



# **WEB VERSION**

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## **1 WARNINGS AND CAUTIONS**

### WARNINGS:

- TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER AT CIRCUIT BREAKER OR FUSE AND TEST THAT POWER IS OFF BEFORE WIRING, REPLACING OR SERVICING THE PRODUCT!
- HAZARD OF ELECTROCUTION, SHOCK, EXPLOSION, OR ARC FLASH. This device has arcing or sparking parts that should not be exposed to flammable vapors.
- TO AVOID FIRE, SHOCK, DEATH, OR DAMAGE TO THE CHARGER, carefully read the charging instructions in your vehicle's manual before you use the charger.
- RISK OF ELECTRIC SHOCK. Do not remove cover or attempt to open the enclosure of the device.
- This device should be installed, adjusted, and serviced by qualified electrical personnel familiar with the construction and operation of this type of charger and the dangers involved.
- Do not forcefully pull the charging cable, damage it with sharp objects, put fingers, or insert foreign objects into any part of the charging connector.
- Do not use the charger when you are in the vehicle, or the charger is exposed to severe rain, snow, or other severe weather.
- Connect only to a circuit providing branch circuit overcurrent protection in accordance with the National Electrical Code, ANSI/NFPA 70 (United States), the Canadian Electrical Code, Part I, C22.1. Canada), or NOM-001-SEDE (Mexico).

Model	Circuit Breaker/Fuse Rating	
EV48G, EV48S	60A	
EV80G, EV80S	100A	

### CAUTIONS:

- No user serviceable parts inside.
- The device is designed only for vehicles that are compatible with the SAE J1772 Level 2 charging standard.
- Do not use the charger if it is defective, appears cracked, frayed, broken, or damaged.
- When transporting the charger, handle with care and do not drag or step on the device.
- Do not touch the charging connector terminal with sharp metallic objects to prevent damage.
- Incorrect installation and testing of the charger could potentially damage either the vehicle's battery or the device. Any resulting damage is excluded from the warranty for the device.
- Ensure that the charging cable is positioned properly during charging so it does not get stepped on, tripped over, or subjected to damage or stress.
- Use appropriate protection when connecting to the main power distribution cable.
- Type B, C or D breaker with the rating current for table must be installed in the upstream AC distribution box.
- Disconnect switch for each unground conductor of AC input (not included) in accordance with the National Electrical Code ANSI/NFPA 70.

# **2 SAFETY STANDARDS AND SPECIFICATIONS**

# **Design Safety Standards**

UL2594: Electric Vehicle Supply Equipment

UL 2231-1: Personnel Protection Systems for Electric Vehicle (EV) Supply

**Circuits: General Requirements** 

UL 2231-2: Personnel Protection Systems for Electric Vehicle (EV) Supply

Circuits: Particular Requirements for Protection Devices for Use in Charging Systems

UL 2251: Plugs, Receptacles and Couplers for Electric Vehicles

UL 62: Flexible Cords and Cables

UL 991: Tests for Safety-Related Controls Employing Solid-State Devices

UL 1998: Software in Programmable Components

NFPA 70 Article 625: National Electrical Code, Electric Vehicle Charging System

UL840 (Clearance and Creepage)

	Specifications		
Model Name	EV48G, EV48S, EV80G, EV80S		
Rated Input Voltage	200-240V AC / Single-Phase		
Rated Output Current	48A / 80A		
AC Power Frequency	50/60 Hz		
Input Protection	UVP, OVP, RCD, SPD, Ground Fault Protection		
Output Protection	OCP, OTP, Control Pilot Fault Protection		
Output Interface	SAE J1772 AC Charging Connector		
Storage Temperature	-40°F (-40°C) to +158°F (70°C)		
Operation Temperature	-22°F (-30°C) to +122°F (50°C)		
Relative Operation Humidity	95% RH Maximum		
Relative Storage Humidity	95% RH Maximum		
Module	4G Cellular		
Cable Length	18 ft		
Protection Level	IK08 and IP54		
Installation Type	Wall mount or pedestal mount		
Altitude	≤ 2,000 m		
Weight	EV48G and EV48S: 6.5 ± 0.5 kg EV80G and EV80S: 7.5 ± 0.5 kg		
Dimensions	EV48G and EV80G: 14.2 in. x 9.8 in. x 3.4 in. (360.50 mm x 249.94 mm x 86.94 mm) EV48S and EV80S: 14.2 in. x 9.8 in. x 3.9 in. (360.50 mm x 249.94 mm x 100 mm)		
Status Indication	RED, GREEN, BLUE LED		

# **3 TOOLS NEEDED**

#	Product Name	Quantity
1	AC Charger (With Charging Cable)	1
2	User Manual	1
3	Wall Mounted Bracket	1
4	M5 teeth screws	2
5	5 M6 Hexagonal Expansion Screws	

# Tools Required before You Install the Wall-Mounted Charger:

- Wire stripper
- Phillips screwdriver
- Adjustable Wrench
- Voltmeter or digital multimeter (for measuring AC voltage at the installation site)
- Level
- · Pencil or marker
- Drill



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# **4 BASIC INTERFACE**



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# **5 DIMENSIONS**







Charger Indication Light Status			
BLUE Light	Standby - BLUE light The Ready light stays steady in standby mode.		
GREEN Light	Waiting for Charge - GREEN light After the vehicle connector is connected to the vehicle inlet, the Charge light remains lit		
GREEN Light Flashing	Charging - GREEN light flashes The Charge light flashes while charging.		
RED Light	Fault - RED light If the RED light is ON, an error occurred. Refer to section 9, "Error and Warning Messages" for detailed information.		

## **7 INSTALLATION**

### 7.1 Wiring

### 240V Single-Phase

CAUTION: The two phases used must each measure 120V to GROUND (GND). Earth-ground must be connected to the NEUTRAL wire at one point, usually, at the breaker panel.



### 208V 3-Phase, Wye-Connected

CAUTION: The 208V feed is from a Y-connection power grid, and the AC charger can connect to L1 and L2, L2 and L3, and L1 and L3. Earth-ground must be connected to the NEUTRAL wire at one point, usually, at the breaker panel. Leave the unused leg open. Do not connect it to a NEUTRAL bar, or to GROUND. Be sure the center point is Earth-ground somewhere in the system.

L2

GND



Circuit Breaker Options Table			
Output Amperage Amps	48A	80A	
Circuit Breaker Options Amps	60A	100A	

## **7 INSTALLATION**

### 7.2 Wall-Mounted Bracket Installation

- **1.** Mark the four places on the wall for the four screw holes for the bracket. Drill the screw holes with the following dimensions: Diameter 0.33 in. (8.5 mm) and Depth: 2.05 in. (52 mm).
- 2. Insert wall anchors appropriate for the wall substrate on which you are mounting.
- **3.** Align the screw holes on the bracket with the screw holes on the wall. Insert the four expansion screws and M6 screw and tighten to fix the wall-mounted bracket to the wall.



4. Align the rear notch of charger with the wall-mounted bracket.



5. Secure device to wall-mounted bracket with two M5 screws.



# **8 OPERATING PROCEDURES**

### Overview

- User authorization, if required.
- Connect to vehicle charging inlet.
- Charging messages.
- Charging complete.

Operating Procedures			
READY	<ol> <li>Standby - BLUE light - If you are using the EV48S or EV80S model, you may need to enter user credentials.</li> </ol>		
	<ul> <li>2. Plug the charging connector into the vehicle's charging inlet.</li> <li>NOTE: If you have activated RFID on your charging station, you must tap the RFID card on the indicated spot, and then plug in within 2 minutes.</li> </ul>		
	<ul> <li>3. Charging</li> <li>The GREEN light flashes automatically, which indicates the device is charging.</li> <li>NOTES:</li> <li>If the RED light (an error occurred) is lit, plug-in the vehicle</li> </ul>		
CHANGE	<ul><li>connector again.</li><li>If RED light is still lit, refer to the "Error and Warning Messages," section.</li></ul>		
	<b>4.</b> Charging complete. Unplug the connector. <b>NOTE:</b> The GREEN light stops flashing.		

## Software Setup

For instructions on registering and verifying your charger, refer to the ampUp Installer Quick Start Guide.

# 9 ERRORS AND WARNING MESSAGES

Error	BLUE LED	GREEN LED	RED LED	Message
Input OVP	-	-	1 flash, followed by 3 second pause	Auto-Recover
Input UVP	-	-	2 flashes, followed by 3 second pause	Auto-Recover
Output OCP	-	-	3 flashes, followed by 3 second pause	Auto-Recover
OTP	-	-	4 flashes, followed by 3 second pause	Auto-Recover
RCD Abnormal	-	-	5 flashes, followed by 3 second pause	Auto-Recover
Ground Fault	-	-	6 flashes, followed by 3 second pause	Auto-Recover
Control Pilot Fault	-	-	Flickers	Auto-Recover
MCU Self-Test Fail	-	-	Constantly bright	Auto-Recover
RCD Self-Test Fail	-	-	Constantly bright	Contact customer service.
Relay Self-Test Fail	-	-	Constantly bright	Contact customer service.
RCD Abnormal Stop Charging	-	-	Constantly bright	Contact customer service.
Output OCP Stop Charging	-	-	Constantly bright	Contact customer service.
OTP Stop Charging	-	-	Constantly bright	Contact customer service.

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### **10 DAILY MAINTENANCE**

### WARNING:

Avoid moisture or water in the charger. If there is water or moisture, immediately power OFF the charger, and notify professional personnel to perform maintenance before its next use.

### CAUTIONS:

- If possible, keep the charger clean and in a clean area with low humidity. Do not install it in an environment that is near the sea, or with high-oil, high-humidity, or high-dust.
- If there is any damage or dirt on the vehicle connector, charging cable, or vehicle connector holder, please contact the maintenance personnel immediately.
- Please use the charger properly. Do not hit or press hard on the case. If the case is damaged, please contact a professional technician.
- Avoid placing the charger near hot objects, in high-temperature locations, and away from dangerous substances, such as flammable gases and corrosive materials.
- Do not place external objects or heavy objects on the charger.

# 11 STANDARD STATEMENTS AND WARRANY

### FCC STATEMENT:

This device complies with Part 15 of the FCC Rules and ISED License-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by Leviton could void the user's authority to operate the equipment.

These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This Class A digital apparatus complies with Canadian CAN ICES-3(A)/NMB-3(A).

### FCC SUPPLIER'S DECLARATION OF CONFORMITY:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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### FOR CANADA ONLY

For warranty information and/or product returns, residents of Canada should contact Leviton in writing at Leviton Manufacturing of Canada ULC to the attention of the Quality Assurance Department, 165 Hymus Blvd, Pointe-Claire (Quebec), Canada H9R 1E9 or by telephone at 1-800-405-5320.

### FOR MODELS 48G AND 80G LIMITED 2 YEAR WARRANTY AND EXCLUSIONS

Leviton warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Leviton is free of defects in materials and workmanship under normal and proper use for two years from the purchase date. Leviton's only obligation is to correct such defects by repair or replacement, at its option. For details visit www.leviton.com or call 1-800-824-3005. This warranty excludes and improper environment, overloaded, misused, opened, abused, or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. There are no other or implied warranties of any kind, including merchantability and fitness for a particular purpose, but if any implied warranty is required by the applicable jurisdiction, the duration of any such implied warranty, including merchantability and fitness for a particular purpose, is limited to two years of, any equipment, lost sales or profits or delay or failure to perform this warranty obligation. The remedies under the exclusive remedies under this warranty, whether based on contract, tor to otherwise.

### FOR MODELS 48S AND 80S LIMITED 3 YEAR WARRANTY AND EXCLUSIONS

Leviton warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Leviton is free of defects in materials and workmanship under normal and proper use for three years from the purchase date. Leviton's only obligation is to correct such defects by repair or replacement, at its option. For details visit www.leviton.com or call 1-800-824-3005. This warranty excludes and improper environment, overloaded, misused, opened, abused, or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. There are no other or implied warranties of any kind, including merchantability and fitness for a particular purpose, but if any implied warranty is required by the applicable jurisdiction, the duration of any such implied warranty, including merchantability and fitness for a particular purpose, but if any implied warranty is loss of use of, any equipment, lost sales or profits or delay or failure to perform this warranty obligation. The remedies provided herein are the exclusive remedies under this warranty, whether based on contract, tort or otherwise.

For Technical Assistance Call: 1-800-824-3005 (USA Only) or 1-800-405-5320 (Canada Only) www.leviton.com

For Software and Setup Technical Assistance Call: 1-833-692-6787



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