GO EV Charger

Installation Manual

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Document Version History

Version	Date	Changes
1.0	20240202	Initial release
1.1	20240315	Updated and reorganized installation and commissioning procedure to align with phase 2 software release.

Contents

IMPORTANT SAFETY INFORMATION

SAVE THESE INSTRUCTIONS

This manual contains important instructions for installing and maintaining the Tigo GO EV Charger. The charger must be installed and maintained only by qualified personnel in accordance with applicable electrical codes. Before installing the charger, read this document carefully to get familiar with product information and safety precautions.

> ⚠️ **DANGER!**

- Do not install the charger near flammable materials.

- Opening the enclosure exposes potentially lethal voltage.

- Do not use with extension cords.

- Disconnect power at the circuit breaker/RCD before performing any repairs or maintenance.

> ⚠️ **CAUTION!**
> Failure to follow instructions herein may cause equipment damage not covered by the warranty.

- Check specifications for all components in the Specifications section of this manual.

- Components must operate within the technical specifications listed in their data sheets.

- Use only copper conductors rated 75 °C or higher. Do not use fine-stranded conductors.

- Unused conduit openings must be properly sealed and connected conduit must use appropriate fittings. The GO EV Charger enclosure is rated IP65.

- Always wear appropriate PPE and use insulated tools.

- Do not operate Tigo components if they have been physically damaged. Check all cables and connectors and ensure they are in good condition.

These safety symbols may appear in the manual:

DANGER!
A hazardous situation which could result in serious injury or loss of life.

CAUTION!
A hazardous situation which could result in injury or damage to the product.

These symbols may appear on Tigo enclosures:

Risk of electrical shock.

Risk of burns.

Check the operating instructions.

Caution, the inverter may retain high voltage for up to five minutes after disconnection.

Avoid tampering.

Observe caution.

Grounding connection.

Conformité Européene mark

Technischer Überwachungsverein (TÜV) product certification mark
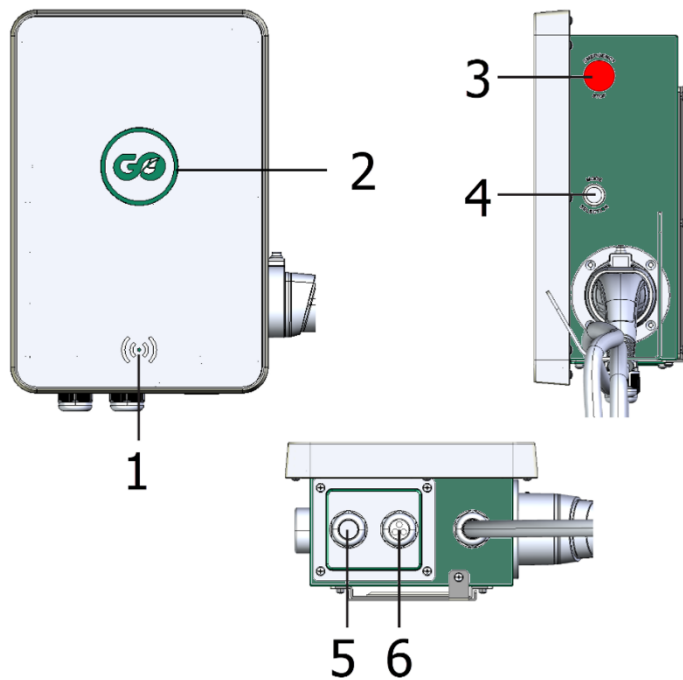
UK Conformity Assessed mark

Do not dispose with household waste.

Recyclable

Overview

The GO EV Charger extends the Tigo residential solar solution to electric vehicles, driving down transportation costs as part of an intelligent energy management strategy.

1	RFID scanner	Use an RFID card to enable vehicle charging.
2	LED status indicator	View charger states.
3	Emergency Stop	Shut down the charger.
4	Mode selector	Switch between Green and Boost modes and disconnect the charger.
5	AC input port	Connect conductors from the AC source to the charger.
6	COM port	Connect a CAT5/6 cable from the inverter to the charger.

Charger dimensions (w/h/d) are: 265 x 370 x 155 mm.

EV Charger boxes include mounting hardware and:

- Cord hook
- Two RFID cards
- Replacement EI Link to EI Inverter COM cable (RJ-45 to USB)
- Waterproof RJ-45 connector

CAUTION!
The charger must be installed alongside an operating, updated Tigo EI Inverter. The process of commissioning and connecting the charger must be run in several steps using the EI mobile app.
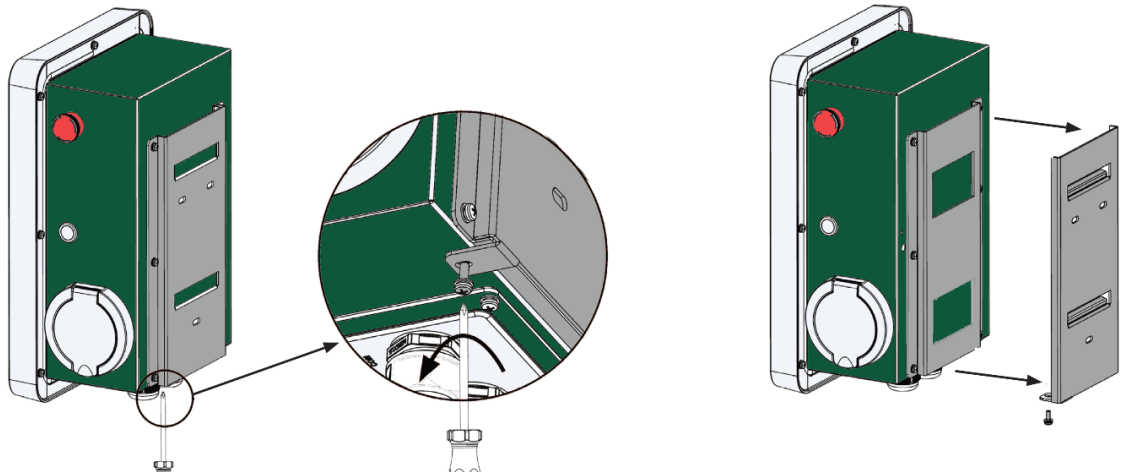
Mount the Wall Bracket and Cord Hook

The charger enclosure is NEMA 4/IP65-rated for indoor and outdoor exposure. Locate the charger where the following conditions are met:
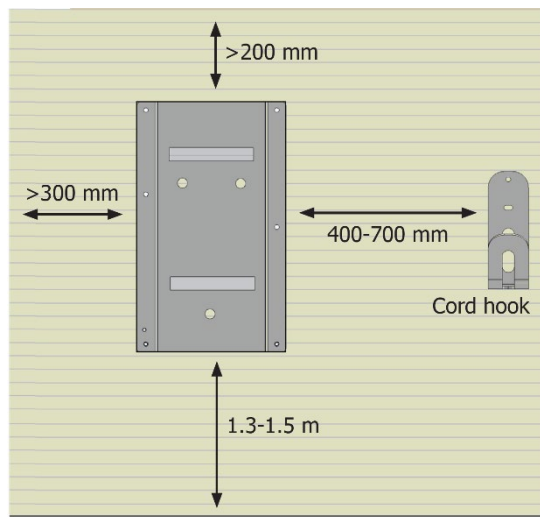
- Operating temperature range: -30° – 50 °C
- Relative humidity: 5 – 95%
- Protected from direct sun and precipitation

To mount the wall bracket and cord hook:
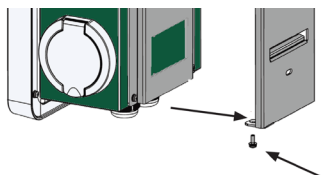
1. Remove the wall mount bracket from the charger.

2. Attach the bracket and cord hook to a wall or stand using appropriate fasteners.

You may hang and attach the charger on the wall bracket before or after AC conductors and the COM cable have been connected.

Use the wall bracket screw to attach the charger.

Connect AC Conductors and the COM Cable to the Charger

Connect phase, neutral, and ground conductors from the AC essential loads panel to the charger using:

- A Type A residual current device (RCD) breaker with a trip current ⩽30 mA
- Single phase: three-core 10 mm^2 gauge, 12.5 – 18 mm O.D. copper wire
- Three phase: five-core 10 mm^2 gauge, 12.5 – 18 mm O.D. copper wire

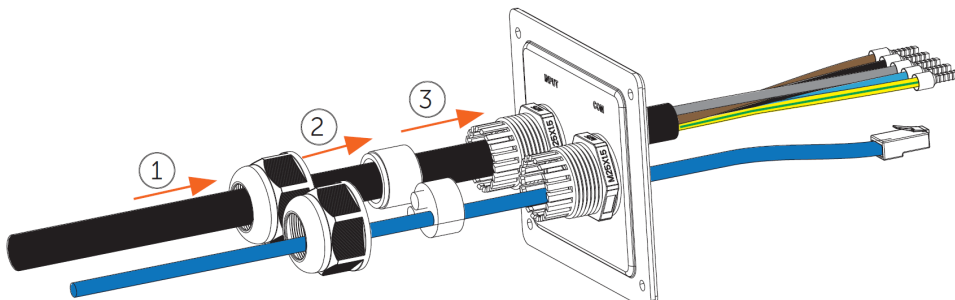To connect AC conductors and a straight-through CAT5/6 COM cable with RJ-45 connectors to the charger:

1. Unfasten and slide out the charger wirebox.
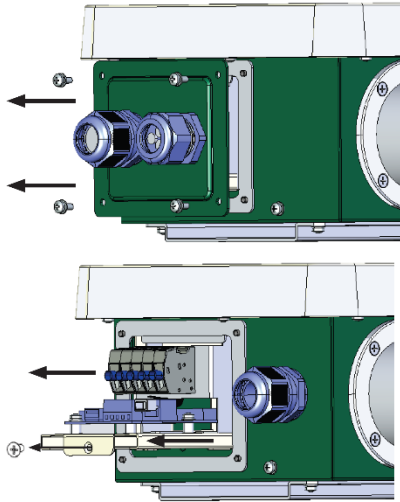
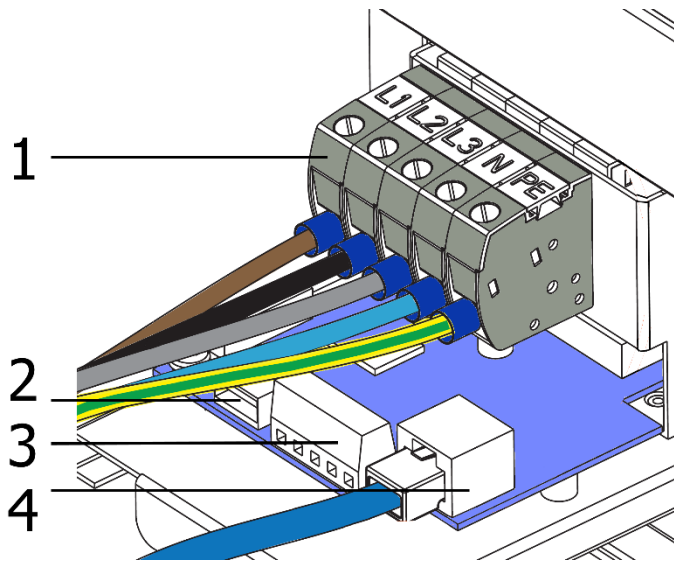2. Crimp all power conductors with the provided ferrules.
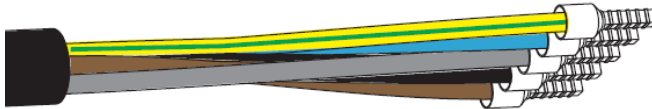
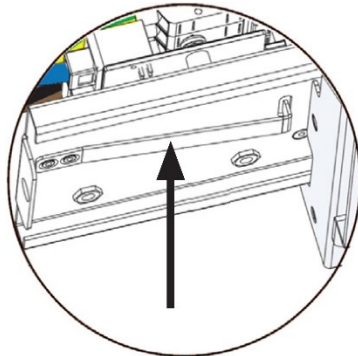3. Route power conductors and the COM cable through the wirebox ports.

4. Connect power conductors and the COM cable. Torque to 1.5 Nm.

1	AC terminals
2	USB upgrade port (not used)
3	RS-485 terminals (not used)
4	RJ-45 COM port

5. Press the spring clip on the bottom to slide the wirebox back.

6. Re-fasten the wirebox and the cover plate.

7. Hang and attach the charger to the wall bracket.

Commission and Connect the Charger

The charger must be installed alongside an operating, updated Tigo EI Inverter. The process of commissioning and connecting the charger must be run in several steps using the EI mobile app.
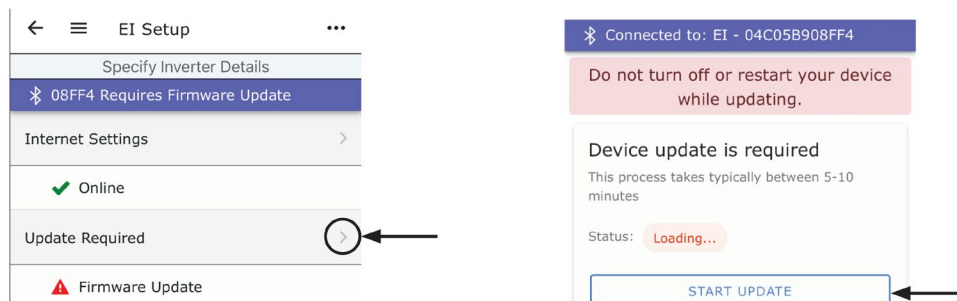
Update System Firmware

⚠️ CAUTION!
You must update inverter firmware before reconfiguring COM cables for the GO EV Charger.

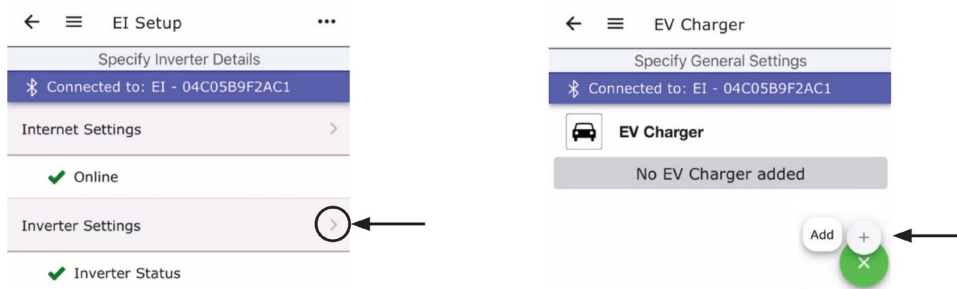Within Bluetooth range of the inverter, open the EI app on your mobile device.

1. Tap the Settings gear icon and tap *Edit System > Select Equipment > Inverters > View Details > CONNECT*.

2. If *Firmware Update* appears, tap *Update Required > START UPDATE*.

Add the GO EV Charger

After all firmware is updated:

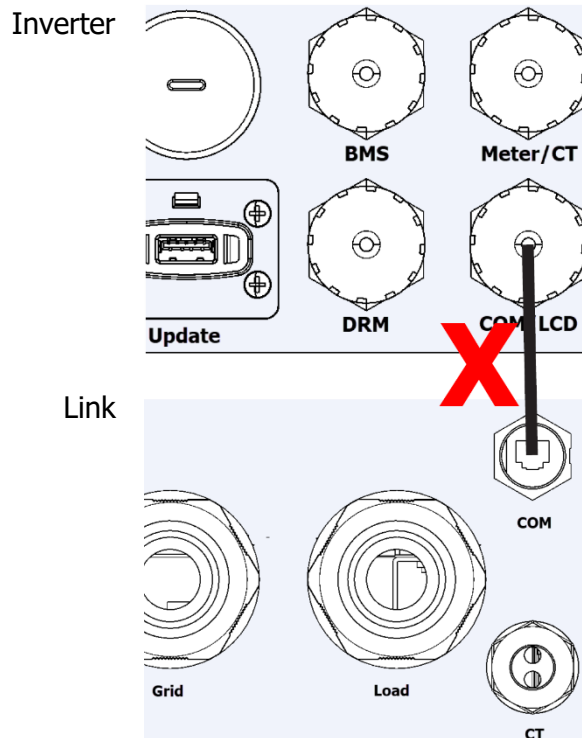1. Tap *Inverter Settings > Advanced Settings > EV Charger > Add*.

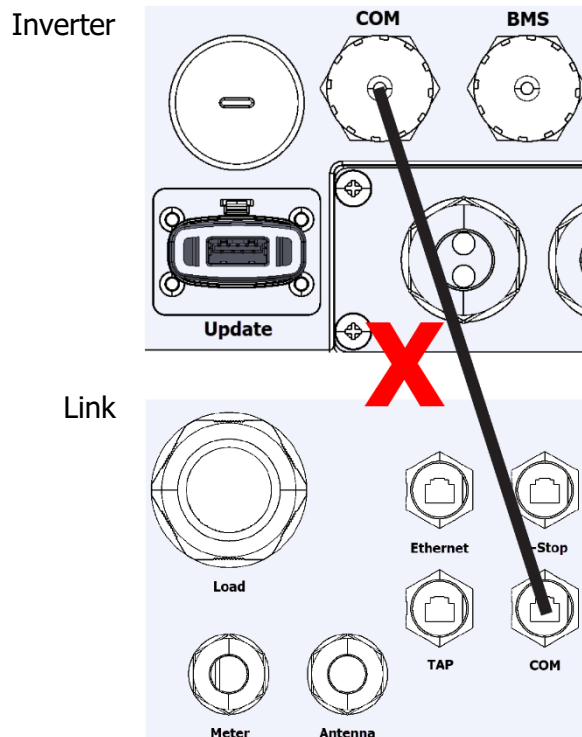2. Scan the barcode on the left side of the charger and tap *SAVE BARCODE*.

Remove the Existing Inverter-to-Link COM Cable (RJ-45 to RJ-45)

Remove the existing cable that connects the inverter and link *COM* ports.

Single phase:

Three phase:

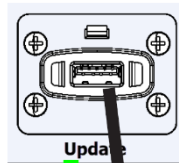## Connect the New Inverter-to-Link COM Cable (USB-A to RJ-45)

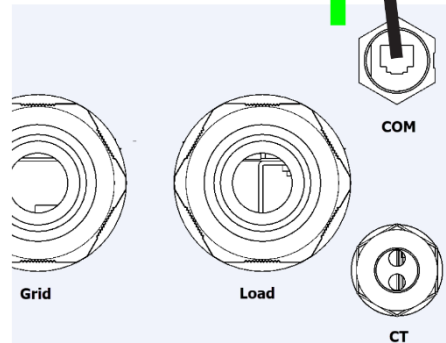The new COM cable is included in the GO EV Charger box.

Connect the new cable between the link *COM* port and the inverter *Update* port.
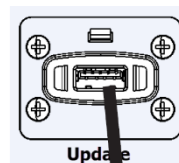
Single phase:

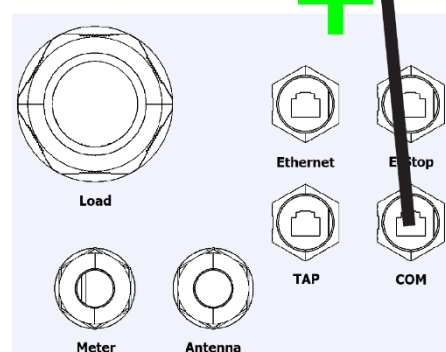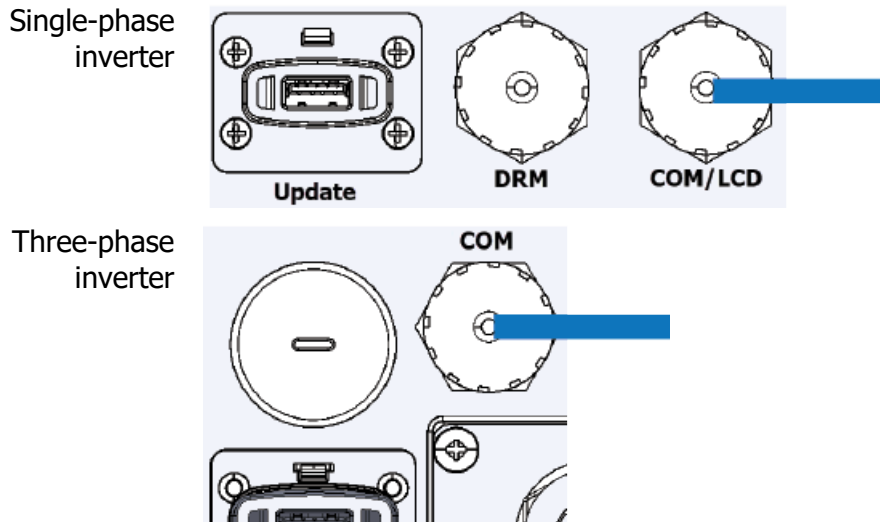*Three phase:*

Connect the Charger-to-Inverter COM Cable

Connect the CAT5/6 cable coming from the charger to the inverter COM port. Use the waterproof RJ-45 connector found in the charger *Accessories* bag.

Single-phase inverter

Three-phase inverter

Complete Commissioning

After configuring cables:

1. Turn on the charger by closing its breaker at the main service panel. The GO logo will display blue.

2. Tap *NEXT* in the EI app to complete commissioning.

3. If adding to a 3-phase system, set the Maximum Charging Power setting according to local regulations and tap *SAVE*.

# Operation

This section includes the following topics:

- Basic Operation
- LED Status Indicator
- Advanced Features
- Security with RFID Cards

Basic Operation

The charger is ready to go if the charger's circuit breaker at the AC essential loads panel is on (closed) and the *Emergency Stop* button is not depressed. The GO logo color should be green or blue.

To start charging an EV:

1. Connect the charging cable to the EV.

2. Press the mode selector button to toggle Green/Boost modes.

Emergency Stop button

Mode selector button
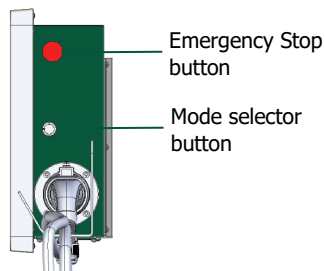
- Green mode – EV charging current is drawn only from solar modules. The LED status indicator displays a green GO with a green ring.

- Boost mode – EV charging current is drawn from solar modules and the grid as needed. The LED status indicator displays a green GO with a blue ring.
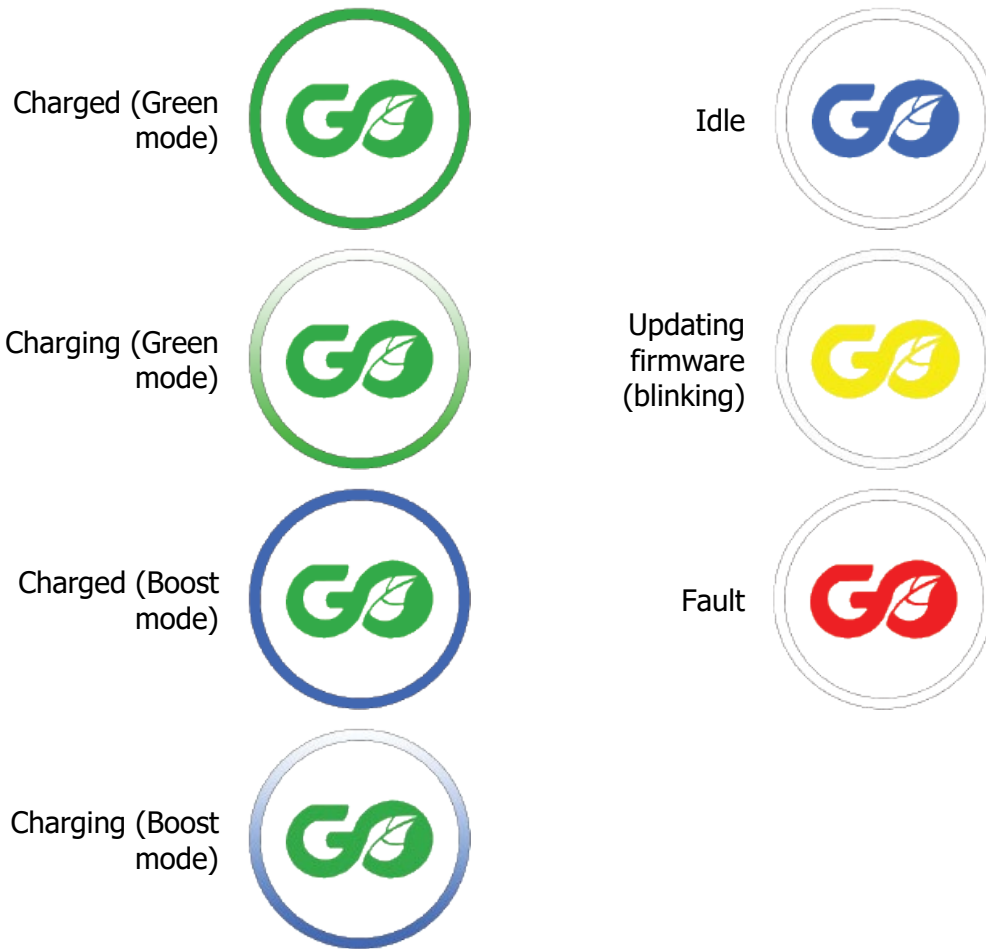
To stop charging:

1. Press the mode selector button for three seconds.

2. Disconnect the charging cable from the EV.

To stop charging immediately, press the *Emergency Stop* button. The LED status indicator will display a red GO. To release the button and reset the charger, remove the charger cord and twist the Emergency Stop button clockwise.

LED Status Indicator

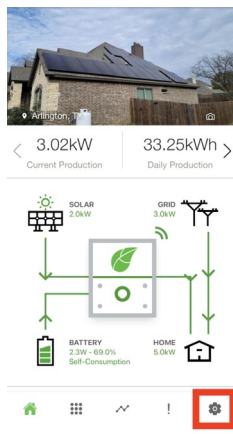The % of ring coloration indicates the vehicle state-of-charge (SOC) percentage.

Charged (Green mode)		Idle	
Charging (Green mode)		Updating firmware (blinking)	
Charged (Boost mode)		Fault	
Charging (Boost mode)			
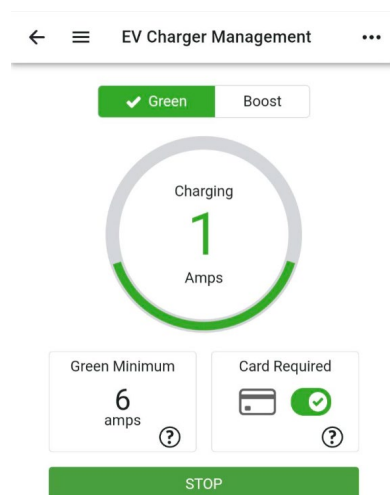
- EV charging current is drawn only from solar modules.

- Tapping *Green Minimum* sets the solar energy threshold (minus the household load) below which the EV will not charge.
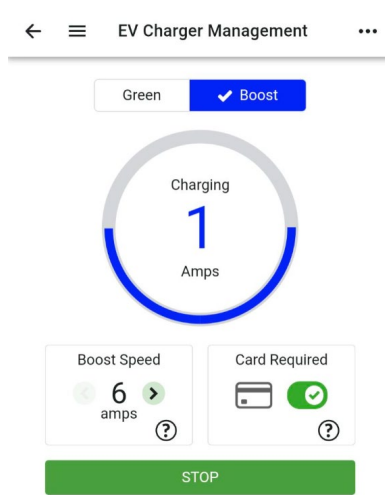
  For example, if Green Minimum is set to 6, the EV will charge when the solar energy current minus the household load current is greater than 6 amps.

- The LED status indicator displays a green GO and a green ring.

- Tapping *STOP* ends the charging session.

In Boost mode:

- EV charging current is drawn from solar modules and the grid as needed.

- Tap *Boost Speed* to set the maximum current the charger will draw from the grid to charge the EV.

  For example, if Boost Speed is set to 16, the charger will draw whatever solar energy is available plus up to 16 amps of current from the grid.

- The LED status indicator displays a green GO and a blue ring.

- Tapping *STOP* ends the charging session.

Security with RFID Cards

Two RFID cards let the user control who can access the charger. If *Card Required* is toggled on, swiping the RFID card across the front of the charger will enable charging.
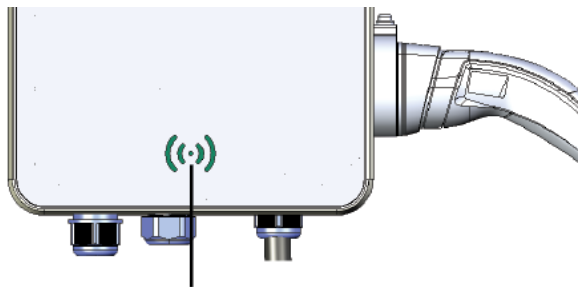
Reference

This section includes the following topics:

- Specifications
- Warranty
- Maintenance

Specifications

For detailed specifications, download the GO EV Charger data sheet.

Download comprehensive specifications for all Tigo products from the Tigoenergy.com Downloads (www.tigoenergy.com/downloads) page.

Warranty

Download comprehensive warranty information from the Tigoenergy.com Downloads (www.tigoenergy.com/downloads) page.

Maintenance

Any operational problems or external damage must be evaluated by a qualified service technician. In addition:

- Clean surfaces with a damp cloth only. Never use solvents or abrasives.
- Ensure the charging cord is not frayed or cut.
- Check that the connector seats properly in the EV charging port.

Customer Support

The Tigo support team is available by:

- Chatting with a tech through the Tigo EI app.
- Submitting a ticket from the Tigo EI app.
- Submitting a ticket through the Tigo Help Center.
- Calling +39 055 1987 0059 (Italy).

Support will need:

- A description and history of the problem.
- Color and activity of the LED status indicator.
- A procedure for reproducing the problem, if possible.

In addition, the Tigo Community web forum is an important 24/7 resource where ESS technicians learn, share, and collaborate.