



TCHARGE® UAC 50 / UAC 80 Series

AC Charger Installation Manual





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Important

Before operating or maintaining this unit, please read this manual carefully and pay extra attention to the safety warnings and precautions.

For Service and Support:

Web: <http://www.blueview-usa.com/>

Tel: +1 (317) 772-1526

Email: info@blueviewelectricity.com

Safety Information

For your own safety and the safety of others as well as to prevent damage to the device and vehicles upon which the device is used, it is important that the safety instructions presented throughout this manual be read and understood by all persons operating or coming into contact with the device.

Safety Instructions

The safety messages herein cover situations BLUEVIEW is aware of. BLUEVIEW cannot know, evaluate, or advise you as to all the possible hazards. You must be certain that any condition or service procedure encountered does not jeopardize anyone's personal safety.



SAFETY WARNINGS

- Read all the instructions before you use this device.
- Do not install or use the device near materials, chemicals, or vapors that are flammable, explosive, harsh, or combustible.
- Turn off the power at the circuit breaker before installing or cleaning the device.
- Children around this device should be supervised when the device is in use.
- This device must be grounded through a permanent wiring system or an equipment-grounding conductor.
- Use the device only within the specified operating parameters.
- Do not use the device if it is defective, appears cracked, frayed, broken or otherwise damaged, or fails to operate.
- Do not use the device if the flexible power cord or EV cable is frayed, broken, or otherwise damaged, or if it fails to operate.
- Do not attempt to disassemble, repair, tamper with or modify the device.
- Handle the device with care during transportation. In order to prevent damage to it and to any of its components, do not subject it to strong force or impacts, pulls, twists, tangles, or drags. Do not step on the device.
- Do not insert fingers or foreign objects into any part of the device.








CAUTION

- Do not use private power generators as a power source for charging electric vehicles (EVs) with this device.
- Do not operate the device in temperatures outside its working temperature range.
- Incorrect installation, operation, or testing of the device could potentially damage the battery or other components of an EV as well as the charger device itself.

Download Home Charging APP for Your Home Charger!

If the product you purchased is a **TCHARGE® UAC 50H** home charger, you would need **TCHARGE® home charging mobile application (APP)** to use the charger and charge your vehicle at home.

Scan the following QR codes to access APP download links and latest APP using guide:

Type	Instructions	
APP Using Guide	For the latest version of TCHARGE® home charging mobile APP using guide, please scan the QR code to the right to download the document.	
Android Devices Download	Search "TCharge" in Google Play or scan the QR code to the right to install the home charging APP on your Android device.	 
iOS Devices Download	Search "TCharge" in APP Store or scan the QR code to the right to install the home charging APP on your Apple device.	 

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1. Using This Manual

1.1 Purpose

The purpose of this manual is to offer guidance regarding on-site installation and use of **TCHARGE®** UAC 50 / UAC 80 series AC charger.

1.2 Applicable Products

This document applies to **TCHARGE®** UAC 50C, UAC 50H, or UAC 80C AC Charger.

Caution: Death, injury, and/or property damage may occur if you use this equipment in a manner other than as described in this manual or other related documents.

1.3 Definition of Warning Symbols




Symbol	Meaning
	<p>WARNING signs indicate significant dangers.</p> <p>This sign indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury to the operator or to bystanders.</p> <p>Operations after the WARNING sign can only be performed once the indicated conditions are fully understood and met.</p>
	<p>CAUTION signs indicate potential risks.</p> <p>This sign indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury to the operator or to bystanders.</p> <p>Operations following the CAUTION sign should only be performed once the indicated conditions are fully understood and met.</p>
	<p>HINT signs indicate tips or useful information.</p> <p>This sign marks tips and useful information worthy of notice.</p> <p>Contents following HINT signs will not contain information that warns of hazardous or harmful functions.</p>

Table 1.1 Definition of Related Warning Symbols

2 General Introduction

TCHARGE® AC charger is designed to charge an electric vehicle (EV). Our chargers provide you with safe, reliable, fast, and smart EV charging solutions.

This manual will instruct users and installation technicians on how to install this charger.



Note: Images in this manual are based on commercial charger models UAC 50C and UAC 80C. If you purchased one of our [home charger products \(UAC 50H\)](#), you would **not** find the [LCD screen feature](#) as depicted in this manual. However, the [installation process for the charger remains the same](#).

2.1 Intended Uses

TCHARGE® UAC 50 / UAC 80 series AC charger is suitable for charging EVs with AC power in both indoor and outdoor settings such as:

- Workplace
- Commercial complexes
- Public agencies
- Roadside parking spots and / or parking lots



Caution: Dangers

- If you use the equipment in any way other than described in this manual or other related documents, possible deaths, injuries, and damage to property can occur.
- Use this EV charging equipment only as intended.

2.2 Product Overview

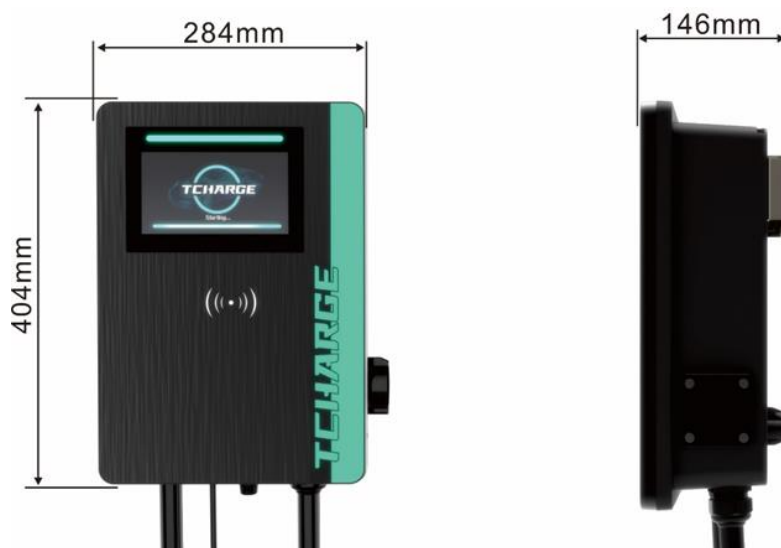


Figure 2.1 Dimensions of **TCHARGE®** UAC 50 / UAC 80 Charger

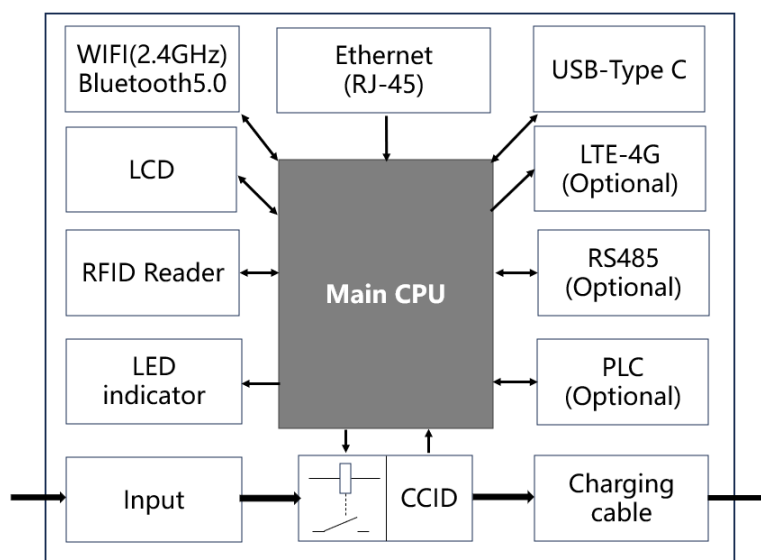


Figure 2.2 Block Diagram of **TCHARGE®** UAC 50C / UAC 80C Charger
(UAC 50H without LCD feature)

2.3 Key Technical Parameters

2.3.1 UAC 50C & UAC 50H Key Technical Parameters

General Design	
Dimension (H*W*D)	16" H * 11" W * 5" D (404mm * 284mm * 127mm)
Weight	17.2 lb. (7.8kg, UAC 50H) / 17.6 lb. (8kg, UAC 50C)
Output Rating & Current	12kW / 50A (max.)
Input	208V AC / 240V AC, 50Hz / 60Hz
Connectors	Single outlet, Type1 (J-1772)
Installation	Wall mounting or pole mounting
Safety Features	
Protections	Over/under voltage, overload, current leakage, earth leakage, lightning surges, communication interruptions and resets, ultra-violet exposures
Enclosure Rating	NEMA Type 4
Key Certifications	UL2202, UL2231-2, UL2594
Connectivity and User Interaction	
Internet Connectivity	Ethernet, WIFI; 4G (UAC 50C)
Charging Authorization	Mobile APP or RFID card; POS terminal as an optional feature (please contact your payment service provider for POS)
User Interface	LED indicator; 7" LCD touch screen (UAC 50C)
System Protocol	OCPP 1.6-J+
Working Environment	
Altitude	<6,562 ft (2000m)
Operating Temperature	-22°F to +131°F (-30°C to +55°C)
Working Humidity	5% to 95% relative humidity without condensation

Table 2.1 Key Technical Parameters of **TCHARGE®** UAC 50C & UAC 50H AC Charger

2.3.2 UAC 80C Key Technical Parameters

General Design	
Dimension (H*W*D)	16" H * 11" W * 5" D (404mm * 284mm * 127mm)
Weight	22.0 lb. (10kg)
Output Rating & Current	19kW / 80A (max.)
Input	208V AC / 240V AC, 50Hz / 60Hz
Connectors	Single outlet, Type1 (J-1772)
Installation	Wall mounting or pole mounting
Safety Features	
Protections	Over/under voltage, overload, current leakage, earth leakage, lightning surges, communication interruptions and resets, ultra-violet exposures
Enclosure Rating	NEMA Type 4
Key Certifications	UL2202, UL2231-2, UL2594
Connectivity and User Interaction	
Internet Connectivity	Ethernet, WIFI, 4G
Charging Authorization	Mobile APP or RFID card; POS terminal as an optional feature (please contact your payment service provider for POS)
User Interface	7" LCD touch screen, LED indicator
System Protocol	OCPP 1.6-J+
Working Environment	
Altitude	<6,562 ft (2000m)
Operating Temperature	-22°F to +131°F (-30°C to +55°C)
Working Humidity	5% to 95% relative humidity without condensation

Table 2.2 Key Technical Parameters of TCHARGE® UAC 80C AC Charger

3. Prepare for Installation

3.1 Installation Space Requirements

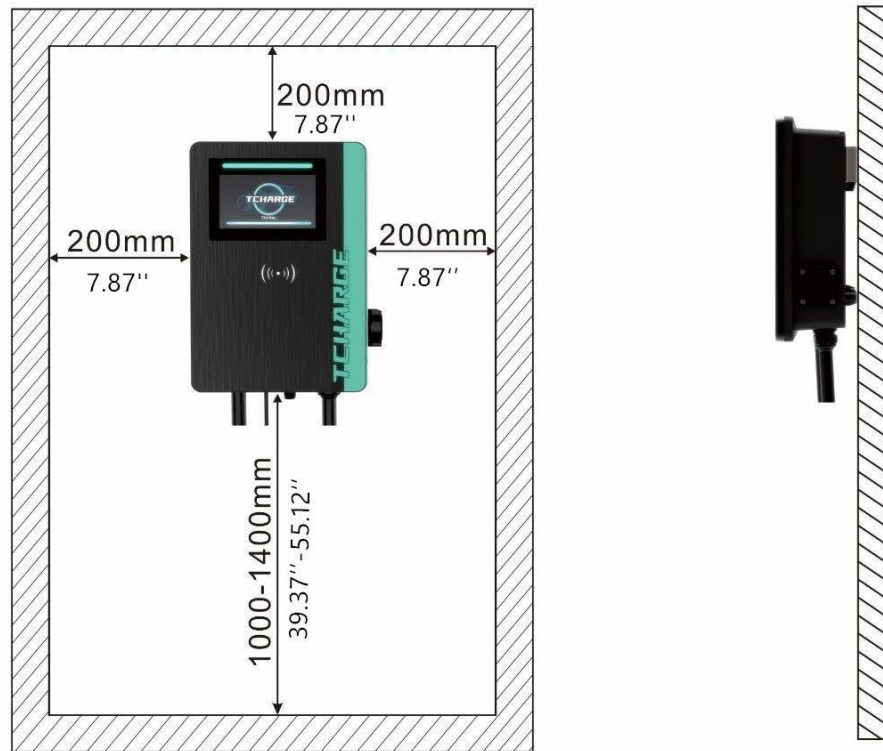


Figure 3.1 Space Requirement for Installation of **TCHARGE®** UAC 50 / UAC 80 Charger

For installation, empty spaces reserved around the UAC 50 / UAC 80 series charger should be:

- At least **200 millimeters (7.9 inches)** on the top, left, and right side of the charger;
- At least **1,000 to 1,400 millimeters (39.4 to 55.1 inches)** beneath the charger.

Refer to diagram in **Figure 3.1** for the space required around the charger.

The space requirements are **the same for either wall-mounted or pole-mounted** installations.



Important Note: Rebooting the charger is useful in many troubleshooting scenes. Therefore, it is highly recommended to install the charger on a circuit with its individual switch, or in proximity to the switch box. In particular, the **UAC 50H model requires restarting the charger to set up wireless internet connection**. As a result, please install your home charger in a way that, when required, its power supply can be shut off and restored in an easy manner.

3.2 Installation Tools



Note: The following list of tools is the manufacturer's recommendation for installing **TCHARGE®** UAC 50 / UAC 80 series AC charger. Provided that worksite safety is ensured, technicians in charge of on-site installation may select other additional and/or alternative tools according to actual needs posed by on-site situations.









	Name of Tool	Img.	Main Uses
1	Multimeter		Checking electrical connections and measuring voltages
2	Impact drill		Drilling holes in the wall (for wall-mounted installation)
3	Wrench		Fastening bolts
4	Diagonal plier		Cutting cables
5	Wire stripper		Peeling cables
6	Crimping plier		Pressing cable terminal
7	Phillips screwdriver		Unfastening and fastening screws
8	Torx screwdriver T10		Unfastening and fastening screws

Table 3.1 Recommended Tools for **TCHARGE®** UAC 50 / UAC 80 Charger Installation

3.3 Installation Accessories

3.3.1 Accessories for a Wall-Mounted Installation

Below is a list of installation accessories packed with the **TCHARGE®** UAC 50 / UAC 80 series AC charger when the charger ordered is to be mounted on a wall.


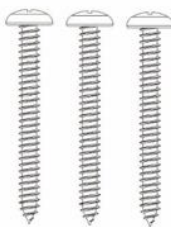
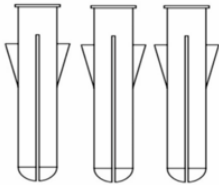

No.	Accessory Specs	Diagram	Count
A	Positioning plate		1
B	ST4x40 screws		3
C	Φ6 expansion tubes		3
D	Waterproof gasket		1

Table 3.2 Installation Accessories for Wall-Mounted **TCHARGE®** UAC 50 / UAC 80 Charger

3.3.2 Accessories for a Pole-Mounted Installation

Below is a list of installation accessories packed with the **TCHARGE®** UAC 50 / UAC 80 series AC charger when the charger ordered is to be mounted on a pole.

Note that when the charger ordered is to be mounted on a pole, the pole will be shipped together with the charger, but not necessarily in the same package.

Note also that a pole can have chargers installed on either 1 side or 2 sides of it. **The numbers being denoted below are the number of accessories required for installation of 1 charger.**


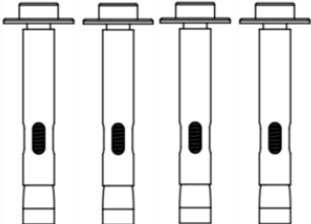
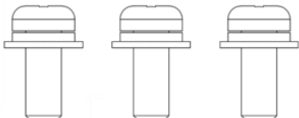

No.	Accessory Specs	Diagram	Count
A	Positioning plate		1
B	M8x80 screws		4
C	M4x12 screws		3
D	Waterproof gasket		1

Table 3.3 Installation Accessories for Pole-Mounted **TCHARGE®** UAC 50 / UAC 80 Charger

4. Install the Charger



Note: Unless otherwise specified, procedures described in this section apply to both wall-mounted and pole-mounted installations of **TCHARGE®** UAC 50 / UAC 80 series AC charger.

4.1 Preparation and Wiring

4.1.1 Open the Front Cover

- 1) Unfasten the button screw with T10 Torx screwdriver. (See step [A] in **Figure 4.1**)
- 2) Pry off the front cover of the charger. A flat-head screwdriver is desirable for finishing this job, as a notch can be found on the side of the cover. (See step [B] in **Figure 4.1** and step [C] in **Figure 4.2**)
- 3) Unfasten the six screws (circled in **Figure 4.2**) on the front holding the wiring area cover and remove the wiring area cover.



Important Note: Please carefully save the six screws removed in **step (3)** above. They are required at the end of installation to re-install the charger's front cover.

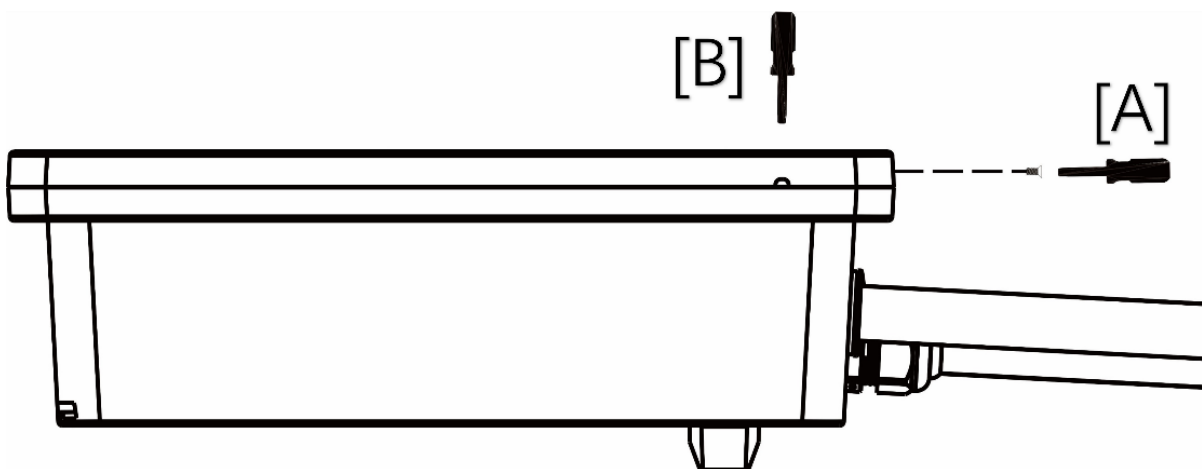


Figure 4.1 Removing the Front Cover of the Charger

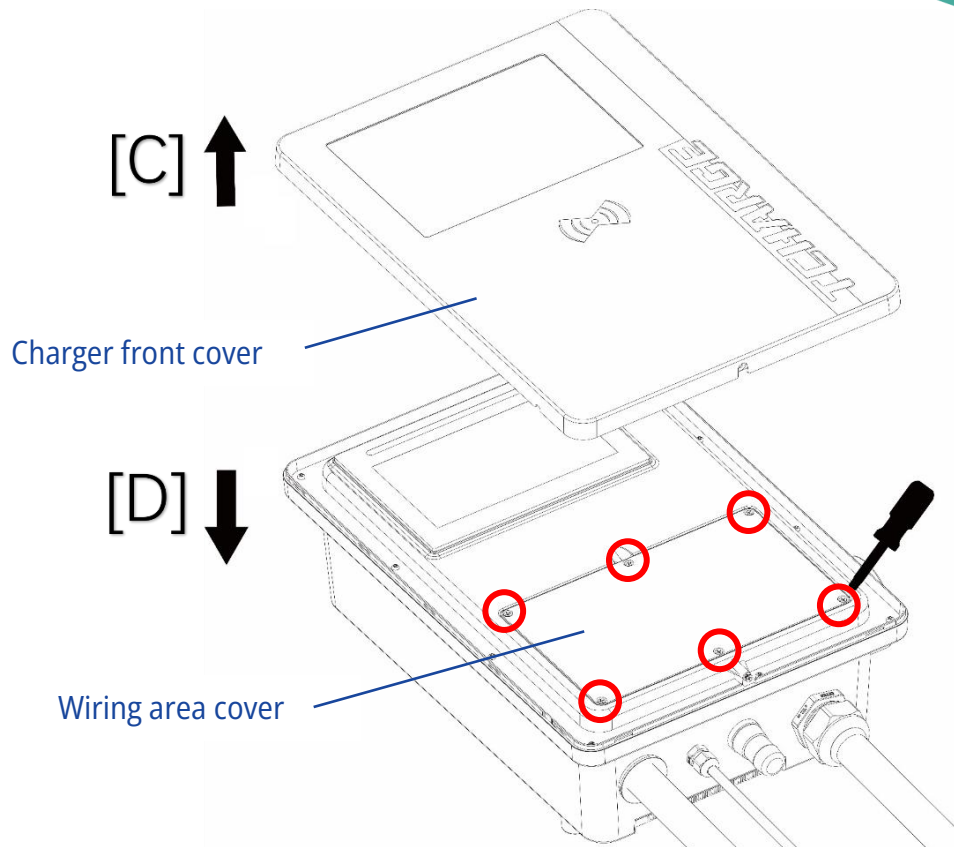


Figure 4.2 Removing the Wiring Area Cover of the Charger

4.1.2 Wiring



Warning: Electricity is dangerous and electrical procedures can be fatal. Operations in this section should only be carried out by qualified professional electricians who fully understand the procedures and can ensure on-site safety.

- 4) Pass the prepared power cable through the cable inlet at the bottom of the charger (marked with "INPUT" at the bottom).
- 5) In the opened wiring area, connect each phase of the cable to the input terminals according to the terminal label "L1", "L2/N" and "GND" (see detailed diagram [C] in **Figure 4.3**).
 - For 2-hotwire inputs, connect the two hotwires to "L1" and "L2/N" slot of the terminal respectively.

- For L-N-GND wiring, connect neutral phase wire to “L2/N” slot.

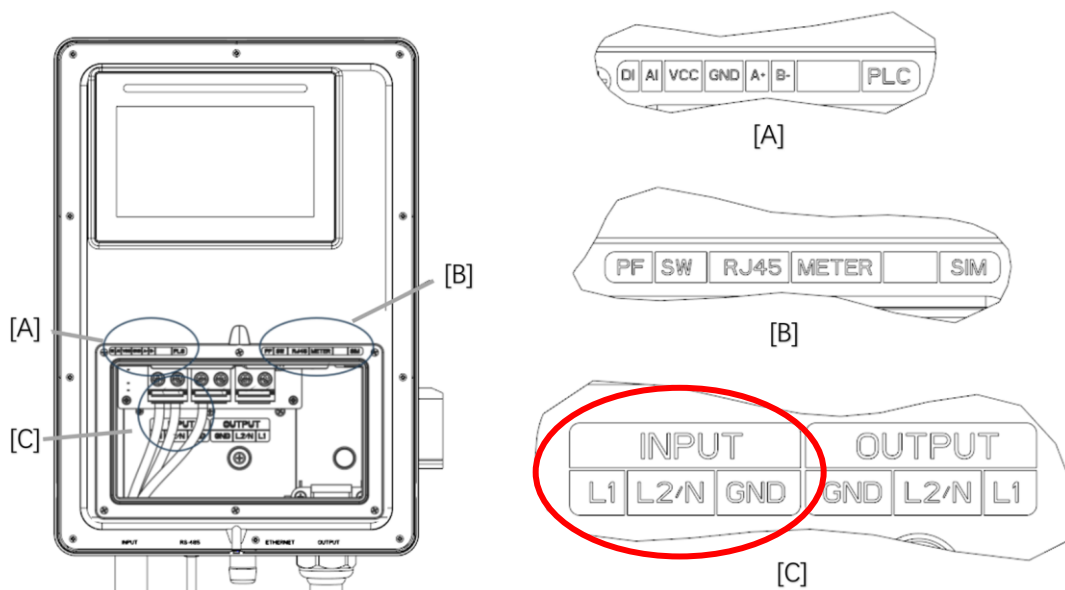


Figure 4.3 Labels Found in the Wiring Area

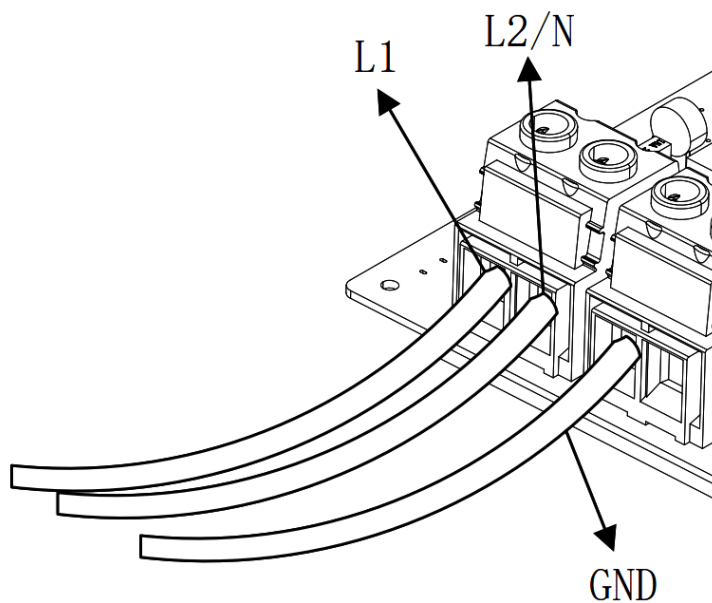


Figure 4.4 Input Cable Wiring

4.2 Wall-Mounting Installation



Note: This section is for a wall-mounted installation of **TCHARGE®** UAC 50 / UAC 80 series AC charger only. For a pole-mounted installation, see [Part 4.3](#) of this manual on [Page 20](#).

4.2.1 Install Positioning Plate

- 1) Drill 3 holes with a diameter of **6mm (0.23 inches)** and a depth of at least 50mm (**2 inches**) on the wall for the screws with their relative positions shown in **Figure 4.5**.
- 2) Install the three $\Phi 6$ expansion tubes (wall-mounting **Accessory C**, see [Table 3.2](#) on [Page 13](#)) into the holes.

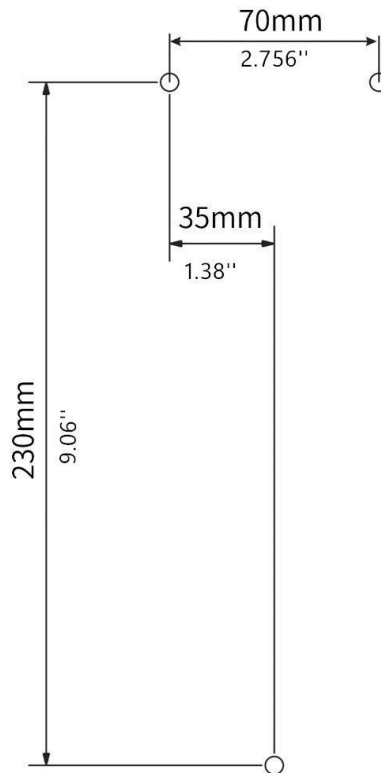


Figure 4.5 Relative Position for Screw Holes on the Wall

- 3) With two ST4x40 screws (wall-mounting **Accessory B**) and the two screw holes on the top, fix the positioning plate (wall-mounting **Accessory A**) on the wall (**Figure 4.6**).

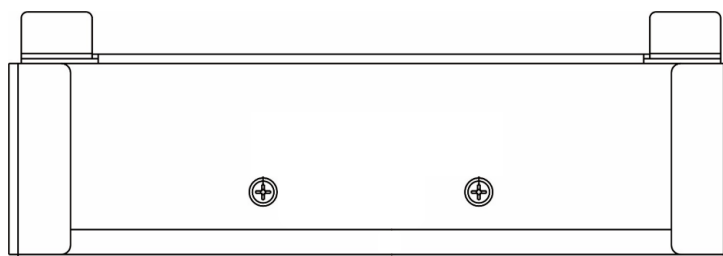


Figure 4.6 Positioning Plate as Fixed by the Screws

4.2.2 Mounting the Charger

- 4) After the positioning plate is fixed in a horizontally leveled position, install the charger on the positioning plate by sliding it down in the direction of the arrow depicted in **Step 1** on the left of **Figure 4.7**, till the device hangs firmly.
- 5) Use the one remaining ST4x40 screw (wall-mounting **Accessory B**) and the 1-piece waterproof gasket (wall-mounting **Accessory D**) to fix the lower part of the charger on the lower screw hole on the wall (**Step 2** as shown in **Figure 4.7**). The screw hole on the charger is found in the back of wiring area, as shown on the right of **Figure 4.7**.

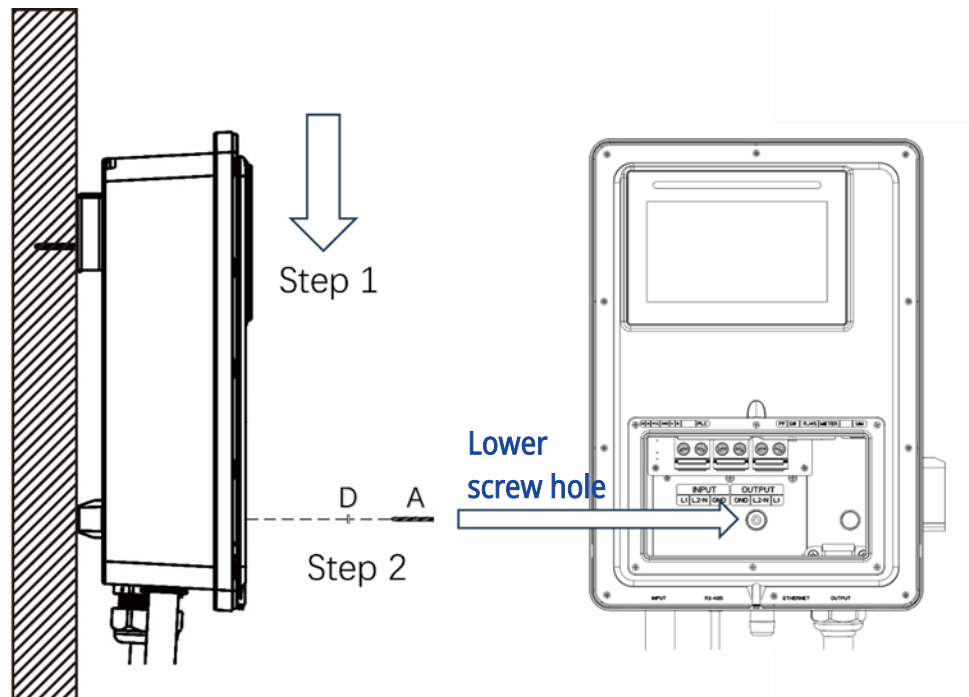


Figure 4.7 Fixing the Charger on the Wall

4.3 Pole-Mounting Installation



Note: This section is for a pole-mounted installation of **TCHARGE®** UAC 50 / UAC 80 series AC charger only. For a wall-mounted installation, see [Part 4.2](#) of this manual on [Page 18](#).

4.3.1 Install the Pole and Positioning Plate

- 1) Drill 4 holes in the base or the pedestal where the pole is intended to be installed. Use the four M8x80 screws (pole-mounting **Accessory B**, see [Table 3.3](#) on [Page 14](#)) to fix the pole to the ground (see left side of [Figure 4.8](#)).
- 2) Determine the side(s) where the charger(s) will be installed; locate the backplate of the corresponding side in the upper middle part of the pole (see [Figure 4.8](#)).

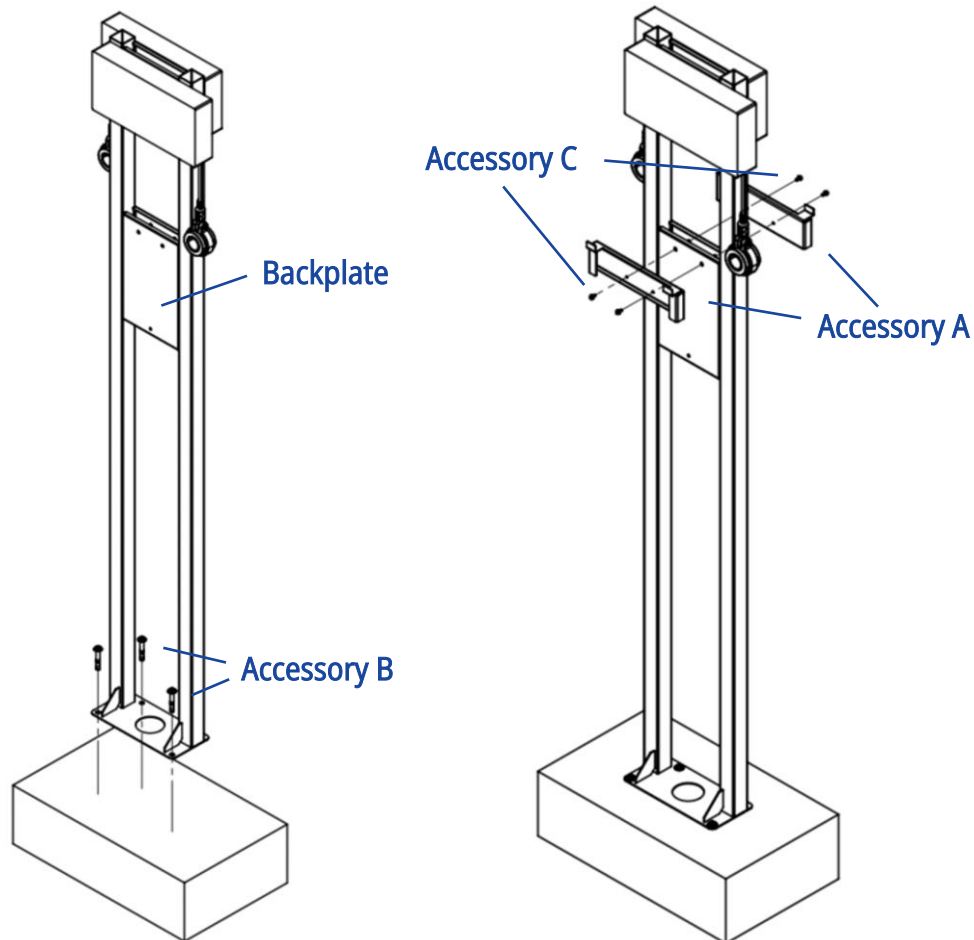


Figure 4.8 Installing the Mounting Pole and Positioning Plate(s)

- 3) Use two M4x12 screws (pole-mounting **Accessory C**) to install the positioning plate (pole-mounting **Accessory A**) on the two upper screw holes of the backplate (see right side of **Figure 4.8**).

4.3.2 Mounting the Charger

- 4) After the positioning plate is fixed in a horizontally leveled position, install the charger on the positioning plate by sliding it down in the direction of the arrows depicted as **Step 1** on the sides of **Figure 4.9**, till the device hangs firmly.

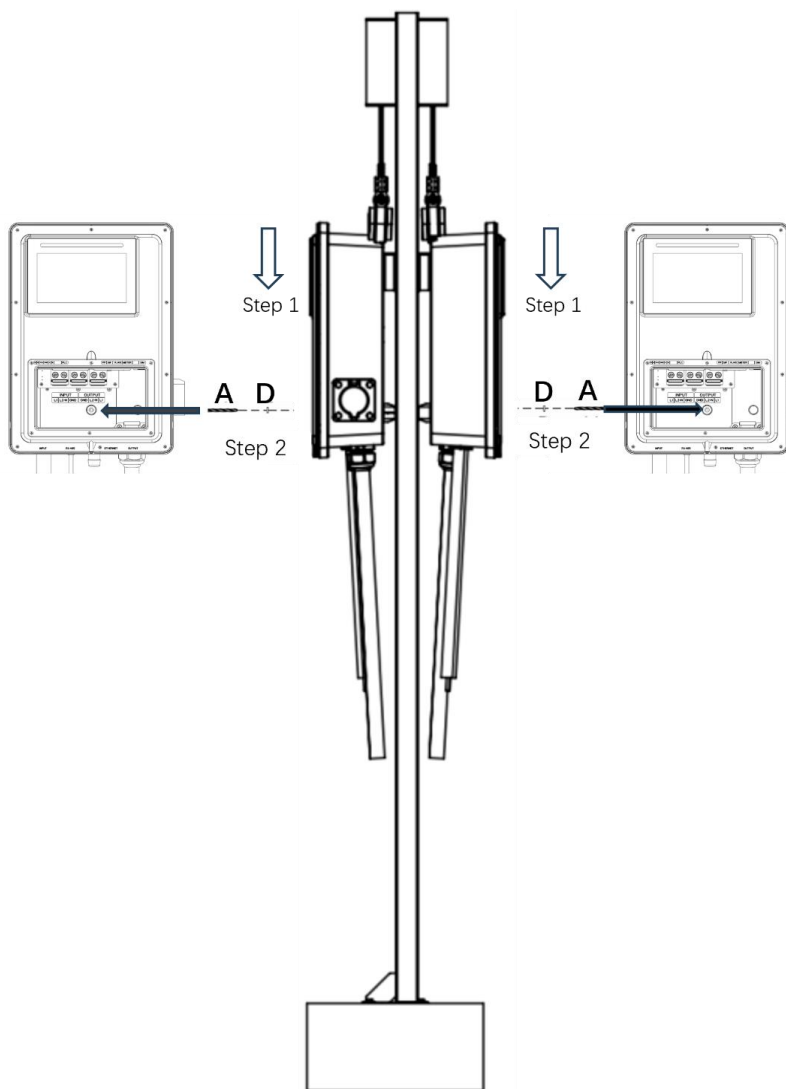


Figure 4.9 Fixing the Charger(s) on the Pole

- 5) Use the one remaining M4x12 screw (pole-mounting **Accessory C**) and the 1-piece waterproof gasket (pole-mounting **Accessory D**) to fix the lower part of the charger on the lower screw hole on the pole (**Step 2** as shown in **Figure 4.9**). The screw hole on the charger is found the back of wiring area, as marked by the thick arrows on **Figure 4.9**.

4.4 Internet connections

TCHARGE® UAC 50 / UAC 80 series AC charger supports connections to the Internet via both ethernet and 4G wireless communication.

- To connect via ethernet cable, plug the RJ45 plug of ethernet cable into the **RJ45 connector** located in the wiring area.
- To connect via 4G wireless network, insert the SIM card into the slot found in the upper right part of the wiring area.

Refer to detailed diagram [B] in **Figure 4.10** for locations of **RJ45** and **SIM** labels in the wiring area.

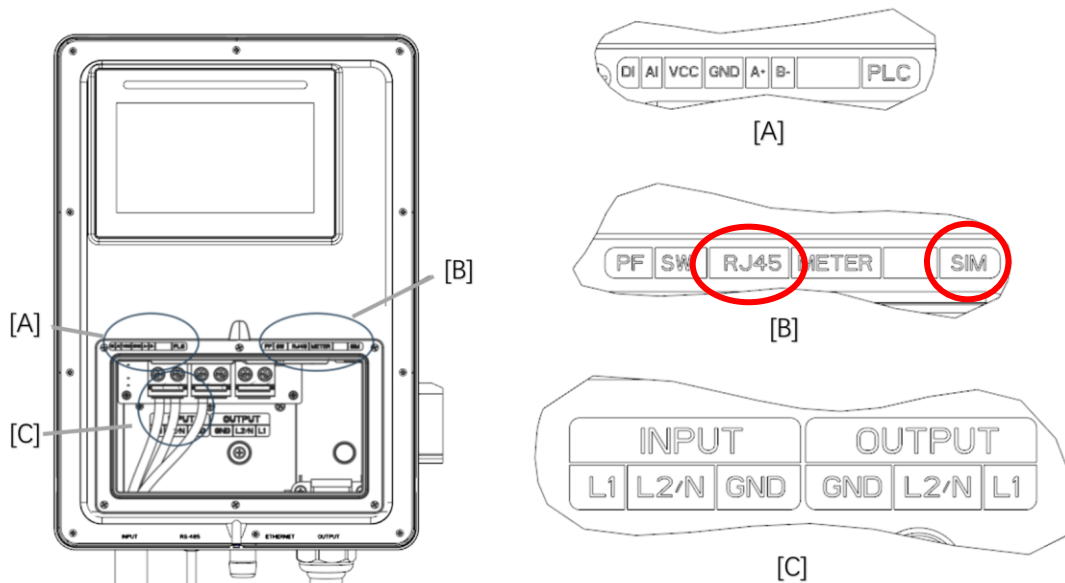


Figure 4.10 Locations of RJ45 Port and SIM Card Slot in the Wiring Area

4.5 Restore the Front Cover

After all the wiring and network access procedures are finished (see **Part 4.1** and **4.4**), and the lower screw going through the wiring area screw hole is installed (see **Part 4.2.2** or **4.3.2**, depending on the type of installation), the front covers of the charger can be restored to finish the installation process.



Note: Check before restoring the covers if all work is completed. Otherwise, repeated efforts of removing and restoring the covers may be required.

- 1) Close the wiring area cover; **reinstall and fasten the six screws** that were previously taken off in **Part 4.1.1 Step (3)**.
- 2) Restore the front cover of the charger. Fasten the M3 screw in the bottom front to hold the front cover better (see **Figure 4.11**).

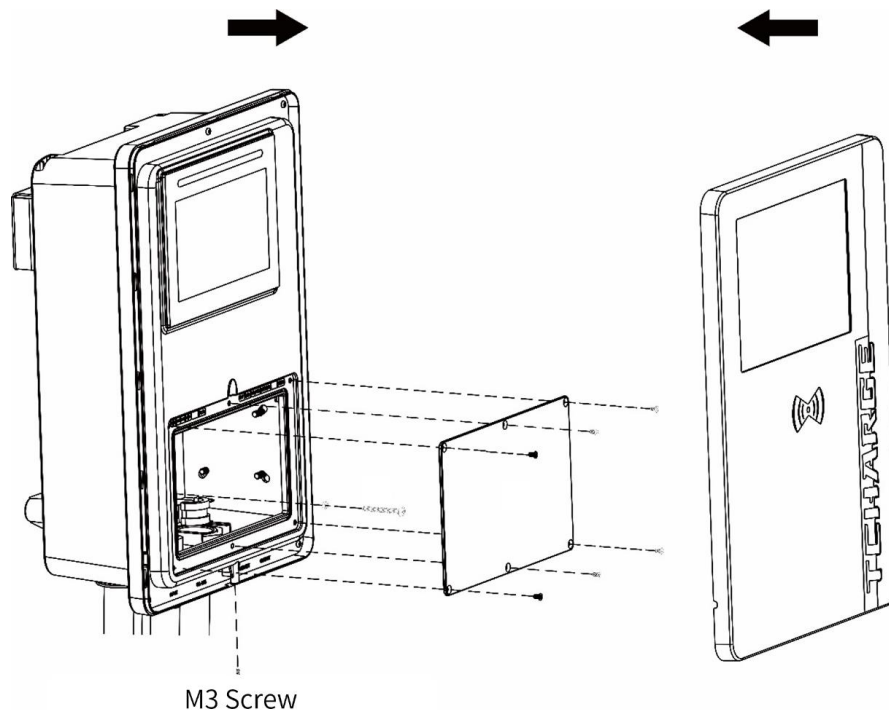


Figure 4.11 Restore the Front Covers of the Charger and Finish the Installation

5. Service and Support

If you encounter problems while installing, configuring, or using the charger, please reach out to our technical support team.

For services in U.S. or Canada, please contact **BLUEVIEW** with the following information:

Web: <http://www.blueview-usa.com/>

Tel: +1 (317) 772-1526

Email: info@blueviewelectricity.com







6. Compliance Information

The product is in conformity and certified with the following technical standards:

- UL2594
- UL2231-2
- UL2202
- SAE J1772

Search for Other TCHARGE® Product Documents!

Use the following tips and QR codes to access more useful tools and documents for **TCHARGE®** EV charger products.

Type	Instructions	
Home Charge APP Using Guide	For the latest version of TCHARGE® UAC 50H home charging mobile APP using guide, please scan the QR code to the right to download the document.	
Commercial AC Charger UI Guide	For the latest version of guide on using TCHARGE® UAC 50C & UAC 80C commercial AC charger's LCD touch screen system, please scan the QR code to the right to download.	
Android Devices APP Download	Search " TCharge " in Google Play or scan the QR code to the right to install the TCHARGE® home charging APP on your Android device.	 
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