③	Charging modes	W	Mode 3
④	Charging interface	Blank	Type2(IEC62196-2)
		U	Type1(SAE J1772)
		G	GB(GB/T20234)

Specifications

Electrical Specifications

• Phase Number	1-phase		3-phase	
• Product Model	EVE07W	EVE12W	EVE11W	EVE22W
• Rated Voltage	AC110V/240V		AC400V	
• Input Frequency	50/60Hz			
• Max.output Current	32A	48A	16A	32A
• Max.output Power	7.7kW	11.5kW	11kW	22kW
• Cable Specification	3x6mm²	8AWG	5x2.5mm²	5x6mm²

Protection	
Over voltage protection	Yes
Under voltage protection	Yes
Over load protection	Yes
Short circuit protection	Yes
Leakage protection	Yes
Over-temp protection	Yes
Lightning protection	Yes

Function andAccessory	
LED indicators	Yes
LCD screen	3.0-inch
RCMU	Type B (AC 30mA+DC 6mA)
Current adjustment	Yes
RFID	Yes
WIFI/Bluetooth	Yes (WIFI 2.4GHz)

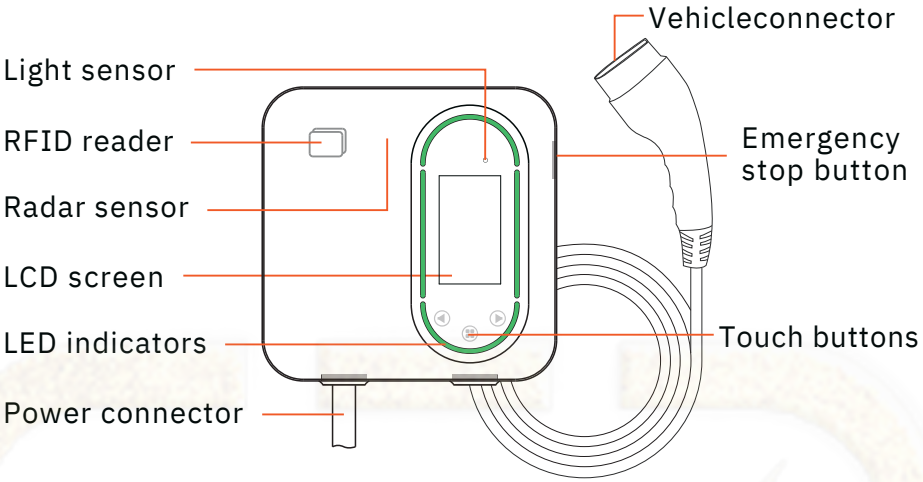
Working environment	
Protection degree	IP65
Operation temperature	-30℃～60℃
Relative humidity	≤95%RH
Operating elevation limit	≤2000m
Cooling	Natural air cooling
Standby power consumption	<5W

Mechanical parameters	
Charging cable	5m (Standard configuration)
Control box	HxWxD=180mm*180mm*70mm
Weight	≤6kg
Colour&Material	White/Black;PC

Standard&Certificate	
Standard	IEC 61851 ; GB/T18487
Certificate	CE,RoHS

OPERATION

Overview



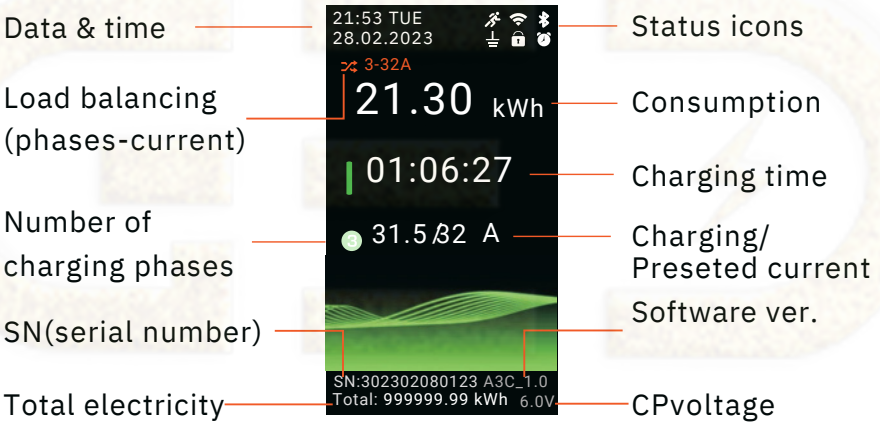
LED indicators

Status	Power On			Charging Standby	Setting Mode
Indicator Light	Light → Light → Meteor			Breathing	Light
Status	Reservation Charging	Waiting Car Signal	Charging Finished	Charging Mode	Fault Mode
Indicator Light	Meteor	Breathing	Light	Meteor	Flashing

Touch buttons

LCD screen

The LCD screen of the device can view status, safety warnings, charging records, and settings.



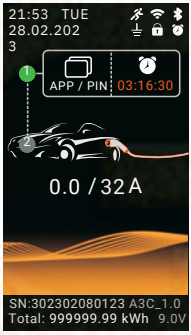
Icon	Connotation	Icon	Connotation
	Bluetooth enable		Human motion
	Bluetooth connected		Reservation enable
	Wi-Fi connected		PIN lock enable
	Wi-Fi exchange data		Grounding connected

Status display

Charging Standby

Touch button

- No reaction
- Enter [Charging history] page.
- Enter [Settings] page, if PIN is enabled, enter the [Unlock] page.



Reservation charging

Swipe RFID, useAPPor enter PIN to skip countdown for charging.

Touch button

- No reaction
- No reaction
- Enter [Unlock] page,unlock and start charging.

Waiting Car Signal

During the process of waiting for the vehicle signal, step 1 (green circle) remains on and step 2 flashes.

Touch button

- No reaction
- No reaction
- No reaction

Status display

Charging Mode-1

Touch button

- No reaction
- Enter [Charging Mode-2] page.
- No reaction

Charging Mode-2

Display voltage and current of each phase separately, charging power, temperature, and ambient brightness.

Touch button

- Enter [Charging Mode-1] page.
- No reaction
- No reaction

Charging Finished

Display consumption and total charging time.

Touch button

- No reaction
- No reaction
- No reaction

Fault Mode

Display fault information, fault codes, and handling methods.

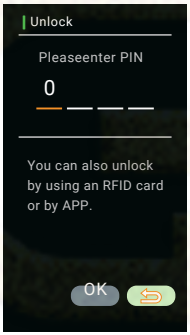
Touch button

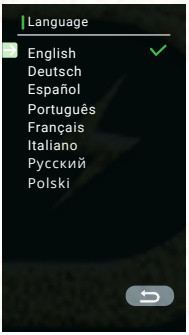
No reaction No reaction

Enter [Settings] page, if PIN is enabled,

enter the [Unlock] page.

Setting display



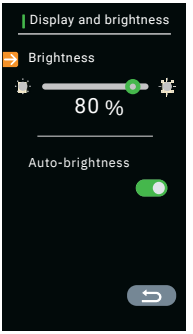


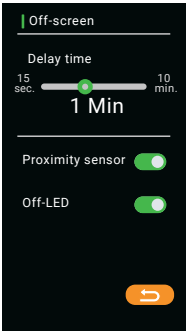
Button function description

Move the cursor up or left, it will be displayed in orange. If the setting is numerical parameter, the button function is reduced.

Move the cursor down or right, it will be displayed in orange. If thesetting is numerical parameter, the button function is increase.

Confirm the selection of the orange item. If the setting is on/off,the button function is on or off.





Data&time

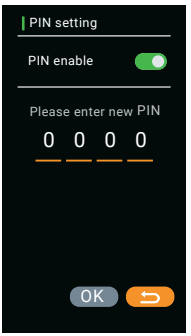
If the device is used for the first time or has not been used for more than 20 days, please set the date and time after turning it on. Incorrect time will affect the scheduled charging function.

Display and brightness

This suggestion is to use auto-brightness, which will automatically adjust the appropriate LCD screen brightness according to the ambient brightness.

Off-screen

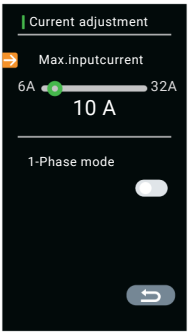
Turn off the screen after the set delay time without touching the button. If theproximity sensoris turned on, the LCD screen will light up when the human body is within 5 meters of the device,and the icon on the status display page will light up.

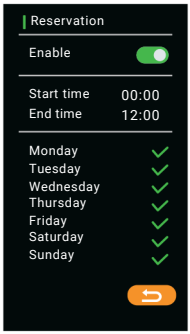


PIN setting

When the PIN is turned on, entering the menu requires entering the PIN, and the icon on the status display page will light up.

If you forget your PIN, touch the button, use RFID orAPPto unlock, enter the [PIN setting] page of the settings menu, close the PIN or reset the PIN.

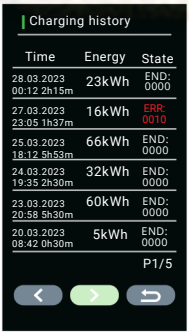




Current adjustment
Set appropriate charging current according to the capacity of the power grid.
If the 1-Phase mode is enabled, the three-phase device forcibly uses L1 live wire, L2 and L3 do not output during the charging process.

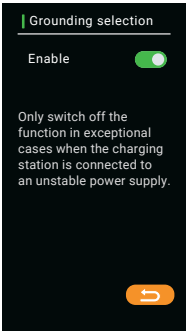
Reservation
Reservation can be achieved between the start and end times, and it needs to meet the week setting.After the reservation is enabled, and the icon on the status display page will light up.

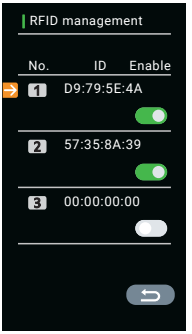
Charge mode
Plug & charge is enabled, start charging when the charging connector is connected to the vehicle, no other authorization required.



Charging history
The device can store up to 30 records, which can be viewed through the left and right buttons (turn orange and touch the button).

Note: After accumulating 30charging records, the old records will be overwritten one by one.

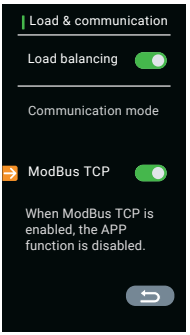




Grounding selection
The charger is installed in an ungrounded or poorly grounded power grid, and grounding can be turned off.

RFID management
RFID can be added or disabled, with maximum ofthree cards added and saved.
Add RFID: The cursor stays on the ID option, and after touching the button, the ID will turn orange. Remove the RFID that needs to be added and approach the device's card swiping area.

Wi-Fi
The device needs to set wireless name and password through theAPP, and can also set static IPaddress.



Load & communication
The device can be communicated through ModBus TCPin WIFI mode.
After enabling load balancing, control the current during the charging process through the enabled communication mode.

Note: After enabling load balancing, the app will not be able to connect to devices

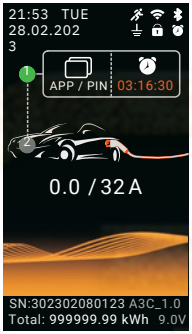
Start charging

1.Connect the power plug of the charger to a grounded outlet, wait for the device to enter charging standby.

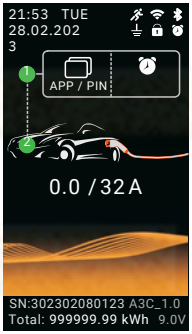
2.Couple the vehicle-end connector of the device to the vehicle's charging socket.

3. Enter the reservation page(If reservation is enabled). Swipe RFID, useAPPor enter PIN to skip countdown for charging.

4.Wait for the vehicle authorization signal, and then enter the charging mode.



Reservation charging



Waiting Car Signal

Charging Mode

Stop charging

1.Stop the charging process at the controls inside the vehicle, this releases the lock on vehicle's charging coupling.

2.First disconnect the connector coupled to the vehicle, then unplug the connector plug from the power socket or the charging station.

Installing theApp

1. Download and install the app on Google Play orApp Store.
2. Allow Bluetooth functionality on your smartphone or tablet, and enable**location** permission on the EV-Charger app.

GET IT ON Google play

EV-Charger

Available on the App Store

EV-Chargergo

EV-charger
Utilities

Registration

You must register before using the APP.

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

Please note the privacy policy for the processing of your personal data in the app.

1. Open the EV-charger app, select the language for the app in the top right-hand corner and click on **Register** (Fig. 6)
2. Enter your **email address** and click on **Get code**. You will receive an email with a **6-digit code**. Enter the code in the **Verification code** field.
3. Enter a secure password that you can save in a password manager or memorise.
4. Click on **Register**. Your user account is created and you are automatically logged into the app (Fig. 7).

Fig.6

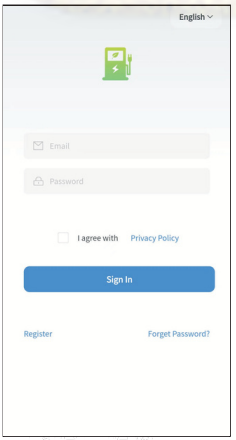
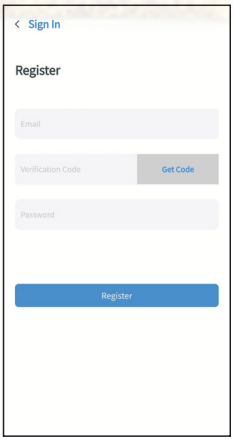


Fig.7



Connecting the charging station

The charging station is first connected via the Bluetooth connection. Once the connection has been established, the wallbox can be connected via WiFi.

1. Switch on the charging station and hold the smartphone or tablet within range of the charging station.
2. Start the app and tap on the **QR code symbol** or the **plus symbol** in the top right-hand corner (Fig. 8).
3. Now scan the QR code of the charging station, which you will find on the operating instructions and under the housing cover of the charging station.
4. After the QR code has been scanned, enter the **6-digit PUK** and click on **Confirm add** (Fig. 9).
5. The app now searches for the charging station and adds it automatically.

Note: Accept the authorisations for camera and location that the app requests. Without the permissions, the code cannot be scanned and the charging station cannot be found.

Fig.8

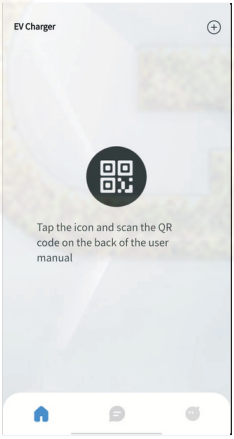


Fig.9

WiFi connection

Once the charging station has been connected via Bluetooth, you will find it in the app overview. To connect the charging station to an existing WiFi network, proceed as follows:

1. Select the charging station in the app on the overview page (Fig.10).
2. Tap on the **WiFi symbol.**
3. Enter the **name** and **password** of your WiFi network and click on **OK**. (Fig. 11).
4. The charging station will now attempt to connect to the data you have entered.
5. As soon as the charging station is connected to the WiFi, the **WiFi symbol** lights up on the display of the charging station. Check that the charging station is connected to the network by opening the **WiFi menu** of the charging station.
6. Go back to the overview in the app by tapping on the **arrow** at the **top left** and refresh the view by **swiping from top to bottom** in the app.
7. The charging station is connected to WiFi when **Online** is displayed in the overview page and the **WiFi symbol** on the status page is blue (Fig. 12).

Note: Leave the DHCP switch switched on to enable automatic IP address assignment.

Fig.10

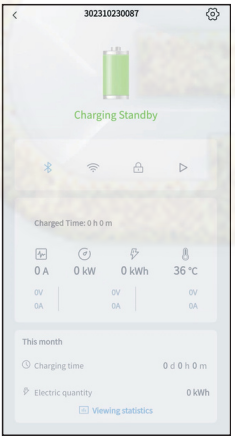


Fig.11

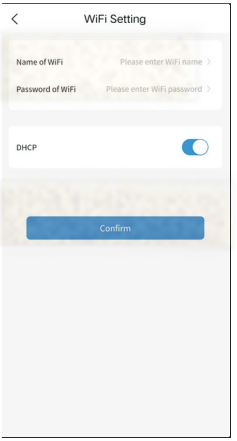


Fig.12

App Overview

Overview of charging stations

Add charging station

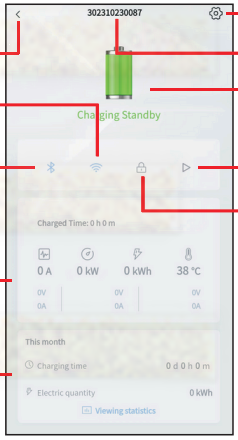
Added charging stations

Notifications

Home

Profile

Detail page of charging station



Settings

Back

Charging station name

WiFi state
WiFi settings

State

Bluetooth state
connect/disconnect

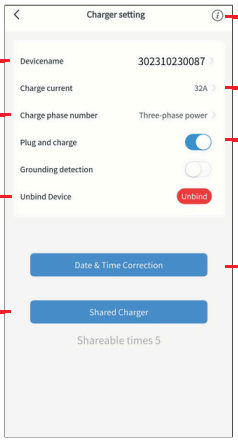
Start/pause charging

Unlock state
unlock PIN code

Details of charging transaction

Statistics

Charging station settings



Information of charging station

Charging station name

Maximum charging current

Number of phases

Charge without authentification

Remove charging station

Set date & time

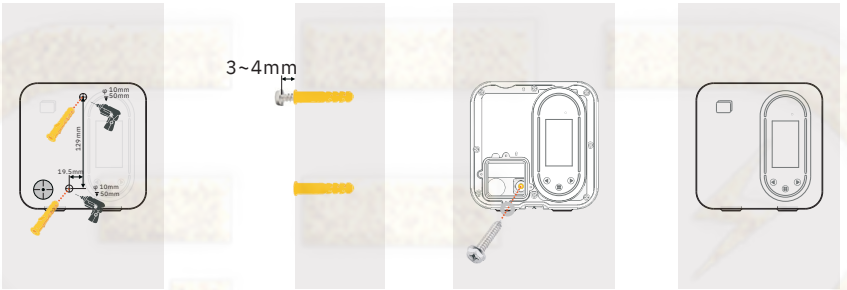
Share device with others

INSTALLATION

① Cardboard
② Self-tapping Screws
③ Silicone Pad
④ Expansion Plugs

Installation steps

Before installation, please ensure that the power is cut off.



Step1 **Step2** **Step3** **Step4**

Step 1: Please drill holes on the wall according to the size of the holes on the**cardboard**and punch in the**expansion plugs**.

Step 2: Install the upper**self-tapping screw**, and reserve about 3 to 4mm threads outside the wall.

Step 3: Remove the decorative panel and wiring cover of the device, and hang the device onto the upper screw.Align the plastic expansion position inside the wiring compartment, cover the lower**self-tapping screw**with a**silicone pad**, and tighten it.

Step 4: Check that the sealing strip of the wiring compartment is intact and close the wiring cover. Lock withscrews, install the decorative panel, and tighten thescrew.

FAULT HANDLING

The device is automatically protected in the event of the fault.The fault information and handing methods are as follows.

Fault information	Handling method
Both the LED and LCD screen are not on	◆Check whether the power supply and distribution are normal. ◆Check breaker is tripped, and open the breaker after troubleshooting.
LED on, and LCD screen not on	◆LCD connection cable is loose or LCD is damaged.
Waiting car signal for a long time	◆Battery ofcaris full,the car is in the reservationdelay charging mode,or thevehicleconnector is not properly connected. ◆Disconnect and reconnect thevehicleconnector.
Ground Fault Code: 0001	◆The device is not grounded, check the input power cable.
RCMU Fault Code: 0002	◆The RCMU is damaged and needs to be returned to the factory for repair.
Over voltage Code: 0004	◆Check whether the input cable is connected correctly. ◆Check whether the input voltage is abnormal.
Under voltage Code: 0008	◆Check whether the input cable is reliably connected. ◆Check whether the input voltage is abnormal.
Leakage Fault Code: 0010	◆Check whether thevehicleconnector and it's cable are damaged or wet. ◆Recover after pulling out the mains connector.

Fault information	Handling method
Over current Code: 0020	◆Check whether thevehicleconnector is correctly connected. ◆Check whether the on-board chargeris normal.
CPvoltage Code: 0040	◆Check thevehicleconnector and charging socket of EV. ◆Disconnect and reconnect the vehicleconnector.
Short circuit Code: 0080	◆Check whether thevehicleconnector and it's cable are damaged or wet.
Over temperature Code: 0100	◆Check power plugand socket are in close contact. ◆Check the cable diameter of the socket.
Emergency stop button pressed Code: 8000	◆The STOPbutton has been pressed. ◆If no fault occurs , Please press the button again to reset the charger.

MAINTENANCE

- ◆ Check whether the join point of the input terminal is in good contact and whether there is any abnormality.
- ◆ If plugs get wet, allow them to dry before using them.
- ◆ Always fit the device with the protective caps when not plugged in.

Electric and Hybrid Vehicles

Model: Faladay Enlarge Rev. 0.4