



PORTABLE EV CHARGER LEVEL 1

Part Number: 285303
Manual No. LVL 1 CHARGER 090217-OP_r00



USER GUIDE

OPERATION MANUAL AND SERVICE PARTS LIST KEEP THE MANUAL WITH THE VEHICLE

NOTE: Read this manual before installing, operating or servicing this equipment. Failure to comply with the operation and maintenance instructions in this manual will VOID THE EQUIPMENT WARRANTY.

This publication contains the latest information available at the time of preparation. Every effort has been made to ensure accuracy. Vanair® Manufacturing, Inc. reserves the right to make design change modifications or improvements without prior notification.

Making unauthorized modification to the system components WILL VOID THE WARRANTY! Always contact Vanair® before beginning any changes to the EPEQ® EV Level 1 Charger.

Scan the QR Code below to connect to the product registration page for your Vanair® product. Product must be properly registered to validate the Warranty.



The VANLINKD® QR code is your one-stop-shop for resources while in the field. Scan the QR code with your smartphone to watch troubleshooting videos, access your machine's manual, order parts, and more!

VANLINKD®

Scan code for instant access to product details



286743_r0_EV CHARGER LEVEL 1

**EPEQ® ELECTRIFIED POWER
EQUIPMENT***

**EXCLUDES
ELEMENT BATTERY**



**VANAIR® VANTAGE
WARRANTY**

This limited warranty supersedes all previous Vanair® warranties and is exclusive with no other guarantees or warranties expressed or implied.

LIMITED WARRANTY—Subject to the expressed terms and conditions set forth below, Vanair® Mfg., Inc. ("Vanair"), of Michigan City, Indiana (USA), warrants to the original retail purchaser of new Vanair® equipment that such equipment is free from defects in materials and workmanship when shipped by Vanair®.

For warranty claims received by Vanair® within the applicable warranty periods described below, Vanair® will repair or replace any warranted equipment, parts or components that fail due to defects in material or workmanship or refund the purchase price for the equipment, at Vanair's discretion. Vanair® is not responsible for time or labor to gain access to the machine to perform work. WARRANTY WILL BE VOID IF GENUINE VANAIR PARTS AND FLUIDS ARE NOT USED.

Vanair® must be notified in writing within thirty (30) days of any such defect or failure. All warranty or returns must be pre-authorized in writing prior to performing warranty work. Call Vanair® for process and forms. Vanair® will provide instructions on the warranty claim procedures to be followed.

Warranty will commence upon receipt of the Warranty Registration Card. If the Warranty Registration Card is not received within six (6) months of shipment from Vanair®, the warranty commencement date shall be thirty (30) days from the date of shipment from Vanair®. Records of warranty adherence are the responsibility of the end user.

1. Inverters: 1 Year Parts / 1 Year Labor
2. Converters: 1 Year Parts / 1 Year Labor
3. Chargers: 1 Year Parts / 1 Year Labor
4. Electric Motors: 1 Year Parts / 1 Year Labor
5. EPEQ® Lithium Welder: 1 Year Parts / 1 Year Labor
6. Alternators: 1 Year Parts / 1 Year Labor
7. Compressor Air End:
 - Rotary Screw: Lifetime with Vanair® Authorized Service Kits and Lubricants : 3 Years Labor
 - Reciprocating: 3 Years Parts / 1 Year Labor
 - Scroll: 1 Year Parts / 1 Year Labor
8. Hydraulic Pumps/Motors: 2 Years Parts / 1 Year Labor
9. 1 Year Parts/Labor on the following:
 - All electronics and controls including, but not limited to:
 - (i) I/O Boards
 - (ii) Modules
 - (iii) Panel Boxes
 - (iv) Instrumentation
 - (v) Clutches
 - (vi) Solenoids
 - (vii) Running Gear/Trailers
 - (viii) Cooler Cores and Fans
 - (ix) Battery Management Systems and Controllers

This Limited Warranty shall not apply to:

1. Consumable components, such as: shaft seals, valves, belts, filters, capacitors, contactors, relays, brushes, wire or parts that fail due to normal wear and use.
2. Items furnished by Vanair®, but manufactured by others, such as engines and trade accessories (these items are covered by the manufacturer's warranty, if any).
3. Equipment that has been modified by any party other than Vanair® or equipment which has not been used and maintained in accordance with Vanair's specifications.

4. Equipment which has been improperly installed and/or improperly operated, based upon Vanair's specifications for the equipment or industry standards.

5. Equipment installed by non-authorized or third party personnel. Vanair® products are intended for purchase and use by commercial/industrial users and persons trained and experienced in the use and maintenance of industrial equipment.

In the event of a warranty claim covered by this Limited Warranty, the exclusive remedies shall be, at Vanair's sole discretion: (i) repair; or (ii) replacement; (iii) where authorized in writing by Vanair® in appropriate cases, the reasonable cost of repair or replacement at an authorized Vanair® service facility; or (iv) payment of (or credit for) the purchase price (less reasonable depreciation based upon actual use) upon return of the equipment at the warranty claimant's risk and expense. Vanair® will pay standard ground freight for any warranty item shipped to and from Vanair® or (Vanair® designated facility) within the first year of the applicable warranty period. Any additional expedited freight cost is the responsibility of the purchaser.

TO THE GREAT EXTENT PERMITTED BY APPLICABLE LAW, THE REMEDIES PROVIDED HEREIN ARE THE SOLE AND EXCLUSIVE REMEDIES APPLICABLE TO THE VANAIR® EQUIPMENT. IN NO EVENT SHALL VANAIR® BECOME LIABLE FOR DIRECT, INDIRECT, SPECIAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOSS OF PROFIT OR LOST BUSINESS OPPORTUNITY), WHETHER BASED ON CONTRACT, TORT OR ANY OTHER LEGAL THEORY. IN NO EVENT SHALL VANAIR® BECOME OBLIGATED TO PAY MORE ON ANY WARRANTY CLAIM THAN THE PURCHASE PRICE ACTUALLY PAID BY THE ORIGINAL RETAIL PURCHASER.

THIS LIMITED WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER WARRANTY OR GUARANTEE ARISING BY OPERATION OF LAW. ANY WARRANTY NOT EXPRESSLY PROVIDED HEREIN, IMPLIED WARRANTY, GUARANTEE AND ANY REPRESENTATION REGARDING THE PERFORMANCE OF THE EQUIPMENT, AND ANY REMEDY FOR BREACH OF CONTRACT, IN TORT, OR ANY OTHER LEGAL THEORY WHICH, BUT FOR THIS PROVISION, MIGHT ARISE BY IMPLICATION, OPERATION OF LAW, CUSTOM OF TRADE, OR COURSE OF DEALING ARE EXCLUDED AND DISCLAIMED BY VANAIR®.

Some states in the United States of America do not allow limitations of how long an implied warranty lasts, or the exclusion of incidental, indirect, special or consequential damages, and as such, the above limitations and exclusions may not apply to you. This warranty provides specific legal rights. Other rights may be available to you, but may vary from state to state.

In Canada, legislation in some provinces provides for certain additional warranties or remedies other than as stated herein, and to the extent that they may not be saved, the limitations and exclusions set out forth above may not apply. This Limited Warranty provides specific legal rights, and other rights may be available, but may vary from province to province.



**ALL WARRANTY OR
RETURNS MUST BE
PRE-AUTHORIZED PRIOR
TO PERFORMING
ANY WARRANTY WORK.**

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EFFECTIVE: MAY 20, 2022

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SPECIFICATIONS

Description	120V (16A) Model Specifications
Model	285303 - EPEQ® EV Level 1 Charger, Charge Cable & EV Connector
Charging Standard	SAE J1772
Phase	Single Phase
AC Plug Type	NEMA 5-15P and NEMA 6-20R
Rated Current	16A Max. (Adjustable 10A/13A/16A)
Rated Power Output	Up to 1.9 kW (Max.)
Input & Output Voltage	120V AC (Standard); (120V AC)
Input Frequency	60Hz
Operating Temperatures	-22°F to 176°F (-30°C to 80°C)
Insulation Resistance	>1000MΩ
Contact Resistance	0.5MΩ
House Fire Rating	UL94V-0
Certification	UL2594 (UL2251, UL2263, UL991, UL1998) by SGS, FCC
Length of Cable	25 feet (7.62 meters) or Custom
Wiring Harness Size	3x 13AWG + 1x 18AWG
IP Rating	IP66
Accessories	Optional SAE J1772 to SAE J3400 Adapter
Dimensions	4.49" L x 2.82" W x 9.59" H
Weight	10 lbs. (4.535 kg.)

Model:		
Current: 16A	Phase: Single	Cable: 3G 2.5mm ²

GENERAL INFORMATION

For parts, service or technical assistance, make sure you have the Serial Number and Model Number of the unit. Please record the information in the spaces below for future reference.

Serial Number:	
Model Number	

- The EPEQ® EV Level 1 Charger is a durable, lightweight electric vehicle charger intended to provide a convenient and easy way to charge electric vehicles using a standard 110-120V AC grounded electrical outlet. This unit may also be used in a fully mobile 110V Level 1 EV charging solution when paired with our 48V ELiMENT® battery and 110-120V AC capable EPEQ® Inverter equipment.
- This portable EV charger is intended to be used as a temporary charging device for electric vehicles only and is not intended to be used as a permanently powered charger - such as those used for public charging stations.
- Keep these Instructions. Do not throw away.
- This manual should be kept with the equipment and made available at all times to anyone using or interacting with the

EV charging equipment. Please ensure the manual is kept with the unit - even if changing owners.

WARNINGS AND SAFETY

- Read all instructions in this user guide
- Children should be supervised when in the vicinity of the charger while it is plugged in.
- DO NOT place EV charger near explosive, flammable materials, chemical vapors or potentially hazardous materials.
- This charger MUST be properly grounded to reduce the risk of electric shock to the user in the case of a malfunction, damaged or broken unit. This unit will try to detect a good grounded connection and will not operate if the unit fails to detect a proper ground connection.
- DO NOT operate the charger with a damaged output cable, charger connector or module.
- DO NOT modify or disassemble this charger without pre-approval of Vanair® Service Dept. as this will void the warranty.
- When in use, make sure cables, controller and other parts of this charger will not be driven over, tripped over or stepped on. Avoid any condition that may cause damage or stress to the cables and connections.
- Before cleaning, disconnect the power plug of the charger from the AC input/wall outlet. To clean the unit, wipe it with a clean cloth dampened with water or a mild detergent, suitable for use on automotive parts. To avoid damage do not use chemicals or solvents.
- DO NOT submerge the control box or charging connector in water or other liquid.

MAINTENANCE

- The EV charger is low maintenance and does not normally require daily or periodic maintenance. When cleaning always unplug the power cord from the electric



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outlet first. Use a soft, dry cloth to wipe clean the exterior parts of the charger. A damp cloth may be used if needed.

- Do not directly wash with water, corrosive chemicals or strong detergents to avoid short circuit conditions or other damage to the unit.

WHAT'S IN THE BOX

- EPEQ® EV Charger & Charging Cable (x1)
- Carry Bag (x1)
- Mounting Bracket (x1)
- NEMA 5-15P/6-20R 20A Plug Adapter



The front of the control box of the EPEQ® EV Level 1 Charger contains the LED Display, Touch Pad and Indicator Light. See the following descriptions and image.

INDICATOR LIGHT

On the front of the control box is an indicator light that is used to display the status of your charger. Use the following images and reference information to provide a simple interpretation of the color and pattern of the indicator light.

GREEN:

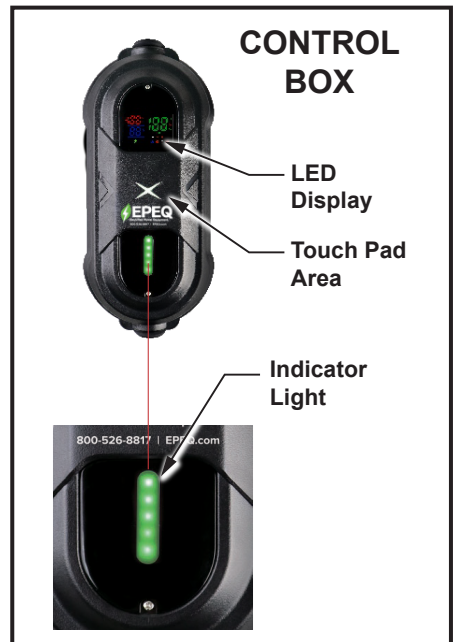
- When the EV charger is powered on and ready for use, the GREEN STATUS indicator will glow steady green.
- When the charger connects with the vehicle, the GREEN STATUS indicator will flash slowly to indicate successful charging.

RED:

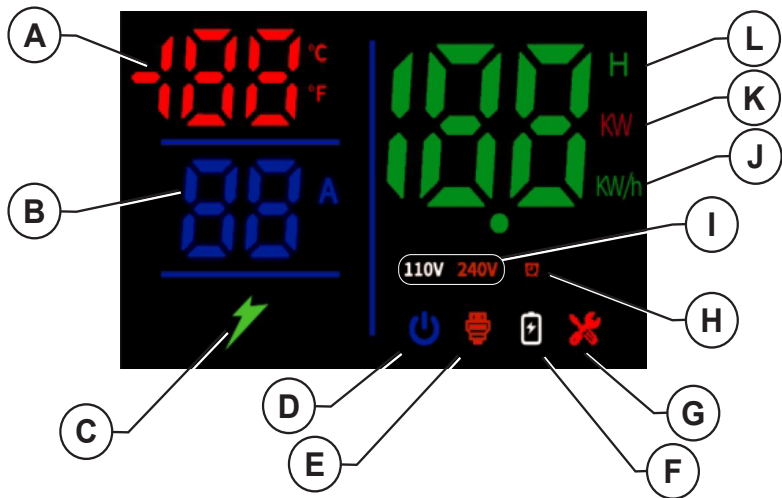
- The RED TROUBLE indicator will illuminate when the EV charger has detected an error. If the RED TROUBLE light is illuminated, the EV charger will NOT deliver power to the vehicle.
- The error must be corrected before a charging cycle can begin or continue.

LED LIGHTS

- Any error will be shown as a code on the LED display at the same time. (Please refer to **LED Display** and **Troubleshooting** Sections for additional information.)



LED DISPLAY



ID	LED FUNCTION	DESCRIPTION
A	Working Temperature	- Displays the working temperature while it's charging. - Temperature unit is Celcius/Fahrenheit.
B	Current	(Power on EV charger, before charge vehicle) Plug into the wall outlet, press and hold touch button for 3 seconds and you can select the current you need (flashing). Wait for 2 seconds without any operation, your selected current will be saved. Then it will switch to timer setting (refer to timer section) - After charging your EV, the current will show a real-time status. - Default current for each time will depend on your previous selected current.
C	Charging	When your EV is successfully connected and charging, indicator lights green.
D	Charger Power Indicator	When you power on EV charger, this indicator will light up.
E	EV Charge Successful	When your EV is successfully charged, this will light up.
F	Vehicle Fully Charged	- When your vehicle has reached full charge, this indicator will light up. - A special situation will be that your vehicle does not accept the charging, if it doesn't recover to normal charging after a period of time, contact your dealer.
G	Troubleshooting Error Code	- Troubleshooting (Error code): When the EV charger doesn't work, an error code will be displayed on the LED screen, and this indicator light will turn red. - Please refer to Troubleshooting (Error Codes) in this manual.
H	Timer	- After the current is saved, it will switch to Timer setting. - Once the timer is set up, alarm will light up. It will be flashing when the time ends, and will disappear when you unplug the connector.
I	Voltage	Shows the rated voltage.
J	Power Consumption	Shows the current power consumption in KW/hour
K	Charging Power	Displays charging power (in KW)
L	Charging Time	Shows accumulated hours of use. Re-plugging charger resets this data.

CHARGING YOUR VEHICLE

Insert the wall side 3-prong grounded electrical plug into a properly installed and grounded 110-120V AC electrical AC power outlet. (or use the NEMA 5-15P/6-20R 20A adapter).



PRESS AND HOLD the touch-sensitive pad located on the front panel of the unit for three (3) seconds to activate current selection mode. Press this touch sensitive button normally to change current and set timer. (See image below.)



1. Insert the connector into the vehicle's charging inlet. A small latch built into the charger's plug will lock into place when properly inserted. A green flashing LED assures you that unit is charging successfully. (See [C] shown on the **LED Display illustration** on the previous page.)

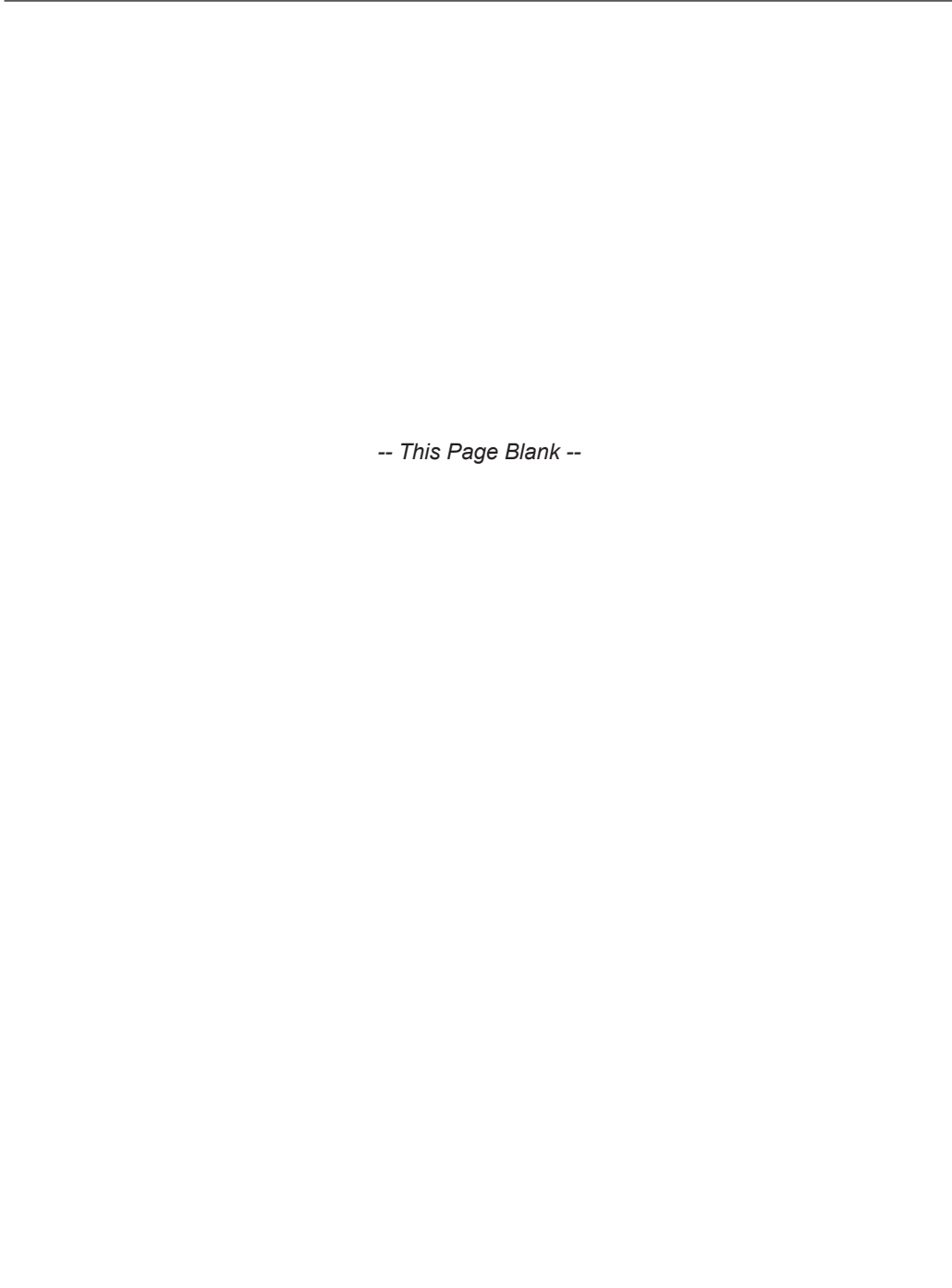
2. An indicator shows when charging is complete. (See [F] on the **LED Display illustration**.) Press the release button on the handle and remove the charger's connector from the vehicle.



TROUBLESHOOTING (ERROR CODES)

The error code will display on the LED screen when the EV Charger fails or has failed during use. Refer to the following table for possible solutions when charging your vehicle using this charger.

E0	LEAKAGE PROTECTION Signal leakage detected by leakage protection integrated circuit (IC). Please re-plug the connector. If it still occurs, please contact your dealer.
E1	PE GROUNDING PROTECTION Ground fault detected by ATT7022. It will automatically recover once the ground is connected and normal. If fault reoccurs, please contact your dealer.
E2	CP GROUNDING PROTECTION This appears when CP_ADC exceeds 12V, and is lower than 6V. It will automatically recover when voltage is normal.
E3	OVER CURRENT PROTECTION When effective value of the current exceeds +20% of the rated current, the control box will signal an overload condition. Please re-plug the connector and retry.
E4	OVER VOLTAGE PROTECTION This will occur if input voltage exceeds maximum allowed AC input voltage. Unit will recover once voltage returns to acceptable level.
E5	UNDER VOLTAGE PROTECTION This will occur if input voltage is detected to be below minimum AC voltage requirements. Unit will recover once voltage returns to acceptable level.
E6	HIGH TEMPERATURE PROTECTION When the temperature of the internal control box reads above 85°C (185°F) high temperature protection kicks in. Will auto-recover when temperature falls below 75°C (167°F)
E7	COMMUNICATION PROTECTION Appears when ATT7022 detects communication failure. Will auto-recover once normal communication is detected.
E8	LEAKAGE DETECTION PROTECTION Appears when connection self-test detects leakage failure. Please re-plug the connector and it will recover when it is normal.



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Effective Date: 06/13/2024