

## Renewable Energy

### **Solar Battery Charger**

The Magellan Power Solar Battery Charger is highly efficient, reliable and robust equipment designed to withstand the pressures of the harsh Australian climate. It combines high-quality power electronic components with advanced controls to seamlessly transfer energy from the sun to batteries.

Available in PWM and MPPT models and featuring advanced communication options including optional satellite and GSM, the Magellan Power Solar Battery Charger is perfect for use in a variety of applications.

#### **Product Features**

- Highly efficient
- Configurable
- Large LCD display (including mimic panel)
- Programmable charging regime
- Sophisticated digital metering
- Advanced communication options, including satellite and GSM
- Data logging
- Comprehensive alarm suite
- Reliable IGBT technology
- Wide input range



**Technical Specifications – Solar charger**

ITEM	SPECIFICATION
<b>NOMINAL BATTERY VOLTAGE</b>	120 Vdc
<b>BATTERY VOLTAGE</b>	90 – 150 Vdc
<b>RATED PV RATING</b>	10kWp
<b>MAXIMUM SOLAR VOLTAGE</b>	350 Vdc
<b>MPPT VOLTAGE RANGE</b>	150 – 300 Vdc
<b>MAXIMUM SOLAR CURRENT</b>	100A (PWM Model) 65A (MPPT Model)
<b>CONVERSION EFFICIENCY</b>	97-99% (PWM Model) 95-98% (MPPT Model)
<b>CONVERSION TOPOLOGY</b>	Trench IGBT Integrated Power Module PWM or High Frequency Buck (MPPT Model)
<b>OPERATING AMBIENT TEMPERATURE</b>	-10 to 60 C (de-rates over 50 deg C)
<b>PARALLELING INTERFACE</b>	Electrically Isolated CAN bus Modular connector, maximum cable length < 5 metres Single Master with Multiple Slaves
<b>USER INTERFACE</b>	128x64 Graphical Blue LCD with White LED Backlight Membrane Keypad Green System OK LED Red Alarm Fault LED Real-time Display of all Measured Parameters Setpoint Adjustment
<b>CHARGER PROTECTIONS</b>	Charger Current Limit Monitoring Charger Over Temperature Monitoring Charger Heatsink Temperature Derating Sensing Fault Lightning Transient Protection (MOV)
<b>BATTERY PROTECTIONS</b>	Battery Over Temperature Monitoring Battery Voltage - Temperature Compensation Battery Under Voltage Monitoring Battery Over Voltage Monitoring
<b>BATTERY CHARGING STRATEGY</b>	Three-Stage (Bulk, Absorption, Float) Programmable Bulk & Float Voltages Programmable Maximum Battery Charging Current Master controls overall charging with paralleled units
<b>MONITORED SYSTEM PARAMETERS</b>	Battery Voltage, Current & Temperature Solar Voltage & Current Enclosure & IGBT Temperature
<b>COMMUNICATION PORTS</b>	Electrically Isolated RS232 DB9 Female Connector Optional Wireless Bluetooth Serial Port
<b>COMMUNICATION PROTOCOLS</b>	Modbus RTU Optional Satellite and GSM SMS Reporting
<b>INBUILT DIAGNOSTIC SYSTEM</b>	Periodic Data Logging into Non-Volatile Memory. Fault Event Recorder Data Downloadable via Communications Ports
<b>ENCLOSURE</b>	Width 240mm Length 380mm Height x 140mm (PWM) 300mm (MPPT) Weight < 10kg
<b>COOLING</b>	Internal Heatsink with Temperature Controlled Fan
<b>TERMINALS</b>	1m Flying Leads DC Solar Input DC Battery Output Volt-Free DC Low Alarm Screw Terminals (C, NO, NC) 10m Battery Temperature Sensor Lead Optional External Battery Current Sensor Optional External Battery Voltage Sensor CAN bus RJ12 Modular Connector
<b>VOLT-FREE OUTPUT</b>	Low-battery condition. Setpoint programmable trip level Volt-free contact 10A
<b>STANDARDS COMPLIANCE</b>	AS3100, AS4509

\*Specify at factory if MPPT model required

