

40A DC TO DC BATTERY CHARGER

80A When combined with Start Assist Booster Kit (ISABK001)

The IDCDC40 is able to utilise 40A when wired with a standard configuration and up to 80A charging to the auxiliary battery using our new boost mode (kit supplied separately). This is all still achieved in an extremely compact package (373cm³) while still boasting all the features of a booster battery charger in a weather, dust and vibration resistant package.



Features

- 3-stage 12V Booster Charger
- 40A max output
- Selectable output voltages
- Over current and temp protected
- Precise under voltage protection
No external isolator required
- High efficiency (Typically >96%)
- Remote charge status LED indicator
- Very low standby current <3mA
- Optional start assist and boost charge features
increased amperage output to 80A max

TECHNICAL DATA

Max Charge Current (without Boost Kit)	40 Amps
Max Charge Current (with Boost Kit)	80 Amps
Input Op Volt Range	11-16VDC
Max Charge Voltage	
(Flooded Cell)	14.5V
(Lithium)	14.8V
(AGM/GEL)	14.3V
Float Voltage:	13.5V
Lithium Float Charge:	13.9V
Standby Current:	0.003A
Min Input Startup Volt:	12V
Dimensions:	162x71.5x32.2mm
Weight:	560g

Important Notes

- Before installation the user shall determine the suitability of the product to ensure correct application.
- Check with your battery manufacturer for the suitability of the charger for your installation.
- Where Lithium battery banks are involved ensure your Battery Management System (BMS) is compatible with our charger.
- A large spark can sometimes be generated during connection, due to the current required to charge the capacitors in the charger.
- Do not short out when powered and operational, as this may cause damage to the unit.
- If the Start Assist / Boost Charge option is not used and the solenoid is not installed then please leave the yellow wire unconnected and isolated.

Installation

- Disconnect the battery supply.
- The following connection sequence is to be followed: Ground (BLACK), Input (RED), Output (BROWN), LED (GREEN), Chemistry/Output Selection (ORANGE), Control (BLUE).
- The unit is protected from weather and dust but do not pressure wash or mount to areas that will be submerged. Avoid locations such as fuel lines or where external heat is produced e.g. exhaust system or where the batteries are located.
- Choose a position with good ventilation where air can pass freely around the unit.
- Ensure the unit is protected from sources of contamination e.g. oil, grease and dust.
- Ensure that the unit is installed away from any flammable fumes, liquids or materials.
- If you are installing to use the Start Assist/Boost Charge feature we recommend that the solenoid is mounted as close to the charger as per wiring diagram overleaf.

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WIRING GUIDE FOR STANDARD INSTALLATION No Start Assist Max 40A Output

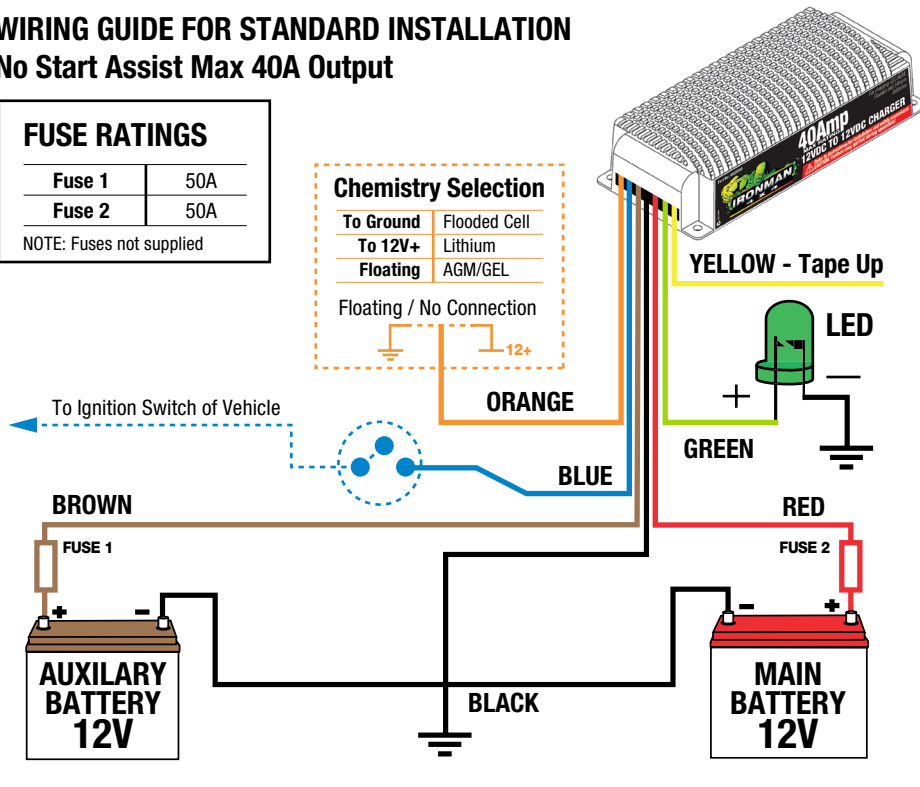
FUSE RATINGS

Fuse 1	50A
Fuse 2	50A

NOTE: Fuses not supplied

Chemistry Selection

To Ground	Flooded Cell
To 12V+	Lithium
Floating	AGM/GEL
Floating / No Connection	



LED Indications

ON / Solid Normal Operation
During normal operation the Remote LED will remain solid ON as a indication of normal charging.

S Slow Flashing Auxiliary Below 12VDC
A flashing LED is a visual indication that the Auxiliary Battery is below 12V.

O OFF No Output / Check
The LED is completely blank is indicative of No Output from the unit and can be from several conditions:

- That the ignition has been turned off and the BLUE ignition wire is at 0V.
- Fuse 2 may be blown - Check Fuse 2 and replace if required.
- Over Temperature - No action required. Unit will restart when temperature drops within normal operating range.

F Fast Flashing Following a failed cranking

- Start Assist Activated - Check main battery
- If occurs outside of cranking during normal operating - Return unit for recalibration.

WIRING GUIDE FOR OPTIONAL START ASSIST Boost up to 80A Output

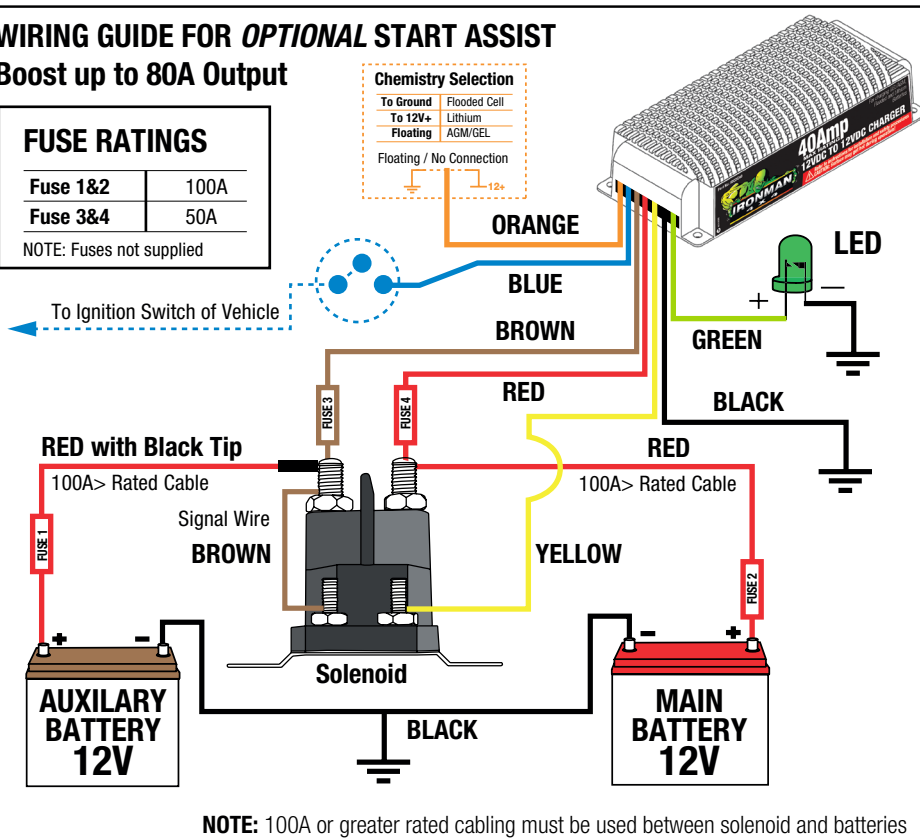
FUSE RATINGS

Fuse 1&2	100A
Fuse 3&4	50A

NOTE: Fuses not supplied

Chemistry Selection

To Ground	Flooded Cell
To 12V+	Lithium
Floating	AGM/GEL
Floating / No Connection	



NOTE: 100A or greater rated cabling must be used between solenoid and batteries

Start Assist and Boost Charge

Start Assist
With the solenoid connected it enables the unit to automatically provide assistance from the Auxiliary Battery on starting of the vehicle. Provided the Auxiliary Battery is charged. Following a failed cranking attempt due to low main battery charge-Release the key so it returns to "ON" position, do not bring it to the "OFF" or "ACC" position. Now within a couple of seconds try cranking again. The vehicle will then start and the LED indicator will flash rapidly for about 60 seconds. Following the Start Assist activation and fast LED flashing we recommend having your main battery and wiring tested.

Boost Charge
With the addition of the solenoid boost charge will allow up to 80A initial charge for fast flat auxiliary battery charging conditions. This initial boost charge reverts automatically to normal charging once the auxiliary recovers from deep discharge.

Warranty Conditions: Our products come with guarantees that cannot be excluded under the Australian Consumer Law. The customer is entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. The customer is also entitled to have the products repaired or replaced if the products fail to be of acceptable quality and the failure does not amount to a major failure. Ironman 4x4 warrants that its products will, under normal use and service, be free of defects in material and workmanship for a period of two (2) years from the date of the original purchase by the customer as marked on the customer's original invoice. Please refer to our website for full warranty information which can be found at <http://www.ironman4x4.com/warranty-terms>