6/12V 4A Digital Battery Charger - NORM, AGM & Li-Ion
Part 0-647-34

GENERAL

Before using this unit please read these instructions carefully. Take special care to follow the warnings and safety suggestions listed below. Keep these instructions for future reference. There are no user-serviceable parts within the unit, refer servicing to qualified service personnel.

IMPORTANT SAFETY INSTRUCTIONS

1. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

2. Working in vicinity of a lead-acid battery is dangerous. Batteries generate explosive gases during normal battery operation. For this reason, it is of utmost important that each time before using your charger, you read this manual and follow the instruction exactly.

3. To reduce risk of battery explosion, follow these instructions and those published by the battery manufacturer and manufacturer of any equipment you intend to use in vicinity of battery. Review cautionary markings on these products and on engine

WARNINGS

1. Use charger for charging LEAD-ACID battery, AGM and Li-Phosphate (LiFePO4) battery only.
2. Do not use battery charger for other types of batteries, these may burst and cause injury to persons and damage to property.
3. Use output socket for supply power to appliance with rated voltage DC12V and rated current less than 12A only.
4. Use only attachments recommended or sold by manufacturer. Use of non-recommended attachments may result in fire, electric shock, or injury.
5. When disconnecting the battery charger, pull by the plug, not by the cord. Pulling on the cord may cause damage to cord or plug.
6. Do not operate charger with damaged cord or plug. Have cord replaced immediately.
7. Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way. Take it to a qualified professional for inspection and repair.
8. Do not disassemble charger. Take it to a qualified professional when service or repair is required. Incorrect reassembly may result in electric shock or fire.
9. To reduce risk of electric shock, unplug charger from outlet before attempting any maintenance or cleaning.

Do not use an extension cord unless absolutely necessary. Use of an improper extension cord could result in fire or electric shock. If an extension cord must be used, make sure that:

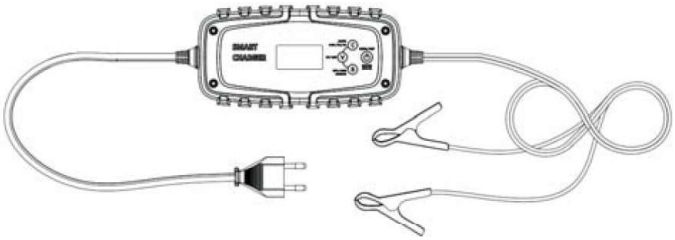
• Pins on plug of extension cord are the same number, size, and shape as those of plug on charger. • Extension cord is properly wired and in good electrical condition.

• Wire size is large enough for AC ampere rating of charger

10. Always charge battery in a well-ventilated area. NEVER operate in a closed-in or restricted area without ad-equate ventilation. WARNING: Risk of explosive gas.
11. Locate charger as far away from battery as DC charger cable's permit.
12. Do not expose charger to rain or snow.
13. NEVER charge a frozen battery. If battery fluid (electrolyte) is frozen, bring into a warm area to thaw before charging.
14. NEVER allow battery acid to drip on charger when reading specific gravity or filling battery.
15. NEVER set a battery on top of charger.
16. NEVER place charger directly above battery being charged. Gases from battery will corrode and damage charger.
17. NEVER touch the battery clips together when the charger is energized.
18. NEVER crank engine with charger attached to battery.
19. WARNING: Wear complete eye protection and clothing protection, when working with lead-acid batteries.
20. Make sure someone is within range of your voice or close enough to come to your aid when you work with or near a lead-acid battery.
21. Have plenty of fresh water and soap nearby for use if battery acid contacts skin, clothing, or eyes. If battery acid contacts skin or clothing,
wash immediately with soap and water.
22. Avoid touching your eyes while working with a battery. Acid particles (corrosion) may get into your eyes! If acid enters your eye, immediately
flood eye with running cold water for at least 10 minutes. Get medical attention immediately.
23. Remove all personal metal items such as rings, bracelets, neck laces, and watches when working with a lead-acid battery. A lead-acid battery can produce a short-circuit current high enough to weld a ring.
24. Take care not to drop a metal tool or other metal onto the battery. Metal may cause sparking or short circuit the battery or another electrical devise. Sparking may cause an explosion.
25. Always operate battery charger in an open well-ventilated area.
26. NEVER smoke or allow a spark or flame in the vicinity of the battery or engine. Batteries generate explosive gases!

APPLICATION & OPERATION

The battery charger is widely used in 6V / 12V DC battery charger and maintenance including ordinary Lead-acid, maintenance-free lead-acid ,AGM and lithium those used for a variety of vehicle such as sports cars, SUV, caravan cars pickup trucks,motorcycles, ATV, boats, sailing, solar systems etc.

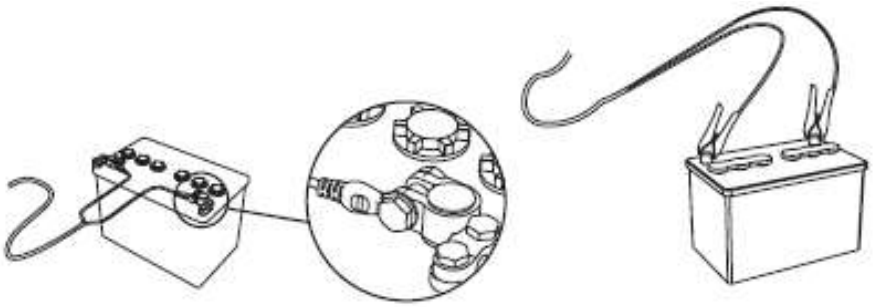


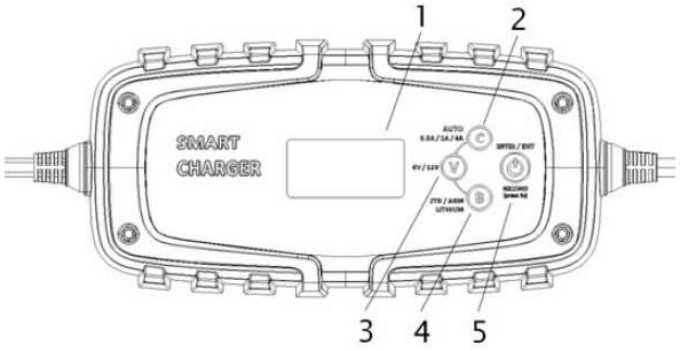
Charging for single lead acid battery:

1. Please put AC plug into AC socket
2. Please select correct charging mode firstly, then connect red clamp/O ring to positive of battery "+", connect black clamp/O ring to negative of battery "-".
3.Please remove the plug from the AC socket before disconnect the battery, then remove the clamp/O ring from battery.

Charging for car battery:

1. Please put AC plug into AC socket
2. Please choose correct charging mode according to battery rated voltage and battery type, press the Enter / Exit button to start charging. If changing charge mode, just press the Enter / Exit button again to re-select the mode.
3. Please remove the plug from the AC power outlet before disconnect the battery.
4. Disconnect the black clamp and then disconnect the red clamp. (If the car battery is positively grounded, first disconnect the red clamp and disconnect the black clamp).

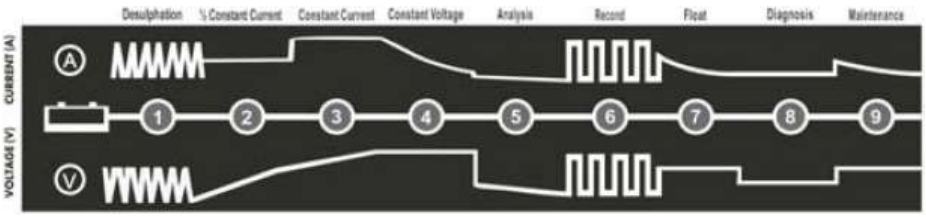




1. LCD Screen: display working codes and icons.
2. Current Selection Button: 0.8A, 2A, 4A, automatic selection.
3.Voltage Selection Button: 6V, 12V
4. Battery Type Selection: NORM,AGM,LITHIUM
5. Enter /Exit Button: Start Charging, Stop Charging

Please connect Charger to Battery according to Operation Instruction, then choose correct Charging Mode as per following table, after that press Enter/Exit button to start related Charging Mode.

Step 1 Voltage Selection "V"	Step 2 Battery Type Selection	Step 3 Charging Mode Selection "A"	Step 4 Start Charging	Charging Status	Applicable Battery Capacity(Ah)
6V	STD	0.8A	ENTER/EXIT	6V Maintain Mode	2-120Ah
		2A		6V 2A Charging Mode	2-60Ah
		4A		6V 4A Charging Mode	2-120Ah
		AUTO		6V Auto Mode	2-120Ah
12V	LITHIUM	4A		12V Auto Mode	6-160Ah (LFP)
	STD	0.8A		12V Maintain Mode	6-80Ah
		2A		12V 2A Charging Mode	6-80Ah
		4A		12V 4A Charging Mode	6-150Ah
		AUTO		12V Auto Mode	6-150Ah
	AGM STD	RECOND		12V Recond Mode Press the enter/exit button for 5 seconds to enter the recond mode	/



1. Pulse charging
Detecting vulcanized batteries, then remove sulfuret from the lead plates of the battery by Pulsing Current and Voltage.
2. ½ Constant Current
Charging battery to 25% capacity by 1/2 Current.
3. Constant Current
Charging battery to 50% capacity by max Current.
4. Constant Voltage
Charging battery to 75% capacity by Constant Voltage.
5. Analysis
Analyzing power capacity, if can not store power the battery should be replaced.
6. Recond
Restores power capacity in a stratified battery to sustain ultimate battery life.
7. Float charge
Charging battery to 100% capacity by Constant Voltage, and keep battery voltage with maximum level.
8. Diagnosis
To check if battery has been fully charged
9. Fully charged
The battery has been fully charged.

LCD Status Display Key

	Flickin: clips not be connected with battery
	Charger clamps reverse connection with Battery Terminal, please connect red clip to Positive, black clip to Negative
88%	Battery Capacity Percentage
	Recond Mode
M	Maintain Mode
6V	6V Charging Mode
12V	12V Charging Mode
AGM STD LIT	Battery Type Switch Mode
8.8.8 V A	Function Selection

CE

Code Display

AUT	AUTO MODE	F01	SHORT-CIRCUIT PROTECTION
PUL	PULSE MODE	F02	OVER-VOLTAGE PROTECTION
REC	RECOND MODE	F03	OVER-CURRENT PROTECTION
FUL	BATTERY FULLY CHARGED	F04	OVER-TEMPERATURE PROTECTION
SUP	SUPPLY MODE	F05	OVERTIME CHARGING
CHE	ANALYSIS MODE	F06	REVERSE CONNECTION PROTECTION

1. Automatically enter float mode
The charger will enter float mode automatically when finished charge to prevent overcharge.
2. DC input short-circuit protection
The charger will shut down automatically when DC input short-circuit.
3. Over-temperature protection
The charger will shut down in two situations as below, and it will enter charge mode automatically when temperature recovers to the normal condition.
a. When charger used long time under high temperature.
b. When inside temperature of charger reaches the present temperature.
4. Over-voltage protection
5. Fire protection
There is no output in the clamp when disconnected with battery.
6. Low-voltage activation
The charger will enter the charge mode automatically when voltage of end of clamp was higher than DC 1.5V, the charger will not output if voltage is lower than DC 1.5V.

TROUBLESHOOTING

No reaction when power is on:

1. Check the battery charger is plugged into the socket and makes a good connection
2. AC socket whether has AC output?
3. Send the charger to professional person to test

Power indicator light but no AC output:

1. Check the clip is connected well
2. Check the terminal for corrosion
3. Check the wire of the clip to see if broken
4. Send the charger to professional person to test

Power indicator and fault indicator light at the same time:

1. Check clips to see if they are connected round the wrong way
2. The charger was on over-temperature protection
3. Check to see if wrong voltage of battery selected
4. Send the charger to professional person to test

Power indicator not illuminated when charger is working

Faulty LED indicator

6V or 12V indicator not illuminated when charger is working

Faulty LED indicator

6V/12V can't switched or not sensitive

1. The operation is improper when using the switch
2. Switch was damaged

SPECIFICATION

Type.....Digital Battery Charger
Battery Types.....Lead Acid, AGM, Li-Phosphate LiFePO4
Rated output voltage.....6V DC / 12V DC
Maintained Battery Capacity.....3-120Ah
Max input power.....17.5W ~ 70W
Max charging voltage.....7.3V DC±0.2V / 14.6V DC±0.2V
Rated output current.....4A
Rated input voltage.....100VAC-240VAC
IP Rating.....IP65
Working temperature.....-10C- 40C
Storage temperature.....-20C- 60C
Dimensions.....L 219 x H 53 x W 90mm
Weight.....0.560Kg
Certificates.....CE