
USER MANUAL

MODEL EX-V120-C20A

PORTABLE CHARGER MODEL EX-V120-C20A

DESCRIPTION

The Expion360 portable charger is designed to charge Lithium Iron Phosphate (LiFePO₄/LFP) chemistry deep cycle batteries. The portable charger is unique in that it uses a 2-stage constant current (CC) constant voltage (CV) charge profile at 14.6V / 20A. The charger is compact and easy to use, making it an excellent choice for portable LFP charging. The portable charger is specifically designed to charge the Expion360 VPR 4Ever Classic and Platinum batteries and can be used with other LFP chemistry batteries that recommend the same charge profile. It is not recommended to use this charger for lead-acid chemistry batteries as it does not have a float or equalization stage required for those batteries.

USE INSTRUCTIONS

STEP 1: Attach the positive clamp first and negative clamp second from the charger to the battery making sure the positive red clamp is connected to the positive battery terminal and the negative black clamp is connected to the negative battery terminal.

STEP 2: Plug the AC power cord into the household or generator AC outlet.

STEP 3: Plug the other end of the AC power cord into the AC input port on the charger. The charger will now begin to charge the battery automatically, and the LED indicator light will be red (charging). **STEP 4:** When the LED indicator light turns green, the charge cycle is complete or nearly complete. Leave the charger connected for an additional 15 minutes to top the battery off. When this is completed, disconnect the charger in the reverse order it was connected.

PARALLEL CONNECTION

The Expion360 portable charger can be parallel connected with up to two units. By parallel connecting the chargers, the charge rate will increase from 20A to 40A while maintaining 14.6V.

CHARGE PROFILE

The Expion360 portable charger uses the CC/CV (bulk/absorption) 2-stage charge profile with no float or equalization stages. LFP batteries have a very low self-discharge rate and do not sulfate by being left at a partial state of charge, so a maintenance float stage and desulfation equalization stage are not required.

Constant Current Stage (Bulk): During this stage, the charger will provide the full rated current at 25A (1 charger) or 50A (2 chargers) until the maximum charge voltage has been achieved at 14.6V. The battery is approximately 97% full and will now transition to the constant voltage stage. The red LED indicator light will be lite when in the constant current stage - bulk.

Constant Voltage Stage (Absorption): During this stage, the charger will hold the full charge voltage while gradually decreasing the current to zero or near zero. This stage will take 15-20Min on average, depending on how many batteries are being charged. During this stage, the final cell balancing is completed. During the constant voltage stage, the red LED indicator will be on. The charger will then enter a standby mode waiting for the batteries voltage to drop to provide another charge cycle. The green LED indicator will be on during standby.

MODEL EX-V120-C20A TECHNICAL SPECIFICATIONS

MECHANICAL PARAMETERS

DIMENSIONS (L X W X H) INCHES	7.5 X 3.5 X 2.0
WEIGHT	2.65LBS
CASE TYPE	ALUMINUM
COOLING	FAN / CONVECTION
PARALELL CONNECTION	2 / 40A

INPUT PARAMETERS

AC INPUT VOLTAGE	90-130V
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OUTPUT PARAMETERS

CHARGE PROFILE	CC/CV 2-STAGE
PROFILE CHEMISTRY	LiFePO ₄ / LFP
DC VOLTAGE	14.6V
CURRENT	20A
ENERGY	250W

TEMPERATURE PARAMETERS

OPERATING TEMPERATURE	-4°F TO 132°F
STORAGE TEMPERATURE	-4°F TO 132°F

NOTICE

TO PREVENT DAMAGE AND EXTEND THE LIFE OF THE CHARGER PLEASE FOLLOW THESE PRECAUTIONS

- ⚠ DO NOT DROP THE CHARGER**
- ⚠ DO NOT OPEN THE CHARGER**
- ⚠ DO NOT SHORT CIRCUIT THE CHARGER**
- ⚠ DO NOT SUBMERGE THE CHARGER IN WATER**
- ⚠ DO NOT CONNECT MORE THAN 2 CHARGERS IN PARALLEL**
- ⚠ DO NOT ATTEMPT TO REPAIR THE CHARGER IF MALFUNCTIONING**
- ⚠ DO NOT USE THE CHARGER TO CHARGE OTHER BATTERY CHEMISTRIES**
- ⚠ DO NOT USE THE CHARGER AS A 12VDC POWER SUPPLY ONLY USE TO CHARGE LFP**
- ⚠ DO NOT COVER THE CHARGER TO PREVENT AIR MOVEMENT THROUGH THE UNIT**

EXPION360 24 MONTH WARRANTY

Expion360 warrants The Expion360 VPR branded portable charger sold by Expion360 or any of its authorized dealers, distributors, and OEM partners to be free of defects 24 months from the date of sale as determined by the customer's sales receipt for proof of purchase.

Within the 24-month warranty period, subject to the exclusions listed below, Expion360 will repair or replace the charger. Or parts of the components in question are determined to be defective in material and or workmanship.

NON-TRANSFERABLE

This Limited Warranty is for the original purchaser only and is not transferable to any other person or entity.

WARRANTY EXCLUSIONS

Expion360 has no obligation under this Limited Warranty for the Expion360 Mobile DC to DC charger subject to the following conditions (including but not limited to):

- Damage is caused by road debris or collision.
- Damage due to short circuits or other electrical conditions caused by mishandling.
- Damage due to improper installation, incorrect parallel connections, wrong wire, and or fuse sizing.
- A charger that has been opened, tampered with, and or modified.
- Environmental damage, such as water, moisture, and fire.

WARRANTY DISCLAIMER

THIS LIMITED WARRANTY REPRESENTS THE TOTAL LIABILITY OF EXPION360 FOR ANY BATTERY. ALL OTHER WARRANTIES IMPLIED BY LAW APPLICABLE TO THE BATTERY SHALL BE LIMITED TO THE WARRANTY PERIOD STATED. EXPION360 MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. EXPION360 SHALL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

LEGAL RIGHTS

Some states do not limit how long an implied warranty lasts or exclude or limit incidental or consequential damages, so the above limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state. This warranty shall be governed by and interpreted by the laws of Oregon. This warranty is understood to be the exclusive agreement between the parties relating to the subject matter hereof. No employee or representative of Expion360 is authorized to make any warranty in addition to those made in this agreement.

SUBMITTING A WARRANTY CLAIM

To submit a warranty claim, please contact Expion360 at support@expion360.com

EXPION360

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