

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
NOMINAL BATTERY VOLTAGE	120 Vdc
BATTERY VOLTAGE	90 – 150 Vdc
RATED PV RATING	10kWp
MAXIMUM SOLAR VOLTAGE	350 Vdc
MPPT VOLTAGE RANGE	150 – 300 Vdc
MAXIMUM SOLAR CURRENT	100A (PWM Model) 65A (MPPT Model)
CONVERSION EFFICIENCY	97-99% (PWM Model) 95-98% (MPPT Model)
CONVERSION TOPOLOGY	Trench IGBT Integrated Power Module PWM or High Frequency Buck (MPPT Model)
OPERATING AMBIENT TEMPERATURE	-10 to 60 C (de-rates over 50 deg C)
PARALLELING INTERFACE	Electrically Isolated CAN bus Modular connector, maximum cable length < 5 metres Single Master with Multiple Slaves
USER INTERFACE	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
CHARGER PROTECTIONS	Charger Current Limit Monitoring Charger Over Temperature Monitoring Charger Heatsink Temperature Derating Sensing Fault Lightning Transient Protection (MOV)
BATTERY PROTECTIONS	Battery Over Temperature Monitoring Battery Voltage - Temperature Compensation Battery Under Voltage Monitoring Battery Over Voltage Monitoring
BATTERY CHARGING STRATEGY	Three-Stage (Bulk, Absorption, Float) Programmable Bulk & Float Voltages Programmable Maximum Battery Charging Current Master controls overall charging with paralleled units
MONITORED SYSTEM PARAMETERS	Battery Voltage, Current & Temperature Solar Voltage & Current Enclosure & IGBT Temperature
COMMUNICATION PORTS	Electrically Isolated RS232 DB9 Female Connector Optional Wireless Bluetooth Serial Port
COMMUNICATION PROTOCOLS	Modbus RTU Optional Satellite and GSM SMS Reporting
INBUILT DIAGNOSTIC SYSTEM	Periodic Data Logging into Non-Volatile Memory. Fault Event Recorder Data Downloadable via Communications Ports
ENCLOSURE	Width 240mm Length 380mm Height x 140mm (PWM) 300mm (MPPT) Weight < 10kg
COOLING	Internal Heatsink with Temperature Controlled Fan
TERMINALS	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
VOLT-FREE OUTPUT	Low-battery condition. Setpoint programmable trip level Volt-free contact 10A
STANDARDS COMPLIANCE	AS3100, AS4509

*Specify at factory if MPPT model required

