

CH5612 & CH5624

Automatic Battery Charger user manual

GENERAL INFORMATION

A visual inspection of this product for damage during shipping is recommended before installation. Please contact your local supplier with any questions.

SECTION 1: IMPORTANT SAFETY INSTRUCTIONS

This manual contains important safety and operating instructions for battery charger Models CH5612 and CH5624. Read the manual carefully and follow the instructions before using your charger.

DANGER

High Voltage may result in a risk of fire, electric shock, injury or death.

WARNING

Batteries may generate explosive gases during normal operation and charging. Never smoke, light a flame, or generate any sparks near the battery.

1.1 This is not a power supply. Use only as a battery charger.

- 1.2 Built-in AC power fuses protected input. No external fuses are needed. Do not attempt to replace internal fuse, if it burns out.
- 1.3 Do not expose the battery charger to rain, snow or wet environments.
- 1.4 Do not disassemble the charger. Return to supplier when service and repair is needed.
- 1.5 Be very careful not to drop any metal tool on to the battery or charger. It may spark or short-circuit the battery or other electrical part, which in turn may cause an explosion.
- 1.6 To reduce the risk of damage to the electric plug and cord, pull using the plug rather than the cord when disconnecting the charger.
- 1.7 If battery acid or chemicals contact skin or clothing, wash immediately with soap and water.
- 1.8 If battery acid or chemicals comes into contact with your eye, immediately begin washing your eye with cold water before taking any other action and continue for at least 10 minutes. Get immediate medical attention.
- 1.9 If AC power is removed from charger, the charger will continue to consume approximately 30mA from battery. Therefore if AC input is removed for a prolong period, please disconnect charger from battery to avoid additional battery power drain.

SECTION 2: SPECIFICATIONS

Power Input

Voltage	100 – 265 Vac
Frequency	47 – 63 Hz
Current	2A

DC Output

CH5612	Voltage 13.6 Vdc / Current 12A Max.
CH5624	Voltage 27.2 Vdc / Current 6A Max.

DC Voltage Regulation

CH5612	less than +/- 2%
CH5624	less than +/- 1%

Charge Mode

Float (Current limiting, constant voltage)

Efficiency

More than 88% @ Full load

Static Power Consumption

Max 2W @ 110 Vac
Max 1W @ 220 Vac

Fuse

Slow blow 5A 300V

Suitable Battery Type

Gel, Lead Acid & AGM

Protection

Reverse polarity & short circuit protections
DC output Over/Under Voltage protections
DC output Over Current protection
AC input Over Voltage protection
Temperature sensor failure protection

Environment

Operation Temperature	-20 to +50 °C
Storage Temperature	-30 to +80 °C
Relative Humidity	Max. 90%
Vibration	5.0Gs @ 60 Hz

Mounting Type

Panel Mount

Dimensions

208.0 (L) x 134.0 (W) x 63.0 (H) mm
8.19 (L) x 5.28 (W) x 2.48 (H)

Weight

0.89 Kg (1.96 Lb) +/- 2%

SECTION 3 : INSTALLATION AND OPERATION

CAUTION

- Read and follow all installation instructions before installing the charger
- Make sure to disconnect all the electrical power to the charger
- Crimp and property secure terminal lugs on to power wires to avoid shorts.
- High ambient temperatures could cause overheating. The charger will automatically reduce the charging current proportionally.
- Disconnect the charger from the battery if the AC power is off for long periods of time.

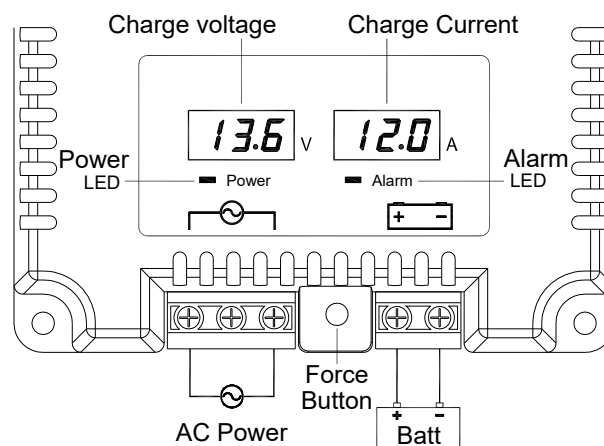
- 3.1 Check that the correct model charger is selected for your battery
- 3.2 Verify your line voltage is correct.
- 3.3 Connect line voltage to the charger, then the "Power" indicator should light up and display the output voltage and current readings.
- 3.4 Disconnect AC power before connecting the charger to the battery. Connect charger output to the battery positive and negative terminals.
- 3.5 Turn AC power ON. The unit will automatically charge the battery with an adjusted current related to battery condition and cyclically show charging voltage and current on screen.
- 3.6 The charger is automatic and can always stay connected even during engine cranking and running.
- 3.7 For the model CH5612 to work the minimum battery voltage must be higher than 6 Vdc or the charger will automatically shut-down and all the indicators on the panel will turn off. (For model CH5624, the minimum battery voltage is 13 Vdc).
- 3.8 Voltage sensing circuit automatically stops charging when the battery is fully charged.
- 3.9 For AC power connection:
cable size $\geq 1.25\text{mm}^2$ (AWG 16).
- 3.10 For DC power connection
cable size $\geq 2.00\text{mm}^2$ (AWG 14).

SECTION 4: ALARM AND PROTECTIONS

If any of the following fault conditions occur, the "Alarm" indicator will light up red and display fault message. The charger will automatically shut-down simultaneously. The battery charger will resume operation automatically after the fault conditions are cleared.

- 4.1 **Reverse polarity & short circuit alarm**
Fault message display "Err 01".
- 4.2 **AC input Over Voltage alarm**
Fault message display "Err 02" indicates AC input voltage is higher than 256 Vac.
- 4.3 **Temperature sensor failure alarm**
Fault message display "Err 03".
- 4.4 **DC output Over Voltage alarm**
Fault message display "HiV"
It means DC input voltage is higher than 15 Vdc for model CH5612; or higher than 30 Vdc for model CH5624.
- 4.5 **DC output Under Voltage alarm**
Fault message display "LoV"
It means DC input voltage is lower than 6 Vdc for model CH5612; or lower than 13 Vdc for model CH5624.
- 4.6 **DC output Over Current alarm**
Fault message display "OC"
It means DC output current is higher than 13 Adc for model CH5612; or higher than 6.5 Adc for model CH5624.

SECTION 5: DISPLAY & EXTERNAL WIRING

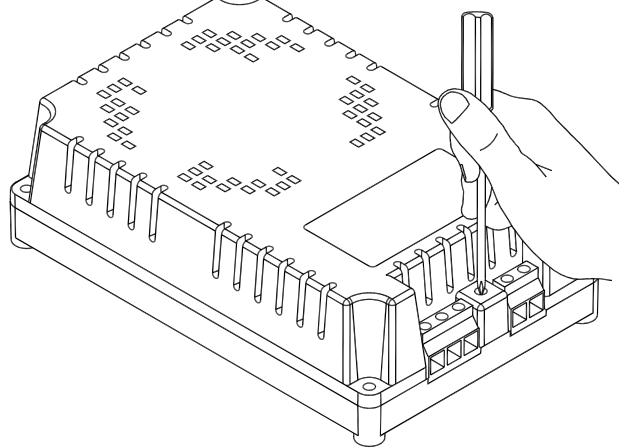


SECTION 6: Manually Force Charge

If battery has not been charged or discharged for long periods of time, the residual voltage will be too low to start charge automatically.

When this happens, use proper tool to press and hold the **"Force Charge Button"** to force charge battery. In the meantime the "Power" indicator is continuously blinking GREEN.

After the battery voltage is increased, release the button. The battery charger will automatically resume to normal charging.



CAUTION

- All the protections will stop while the battery charger is being force charge manually.
- DO NOT force charge in the normal condition; attempts to do so may result in damage.

SECTION 7: OUTLINE / SIZE

