IMARK SR SOLAR REGULATORS

MPPT Solar Regulators
Imark Stock # 80481x

Features:

- Dual Maximum Power Point Tracking
- Up to 500Voc PV Input
- Rated for 100 Amperes at Battery Voltage
- Rugged mechanical design
- Large Heatsink eliminates any need for fan cooling
- Night, Bulk, Absorb, Equalise, & Float charge modes
- 6 LED's for easy working status indication
- Illuminated Alpha-Numeric LCD Display on SRX models
- Fully Programmable via the LCD or over the Internet
- Programmable conditions for 10A Load Output
- Compact 4RU Rack or Wall Mounting versions
- Transient protection on PV Inputs
- Battery Temp Compensation & Sensor included
- Internet Capability with Imark Site Explorer on SRX models provides full performance data availability
- SD Card or USB ports to store lifetime performance data
- Inbuilt Diagnostics and Protection Features
- Alarm & Remote Output Signal Terminals
- Regulator Over Temperature Protection
- Several outputs for control of external equipment

PRODUCT DESCRIPTION:

IMARK SR & SRX solar regulators utilise dual MPPT trackers both for solar efficiency and to allow East/West Solar Panel orientation where required. Up to 500Voc on the PV Inputs allow installers to run longer PV strings and reduces power losses where long cable runs are required. Multi-phase PWM switching is employed to reduce interference from switching noise.

The SR models are low cost entry level models that include LED's for status indication and DIP switches to program operating parameters. The SRX models replace the DIP switches with a 4x20 alphanumeric back-lit LCD display thus allowing the display and/or programming of operating parameters. A Remote LCD (RLCD) is available which can be mounted up to 100 meters from the regulators. The RLCD unit includes 6 LED's and the 4x20 LCD display and can operate with any combination of up to four SR or SRX models. Wall or rack mounted versions are available to cater for differing installation requirements. All SR & SRX models use a custom aluminium extrusion to provide a compact rugged housing and maximum heat dissipation without the need for cooling fans. Interfacing to the PV Input, or Load output is by means of dedicated connections on the Terminal panel. A 16-way interface connector on the terminal panel enables easy interfacing to external devices or popular inverters. Settable Battery Temperature Compensation is included to prevent overcharging the batteries when temperatures are elevated. Numerous protection features are standard on all models and includes Transient Protection on the PV Inputs, Heatsink Over-Temperature protection, Battery Over-temperature protection, Over-Voltage and Over-current protection. Password protection is included on SRX models to prevent tampering by un-qualified persons. CANBus communications allows up to four regulators to operate as one system and only requires one unit (or the Remote LCD Unit) to be fitted with the LCD Display to monitor performance or change settings on any one regulator.

The Load Output can be programmed to operate lights, or small loads, based on Time, Battery State of Charge, Temperature, and cycle period. Similar conditions can also be applied to the Remote Signal Output terminal to control the operation of heaters, airconditioners, pumps, generators or similar equipment. A Low Battery Voltage Load Disconnect function on all models will disconnect the Load to prevent battery damage if/when the battery voltage falls to a pre-set level.

The IMARK Site Explorer software allows remote access where sites have Internet capability. With the IMARK Site Explorer users can monitor the site performance (of up to four regulators in a system) from anywhere worldwide, can make setting changes if necessary, and can down-load the site's historical performance data using the web browser on a desktop PC, a laptop, an iPad, or smart phone. Direct connection on site with a laptop computer enables performance monitoring, setting changes, and data down-loading in exactly the same manner as being connected over the Internet.

An optional SD Card or USB Memory stick will store the historical performance data of up to four regulators for the life of the product.

SRX100 SOLAR REGULATOR SPECIFICATIONS						
Model #	**SR100-24**	**SRX100-24**	**SR100-48**	**SRX100-48**	**SR100-120**	**SRX100-120**
Imark Stock Number			804810	804812	804815	804817
PV Input Voltage Range	60 – 300Voc dc (Max)		120 - 500Voc dc (Max)		300 - 500Voc dc (Max)	
Nominal DC Battery Voltages	24 Volts dc (nominal)		48 Volts dc (nominal)		120 Volts dc (nominal)	
Regulator Operating Modes	OFF, Standby, Bulk, Absorbtion, Float, & Equalise					
Nominal Operating Frequency	25 kHz					
Charging Modes	Standby (Night), Bulk, Absorb, Equalise, & Float					
Maximum Charge Current	100 Amps					
Maximum Load Current	2 x 5 Amps					
Load Voltages	Same as Battery Voltages					
Load Disconnect Voltages	Based on the settings for each regulator					
DC Load Voltage Regulation	Battery Voltage ±50 mVdc					
Status Display Method	6 x LED's	6 x LED's + 4x20 LCD	6 x LED's	6 x LED's + 4x20 LCD	6 x LED's	6 x LED's + 4x20 LCD
Historical Data Storage	N/A	SD Card	N/A	SD Card	N/A	SD Card
Data Storage Period	Last 15 days in EPROM (all models). Lifetime with SD Card or USB on SRX models.					
Efficiency	>95%					
Operating Temperature Range	0°C to 50 °C					
Storage Temperature Range	-30°C – +70 °C					
Pollution Degree	2				2	
Ingress Protection	IP20				IP20	
Maximum Altitude Rating	2000 Metres				2000 Metres	
Relative Humidity	0 - 95% non-condensing					
Low Battery Load Release Low Battery Load Re-Connect	0–65 Vdc adjustable 0–65 Vdc adjustable		0–65 Vdc adjustable 0–65 Vdc adjustable		0 – 163 Vdc adjustable 0 – 163 Vdc Adjustable	
Battery Drain in Standby Mode	50mW to 100mW (depending on Regulator and LCD states)					
Inputs/Outputs	PV Inputs x 2 or 4, Battery + & Battery -, Load Output x 2 pairs,16 way for external device I/O, CANBus x 2, Ethernet, SD-Card, Keys x 6					
Dimensions (excluding protrusions) and Weight	325W x 315L x 185H mm 18.5 Kgs (approx.)		375W x 320L x 170H mm 19 Kgs (approx.)		375W x 430L x 170H mm 26.5 Kgs (approx.)	
Shipping Dimensions and Weight	440W x 530L x 275H mm 21 Kgs (approx.)		440W x 530L x 275H mm 21.5 Kgs (approx.)		440W x 530L x 275H mm 29 Kgs (approx.)	
Safety Standards	IEC 62109:1, AS5033					
ERAC Registration	E4049					
Compliance Markings	N8					

STANDARD FEATURES	
Battery Protection	Load Output Disconnect Re-Connect, & Charge Stop based on setup settings
Battery Temperature Sensor	Included as standard with 5M Cable and bootlace terminals
Remote Output Signal	Automatic selection based on S.O.C., Time, Temperature, & Period conditions
Remote Output Signal	Voltage Free signal terminal to activate external equipment (OPEN/CLOSE) with 150mA max sink current x 2
Cooling	Convection (internal DC Fans included on 19" Rack Mounting models)
Temperature De-rating	Output current is progressively reduced to 0 Amps from 70°C to 90°C.
OPTIONS	
Remote Control Unit (Optional)	In-built 4x20 back-lit alphanumeric liquid crystal display with 6 LED Status indicators, 6 keys, CANBus, RS232, RS485, & Ethernet connectors.
SD Card (Optional)	Different capacity SD Storage Cards