



# CHARGEMATE 3P22

## INSTALLATION/USER MANUAL

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## Document Control

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## Safety notice

JET Charge's commitment to health and safety is demonstrated by following the "Journey to Zero Harm". We believe that zero harm is genuinely achievable, and it is the responsibility of the Company and its Sub Contractors to make that commitment to each other and to our valued clients.



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# PREFACE

## (i) Relevant readings

This document is to be read in conjunction with the applicable Australian Standard which will cover to works involved.

## (ii) Hardware suitability

This document currently covers only ChargeMate electric vehicle charging stations. The specifications outlined within this document is catered to Australian electrical standards and infrastructure and cannot be used elsewhere without first consulting the party's own country's electrical specifications.

## (iii) OH&S, Environment & Health

JET Charge's commitment to health and safety is demonstrated by following the "Journey to Zero Harm". We believe that zero harm is genuinely achievable, and it is the responsibility of the Company and its Network members to make that commitment to each other and to our valued clients.

JET Charge network is a national operation as such it's members must ensure the following in relation to OH&S.

- Compliance with legislative requirements and industry standards relevant to that State or Territory in which it is operating as an Electrical Contractor.
- Providing and maintaining safe systems of work and maintaining written procedures
- Providing relevant health and safety information, instruction, training and supervision to employees, subcontractors and visitors as is necessary to ensure their safety
- Consulting and communicating with employees and others on workplace health and safety issues
- Providing support and resources to employees and sub-contractors to help them meet their workplace health and safety duties
- Actively monitoring the safety performance, safety systems and high-risk activities

## (iv) OH&S Documentation

It is a legislated requirement that Safe Work Method Statements (SWMS) be completed prior to the commencement of any high-risk activity, or activity which presents a realistic risk of personal injury, equipment damage or reportable environmental impact

This includes but is not limited to:

- Working at heights
- Working in a confined space
- Working on or near water

Working around flammable / dangerous goods:

- Using dangerous / heavy plant or equipment
- Hot works
- Working around
- Working with Electricity
- Entering trenches with an excavated depth of 1.5 metres or greater.

JET Charge Pty Ltd recognises that all work tasks involving the use of ladders, power tools, electrical equipment, vehicles and manual handling present a risk to workers and bystanders. For this reason, JET Charge recommends that its network members adopt the use of Safe Work Method Statements as a standard safety process allowing risk identification and mitigation, for all work tasks which present the risk of injury to workers or bystanders.

JET Charge Network Members are expected to carry the following

OH&S/WH&S compliant Job Safety Analysis (JSA) / Safe Work Method Statement (SWMS) / Risk Assessment or appropriate Work Instruction for all tasks considered to be of a medium/moderate risk level or higher including for all 'High Risk Construction Work' at the work site;

Details of Risk Assessments for all tasks considered to be of a medium/moderate risk level or higher including for all 'High Risk Construction Work' at the work site,

## (v) SWMS Requirement

SWMS must also be dated, to allow annual review of content, as a minimum.

All SWMS must be relevant to the tasks being performed and the site at which the work is being undertaken. All tasks activities are to be identified and a risk assessment completed as part of the SWMS process. Control methods are to be identified and included in the SWMS. SWMS must be reviewed, understood and signed off by all persons undertaking the work tasks or risks change.

## (vi) Safety Reporting

All JET Charge network members are expected to identify hazards and report unsafe work practices that they encounter whilst undertaking installation works.

JET Charge Network Members are expected to

- Carry out safety reporting with their internal company procedures
- Identify and rectify any hazards where possible on the job, this information can be uploaded on to JET Charge's
- Envisage Installation Platform.
- JET Charge Network Members must always report any matters relating to OH&S when carrying out installation works.

## (vii) Environment

JET Charge PTY LTD recognises the importance of protecting the environment for the benefit of our customers, employees, shareholders and the community. Our commitment is to deliver installations in an environmentally responsible manner.

JET Charge network member expectation:

- complying with all relevant environmental legislation, regulations, codes of practice and contractual conditions
- preventing the pollution of the environment by activities under our control

- conducting business with suppliers and sub-contractors who also have a commitment to responsible environmental management
- continually improving our environmental management performance by regular reviews and setting realistic environmental objectives and targets.

## (viii) Alcohol and Other Drugs

All JET Charge network members are required to be fit for work while undertaking Installation works. This includes a zero tolerance for alcohol or illegal drugs.

Prescription drugs may affect the safe operation of vehicles, plant and equipment or the general conduct of workers. All workers that have been prescribed medication which may affect their ability to undertake work safely, must report this to their work supervisor and seek leave as appropriate. Medical confirmation may be requested by the supervisor to ensure worker safety is maintained.

## (ix) First Aid Kit Requirements

JET Charge expects that all Network members carry a Safe Work Australia "First Aid Kit on site that meets all relevant standards to the relevant State or Territory in which it operates.

## (x) PPE

Appropriate Personal protective equipment (PPE) must be worn at all times. PPE must be in a serviceable and hygienic condition. JET Charge reserve the right to inspect and direct for PPE to be replaced if there is any doubt regarding the suitability or serviceability of PPE.

PPE requirements are task – specific and must be appropriately addressed in accordance with the provisions detailed in the JET Charge Network Members SWMS for the work being undertaken and any relevant company policy.

As a minimum, it is a requirement that all JET Charge Network Members carrying out installation work must wear

- Steel capped boots footwear which complies with AS2210 at all times unless by doing so this presents a higher risk, as determined through formal risk assessment;
- Hi – Visibility shirts or vests – when in work areas or where mobile plant or vehicle interaction may occur;
- Hard hat head protection – when working under other workers, around plant and equipment or as detailed in the work SWMS;
- Adequate protection from UV Radiation, including sunscreen, long sleeves / work trousers and eye wear;
- Any other items of PPE as indicated on site signage or required by Codes of Practice for the work being conducted.

## (xi) Manual Handling

JET Charge Network members must assess manual handling tasks prior to lifting / moving objects and be aware of your own limits.

Generally, material and equipment of excessive weight (this must be determined by the individual) shall be lifted with the assistance of other workers, or by mechanical means. If in doubt do not lift.

Seek advice or undertake a planned lift with the assistance of others or lifting aids.

## (xii) Discrimination and Harassment

JET Charge Pty Ltd does not tolerate discrimination or harassment in any form and such incidents will be treated seriously.

If a JET Charge Network wishes to lodge a grievance related to their experience during an Installation, they are able to report this to JET Charge in a written format.

## (xiii) Housekeeping

It is a requirement that JET Charge Network Members work areas are always kept clean and tidy.

## (xiv) Hazards

Before commencing any works, perform a 'Take 5' safety checklist to eliminate or mitigate exposure to hazards and health risks. Installations of electrical equipment are prone to risk of electric shock, electrocution, explosions, fire and or arc flashes.

- Do not attempt to install or operate any hardware or internal components if it can be seen visually damaged
- Do not attempt to touch the internal contacts of the load management system or insert foreign objects into them.
- Do not use untested or install any untested equipment or third-party components unless authorised by JET Charge.
- Do not physically modify or alter the load management system in any way.
- Do not expose the internal components of the enclosure to debris or water.
- Do not attempt to troubleshoot internal components of the load management system without a qualified electrician or technician.

## (xv) Documentation

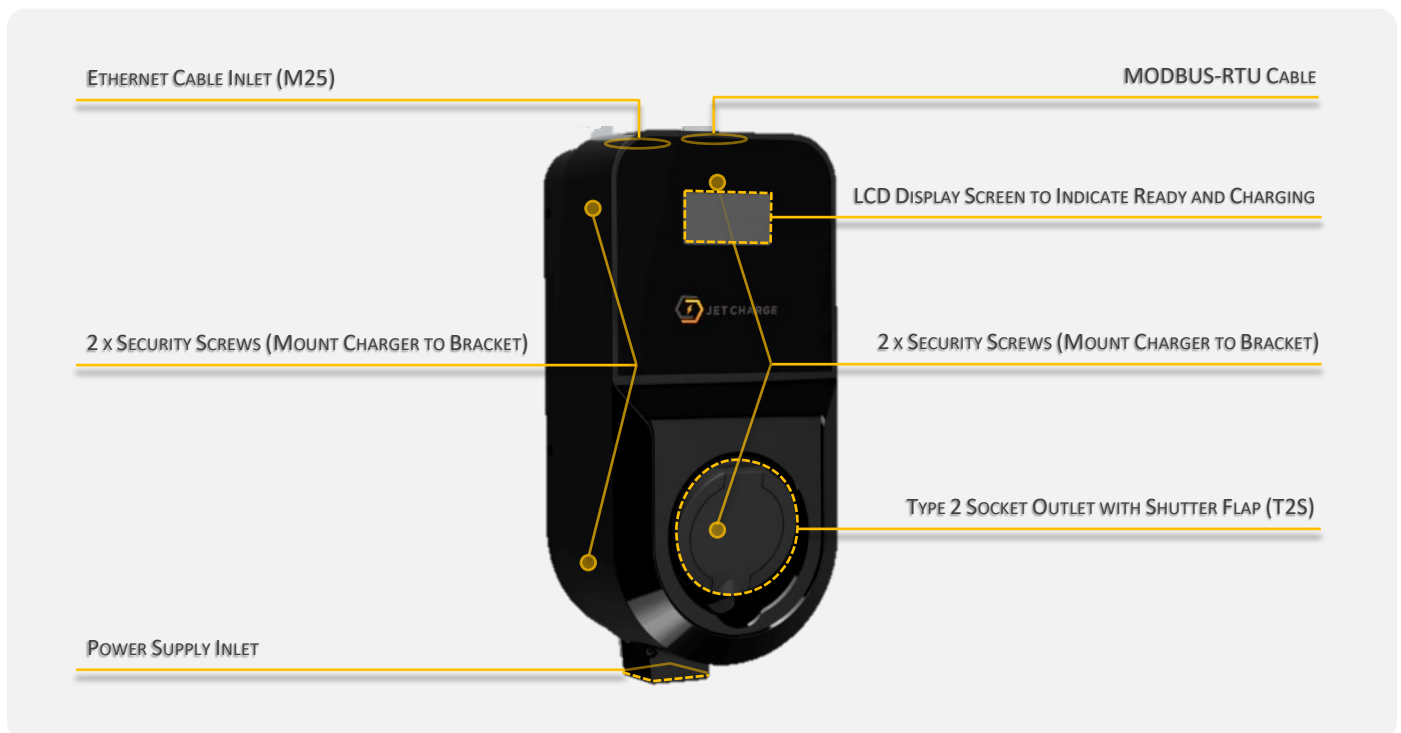
This installation guideline contains information specific and limited to the document's related to electrical infrastructure and electric vehicle charging installations. This guideline contains general descriptions, technical information and procedures of the related product and as such cannot be used determine a user's individual requirements or application. It is the responsibility of the user to verify the product's functionality and or reliability can be safely integrated into their requirements and or infrastructure. All implementations of this product will require the correct pre-installation checks including however not limited to:

- risk analysis;
- maximum demand calculations,
- site assessment
- testing of the product given the user's specifications.

JET Charge and its affiliations will not be held responsible for incorrect application or misuse of this product as a result of poor installation or incorrect user operations. JET Charge and its affiliations will not be held responsible for misinterpretations or incorrect use of the information contained within this manual.



# 1 CHARGER INFORMATION



ChargeMate is an EV Supply Equipment connected to an AC supply network with the following intended use:

- Equipment should be permanently connected, stationary surface mounted.
- Equipment is intended for both indoor and outdoor use, suitable for use in environments of 0C° to 50C° ambient temperature.
- Whenever the charger is installed in a location where there is exposure to direct sunlight (i.e. north facing), we recommend that a UV Protective sunshade be installed.
- Intended locations of use are restricted or non-restricted access areas.
- Equipment has Class 1 protection against electrical shock.

ChargeMate is approved and compatible for use with charging cables as listed below:

- Type2-to-Type2 Charging cable
- Type2-to-Type1 Charging cable

Any adaptors other than those listed above are not allowed to be used with ChargeMate.

Cord extension sets are not allowed to be used with ChargeMate.



## General Characteristics

### Charger Mode

Mode 3

### Weight

3,256 g

### Degree of Protection

IK08 Impact Rating  
IP54 Ingress Protection

### Socket Type

Type 2

### Power

7.2kW - 240V (1  $\Phi$ )  
22kW - 415V (3  $\Phi$ )

### Rated Current / Frequency

32A per  $\Phi$ , 50 / 60 Hz

## Interface Characteristics

### Communications

Ethernet / Wi-Fi / MODBUS-RTU

### Communication Protocol

OCPP 1.6J

### User Identification

CPO

### Charging Status

LCD Display Screen / CPO

### User Interface

CPO

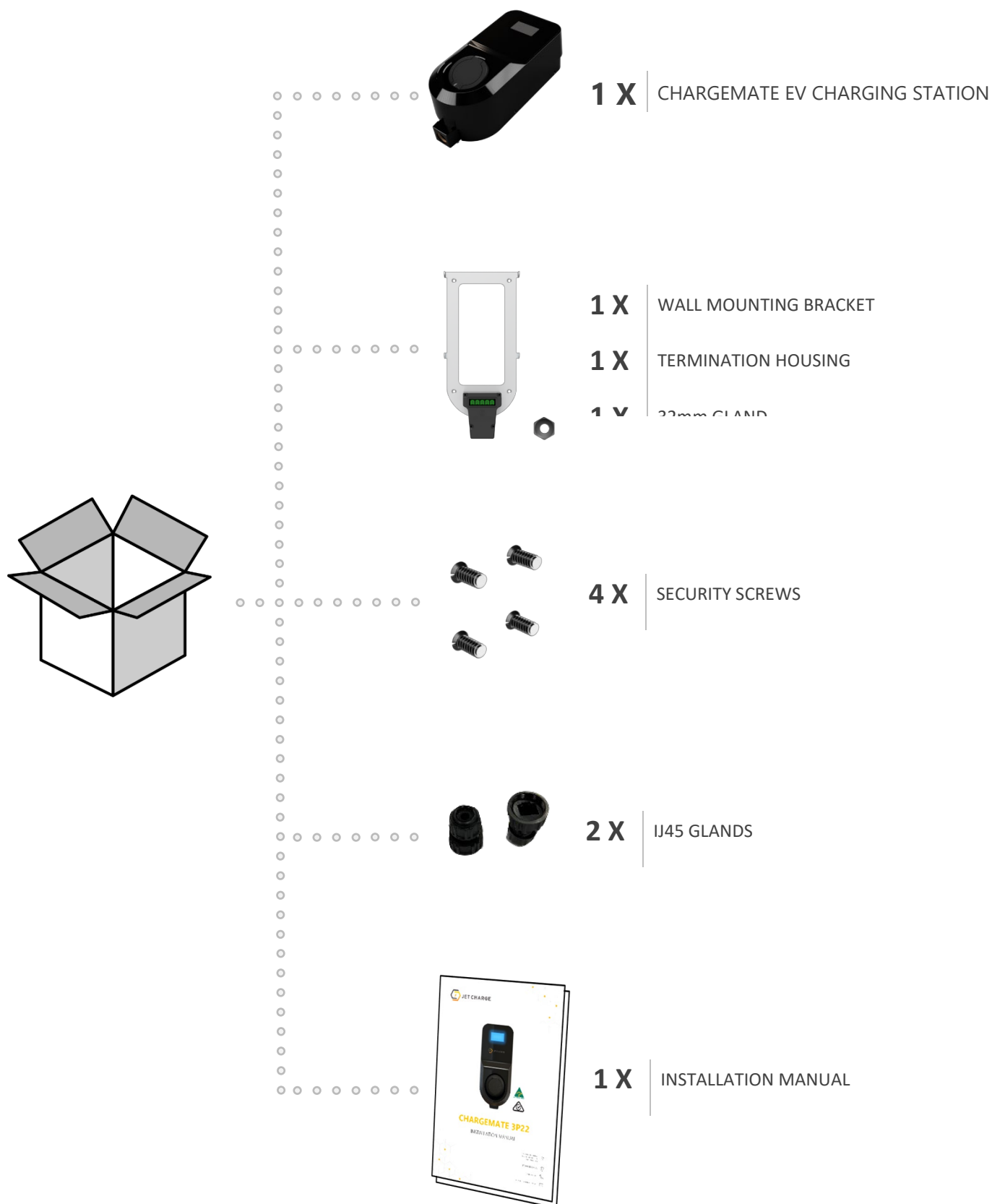
## Interface Protection Device

### Internal Protection

RCD with 6mA DC protection for use with 1/3-phase loads of up to 100A/400V  
Compliant with IEC62955 (Mode 3) EV Charging Stations & UL2231

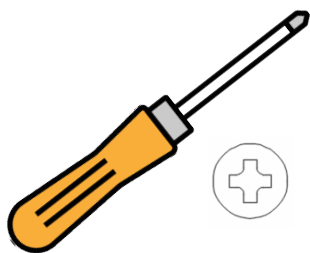


## 2 CHARGER PACKAGE

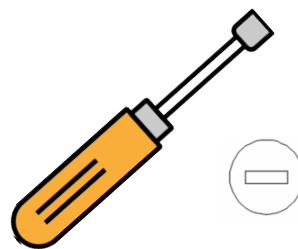


### 3 TOOLS & EQUIPMENT

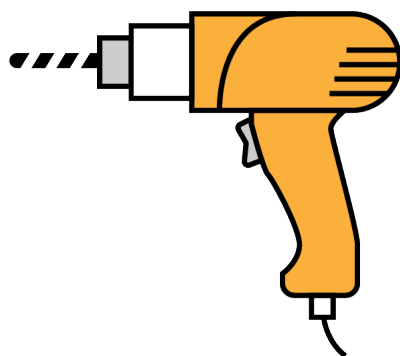
You will require the follow tools and equipment in order to correctly install the charging station.



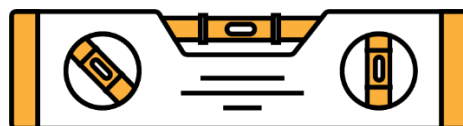
**PHILLIPS HEAD SCREWDRIVER**



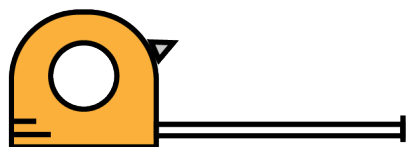
**FLAT HEAD SCREWDRIVER**



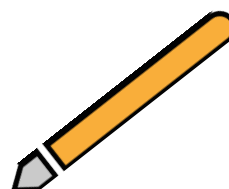
**ELECTRIC DRILL**



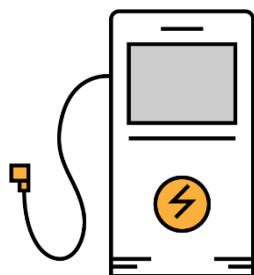
**SPIRIT LEVEL**



**MEASURING TAPE / RULER**



**MARKING PENCIL**



**APPROVED VEHICLE SIMULATION TOOL / EV**





## 4 ELECTRICAL WORKS

All circuits and cabling for EVSE equipment shall adhere to the following requirements:

- Installation to be conducted by Trained Qualified Electrician
- EVSE equipment must fed via its own dedicated circuit (AS/NZS 3000:2018 Appendix P)
- Each charging port must be supplied with its individual dedicated circuit from the switchboard with no other electrical equipment connected to the same circuit.
- Cable sizing shall be assessed by the onsite electrician. Cabling shall be in-line with local standards and regulations. Refer to AS/NZS 3008.1.1:2017 for cable selection criteria.

### Connected Load

(7.2kW Model / Termination)

#### Rate of Power

7.2kW

#### Current

32 Amps

#### Phases

Single-Phase

#### Required Dedicated Circuit

1

### Connected Load

(22.0kW Model / Termination)

#### Rate of Power

22kW

#### Current

32 Amps

#### Phases

Three-Phase

#### Required Dedicated Circuit

1

## MAXIMUM DEMAND

The installation of this should adhere to the AS/NZS 3000:2018 requirements for Maximum Demand. Maximum demand should be calculated at full connected load, if the installation contains more than one connecting point in an installation, then it is considered that all the connecting points of the installation can be used simultaneously.

## RCD PROTECTION

JET Charge is a leader in ensuring that all the right upstream protection is installed in accordance with current wiring regulations (**AS/NZS3000:2018**), as such every EV installation must be installed with a Residual Current Device (RCD).

All electric vehicle charging stations must be fed by its own dedicated circuit from the switchboard. This circuit should have its own RCD Protection installed at the origin of circuit.

JET Charge requires all installations have an RCD of Type A installed upstream as a minimum which protects against residual DC Current. The RCD should not exceed 30 mA.

Refer to AS/NZS 3000:2018 - Appendix P for more information.

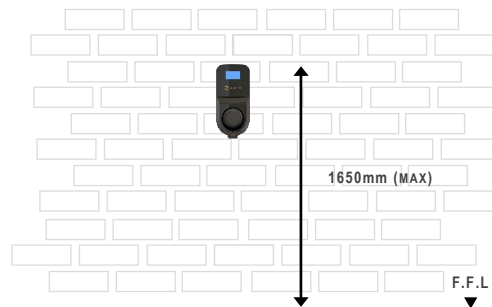


## 5 MOUNTING AND TERMINATION

### Step 1

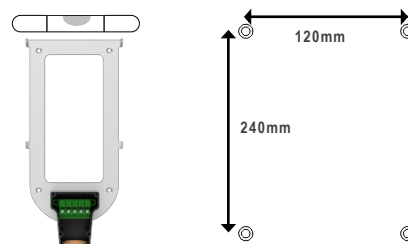
Choose a suitable location to mount the charging station ensuring the wall provides adequate structural integrity.

NOTE: Whenever the charger is installed in a location where there is exposure to direct sunlight (i.e. north facing), we recommend that a UV Protective sunshade be installed.



### Step 2

Place the mounting bracket over the desired location, ensure the bracket is levelled. Mark the four drill points.



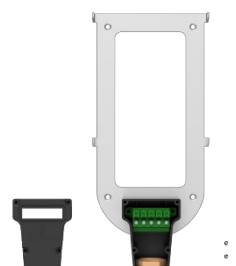
### Step 3

Carefully drill the four drill points



### Step 4

Open the termination housing



### Step 5

Screw gland into termination housing. Ensure that the outer hex grip is flat.



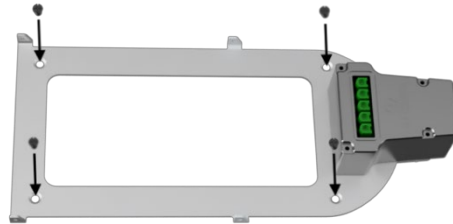
## Step 6

Wire in the earthing, phase(es) and neutral accordingly entering from the inlet located at the bottom of the charger. Terminate connections and tighten connection screws to a torque setting of 1.2 N-m. Screw termination cover back on. Maximum conductor size is **6mm<sup>2</sup>**



## Step 7

Install the appropriate screws into the wall bracket.



## Step 8

If the charger is not connected via Wi-Fi / 4G, connect the ethernet cable / RS cable into the charger via the opening located at the top of the charger.



## Step 9

Insert Ethernet / RS cable through IJ45 Gland, fit IJ45 connector into the gland housing. Insert gland into the appropriate port.



## Step 10

Align ChargeMate with the termination housing, screw in attached 4 x securing screws to ensure charger is firmly secured to mounting plate. Energize RCBO / EV Circuit in switchboard.



## 6 TESTING, COMMISSIONING & QUALITY ASSURANCE

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The charging station will come pre-commissioned to the client's network infrastructure.

After installation of the charging station, it is highly recommended that the charger is tested using a Vehicle Simulation Tool (Charge Checker). This is to confirm that the signalling to the vehicle performs as expected and the power terminations are done correctly. In the case of single-phase this will confirm that the power is connected to correct slot in the power termination connector. In the case of 3-phase installations, this will confirm that all phases are properly terminated.








## 7 WI-FI CONFIGURATION

The charging station can be connected to the customer's on-site Wi-Fi network to gain internet access. This can be done via the **JET Charge Connect** phone App in the respective App stores.



On initial power up, the charging station will cycle through different modes to find an internet connection. This is indicated by an icon in the top left-hand corner of the screen as per the table below.

ICON	FLASHING	SOLID ON
	Wi-Fi Access Point Mode for Setup	
	Searching for Wi-Fi connection	Connected to Wi-Fi
	Searching for Ethernet connection	Connected to Ethernet
		Demand Response Event in Progress

Please wait for the  icon to be displayed before trying to connect to the charger through the App.

See step-by-step instructions on the next page of this document.

## Step 1

Install the JET Charge Connect App



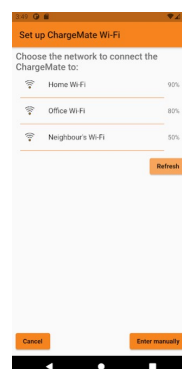
## Step 2

Open the App and click on the 'Connect ChargeMate to Wi-Fi' button



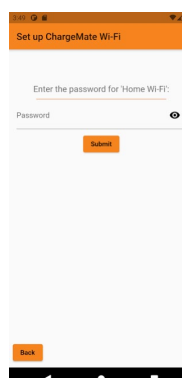
## Step 3

Choose the Wi-Fi connection from the list to connect the charger to



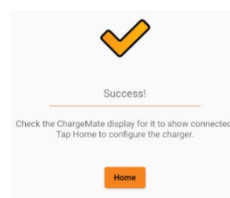
## Step 4

Enter the Wi-Fi password



## Step 5

SUCCESS



## 8 POWER UP – FREE TO USE

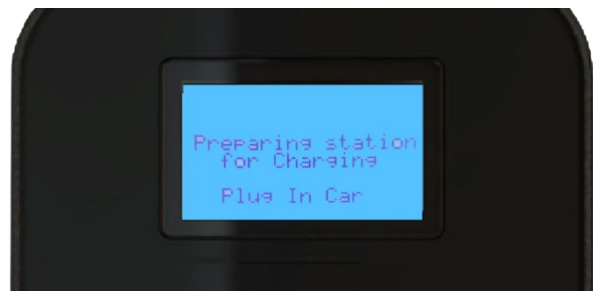
### Step 1

The screen shall display a layout familiar to that seen to the right if it is operational and ready to charge.



### Step 2

No verification shall be required – upon plugging cable into charger socket, plug the other end into the car.



### Step 3

Once the vehicle is plugged in, a screen will show the current voltage, current, power and energy the charging station is drawing. Charging shall be checked with charge checker or vehicle display.



### Step 4

Once the charging session has ended the screen illustrated on the right will appear. This will confirm charging has been completed or cancelled by the user. Simply un-plug cable to end your session.



## 9 POWER UP – CHARGEFOX

### Step 1

When the charger is powered up, the screen shall display a layout familiar to that seen to the right when booting up.



### Step 2

The screen shall display a layout familiar to that seen to the right if it is operational and ready to charge.



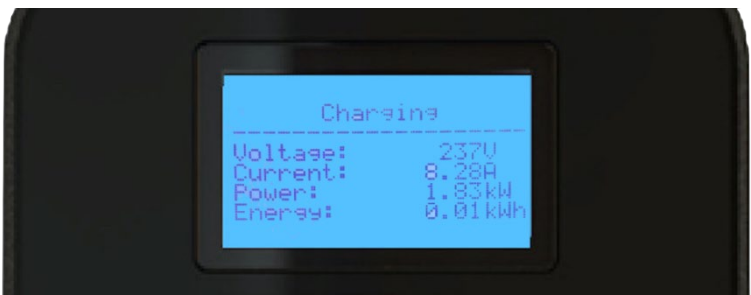
### Step 3

User is authenticated via RFID card / Chargefox App. If either option is not available, please contact JET Charge for a remote start.



### Step 4

Once the vehicle is plugged in, a screen will show the current voltage, current, power and energy the charging station is drawing. Charging shall be checked with charge checker or vehicle display.



### Step 5

Swipe RFID card / use Chargefox App to stop the charging session. Once the charging session has ended the screen illustrated on the right will appear and cable shall be unplugged.





## 10 FAULT DETECTION / TROUBLESHOOTING

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### Error!

When the charger is in error, an error message will be displayed on the LCD screen.



# 11 WARRANTY INFORMATION

JET Charge offers a 12-months warranty for the JET Charge Chagemate and its internal components from the date of installation and commissioning.

1. JET Charge will not be responsible for any failure to supply the Goods or any services associated with the Goods on the date agreed between the parties and you are not entitled to cancel any hire as a result of that failure.
2. Except as expressly provided to the contrary in writing by JET Charge, any representation, warranty, condition, guarantee or undertaking that would be implied in these Terms in relation to any good or service supplied by JET Charge by legislation, common law, equity, trade, custom or usage is excluded to the maximum extent permitted by law, including any implied warranties of acceptable quality or fitness for a disclosed purpose.
3. If any statute implies any term, condition or warranty into these Terms, and that statute prohibits provisions in a contract excluding or modifying the application of, exercise of, or liability under, such a term, condition or warranty, then that term, condition or warranty will be taken to be included in these Terms. However, the liability of JET Charge for any breach of such a term, condition or warranty will be limited, if permitted by statute, at the option of JET Charge, to any one or more of the following:
  - a. the replacement of all or part of the Goods or the repair of the Goods; or
  - b. the amount of the hire charge.
4. To the extent permitted by law, and except as otherwise expressly agreed in writing by JET Charge as part of these Terms, JET Charge will not be liable for any personal injury, incidental damages, consequential losses, loss of profit, costs of business interruption, loss of opportunities or any other loss, damage, cost, expense or liability whatsoever arising from any use of, or incidental to, the Goods or their use, unless, and to the extent that, such damage or loss is directly caused by:
  - a. the gross negligence of JET Charge; or
  - b. the fraud or wilful breach by JET Charge of any of its obligations under these Terms,provided that such loss or damage is reasonably foreseeable and is not caused by something beyond JET Charge's control (including, for the avoidance of doubt, any act or omission of any third party, any force majeure event, any indirect loss of any nature, any incompatibility of your EV with the Chagemate Equipment or any breach by you of these Terms).
5. JET Charge will not be liable to you for any damage of any kind to your EV whatsoever, arising from a failure by you to exercise reasonable care or comply with the requirements of the EV manufacturer's instructions or with JET Charge's instructions when using the Chagemate Equipment. To the maximum extent permitted by law, you agree to hold JET Charge harmless against any liability, claims, proceedings, costs, expenses and damages which JET Charge may suffer or incur as a result of a failure by you to comply with one or more of the following: the EV manufacturer's instructions, JET Charge's instructions, or your obligations under any applicable laws and regulations.
6. To the maximum extent permitted by law, you agree that the maximum aggregate liability of JET Charge for all proven losses, damages and claims arising out of or in connection with these Terms or a supply under these Terms, including liability for breach, in negligence or in tort or for any other common law or statutory action, is limited to the sum equal to the amount of fees paid by you to JET Charge in the 12 months prior to the relevant event.
  - a. All warranty claims shall be void if any of the below conditions are breached:
  - b. internal load management components are tampered or removed; or
  - c. the installation of all load management hardware and equipment has not been completed by a qualified (Australian recognized) electrician; or
  - d. external third-party modifications, alterations and or dismantling of any part or whole of the load management system; or
  - e. pre-electrical works have not been completed to a satisfactory level including however not limited to maximum demand calculations; or
7. installation procedures have not been closely replicated to those highlighted within this guideline.
8. Refer to the JET Charge contractual agreements for specific details that are otherwise not stated in this installation guideline for further warranty information.
9. Before submitting a claim, perform all troubleshooting procedures highlighted within this manual and contact JET Charge for further assistance.
10. All warranty claims should be made to [info@jetcharge.com.au](mailto:info@jetcharge.com.au) including name, address and invoice number where possible.





# “HERE’S TO AN ELECTRIC FUTURE”

## HELP AND SUPPORT

For any questions or general enquires please feel free to contact JET Charge. Our friendly team are always happy to help.

We’re based in North Melbourne, Victoria, and we’re always happy to have a chat.

Contact Hours: Monday – Friday (08:30am – 05:00pm)



91 Munster Terrace  
North Melbourne, Victoria 3051



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