

# MICRO CARE<sup>®</sup>

## SOLAR COMPONENTS



MPPT Regulators, Pure Sine Wave Bi-Directional inverters, Grid Tied Inverters, and Grid Tied Limiters are designed, developed, and manufactured by MICROCARE in Port Elizabeth, South Africa

### Microcare 30 amp LED MPPT Regulator with Load Shed

The MICROCARE 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 MICROCARE MPPT 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 minimum volts.

The MICROCARE MPPT 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:

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- Automatically measures the battery voltage and then sets up the charge parameters (12v-24v)
- Operates the Solar Panels at the maximum efficiency
- Charges batteries by setting up the best power point of the solar panels
- Can improve power extracted from the solar panels by 30% over normal shunt/series pass regulators
- LED Display
- Maximum Current 30 Amps.
- 30 amp Load controller.
- Temperature controlled Cooling Fan
- Selectable low voltage disconnect.
- 24 hour load or Street Light mode

#### **Specifications:**

Output Current Rating	30 amps
Nominal Battery Voltage	Multi-Voltage 12-24vdc (Automatic selection of voltage)
PV Input Voltage	Absolute Maximum 50VDC
Charge Algorithm	2-stage Boost/Float
Boost Voltage	Charges to 14.8v for minimum of 3 hours (12v system) 29.6v (24v system)
Float Voltage	13.8v per battery (12v system) 27.6v (24v system)
Power Conversion	DC/DC Switch Mode
Output Efficiency	>95% Typical @ 14 Volt 15 Amps Output
Voltage Step down Capability	Can charge a lower voltage battery from a higher voltage PV array.
Status display	6 LED Display <ul style="list-style-type: none"> <li>• Panel</li> <li>• Load</li> <li>• Boost</li> <li>• Full</li> <li>• Medium</li> <li>• Low</li> </ul>
Features	<ol style="list-style-type: none"> <li>1. MPPT Charge Controller</li> <li>2. 30 amp Load Shed</li> <li>3. 24 hour load shed or Street Light Controller</li> <li>4. Programmable; Dusk to Dawn, ½ hour 1hour or 1.5 hour delays.</li> <li>5. Selectable battery low cutout. 10.0v,10.7v,11.5v for 12 volt system</li> <li>6. Selectable battery low cutout. 20.0v, 21.4v, 23.0v for 24 volt system.</li> </ol>
Power Consumption	Less than 1watt
Environmental Rating	0 – 40°C
Protection System	<ul style="list-style-type: none"> <li>• Lighting Protection</li> <li>• Reverse polarity Panel/Battery</li> <li>• Internal Fuse</li> </ul>
Cable Entry	Connector (Max Cable size 16mm)
Dimensions	0.5kg      110mm (L) x 110mm (W) x 70mm (H)
PV Panel Range	12v - Max 360 watt PV Panel 24v - Max 720 watt PV Panels

**All Microcare Products have a 3 year carry in warranty**