PTMC340- Manual.

1. ***This integrated charging system is mainly designed for use in caravan ,camper van and buses or Small and medium-sized boats , as long as the auxiliary battery needs to be charged, It can use a 240V AC source to charge the auxiliary battery, or it can use the starter battery in the vehicle. When the alternator is charging, its DC power will charge the auxiliary battery, and it can also accept solar energy to charge the auxiliary battery. This product can also test the data of the auxiliary battery's output current, and it can be installed on the unit itself as well as the LED display installed in any suitable location. Users should take the time to understand the product's various design parameters.***

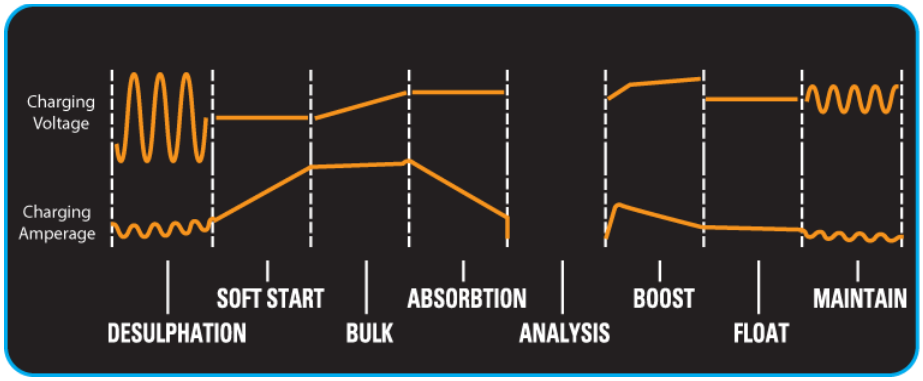
2. ***FEATURES***

- Fully automatic 8 stage charging system.
- Suitable for charging 12V Gel, Lead Acid, AGM, and Maintenance Free Calcium types of flooded automotive batteries. This charger is NOT suitable for Lithium type batteries. Do not attempt to recharge dry cell batteries.
- Large easy to read LED display shows the battery charging status, volts and amps output, operation mode and notifies of battery fault. Also that can display load current status when it connected to load current test sensor unit.
- Zero Volt battery charging, enabling recovery and charging of a completely deep discharged battery.
- Automatic input selection between AC, DC or Solar power sources.
- Removable LED display doubles as a remote controller with 5M of connection cable.
- Inbuilt protection systems for safe operation.

Battery Protection Systems

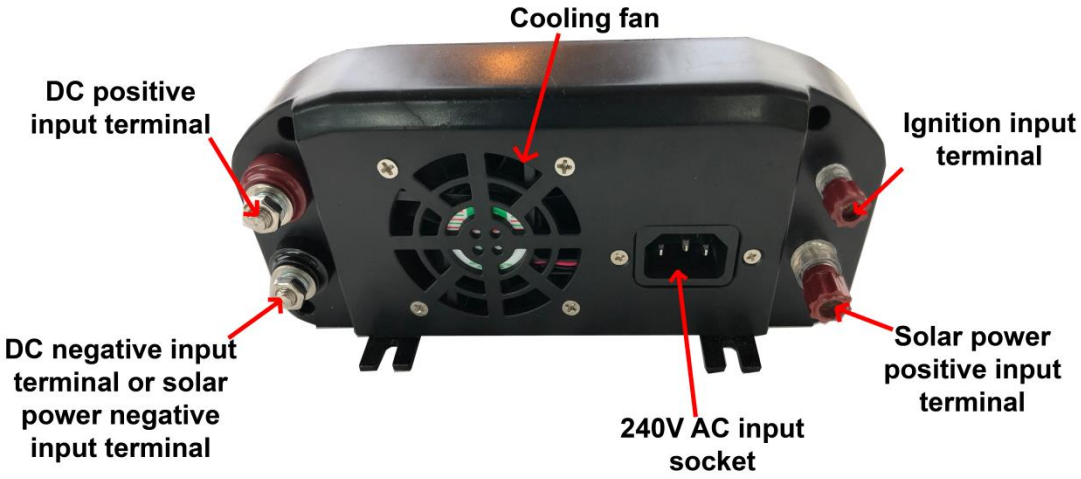
1. **Over-charging protection**
   The battery charger contains an advanced microchip monitoring and controlling system to ensure that the battery does not become overcharged which can result in the loss of electrolyte or in internal short circuit which can cause damage to the battery.
2. **Overload protection**
   Overload protection will activate when the current exceeds 110% of the maximum working current.
3. **High temperature protection**
   High temperature protection will activate when the internal temperature of the charger rises above 50°C. If this occurs, the charger output is automatically reduced. Once the temperature is below approximately 35°C, the charger output will return to normal.
   This feature is designed to protect the battery and the battery charger when they are being used in environments with very high ambient temperatures.
4. **Even charging function**
   By slowly raising the voltage, the batteries cells with a lower voltage are not charged too quickly which can overheat individual battery cells, compared to battery cells with a higher voltage.
5. **Reverse polarity protection**
   Audible alarm when battery clamps are incorrectly connected to the battery in the reverse polarity. Reverse Warning LED indicator will also be flashing. This protection will protect both the charger and the battery from damage. If you have accidentally made a reverse polarity connection, please switch battery charger off from AC power, and correct the battery clamp connections to the correct polarities.
6. **Short circuit protection**
   No output when clamps are connected together, power output only occurs when connected to a battery. This prevents charger malfunction if clamps accidentally come in contact with each other.

3. *BATTERY CHARGER 8 STAGE DIAGRAM*

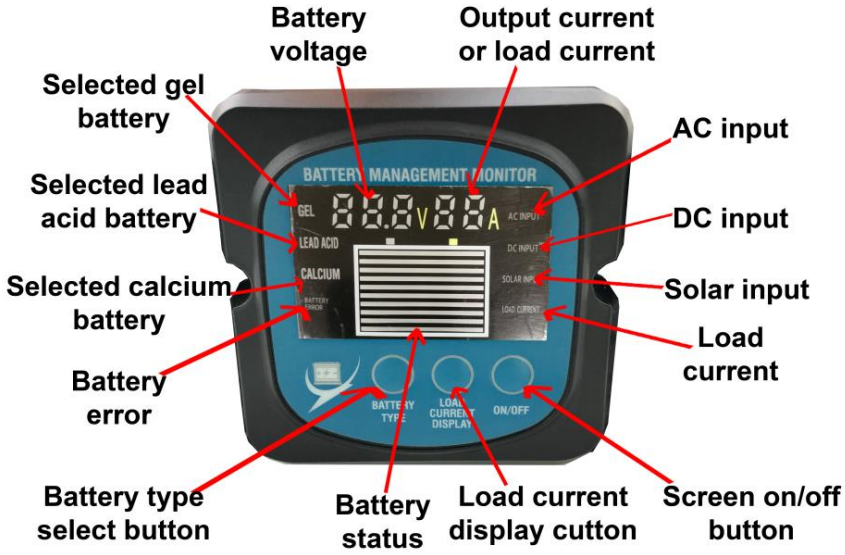


4. *INSTALLATION INSTRUCTIONS*

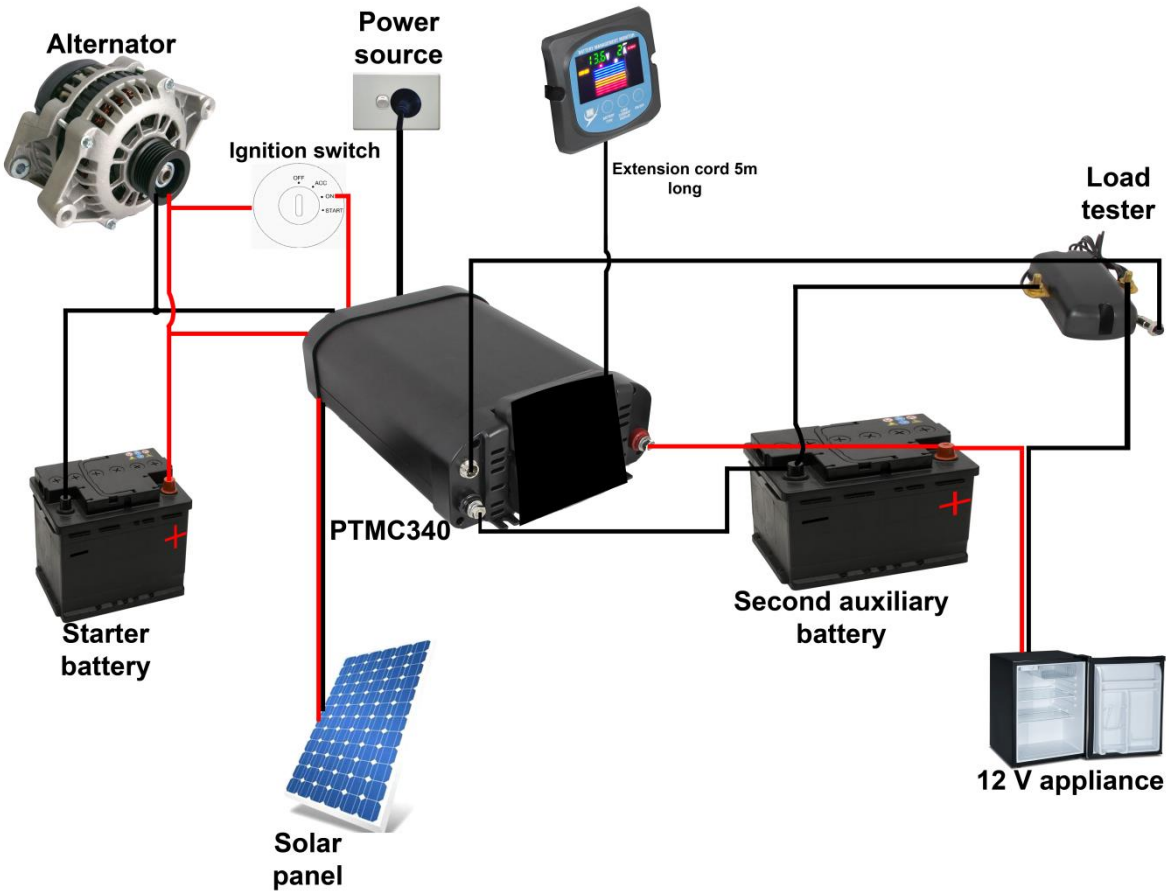
PTMC340 Back panel diagram



Removeable LED screen display



PTMC340 charger connection system diagram



Charging

- Once connected, please select the right place to install the monitor.
- Once connected, the display unit is switched on by pressing the ON/OFF button on the display front panel.
- This unit will automatically switch between connected inputs to keep your auxiliary battery charged. It will switch inputs based on priority;
    - 240V Connection as main priority (will switch off all other input)
    - When 240V is off, DC Input will be next priority if voltage detected is over 13.2V and ignition wire connected (also the ignition on and alternator running)
    - Solar input switches on when there is no 240V signal, or Ignition is switched off.
- Once display is on, the LED Battery status display will illuminate to indicate what voltage and amperage the charger is outputting.
- If there is a fault with the battery or one of the batteries cells, the battery charger will automatically switch off; no charge will be sent to the battery and the Fault indicator LED light will illuminate together with an audible beep.
- Please make sure all cable size and length is at a suitable distance from the DC-DC charger and two batteries.

5. TECHNICAL SPECIFICATIONS

Part Number:	**PTMC340**
Charger Type	Multiple Input DC Output
Battery type selection	Push button, memory stores last selected type
Compatible rechargeable battery types	12V Flooded lead acid, AGM, GEL, Maintenance free, Calcium.
	DO NOT ATTEMPT TO CHARGE DRY CELL BATTERIES
Supplied 240V Cable Length	2m
Load current sensor cable length	1.5m
AC Input Voltage	AC(175-255)V / 50~60Hz
DC Input Voltage	12.4 V – 15V
Solar Input Voltage	12V – 29V
Output Current	AC Input – 30A DC Input – 40A Solar Input – 30A
Short circuit protection (when charger battery clamps are touched together)	Yes, , unit cuts output power
Battery Output Current Test	0 – 100A
Case type	Aluminium / Plastic
Ambient operating temperature	-15℃ to +50℃
Water resistance	NO