

CSDC40 Intelli-Charge

40A 12V Battery/Solar to Battery Charger



IMPORTANT INFORMATION

Thank you for purchasing our DC to DC charger. Please read this instruction manual carefully before operating the device. Keep this manual in a safe place for future reference.

WARNINGS:

Explosive gases may escape from the battery during charging. Prevent flames and sparks and provide adequate ventilation.

- Before charging, read the instructions
- In door use only
- Do not attempt to charge non-rechargeable batteries
- Never charge a frozen battery
- Corrosive substances may escape from the battery during charging and damage delicate surfaces. Store and charge in suitable area.
- This appliance is not intended for use by young children or infirm persons unless they have been adequately supervised to ensure that they can use the appliance safely.
- Risk of electric shock! Do not open the device if it has been connected to the AC power source.

FEATURES

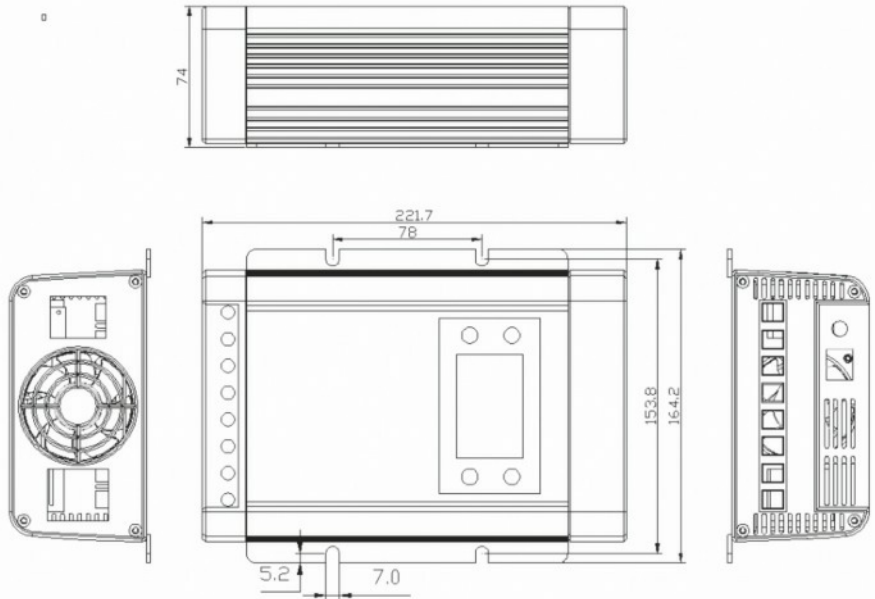
The DC to DC charger is purposely designed for charging auxiliary batteries. It includes all the features needed to maintain the auxiliary battery to its optimum condition and to prolong the battery life.

This product will offer you reliable service for providing a multistage, dual-input battery charger to charge the different types of batteries you have installed in either your home, boat, caravan, 4WD or commercial vehicle. It also supports a solar charge from solar panels. This manual will explain how to use this unit safely and effectively.

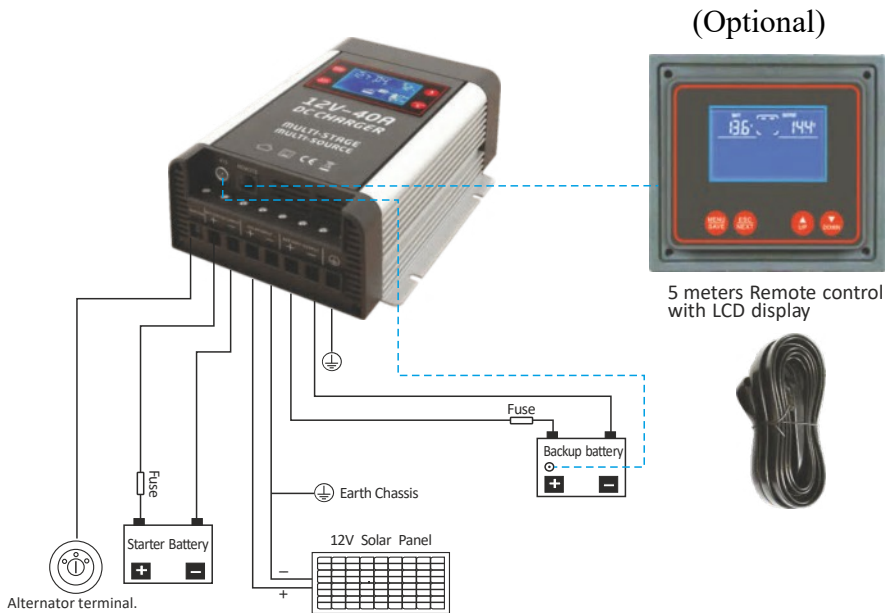
PRODUCT OVERVIEW



DIMENSION

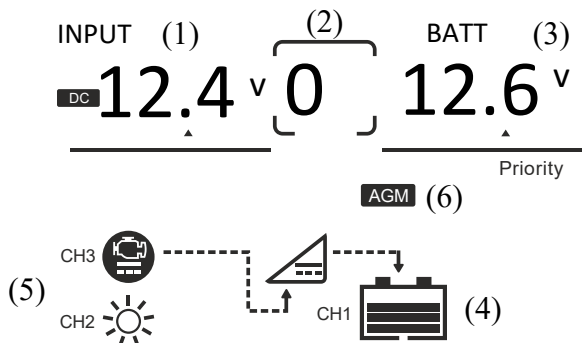


WIRING INSTALLATION



INTRODUCTION

1. DISPLAY INTERFACE:



No.	Icon	Function description
1	INPUT DC 12.4 v	Indicates+ PV/DC input voltage
2	[0]	Indicates the setting program or fault codes (When the product runs normally: This icon rotates clockwise and the parameters display one by one through manually pressing the “UP” and “Down” button; when the product fails the display will show the error code.
3	BATT 12.6 v	Indicates battery voltage, charging current, charging stage (Bulk charge-BUL, Absorption voltage-ABS, Floating-FUL, No charging-NO)
4	CH1 	Indicates battery capacity bar, it is displayed only when the battery is connected. It is dynamically displayed when charging.
5	CH3 CH2	Indicates the input status. When PV / DC is connected, it's corresponding icons are displayed.
6	AGM	Battery type : AGM, WET, GEL, Lithium, Custom Program. The corresponding icon will flash when setting battery type.
7	Priority	Ignition enable (Priority): The word is only displayed when the ignition terminal has been wired.

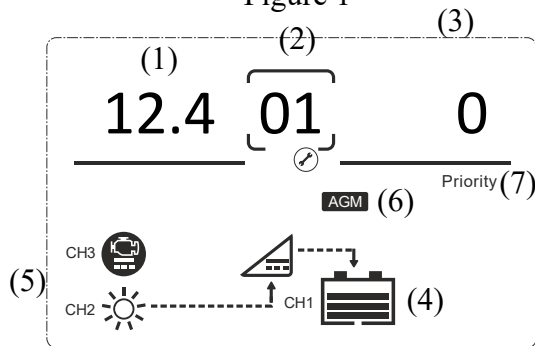
2.THE BUTTON SET:



- MENU/SAVE: Entering settings and saving values
- ESC/NEXT: Exit settings, step to next setting
- UP: Adjusts the parameters (increase), view input and output data.
- DOWN: Adjust the parameters (decrease),view input and output data

Note: The external LCD displays the same.

Figure 1



- Press 'MENU/SAVE' button for 5 seconds to enter the settings menu (see Figure 1). '2' displays the setting level and the value to be changed will flash. "UP" & "DOWN" buttons will change the setting, ESC/NEXT button will step to the next menu level. "MENU/SAVE" button will save the setting.
- Press the ESC/NEXT' button for 5 seconds to exit the menu. Leaving more than 10 seconds without adjustment will also exit the menu.
- When there is no fault the displays backlight will switch off automatically after 30 seconds, when there is a fault or a button is pressed the display lights.
- While charging press the "UP" or "DOWN" buttons to view input and output values PV or DC input voltage, Charge state, charge current, charge voltage.
- Press 'UP' and 'DOWN' buttons together for 5 seconds, the display will flash three times and the unit will be reset to factory settings.

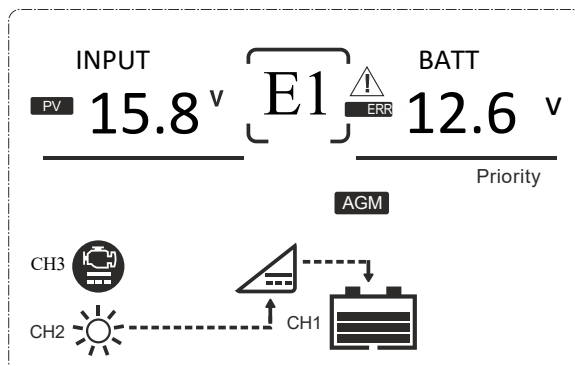
- The main display and the external display can both display and set the parameters, but only one can operate at one time, if the main display is in setting mode the remote display will
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Interface Setting Code

Setting Interface	Code	Default	Range
Input battery LVS	01	11.7V	11.5V~12.5V, shut down with delay 5sec. and at fixed 11V than with delay 0 sec.(direct)shutdown
Input battery LVS recovery	02	12.8V	12.5V~13.5V, with delay 10sec.
Charge current	03	40A	10A/15A/20A/25A/30A/35A/40A
Battery type	04	Setting 1	1:AGM,CV14.6V/FV13.8V 2:WET, CV14.4V/FV13.5V 3:GEL, CV14.2V/FV13.8V 4:LifePO4, CV14.4V/Not activated 5:Custom program: CV14.2V/FV13.8V
Constant charge voltage	05		4:LifePO4: 12.6V~14.8V 5:Custom Program:13.8V~14.8V
Floating charge voltage	06		4:LifePO4: 0V=OFF or 13.0V~14.8V 5:Custom Program:13.0-14.0V

3. TROUBLE SHOOTING:

When the product fails, there is corresponding code showed on '2' (see figure (1), of the display.



Faulty	Code	Faulty	Code
DC low voltage	E1	Internal over temperature warning	A1
DC over voltage	E2	external over temperature warning	A2
PV low voltage	E3	Internal & External over temperature warning	A3
PV over voltage	E4		
Internal over temperature	E5		
external over temperature	E6		
Internal & External over temperature	E7		

4. CHARGING TEST:

- When the ignition terminal is not enabled (no voltage on the ignition terminal), PV has priority. Based on ambient light conditions the battery will be charged via the PV in relation to the units settings.
- When the ignition terminal is enabled, DC has priority with relation to the units settings. If the DC fails the battery is automatically transferred to the PV.
- When the DC is restored, the battery is automatically switched back To DC.

Fan control:

ON: Internal temperature >45°C or Current >30% of the set charge current

OFF: Internal temperature <35°C and current <20% of the set charge current.

If the Internal or external temperature maximum the unit will stop charging. The unit will automatically restart when the temperature falls.

Note: 1. Internal temp. protection >65°C; External temp. protection <55°C

2. External temp. protection >60°C; Internal temp. protection <50°C,
External compensation -3mv.°C

3. PV/DC protection and recover value find in below:

5. DATASHEET

OTHERS	
Internal over-temperature protection	temperature >65 , the charger shut down; temperature <55 , the battery recover to charge again
BTS	Temperature of battery > 60 the charger shut down to protect the battery; temperature of battery <50 , the battery recover to charger again
	Temperature compensation coefficient -3mV/
Product size	L*W*H=221.7*164.2*74mm

INPUT					
Battery Input(Start battery / DC generator)					
Input voltage	12.5-15.8 VDC				
Input low voltage shutdown	factory default is 11.7V, adjustable 11.5V-12.5V (wait for 5sec the unit will continue to charge if the voltage is higher than 11.7V, if lower than 11.7V the unit will stop working. Unit Will shutdown if lower than 11V)				
Input low voltage recovery	≥ 12.8VDC (adjustable range 12.5V~13.5V with 10sec delay)				
Input overvoltage shutdown	≥ 15.8VDC				
Input overvoltage recovery	≤ 15VDC				
Solar Input					
Input voltage	15-45V(open circuit voltage of solar panel)				
Input low voltage shutdown	≤ 15VDC				
Input low voltage recovery	≥ 15.5VDC				
Input overvoltage shutdown	≥ 45VDC				
Input overvoltage recovery	≤ 44VDC				
Solar panel wattage	600W Max				
OUTPUT					
Output voltage	12VDC(nominal voltage)				
Output current	40A Max (10A/15A/20A/25A/30A/35A/40A adjustable)				
Battery type	GEL	AGM	WET	Lithium	Program (Custom settings)
Constant voltage range	14.2VDC	14.6VDC	14.4VDC	14.4VDC(12.6-14.8V Manually adjustable)	4: LiFePO4: 12.6V~14.8V, 5: Custom program: 13.8V~14.8V
Floating voltage range	13.8VDC	13.8VDC	13.5VDC	N/A	4: LiFePO4:0V=OFF or 13.0V~14.8V, 5: Custom program: 13.8VDC (13V~14V Manually adjustable)
Charging current	10/15/20/25/30/35/40 (optional setup on LCD panel)				
Charging mode	Three-stage type				
standby loss	≤ 50mA				
Efficiency	Max.90%				

Warranty

The Suppliers warranty provides free replacement cover for all defects in parts and workmanship for a period of twelve months unless otherwise stated, from the date of purchase. The Suppliers obligation in this respect is limited to replacing parts which have been promptly reported by the Customer as having been in his opinion defective and are so found by the Supplier upon inspection. This warranty is void in the event of improper installation, Customer modification or neglect, natural disasters and does not extend to support posts and ancillary equipment. No responsibility is assumed for incidental or consequential damage. No responsibility is assumed for damage caused by the use of any unauthorised components, misuse, natural disasters, lightning, gale or stronger force winds.

Disposal

When the device has become unusable, dispose of it in accordance with the appliance disposal regulations

