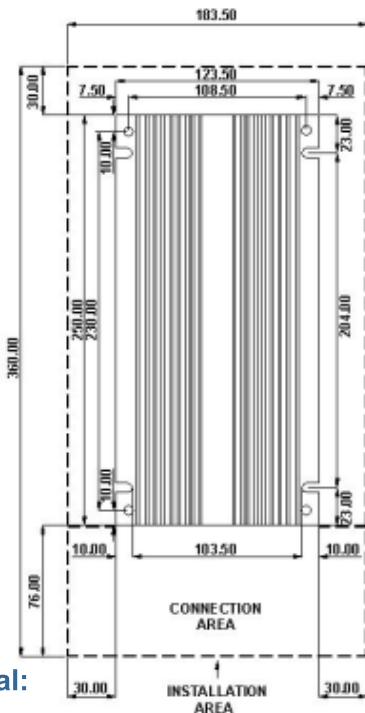




30A Solar Charger : Installation Instructions

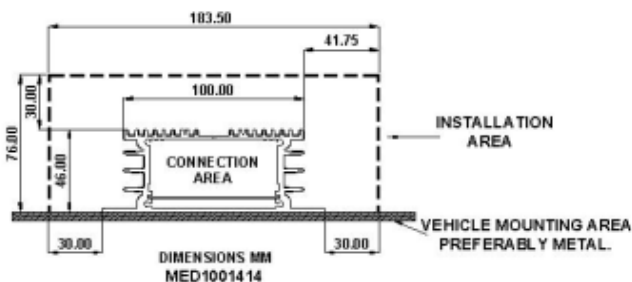
- This charger allows you to charge a 12V leisure/secondary from a vehicle alternator and >100W of 12V solar cells
- This unit is suited to Ignition control, Constant Voltage Alternators, Euro 5 & Euro 6 engines, STOP/START, Smart Alternators & Vehicles with Regenerative Braking. (Mercedes Blue Efficiency Vehicles, VW Blue Motion Vehicles, Ford ECOnetic Vehicles, Vauxhall ecoFlex vehicles to name a few).
- The Serial Interface in conjunction with the Ablemail Software Interface allows the unit to be configured to meet specific customer requirements.

Mechanical: This unit should be mounted as the drawing subject to guidelines below .



NOTES:

1. 4off fixing holes 6.50mm Ø.
2. 4off slots 6mm x 10mm.
3. Recommended air space around heatsink:- top, sides and non connector end 30mm (as dashed lines).
4. Connector end space 80mm absolute min (as dashed lines).
5. Recommended mounting:- metal base.
6. Orientate Led for visibility.
7. Do not fit near heat sensitive material or components as case may reach temperatures up to 75 deg C.
8. Do not fit near heat sources such as exhaust or heater pipes.



Electrical:

The charger should be mounted as close to the load being supplied as possible & connected as below. If the user wishes to connect to the ignition the charger must be configured to operate on an ignition signal & the Ignition Feed must be connected as below .

WE RECOMMEND FITTING:

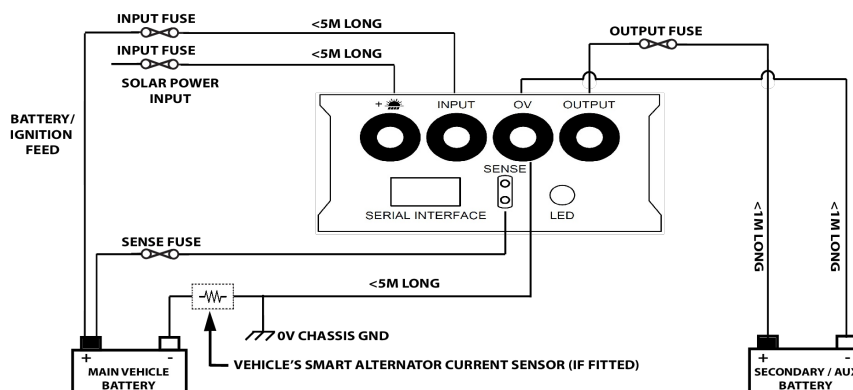
- 50A INPUT POWER FUSES & 50A OUTPUT POWER FUSE TO PROTECT THE VEHICLE WIRING SYSTEM.
- 1A FUSE IN V-REMOTE TO PROTECT VEHICLE WIRING.

IMAGE No : S110012B

NOTE: THE PERFORMANCE OF ANY PRODUCT CAN BE IMPROVED BY USING THICKER SUPPLY CABLE, INCLUDING THE GROUND CONNECTION & CONNECTING REMOTE INPUT POWER CABLE TO THE INPUT BATTERY.

IF THE INPUT / OUTPUT POWER CABLES NEEDS LENGTHENING:

- MINIMUM SIZE: 6MM SQ FOR UP TO 1.5M.
- MINIMUM SIZE: 10MM SQ FOR LONGER RUNS.



Operation:

Each converter operates as described below:

- The charger operates with an input voltage between 9V & 32V.
- The sense Input voltage controls the charger turn on/off according to the configuration.
- The charger output current is limited at 30A .
- The solar charger operates when solar input is greater than 18V (Sun is out) and uses MPPT to ensure the maximum use of sun's energy.The alternator input must also be off.
- The converter is protected against overheating & resets when it cools down.

NOTE: The LED shows the converter state:

- Flashing Red - In fault mode (see codes below of number of short flashes followed by number of long flashes).
- Flashing Amber - Charging at boost battery flat
- Flashing Green - At output voltage
- Steady Green - Solar charger operating .

Trouble Shooting:

- Check voltage at main battery input is 12V & polarity is correct.
- Check voltage at output pins is 12V & polarity is correct.
- Check fuses OK.
- Check Led flashes status as power is applied
- Check Solar input is > 18V & Led is steady Green for Solar operational check

IMAGE No: S11004A

FAULT MODE	FAULT CODE RED LED	
	SHORT FLASHES	LONG FLASHES
ENGINEER MODE	3	0
LOCAL INPUT VOLTAGE BELOW 9V	3	1
LOCAL INPUT VOLTAGE OVER 36V	3	2
LOCAL INPUT VOLTAGE OVER 33V	3	3
CHARGE CONTROLLER POWER DEVICES TEMPERATURE		
MICRO TEMPERATURE OVER 70°C	3	4
FET TEMPERATURE OVER 115°C	3	5
LOCAL OUTPUT VOLTAGE (OUT OF RANGE)	3	9
OVERLOAD	3	10

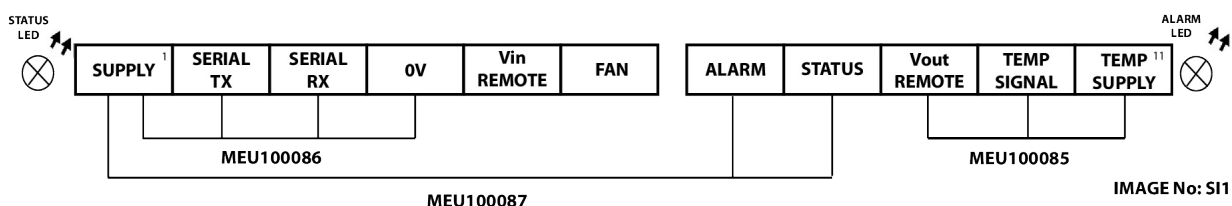
Optional Extras:

The Ablemail Software Interface, a windows pc & the serial communication cable MEU100086 allows many of the settings to be changed to meet a specific customer requirement. The serial interface can also be used to drive the Ablemail display MEU100087LCD & the MEU100090 which maintains vehicle starter battery from the solar input once the secondary battery is charged. SVSR 12 can be used to allow the starter & leisure batteries to be pooled for running loads & assisted starting of the vehicle

If the external interface board is fitted with additional wiring, more advanced operational & control functions are available:

- The serial communication cable 'MEU100086' allows monitoring & re-configuring of the DC DC Converter of the output voltage.
- The remote temperature/output cable 'MEU100085' allows more accurate control of the output voltage & temperature control of an enclosure fan.
- The external status/alarm unit 'MEU100087' allows external monitoring of the converter status.
- These additional features need the interface board.

This interface uses terminal block organized as shown below, If this is fitted more advanced operational & control functions are available.



If you require any assistance or advice on this product & or its safe integration with other electrical equipment, Please contact Ablemail Technical on +44(0)161 745 7697. *Installation Instructions SWI044 Rev.A 2/2*