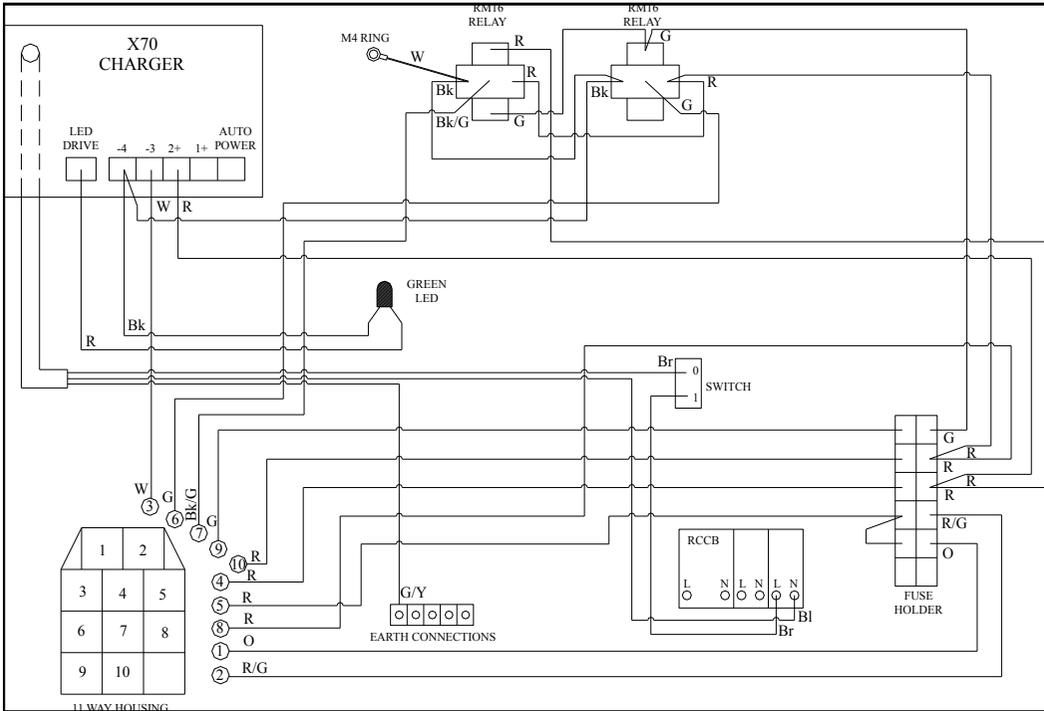




INTERNAL WIRING DIAGRAM



For reference only—Do not change internal wiring as this will invalidate the warranty. Zig Electronics does not accept liability for failure of this unit due to negligence.



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Power Master PCU 1250 and PCU 1650 Battery Charger Power Supply and 230/v / 12v Distribution Unit

Instructions for Fitting and Use

SAFETY INFORMATION

WARNING

Mains electricity can be dangerous particularly in mobile installations such as

caravans, motor homes and boats. It is strongly recommended that the installation of this unit be carried out by a suitably qualified person.

This installation must be carried out with the relevant I.E.E. Regulations.

If you do not have the necessary knowledge do not attempt to fit this unit.

Usage: The appliance is not intended to be used by young persons or the infirm.

DO NOT OPERATE THE POWERMASTER WITH THE OUTER CASE REMOVED

The Powermaster is a purpose designed power centre, combining 12 volt charging and fused distribution circuits with 230v protected distribution.

When connected to a 230v mains supply the Powermasters integral automatic battery charger will recharge the battery as required.

The Powermaster 230v system is protected by a residual Current Device (RCD) and then distributed via MCB (Miniature Circuit Breakers) of 10 amps and 6 amps current rating.

FITTING INSTRUCTIONS

Location and Mounting

This product is not suitable for fitting either externally or in areas that are in close proximity to water or damp.

Select a suitable location for the unit taking into account the statement above.

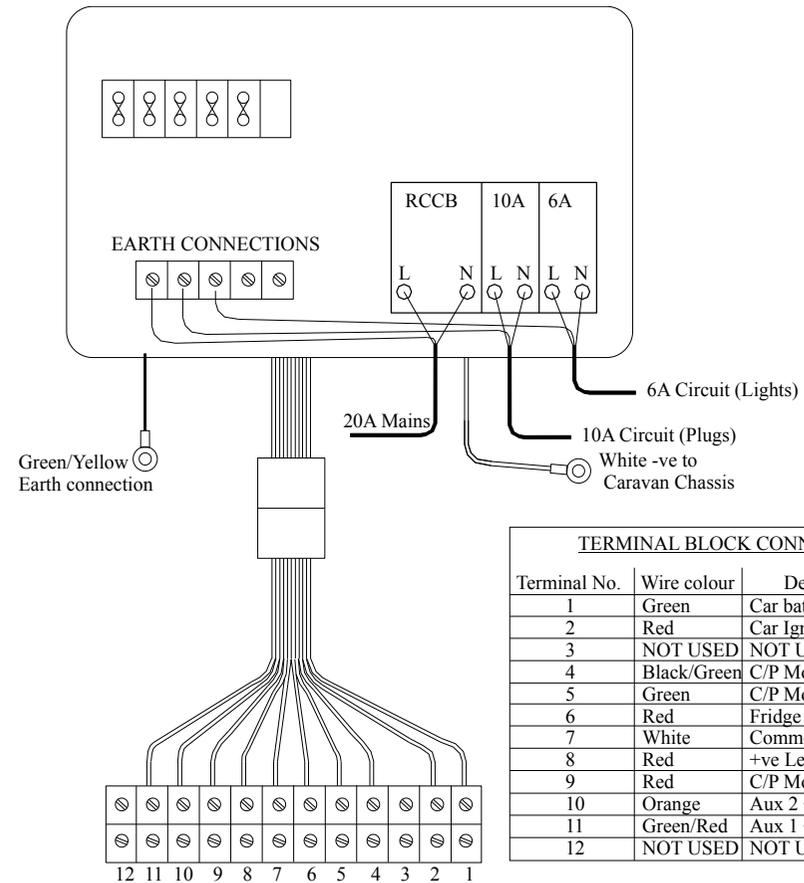
Ample clearance should be allowed around the sides and front of the unit to allow access and ventilation.—The unit when in charging mode will emit heat.

Note the unit is fitted with a thermal cut out should the temperature inside the units exceed permitted levels. All 12v outputs will be neutralised until the internal temperature has reduced.

The Powermaster 1650 higher output model is fitted with an internal fan to assist cooling—the vent for the fan should always be kept clear.

If the unit is fitted in an enclosed space ensure that there is adequate ventilation entering the enclosed space. Protect any exterior ventilation with suitable mesh and shields to prevent ingress of water or small insects.

Suggested Connection Schematic Diagram 1



WIRING and CONNECTIONS.

12 Volt Circuit.

A suggested 12 volt circuit diagram is shown in diagram 1. All 12 volt connections must be made via the terminal block. On no account should any 12v connection be made inside the Powermaster.

Only use the correct rating wire in accordance with the requirements of the installation and the correct standards applicable. Recommended current ratings are also given in the relevant BS—EN Standards for electrical installation

The acceptable maximum current ratings indicated in the standard must be de rated when used as a harness or enclosed. Table 1 gives the relevant information.

Length and appliance consumption can be determined referring to the IEE Wiring Regulations.

Table 1

Nominal Cross Sectional Area (mm ²)	Number and Diameter of wires (Strands/ mm)	Acceptable Max Current Rating (Amps)
1.0	14/0.3	8.0
1.5	21/0.3	13.0
2.0	28/0.3	17.0
2.5	35/0.3 or 19/0.41	21.0

230 Volt Circuit

The demand for appliances should be calculated and connected to the relevant circuits 6 amp or 10 amp in the Powermaster

Connect the internal circuits to the Powermaster first before connecting the Powermaster to the external 230v circuit.

Connect the caravan mains inlet socket to the Powermaster RCD. Ensure that the earth wires are connected to the earth block and that the live and neutral wires are correctly inserted into the RCD before continuing.

Refit the case.

TESTING

DO NOT OPERATE THE POWERMASTER WITH THE OUTER CASE REMOVED

Front Panel

Ensure that the switch marked Charger ON is switch to the OFF position. Ensure that the 230 v RCD and MCB ' s are also in the off position.

Connect the mains supply cable to the vehicle or boat—Switch on the Powermaster charger via the Charger On switch on the front panel—A green light should illuminate. If no light illuminates recheck all connections.

If Light illuminates, switch the charger off. Switch on the RCD—Check the Powermaster by pressing the TEST function button. The RCD should switch off immediately.—If this does not happen disconnect the vehicle or boat from the mains and recheck all connections.

Return the RCD to the ON position and switch on the 6 amp MCB—check the operation of the circuits connected directly to this MCB.

Ensure that the leisure battery is connected then switch on the charger via the switch on the front panel of the Powermaster. The green light should illuminate indicating that the charger is operating.

Switch on the 10 amp MCB and again check appliances associated with this circuit.

Specification

	Powermaster 1250	Powermaster 1650
Charger Input		
Rated Input Voltage	220—240 V AC +/- 10%	220—240 V AC +/- 10%
Rated Input Current	1A(RMS) @230v AC	1A(RMS) @230v AC
Rated Input Frequency	47Hz—63 Hz	47Hz—63 Hz
Maximum Wattage	230 W	230 W
Charger Output		
Rated Output Voltage	Nominal 13.8 v	Nominal 13.8 v
Rated Output Current	(Continuous) - 12.5 A	(Continuous) - 16.5 A
Ripple and Noise	100mV p-p	100mV p-p
Output Voltage Stability	+/- 0.5%	+/- 0.5%
Current Limit	13.5 A	17.5 A
Mains Consumer Unit		
RCCB	25 A—30mS Sensitivity	25 A—30mS Sensitivity
MCB	1 x 10 A & 1 x 6 A	1 x 10 A & 1 x 6 A
Other		
Relays	2x12V 40 A	2x12V 40 A
Temperature Cut-out	Yes	Yes
Cooling Fan with Thermal Switch	No	Yes

Mounting

Mount the unit vertically in a position to allow access to the front of the unit— Access should be provide around the unit to allow removal of the front case.

Remove the 4 screws located in each corner of the front case

Remove the fuse holder plastic cover

Using the diagram below mark mounting locations on the mounting surface.

Fix two screws into the upper holes and hang the Powermaster to these screws.

Fix the lower section of the Powermaster through the centre hole in the base of the unit.

