PR2410 24 Volt 10 Amp Regulator

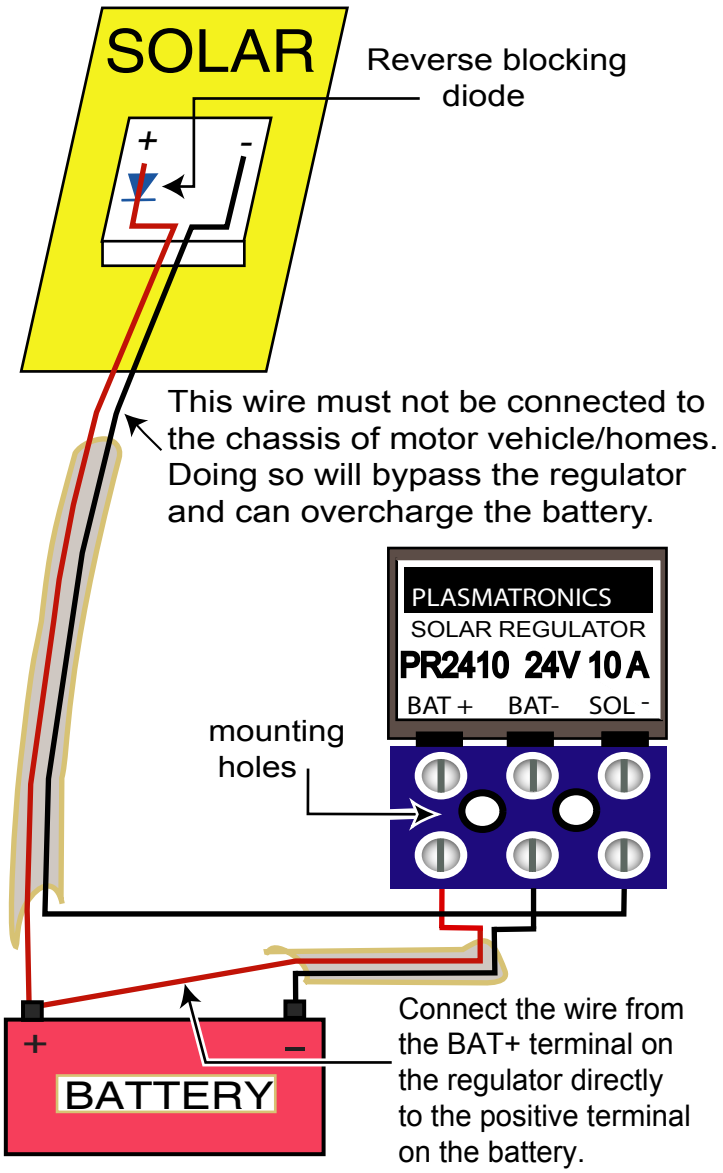
FOR LIQUID ELECTROLYTE LEAD ACID BATTERIES

A simple two stage regulator for charging liquid electrolyte lead acid batteries from photovoltaic panels. It uses a rugged power mosfet and switches on the negative side.

INSTALLATION

Mount the regulator by the holes in the terminal block. In hot or enclosed spaces, allow 1 cm space behind the regulator. Connect a wire from the positive battery terminal to the Battery positive (BAT+) terminal. Connect another wire from the negative battery terminal to the Battery negative (BAT-) terminal. Connect a third wire between the negative side of the solar panel and the Solar negative (SOL-) terminal. Connect the solar panel positive to the positive battery terminal (directly to the battery, not to the BAT+ terminal on the regulator). We recommend the installation of a reverse blocking diode in the solar positive wire.

IMPORTANT: The wire from the SOL- terminal must not be connected to the chassis of motor vehicles or motorhomes. If you connect the SOL- wire to chassis, you will bypass the regulator and you may overcharge your battery.



HOW THE REGULATOR WORKS

The regulator works like an intelligent switch between the BAT- terminal and the SOL- terminal. Charge current flows into the battery until the battery voltage rises to the boost maximum (29.4 V). The regulator now switches to float mode. The current is switched off and the battery voltage slowly falls. When the battery voltage drops below the float cut in voltage (26.4 V), the current is switched on again. The charge current continues to flow into the battery until the voltage rises to the float maximum (27.5 V). The charge current is then turned off. The regulator switches the current on and off to keep the battery voltage between the float maximum voltage and the float cut in voltage. When the battery has been discharged enough for it to fall below the boost cut in voltage (25.0 V), the unit will switch back into boost mode.

DO NOT Attempt to test the regulator without a battery connected. This is not a linear regulator.

The PR2410 is ideal for camping, boating, and other one or two panel solar applications. It features brass inserts and screws in the terminal block and is fully enclosed in resin. The PR2410 is not adjustable.

Manufactured by: Plasmatronics Pty Ltd
ABN 98 073 758 497
www.plasmatronics.com.au

SPECIFICATIONS

Boost Maximum	29.4	V
Boost Cut in	25.0	V
Float Maximum	27.5	V
Float Cut in	26.4	V
All voltages +/- 0.15 volt		
Charge Current	10	A
Supply Current	6	mA
Height	56	mm
Width (max)	37	mm
Depth (max)	21	mm
Cable entry (dia.)	4.5	mm
Mounting hole	M4	

PR2410 24V 10A