



MPPT REGULATOR is designed to interface between the solar panel, the batteries and the load. The tracker will always find the optimum power point of the solar panel system to ensure that maximum power is extracted from the solar panel and put into the batteries

Using this system up to 30% more power can be extracted from the solar panel than using shunt or series pass regulators. The regulator is also able to charge batteries of a lower voltage than the solar panel. By means of LEDS it will show the status of the system. It also incorporates various charge modes which will automatically increase the charge level to the batteries when first starting up or if the battery voltage falls below the min volts. The regulator will read the nominal battery voltage. This unit is designed to run on a 12/24 volt battery set. It will then read the solar panel voltage and automatically find the optimum power point. The charging, battery values and boost modes are then automatically adjusted.

Via links the load voltage disconnect can be selected, whether the battery is lead acid or sealed, and whether the unit operates as a normal load shedder or as a day/night switch.

Features

JUMPER SELECTION

- * Load disconnect. Place the jumper onto the selected low voltage disconnect.
- * Remove the battery jumper for Sealed Gel Batteries.
- * Remove the jumper if the DAYLIGHT SWITCH is required

CONNECTING THE UNIT.

- * Ensure that all cabling used is kept as short as possible as volt drops caused by long cables will reduce the efficiency of the TRACKER. Connect the unit as shown in the diagram. Minimum recommended wire diameter = 4 mm²
- * First connect the Load and then the Battery.
- * The Led display will show the TRACKER checking the battery voltage. The MEDIUM led will flash once for a 12 volt battery and twice
- * Connect the solar panel. The PANEL led will come on if there is panel power.
- * The Regulator will now read the solar panel voltage and select the optimum power point. If there is sufficient power in the solar panel the TRACKER will now start charging.

CHARGING THE BATTERIES.

BOOST MODE: The batteries are charged until they reach the boost voltage 14.8 or 29.6. When the batteries reach this level the tracker will hold this rate for a minimum of 1/2 hour indicated by flashing BOOST LED and then switch to Float Mode. If the batteries fall below the BOOST voltage then the timer is reset ie at night or during cloudy days. This ensures that the batteries are fully Boosted.

FLOAT MODE: Boost Light is off - The batteries are now essentially in trickle charge mode

6 LED DISPLAY

- Panel
- Load
- Boost
- Full Battery
- Medium Battery
- Low Battery

AUDIBLE BUZZER

When the batteries are connected for the first time the buzzer will sound once for 12 volt and twice for a 24 volt battery set. The buzzer will beep when the battery voltage has reached within 1/2 a volt of the battery load disconnect for a 12 volt system and within one volt of load disconnect for a 24 volt battery set. The Buzzer will beep 10 times when the load disconnect is about to trip.

RESET BUTTON.

Pushing the reset button cancels the buzzer. If the unit is in LOAD SHED the reset button will reset the load but if the voltage is too low then the load disconnect will operate.

Technical Specs

MAXIMUM SOLAR PANEL VOLTAGE: 50.0 V DC

MAXIMUM BATTERY SYSTEM: 24 DC<

MAXIMUM CHARGE CURRENT: 10A DC

MAXIMUM LOAD: 10 AMPS

MAXIMUM PANEL SIZE: 12 volts - 120 watts; 24 volts - 240 watts