

# PLASMATRONICS

## PR2410 24 Volt 10 Amp Regulator

The PR2410 is 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

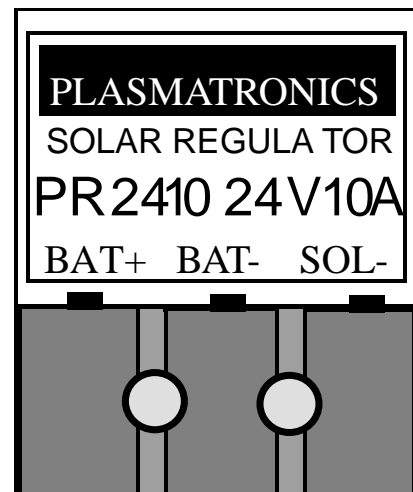
To install, mount the regulator via the holes in the terminal block. In hot or enclosed locations, allow 1 cm space behind the unit. Connect a wire from the positive battery terminal to the terminal marked BAT+. Connect another wire from the negative battery terminal to the terminal marked BAT-. A third wire should be connected between the negative side of the solar panel and the terminal marked SOL-. The positive side of the solar panel should be connected to the positive battery terminal if possible. If not, it is acceptable to use the terminal marked BAT+. We recommend the installation of a reverse blocking diode in the solar positive wire.

### SPECIFICATIONS

|                |      |    |
|----------------|------|----|
| Boost Maximum  | 29.4 | V  |
| Boost Cut in   | 25.0 | V  |
| Float Maximum  | 28.2 | V  |
| Float Cut in   | 26.2 | V  |
| Charge current | 10   | A  |
| Supply current | 6    | mA |

### HOW THE REGULATOR WORKS

The full available charge current is allowed to flow into the battery until the battery voltage rises to the boost maximum. The battery now being almost fully charged, the unit switches to the float mode. The current is switched off and the battery voltage slowly falls. When it drops below the float cut in voltage, the current is switched on again. It stays on until the voltage rises to the float maximum and is then turned off. The battery voltage will slowly oscillate between the float maximum and cut in. When the battery has been discharged enough for it to fall below the boost cut in, the unit will switch back into boost mode. ***Do not attempt to test the unit without a battery connected. This is not a linear regulator.***



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