



TCHARGE® UAC 50H Home AC Charger

Installation Manual





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BLUEVIEW will not be held liable for any direct, special, incidental, or indirect damage or any economic consequential damages (including the loss of profits).

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 charging cable or charging connector 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!

For 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 user guide:

Type	Instructions	
APP User Guide	For the latest version of TCHARGE® home charging mobile APP user 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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Tired of reading texts only?

Scan this QR code to the right for an [installation instruction video](#) on [YouTube](#) as supplement to this guide!



1. Using This Manual

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

1.1 Applicable Products

This document applies to **TCHARGE®** UAC 50H 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.

1.2 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

Some images in this manual are based on commercial charger models UAC 50C / UAC 80C. Our **home charger product (UAC 50H)** does **not** carry the **LCD screen feature** as depicted in these images. However, the **installation processes for the chargers are the same for our home and commercial models.**

2.1 Intended Uses

TCHARGE® UAC 50H home AC charger is suitable for charging private EVs with AC power at home.

Based on the geographical location, climate, and exterior environment of the property, the charger can be installed in both indoor and outdoor settings, such as:

- Garage of a private home or a rented property (if permitted by the owner)
- Shared parking space of condominium (if permitted by the property management)
- Private driveway (if permitted by municipal bylaws and neighborhood consensus)

If you intend to install the charger in settings other than a private garage fully owned by yourself, please make sure that you obtain permissions and consents from all responsible authorities and relevant parties, and that you **have electrical infrastructures prepared on site** for the charger.



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

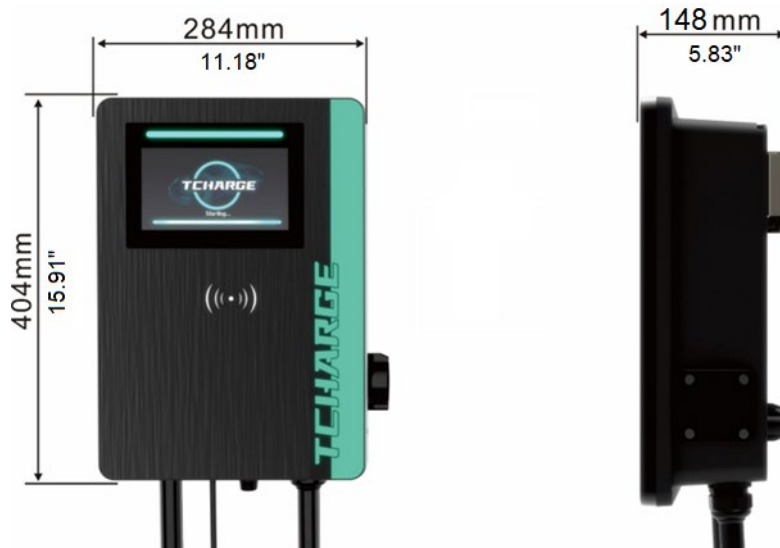


Figure 2.1 Dimensions of **TCHARGE®** UAC 50H AC Charger

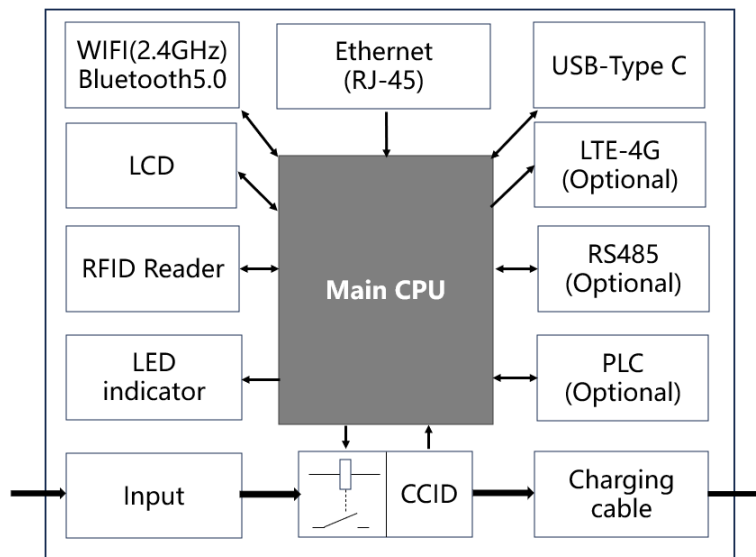


Figure 2.2 Block Diagram of **TCHARGE®** UAC 50 Series Charger
(note that UAC 50H does not carry LCD feature)

2.3 Key Technical Parameters

General Design	
Dimension (H*W*D)	16" H * 11" W * 5" D (404mm * 284mm * 127mm; 148mm / 5.8" deep with positioning plate)
Weight (Connector Included)	17.2 lb. (7.8kg)
Output Rating & Current	12kW / 50A (max.)
Input	208V AC / 240V AC, 50Hz / 60Hz
Connectors	Single outlet, Type1 (J-1772), 25 ft
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	Wi-Fi (2.4 GHz)
Charging Authorization	Mobile APP or RFID card
User Interface	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 2.1 Key Technical Parameters of TCHARGE® UAC 50H AC Charger

3. Prepare for Installation

3.1 Installation Space Requirements

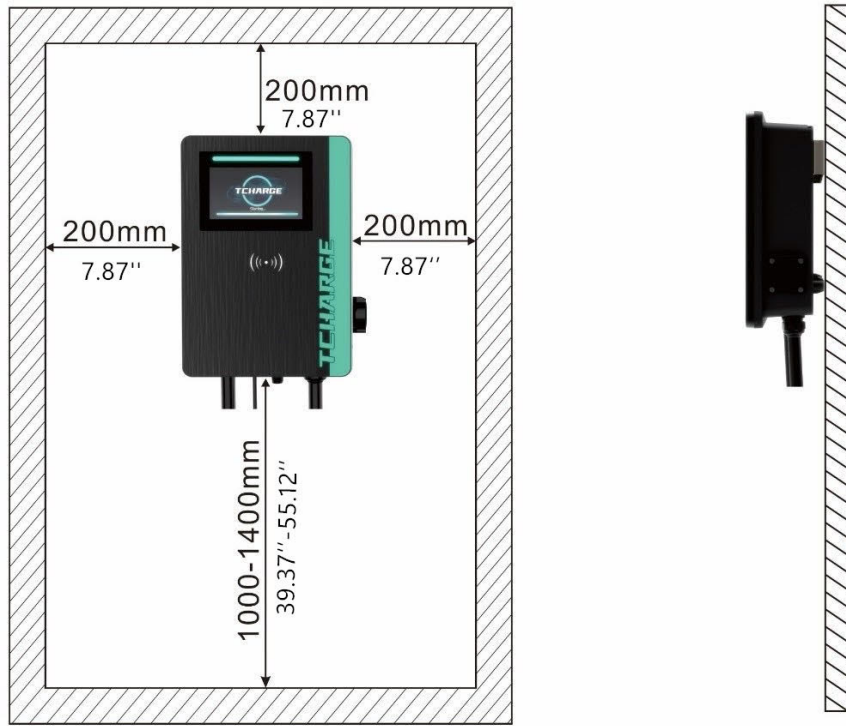


Figure 3.1 Space Requirement for Installation of **TCHARGE®** UAC 50H Charger

For installation, clearances reserved around the UAC 50H AC 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** if you want to install the charger on a mounting pole that you purchase from another supplier.



Important Note

Since the **UAC 50H home charger requires restarting the charger to set up wireless internet connection**, we recommend **installing your home charger in a way that, when required, its power supply can be shut off and restored in an easy manner**. It is highly recommended to install the charger in proximity to your home electrical panel, or on a circuit with its own circuit breaker.

3.2 Installation Tools



Note

The following list of tools is the manufacturer's recommendation for installing **TCHARGE®** UAC 50H 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	Image	Main Uses
1	Multimeter		Checking electrical connections and measuring voltages
2	Impact drill		Drilling holes
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 key T10 (provided with the charger)		Unfastening and fastening bottom screw

Table 3.1 Recommended Tools for **TCHARGE®** UAC 50H AC Charger Installation

3.3 Installation Accessories

Below is a list of installation accessories packed with the **TCHARGE®** UAC 50H AC charger.



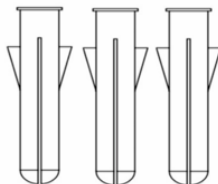

No.	Accessory Specs	Diagram	Count
A	Positioning plate		1
B	ST4x40 screws		3
C	Φ6 expansion tubes		3
D	Waterproof gasket		1

Table 3.2 Installation Accessories for **TCHARGE®** UAC 50H Charger

4. Install the Charger

4.1 Preparation and Wiring

4.1.1 Open the Front Cover

- 1) Unfasten the charger's bottom screw with T10 Torx key **provided together with the charger**. (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 keep the six screws removed in [step \(3\)](#) above. They are required at the end of installation to re-install the charger's front cover.

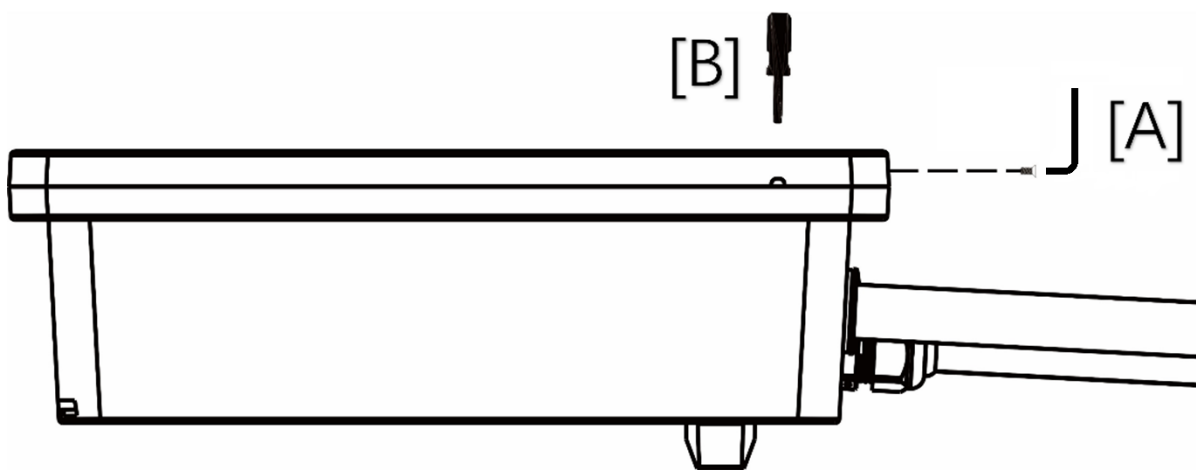


Figure 4.1 Removing the Front Cover of the Charger

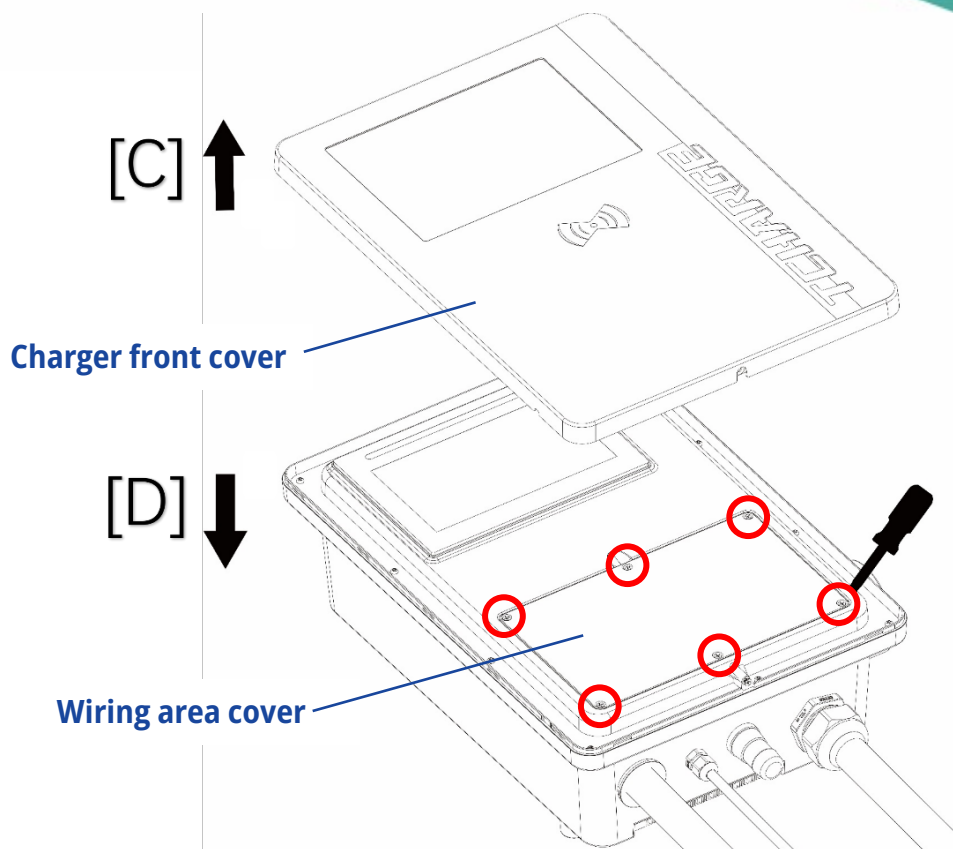


Figure 4.2 Removing the Wiring Area Cover of the Charger

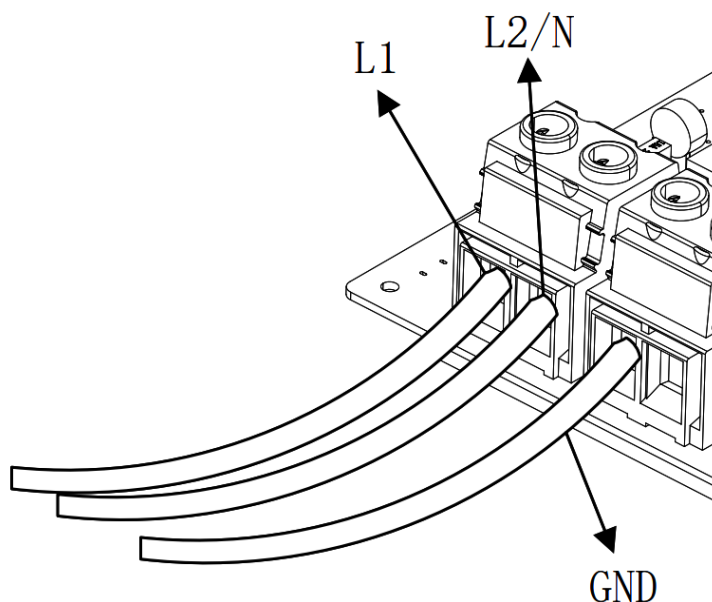
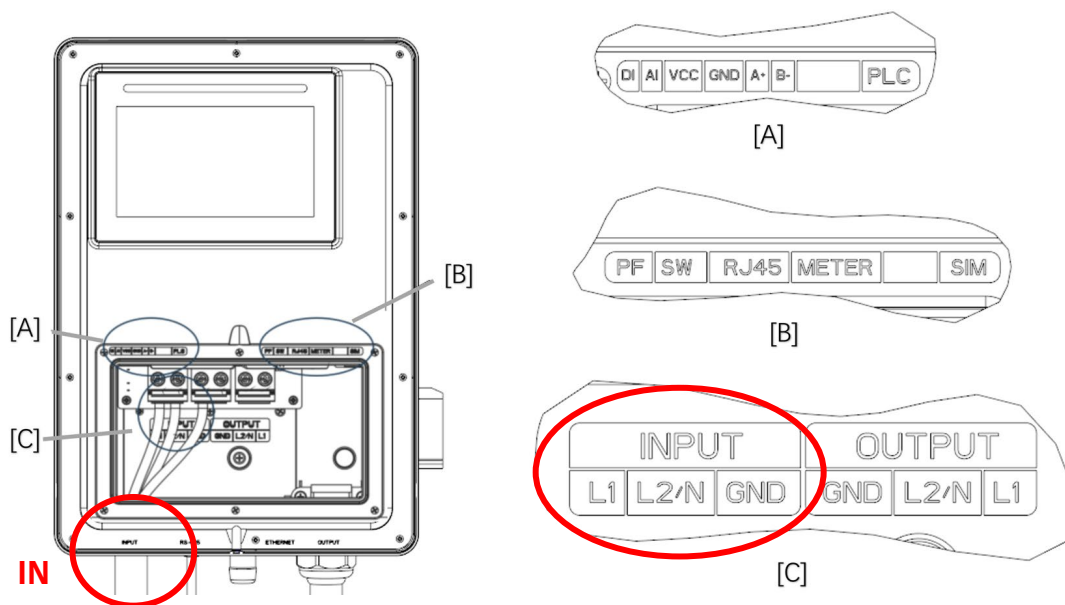
4.1.2 AC Input Wiring



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) Insert the prepared AC input power conductors through the unused cable inlet (gland) to the bottom left of the charger (marked with "INPUT" at the bottom; also see the mark [IN] to the bottom left of **Figure 4.3**).
- 5) In the opened wiring area, connect each conductor to its corresponding input terminal 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 wire to "L2/N" slot.



4.2 Installation

4.2.1 Install Positioning Plate

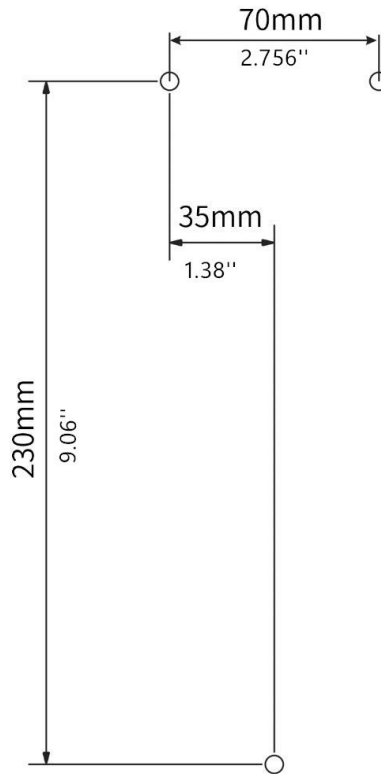


Figure 4.5 Relative Position for Screw Holes on the Wall

- 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 (**Accessory C**, see **Table 3.2** on **Page 13**) into the holes.
- 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**).

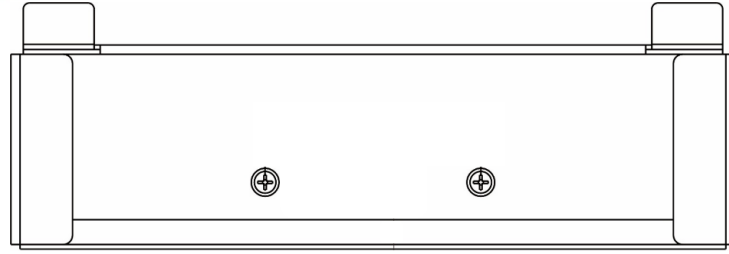


Figure 4.6 Positioning Plate as Fixed by the Screws

4.2.2 Mounting the Charger

- 1) 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.
- 2) 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**.

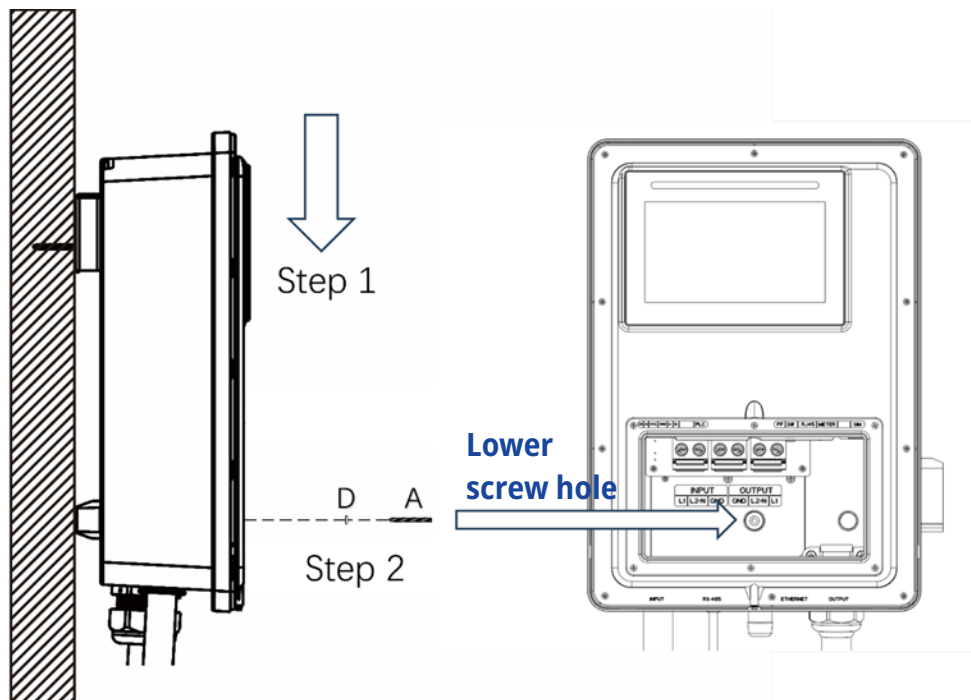


Figure 4.7 Fixing the Charger on the Wall

4.3 Restore the Front Cover

After all the wiring procedures are finished (see **Part 4.1**), and the lower screw going through the wiring area screw hole is installed (see **Part 4.2.2**), the front covers of the **TCHARGE®** UAC 50H charger can be restored to complete the installation process.



Note

Check before restoring the covers and make sure 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 4.8**).

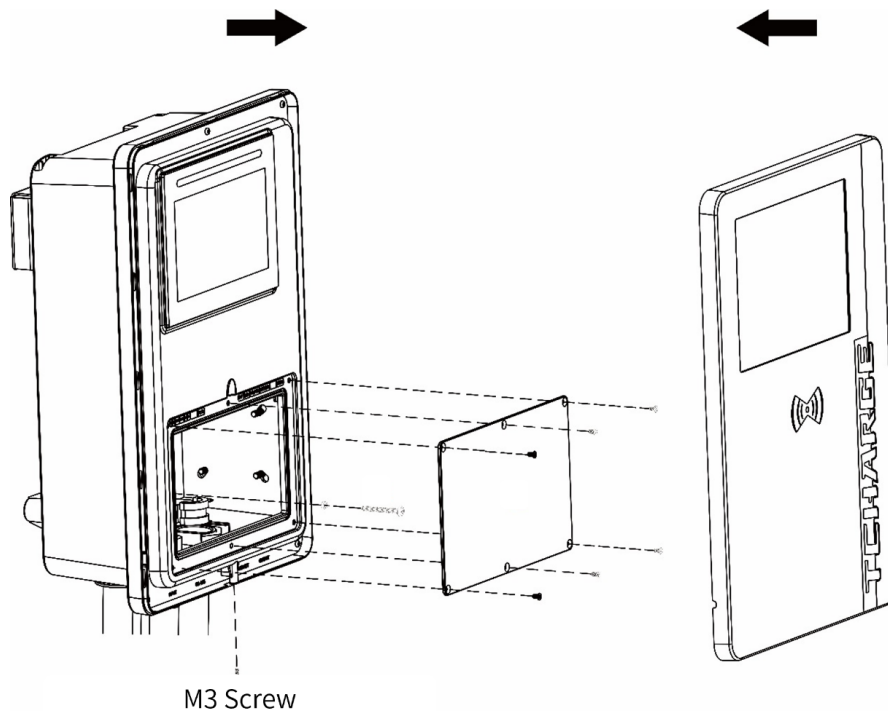


Figure 4.8 Restore the Front Covers of the Charger and Finish the Installation

5. Operation Notes

TCHARGE® UAC 50H AC charger is equipped with multiple user interaction features. See **Figure 5.1** and **Table 5.1** below.

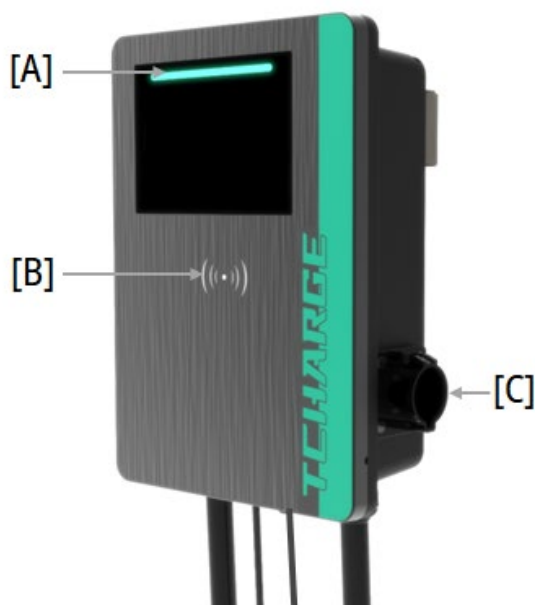


Figure 5.1 User Interaction Features of UAC 50H Home Charger

Features noted in **Figure 5.1** include:

Item	Name	Function
[A]	LED indicator strip	Indicate charger status
[B]	RFID card reader	Swipe the RFID card here to authorize charging
[C]	Connector socket	Hold the charging connector and prevent the connector from damages and contamination when charger is not in use

Table 5.1 User Interaction Features Detailed Explanation

5.1 LED Indicator Strip

The LED indicator strip is found on top of the charger's cover below the screen and RFID card reader zone. It shows the status of the charger with different combinations of light signals.

Please see **Table 5.2** below for a list of light signals applied to **TCHARGE®** UAC 50H home AC charger.

No.	Light Color	Light Status	Signal Meaning
1	Blue	Solid on	Standby status, not connected to internet
		Flashing	Standby status, connected to internet
2	Green	Slow flashing	Standby status, connected to a vehicle
		Fast flashing	Initiating a charging session
		Solid on	Charging
3	Red	Flashing	System fault
4	N/A	Off	Charger off

Table 5.2 **TCHARGE®** UAC 50H Home AC Charger LED Color Signal

5.2 RFID Card Reader

TCHARGE® UAC 50H home charger is typically delivered with **1 or 2 black colored RFID card**. However, lineup of the cards may change if custom requests has been made for order of the charger.

Black RFID card can **authorize the TCHARGE® UAC 50H charger to start and stop charging an EV with or without internet connections**. However, each of these cards is **strictly associated with a single UAC 50H charger and cannot be used to authorize charging on any other charger, including another UAC 50H charger**. Therefore, if you own multiple **TCHARGE®** UAC 50H chargers, please mark the RFID cards in a way that you can tell each of them serves which charger.

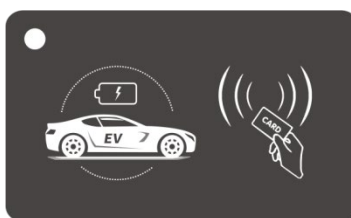


Figure 5.2 Typical **TCHARGE®** RFID Card Design

In addition, these black RFID cards do not support OCPP related features. If you do need to use RFID-card-supported OCPP related features on your home charger, please contact [TCHARGE®](#) tech team for specific solutions.

To use an RFID card to authorize charging, just **tap the RFID card in the card reading area ([B] in Figure 5.1)** after plugging the connector (charging gun) into a vehicle. Messages of start charging will appear on the screen display and your [TCHARGE®](#) home charging mobile APP (if you have already bonded the charger to your [TCHARGE®](#) mobile APP account; see [TCHARGE® UAC 50H Home Charger Mobile APP User Guide](#) document for more information).

During an ongoing charging session, you can tap the RFID card again to make a stop charging authorization.

5.3 Connector Socket

The connector socket of [TCHARGE®](#) UAC 50H home AC charger is attached to the right side of the charger's body ([C] in Figure 5.1). **When the charger is not in use, it is recommended to plug the connector into the socket** to protect the contacting surface of the connector.

6. 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** directly with the following information:

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

Tel: +1 (317) 772-1526

Email: info@blueviewelectricity.com







7. Compliance Information

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

- IEC 61851-1
- IEC 61851-21-1
- EN 61000-3-3
- IEC 62196-1

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 User 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 User 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.	 
iOS Devices APP Download	Search "TCharge" in APP Store or scan the QR code to the right to install the TCHARGE® home charging APP on your Apple device.	 

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