

***Qoltec***<sup>®</sup>

QOLTEC  
INSTRUCTION MANUAL  
SMART CHARGER FOR BATTERIES  
AC-DC  
EN

MODEL:  
51916/51917/51918/51919/51952/51953/51955/519  
56/51957/51958/51959

## INTRODUCTION

Thank you for your trust and for choosing the Qoltec AC-DC charger firm. We are confident that the product will meet your expectations. This manual contains instructions for installing and using the product, including important safety instructions for correct operation and installation. If you have any questions after reading this manual, please contact our Customer Service Department.

## SAFETY INSTRUCTIONS

1. The appliance is intended for indoor use, it is forbidden to use it near flammable materials.
2. Never allow sparks or flames near the batteries as they may generate explosive gases during normal operation.
3. The appliance must only be used at its rated voltage and frequency.
4. If it is necessary to run cables through walls with sharp edges, always use suitable protective sleeves or cable ducts to prevent damage to the cables.
5. Do not allow children to play with the appliance.
6. Do not allow the appliance to be flooded with water.
7. Ensure that the air inlets and outlets of the appliance remain clear of any obstructions.
8. Be careful not to reverse the polarity of the battery connection.
9. Do not charge batteries that are not designed to be recharged.
10. Disconnect the power supply before making or breaking connections to the battery.

### WARNING!

Risk of electric shock! Do not open the device if it has been connected to an AC power source. This appliance has been tested to CE standards and complies with the applicable directives and standards.

**NOTE :** Batteries undergo a process of wear and tear after many years of use. Regular maintenance of the battery is recommended (e.g. every year). After this time, the batteries should be serviced by a qualified technician, otherwise damaged batteries may cause fire or other safety hazards.

## CHARGING INSTRUCTIONS

1. Connecting the charger to the battery

*Illustration 1 in the appendix*

- 1) Set the ON/OFF switch to the OFF position.
  - 2) The AC power cord must be disconnected. Connect the black cable to the terminal marked (-) on the charger side. Connect the other end of the cable to the negative terminal of the battery.
  - 3) Connect the red cable to the terminal marked (+) on the charger side. Connect the other end of the cable to the positive terminal of the battery.
2. Switching on the charger
    - 1) Connect the AC power cord to the charger and AC outlet.
    - 2) Set the ON/OFF switch to the ON position.
    - 3) On the front panel of the charger there is a control panel with a selection of charging modes suitable for different battery types: STD, GEL, AGM, CAL and LIFEPO4. This makes it easy for the user to adapt the charging process to the specific battery type, ensuring optimal performance and extending battery life. In addition, the charger is equipped with a luminous LED that indicates the current charging stage: FLOAT (holding charge), ABS (absorption charge) or BULK (main charge).
3. Switching off the charger
    - 1) Disconnect the AC power cord from the AC socket.
    - 2) Set the ON/OFF switch to the OFF position.
    - 3) Disconnect the charger clamps connected to the battery.

## THREE-STAGE CHARGING

**Stage 1:** The first stage is designed to ensure maximum charge of the battery, speeding up the charging cycle. The "BULK" LED lights up to indicate that the unit is delivering maximum charge current, stimulating the weak battery to absorb energy.

**Stage 2:** When the battery reaches approximately 90% of its rated capacity, the charger will enter "ABSORPTION" mode. During this stage, the unit delivers a constant voltage to the battery at a reduced current.

**Stage 3:** When 90% charge is reached, the "ABSORPTION" LED will turn off and the "FLOAT" LED will light up. In "FLOAT" mode, the charging current will be reduced and the charging voltage will be held constant. The battery now remains in the constant charging mode "FLOAT".

## TECHNICAL SPECIFICATIONS

Model	51955	51956	51957	51958	51959
Input voltage	180-260 VAC-50Hz				
Battery voltage	12V				
Charging bulk/absorption	14.2-15VDC				
Float charge	13.2-13.8VDC				
LiFePO4 charging	14.7 V+/-0.1 VDC				
DC output current	30A	40A	50A	10A	20A
Operating temperature	0-40°C				
Ventilation	Cooling fan, thermal control				
Output ripple	<50 mA at full load				
Efficiency	88%				
Load control	1.5% at output current: no load to full load load				

Model	51952	51953
Input voltage	180-260 VAC-50Hz	
Battery voltage	24V	
Charging bulk/absorption	28.8-29.6VDC (AGM, GEL) 28.4-29.2VDC (LiFePO4)	
Float charging	27.0-27.6 V (AGM, GEL) 27.2-27.6 V (LiFePO4)	
DC output current	10A	20A
Operating temperature	0-40°C	
Ventilation	Cooling fan, thermal control	
Output ripple	<50 mA at full load	
Efficiency	88%	
Load control	1.5% at output current: no load to full load	

Model	51916	51917	51918	51919
Input voltage	180-260 VAC-50Hz			
Battery voltage	12V			
Charging bulk/absorption	14.2-15VDC (selectable)			
Float charging	13.2-13.8VDC (selectable)			
LiFePO4 charging	14.7 V+/-0.1 VDC			
DC output current	60A	70A	80A	90A
Operating temperature	0-40°C			
Ventilation	Cooling fan, thermal control			
Output ripple	<50 mA at full load			
Efficiency	88%			

<b>Load control</b>	1.5% at output current: no load to full load load
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## TROUBLESHOOTING

Status	Possible cause	Suggest a remedy remedy
No DC output or charger cannot start	No AC input	Check power source AC
	Shutdown due to overheating	Wait for unit to cools down
	Bad terminal contact Battery terminal contact or polarity reversed	Check connection between charger and battery, connect correctly
	Short circuit in the output	
	Defective fuse	Check the fuse
Battery charging is not stable	AC input voltage is not stable	Check AC input voltage, if within range input voltage
	Setting does not match battery type	Select the correct battery TYPE
Charger cannot switch to "FLOAT" mode	Cable connected to Battery pack is too thin.	Change the cable to the correct size.
	Battery in bad condition.	Replace the battery with a new one.

## MAINTENANCE

1. The unit should be used in a well-ventilated area.
2. Avoid charging batteries in extremely cold or high temperatures.
3. Check cables and connectors regularly for damage.

## DISPOSAL

Take the used device to an electro-waste collection point. Do not dispose of the device with municipal waste.

## WARRANTY

The device is covered by a 24-month warranty from the date of purchase, which includes repair or replacement in the event of manufacturing defects. Proof of

purchase (receipt or invoice) is required to make use of the guarantee. The warranty does not cover damage resulting from misuse, incorrect installation or interference by unauthorised persons. If service is required, contact an authorised service centre, which will provide professional diagnosis and repair. All service work should only be carried out by qualified personnel to maintain the safety and proper functioning of the appliance. If you have any questions about the warranty or servicing, please contact the customer service department.

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