



INSTALLATION & MAINTENANCE

FOR SMART ION CHARGE ELECTRIC VEHICLE CHARGER

MODELS NUMBERS - EV03221000 & EV03221010

Please Read in Full Before Installing



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Table of Contents

	Page No.
IMPORTANT SAFETY INFORMATION.....	3
INSTRUCTIONS.....	3
CAUTIONS.....	3
PRODUCT OVERVIEW	4
ION EV CHARGER EXTERNAL COMPONENTS – SOCKETED VERSION	5
ION EV CHARGER INTERNAL COMPONENTS – SOCKETED VERSION.....	5
ION EV CHARGER EXTERNAL COMPONENTS – TETHERED VERSION	6
ION EV CHARGER INTERNAL COMPONENTS – TETHERED VERSION.....	6
INSTALLATION	7
CHOOSING A LOCATION	7
CHOOSING A HEIGHT TO FIX THE CHARGER TO THE WALL.....	7
STEP 1 – WALL BRACKET FIXING.....	7
STEP 2: FIXING EV CHARGER TO WALL BRACKET.....	8
STEP 3: MAINS CABLE CONNECTION	8
STEP 4: TETHERED CABLE CONNECTION	9
STEP 5: COVER FITTING	10
GATEWAY HUB USER INSTRUCTIONS	11
GATEWAY SETUP (Ethernet) (Important order of sequence)	11
GATEWAY SETUP (WIFI)	11
APP INSTALLATION	12
CHARGE POINT LED INDICATION	13
ADDITIONAL USER KEY FOB PAIRING.....	13
GATEWAY LED INDICATION	14
BOOST BUTTON FUNCTION.....	15
MAINTENANCE	16
TROUBLESHOOTING	16
WARRANTY.....	16
DISPOSAL.....	16

IMPORTANT SAFETY INFORMATION

Read all instructions before Installing and using this product. Store in a safe place for reference.

INSTRUCTIONS

Warning: Do not install or use the EV charger near flammable, explosive, harsh, or combustible materials, chemicals, or vapours.

Warning: Turn off the power at the circuit breaker before installing.

Warning: The EV charger must be grounded through a permanent wiring system.

Warning: Use the EV charger only within the specified operating parameters.

Warning: Never spray water or any other liquid directly at the EV charger, Charge plug or Hub.

Warning: Never submerge the EV charger, Charge plug or Hub in liquid.

Warning: Store the charge plug (EV03221010) in the dock to prevent unnecessary exposure to contamination or moisture.

Warning: Do not use the EV charger plug if it is defective, appears cracked, frayed, broken, or otherwise damaged.

Warning: The EV charger plug and Hub is not user serviceable. Do not attempt to disassemble, repair, tamper with, or modify. Contact C&D to report any damage or faults.

Warning: Do not touch the EV charger plug terminals with fingers or sharp metallic objects, such as wire, tools, or needles.

Warning: Do not insert fingers or foreign objects into any part of the EV charger socket.

Warning: Use of the EV charger may affect or impair the operation of any medical or implantable electronic devices, such as a cardiac pacemaker or an implantable cardioverter defibrillator. Check with your electronic device manufacturer concerning the effects that charging may have on such electronic devices before using the EV charger.

CAUTIONS

Caution: Do not use private power generators as a power source for charging.

Caution: Incorrect installation and testing of the EV charger could potentially damage the vehicle's battery, components, and/or the EV charger itself.

Caution: Do not operate the EV charger or Hub in temperatures outside its operating range -30°C to +50°C.

Caution: Do not use any adaptors or cable extension cords with this EV Charge unit.

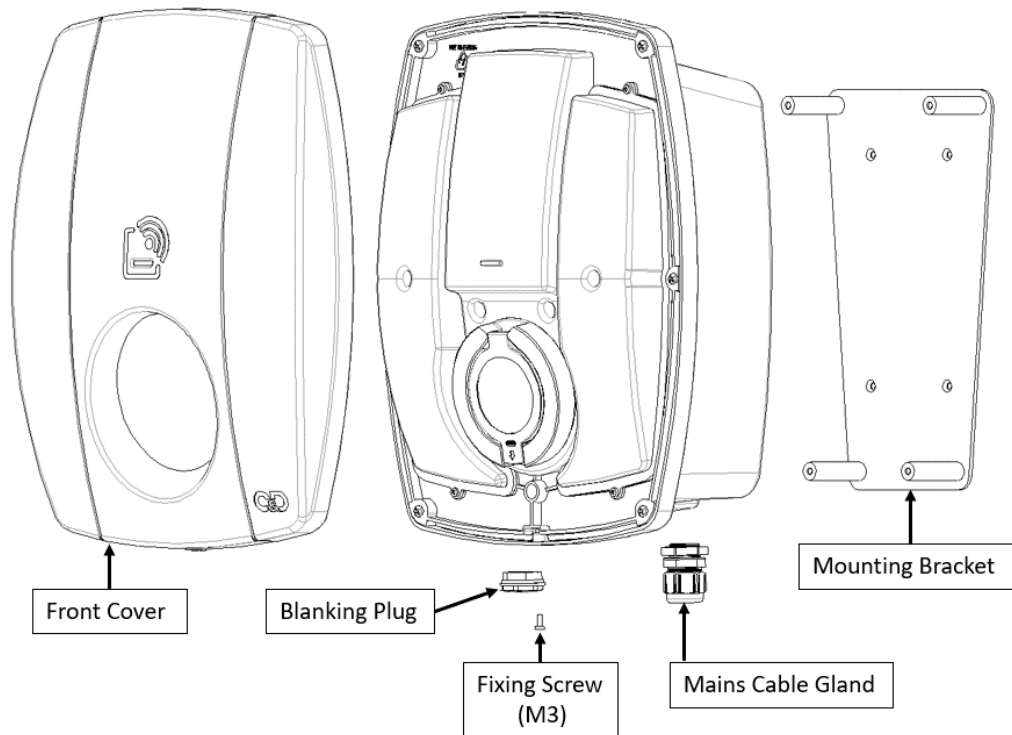
Note: The EV charger should be installed, commissioned, and maintained by or under the supervision of a competent electrician in accordance with current electrical engineering codes of practice, requirements for electrical installations (BS7671), statutory requirements and any specific instruction issued by the company.

PRODUCT OVERVIEW

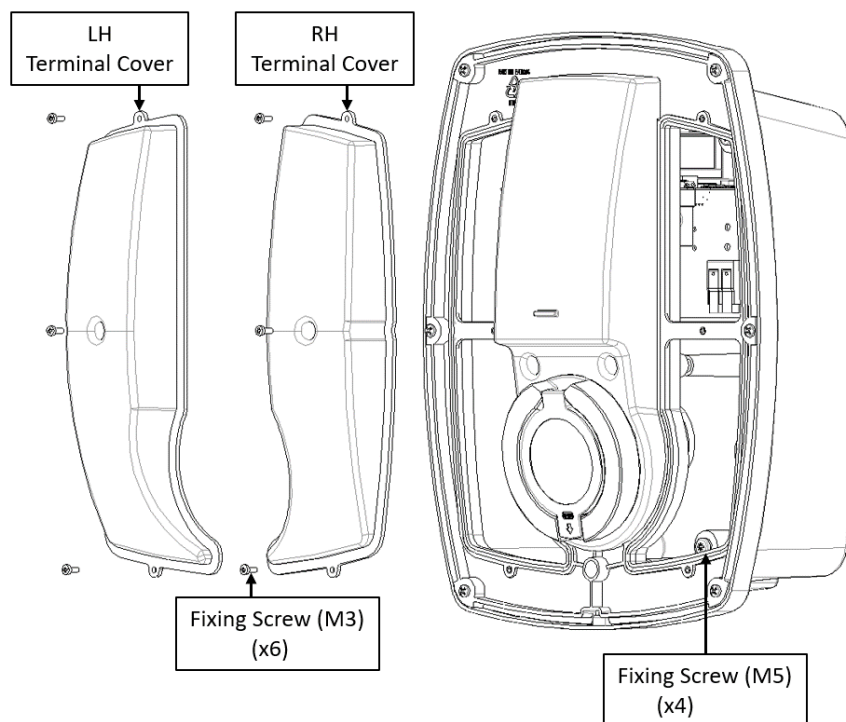
PRODUCT SPECIFICATION – EV CHARGER	
Power supply input	Nominal 230V AC single-phase
AC output current	32A
Mode 3 Fast Charge	7.4kW
Mains Cable Terminals	10mm ²
Car Cable Charger Connection	UK type 2
Frequency	50/60 Hz
Tethered Cable Length	5 metres
Product Size (mm)	351.5 x 280.5 x 140
Weight	3.1Kg (Socketed) - 5.2Kg (Tethered)
Operating Temperature (Indoor or outdoor)	-30°C to +50°C
Storage Temperature	-40°C to +85°C
Enclosure IP Rating	IP55
Ground Fault Circuit Interrupter	Built in 6mA DC residual current detection.
	Integrated PEN Loss detection. No earth rod required.

PRODUCT SPECIFICATION – GATEWAY HUB	
Power supply input	DC 5V/1A
Product Size (mm)	93 x 93 x 27
Weight	240g (inc. accessories)
Operating Temperature (Indoor or outdoor)	-30°C to +50°C
Storage Temperature	-40°C to +85°C

ION EV CHARGER EXTERNAL COMPONENTS – SOCKETED VERSION



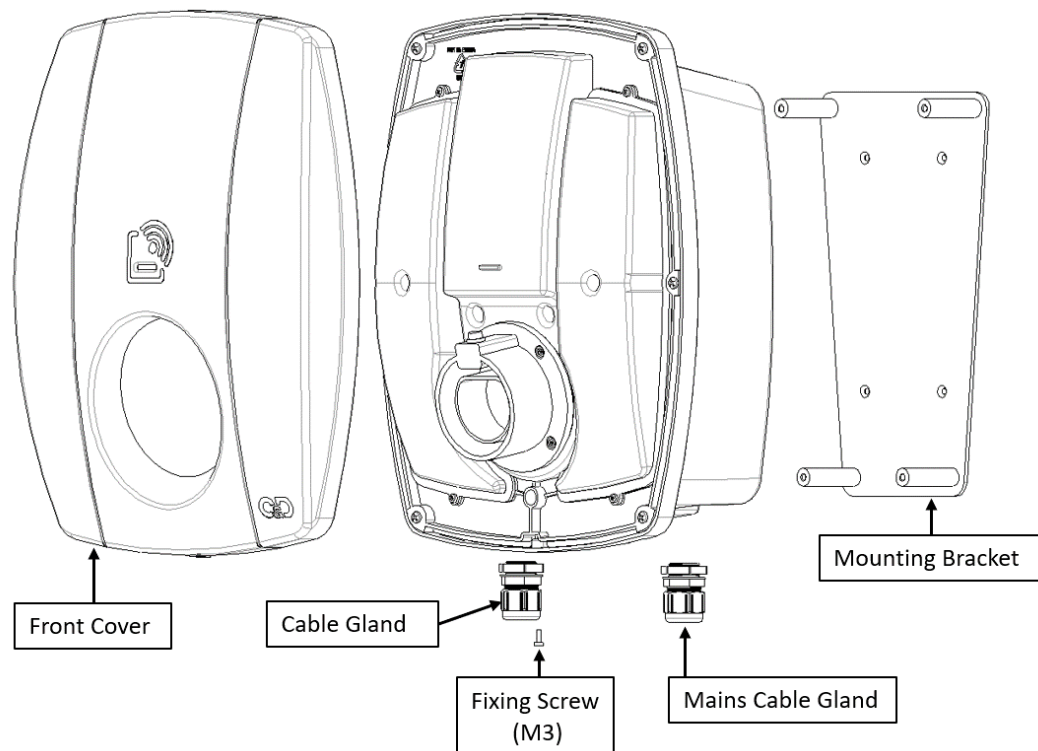
ION EV CHARGER INTERNAL COMPONENTS – SOCKETED VERSION



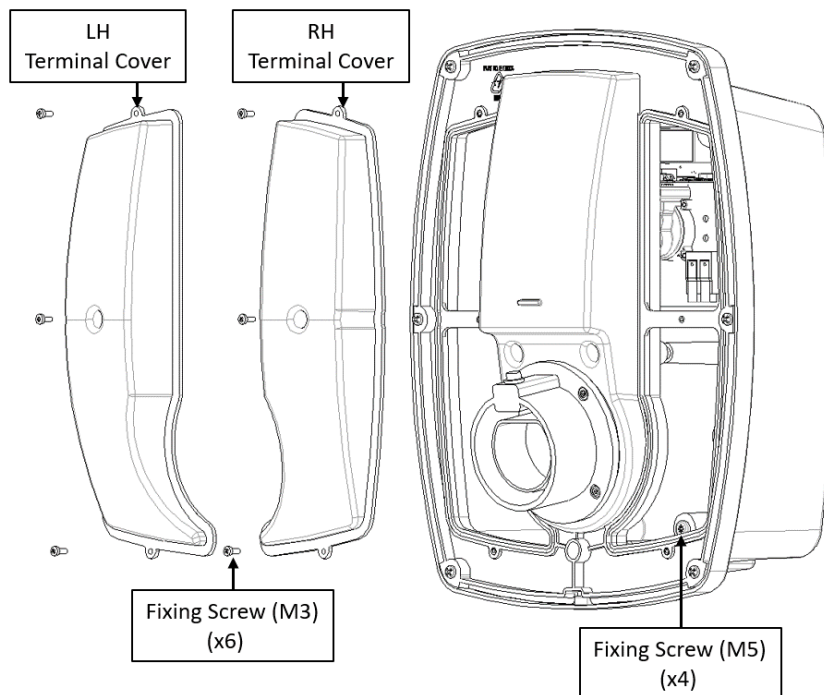
Supplied with:

- 1 x Gateway Hub with Accessories (Boxed)
- 1 x User Key Fob (Pre-paired)

ION EV CHARGER EXTERNAL COMPONENTS – TETHERED VERSION



ION EV CHARGER INTERNAL COMPONENTS – TETHERED VERSION



Supplied with:

- 1 x Gateway Hub with Accessories (Boxed)
- 1 x User Key Fob (Pre-paired)
- 1 x 5m Type 2 EV Cable & Plug

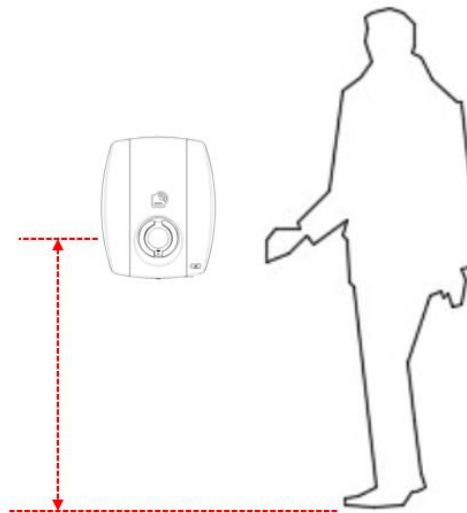
INSTALLATION

CHOOSING A LOCATION

Install the EV Charger in a location that allows the charging cable to reach the vehicle charge port without putting strain on the cable. Tethered cable length is 5m, therefore, a recommended distance would be no greater than 3m from the car charging point.

CHOOSING A HEIGHT TO FIX THE CHARGER TO THE WALL

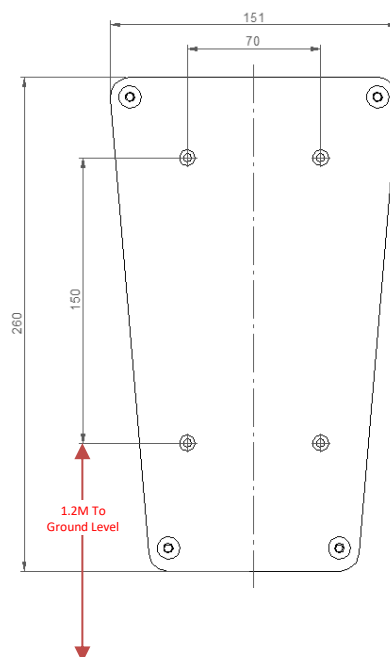
Recommend the EV charger is 1.2metre from ground to centre of cable socket.



STEP 1 – WALL BRACKET FIXING

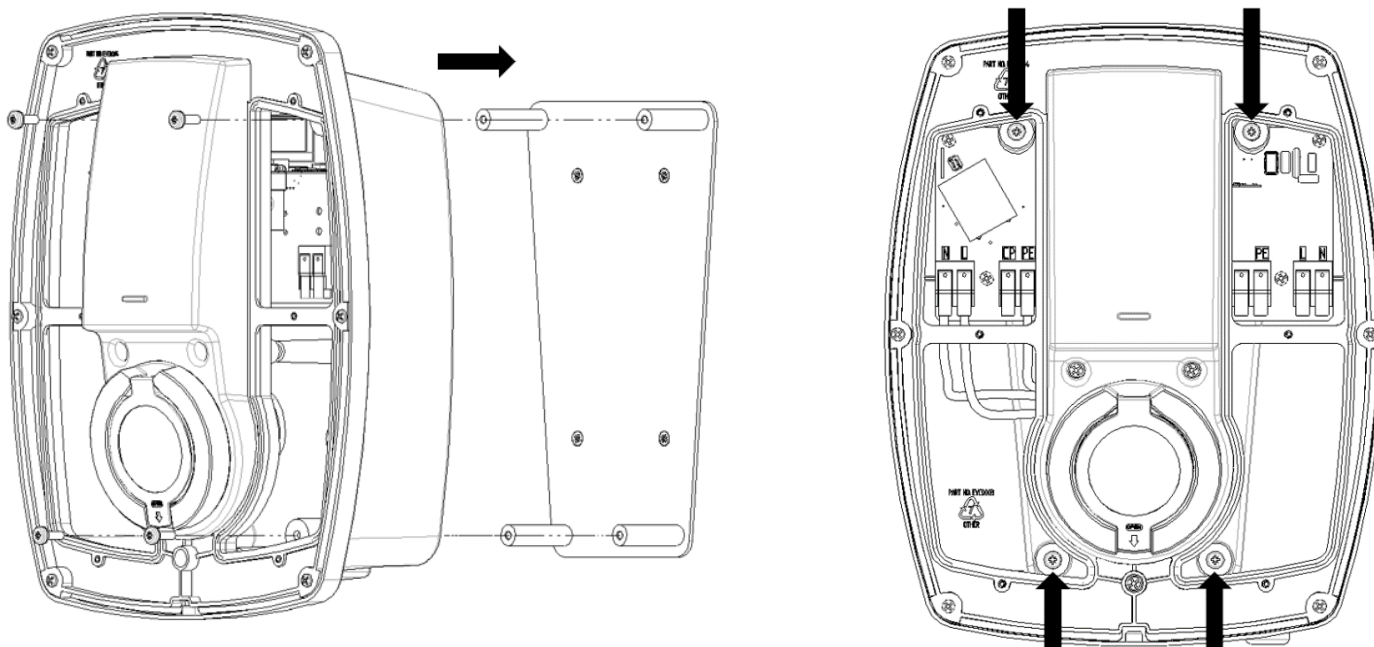
Once you have established the correct height, Using the wall bracket, mark 4 positions on the wall with a suitable tool.

Drill 4 holes and fix the bracket to the wall with suitable C/SK screws.



STEP 2: FIXING EV CHARGER TO WALL BRACKET

Fix EV charger to wall bracket with the 4 off fixing screws (M5 x 16) supplied. Access through LH & RH Terminal Cover apertures.



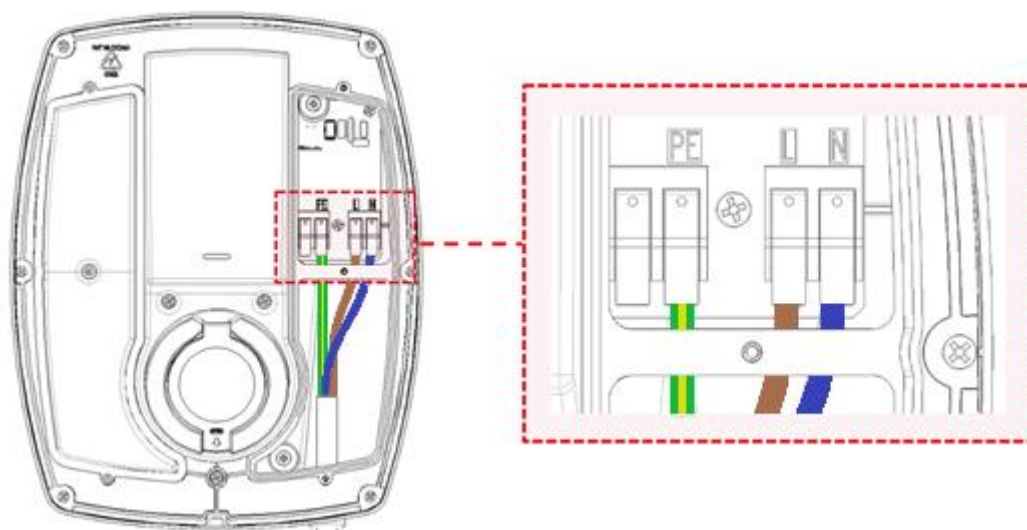
STEP 3: MAINS CABLE CONNECTION

The EV charger is supplied with a Mains M25 Nylon cable gland.

Note: For Steel wire armoured cable, a suitable gland will need to be used (Not Supplied).

Insert cable through RH entry cable gland and tighten glanding nut. Strip back cable and terminate cables into RH terminal blocks.

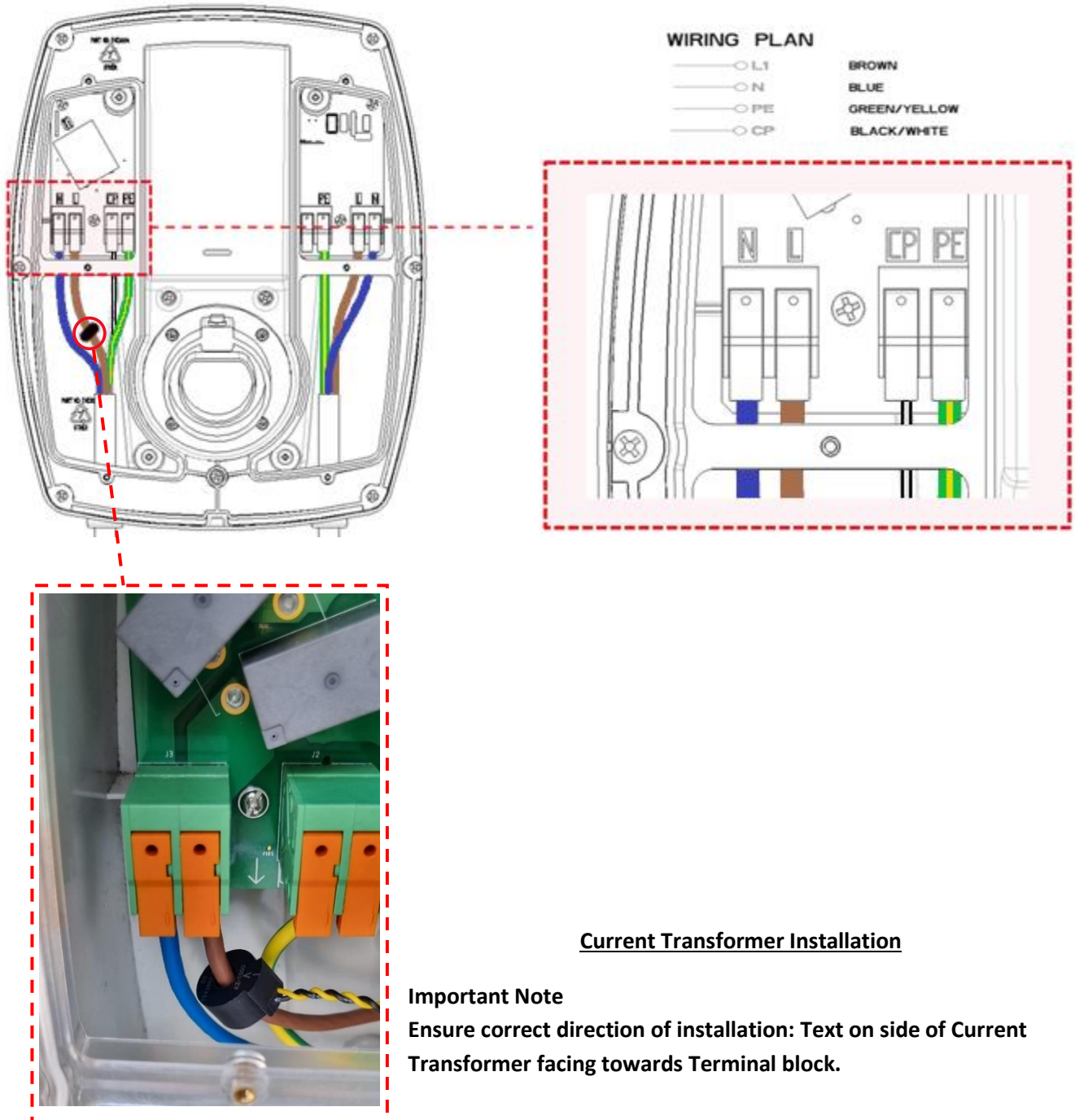
Note: Care to be taken when terminating cables. Ensure conductors are terminated into their corresponding terminals before energising.



STEP 4: TETHERED CABLE CONNECTION

If you have purchased the EV03221010 (Tethered EV Charger) the cable must be fitted as follows:

1. Mains cable connection, as per Step 3.
2. Insert cable through LH entry cable gland and tighten glanding nut.
3. Pass live wire only, through CT (Current Transformer) device, as shown.
4. Terminate cables into LH terminal blocks



Current Transformer Installation

Important Note

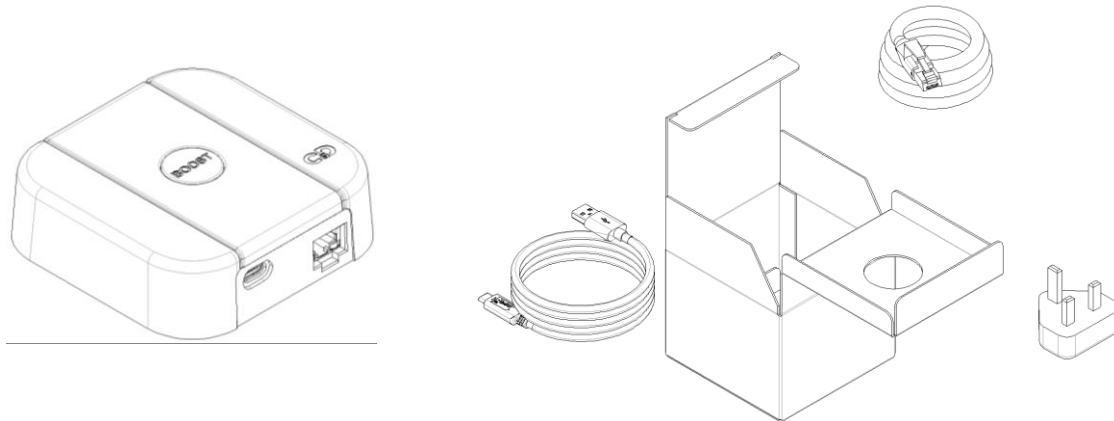
Ensure correct direction of installation: Text on side of Current Transformer facing towards Terminal block.

STEP 5: COVER FITTING

Illustration below for cover fitting



GATEWAY HUB USER INSTRUCTIONS



GATEWAY SETUP (Ethernet) (Important order of sequence)

- Connect the Ethernet cable to the Hub.
- Connect the power cable to the Hub, plug it into the wall socket and switch on. Hub will automatically power on and connect to the Charge point.
- Successful setup is confirmed by Network LED and Internet LED both illuminating GREEN
- If connection fails, see troubleshooting.

Note: If Ethernet is not available or WIFI is preferred, follow WIFI setup procedure below.

GATEWAY SETUP (WIFI)

- Turn on the gateway.
- Hold the reset button for 3 seconds. The Network LED will alternate between AMBER and PURPLE.
- Using a mobile phone/laptop/etc, search for a Wi-Fi network with the name "IONCharge Gateway" and password *IonConfig*
- This will automatically bring up a network login page, showing a notification prompting you to sign into the Wi-Fi.
 - o If you are not prompted to go this page, open your web browser on the same device and connect to the web address 192.168.1.1
- On this webpage, enter the Wi-Fi details you would like the charge point to connect to and press connect.
- The gateway will reboot, showing 3 WHITE LEDs
- The Internet and network LED on the gateway will go GREEN to indicate a successful connection.

Note: If there is an error, this can be repeated at any time

- You will now be able to create an account on the app (see App installation) and then scan the QR code on the back of the gateway. This can then be used to associate the user account with the ID of the system.

APP INSTALLATION

1. Scan the QR code to download the Ion Charge Smart app and create a free account. The app is available on App store and Google Play.



2. Follow instructions, in app, to complete installation.

Note: When prompted to Add Charger, tap to the button to activate the camera and scan the QR code located on the underside of the Gateway Hub.

CHARGE POINT LED INDICATION

Dim blue	Car not plugged in
Bright blue	Car plugged in, not requesting charge
Pulsing blue	Car plugged in, requesting charge
Bright green	Car charging (Including start from boost mode)
Bright red	Car error
Flashing red	Diode error
Fast pulsing red	RCM error
Slow pulsing red	Cable fault
Pulsing purple	PEN fault detected
Bright white	Pairing in Process
Bright amber	Boost mode initiated and vehicle connected, but not charging.
Dim amber	Boost mode initiated, but no vehicle connected.
White flash (Single)	Indicates recognition of an RFID fob
Flashing white (otherwise follows normal LED behaviour)	Indicates charger firmware updates in progress
Two red flashes (at any state change otherwise follows normal LED behaviour)	Indicates loss of connection to internet
Flashing red (Otherwise follows normal LED behaviour)	Indicates loss of connection to the Gateway Hub

ADDITIONAL USER KEY FOB PAIRING

Note: User Key Fob supplied comes pre-programmed.

Pairing New Fob: Additional fobs are available on request. Please contact Craig & Derricott for further information.

GATEWAY LED INDICATION

Internet LED (Rightmost)  - Indicates connection status

Red	Network has rejected connection following attempt to connect to internet router
Green	Network and internet connected
Amber	Searching for network / No connection found
Blue	Network detected, connecting to internet
Flashing other colour + Purple	Web page open for local hosting settings page
Flashing other colour + white	Downloading file (Firmware updating)

Local network/Charger feedback LED (Centre)  - Indicates state as read back from the charger

Green	Charging
Dim Blue	Car not connected (Charger waiting connection)
Blue	Car connected (not charging)
Red	Charger fault
Amber	Charger not connected to gateway
Flashing Amber	Boost mode initiated, but not charging

Power LED (Leftmost)  - Indicates if Gateway Hub is powered

No Light	Hub is not powered
Blue	Hub is Powered

1. Power LED
2. Network LED
3. Internet LED
4. Boost Button
5. USB C Power Port
6. Ethernet Port



OFFLINE BEHAVIOUR

Internet connection lost

- Internet LED on gateway will turn RED and then AMBER
- Charge point LED will flash RED when cable is inserted into charge point or vehicle requests a change of state, such as, when charging commences to indicate charge point is operating without a connection to the internet
- Charge point will be operable as follows:
 - The latest schedule that was set will be observed by the gateway
 - An immediate charging session can be started via either:
 - Gateway boost button
 - User RFID key fob.

Gateway connection lost

- The Charge Point will default to non-smart behaviour if connection can not be established with the gateway for a period of 5 minutes.
- Charge point LED will blink RED repeatedly at a rate of approximately 1 flash every 3 seconds to indicate it is operating without connection to a gateway.
- Charge point will now function in non-smart mode. This will default to enabled following which the charge point can be toggled between enabled / disabled state by tapping the User RFID Key Fob that was supplied with the Charge Point.

Note: If loss of either connection persists, see troubleshooting.

BOOST BUTTON FUNCTION

Boost mode

- Press and hold for <3 seconds to override any user set schedule and initiate a charge session.

MAINTENANCE

General maintenance

Should the product be installed in a space that is accessible to the general public, observe local and national requirements (e.g. BS 7671) in addition to all other safety information contained within this manual.

Cleaning

Should the product require cleaning for cosmetic purposes, use a damp cloth with an all-purpose household cleaner. Avoid the use of strong chemical cleaners and cleaners that contain oil or alcohol, as this will tarnish the plastic.

Do not use running water or high-pressure water jets.

TROUBLESHOOTING

Please visit C&D website for latest EV charger trouble shooting tips or alternatively contact Craig & Derricott on 01543 375541. Please provide model and serial number.

WARRANTY

The EV Charger is covered for 36 months from proof of purchase.

Please visit our website, www.craigandderricott.co.uk, to register your purchase.

The warranty does not cover any damage or malfunction directly, or indirectly caused by, or resulting from, misuse, negligence, accident, or improper installation.

DISPOSAL

This electronic equipment must not be disposed of in household waste. Observe local regulations for correct and environmentally friendly disposal.