

PRODUCT DESCRIPTION



IMARK SR SOLAR REGULATORS

MPPT Solar Regulators

Imark Stock # 80486x

Features:

- Maximum Power Point Tracking
- Low loss MOSFET's (for > 95% efficiency)
- Rugged mechanical design
- Inbuilt Input PV Surge Protection
- Battery Over Voltage Protection
- Regulator Over Temperature Protection
- 20A, 40A, & 60A models available
- Automatic battery selection from 12V, 24V or 48Vdc
- Power terminals rated for 76 Amps on all models
- Large Heatsink for maximum heat dissipation
- Illuminated Alpha-Numeric LCD Display on SRX models
- Bulk, Absorption, Boost, & Float charge algorithms
- Programmable Load Output conditions
- 6 LED's for Status Indication
- Compact 3RU Rack or Wall Mounting versions
- Built-In RFI Suppression
- Battery Temp Compensation & Sensor included
- Internet Capability with Imark Site Explorer
- Alarm & Remote Output Signal Terminals
- MOV's on PV Input for Transient protection

PRODUCT DESCRIPTION:

IMARK SR & SRX solar regulators utilise MPPT for solar efficiency with any voltage PV panels. High power low Rdss MOSFET's provide switching efficiency and low heat generation. Multi-phase PWM switching is employed on 40 & 60 Amp models. The SR Range 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 numerous 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 eight SR or SRX models. Various 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, Battery, and Load output is by means of a 76A 6way plug & socket connector. A 12-way interface connector on the rear panel enables easy interfacing to external devices or popular inverters. Set-able Battery Temperature Compensation is included to prevent overcharging the batteries when temperatures are elevated. Numerous protection features are standard on all models and include Metal Oxide Varistors on the PV Input, 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 eight 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, water pumps, and similar equipment, 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 eight 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 2GB SD Card or USB Memory stick will store the historical performance data for up to eight regulators for the life of the product.



PRODUCT DESCRIPTION

SOLAR REGULATOR SPECIFICATIONS						
MODELS	SR20	SR40	SR60	SRX20	SRX40	SRX60
IMARK Stock #	804861	804862	804863	804865	804866	804867
Battery Voltage (nominal)	12Vdc, 24Vdc, or 48Vdc Automatically selected by regulator or Manually set					
PV Input Voltage (Maximum)	140 Voc					
Renewable Input Power	20 Amps	40 Amps	60 Amps	20 Amps	40 Amps	60 Amps
Input Power (maximum)	1.0kW	2.0kW	3.0kW	1.0kW	2.0kW	3.0kW
Maximum Load Current	20 Amps	40 Amps	60 Amps	20 Amps	40 Amps	60 Amps
Standby Power Draw	50mW, 60mW, 70mW, or 80 mW (depending on Regulator On or Off, & LCD On or Off)					
Communication Ports	CANBus			CANBus, Ethernet, USB, SD Card		
Renewable Input	Up to Rated Current					
Regulation Method	Maximum Power Point Tracking (MPPT)					
Multi-Phase PWM	No	Yes	Yes	No	Yes	Yes
Efficiency	Greater than 95% when battery charging					
Charge Setpoints	Bulk, Absorption, Equalise, and Float					
Charge Setpoint Adjustment	Set by DIP Switches on PCB			Set from LCD during programming		
Battery Conditioning	Absorption voltage (daily for set time), and/or Equalise (for set time & cycle), followed by Float Charging					
Voltage Setpoint Range	2.225V to 2.600V per cell					
Temperature Compensation	None, or External Sensor, set by link, 1 - 10mV/°C/cell					
Voltage Protection	Maximum PV Input Voltage 140Vdc					
Over Temperature Protection	Over Temperature sensor reduces the output power from 70°C to zero at 90°C heatsink temperature					
Over Voltage Protection	Independent Battery Over Voltage Protection circuit					
Programmable Conditions (Days, Time, Temperature, & Battery SOC)	Load Output Load Release ONLY			Low Battery Load Release, Load Output Load Timer, Remote Out Signal Terminal		
Unit Size mm excluding Protrusions	175 (H) x 160 (W) x 110 (D) mm	235 (H) x 160 (W) x 110 (D) mm	235 (H) x 160 (W) x 140 (D) mm	175 (H) x 160 (W) x 110 (D) mm	235 (H) x 160 (W) x 110 (D) mm	235 (H) x 160 (W) x 140 (D) mm
Unit Weight Kgs	2.45 Kgs	3.25 Kgs	5.4 Kgs	2.5 Kgs	3.3 Kgs	5.45 Kgs
Shipping Size	240 x 180 x 130mm	300 x 180 x 130mm	300 x 180 x 150 mm	240 x 180 x 130mm	300 x 180 x 130mm	300 x 180 x 150 mm
Shipping Weight Kgs	3.0 Kgs	4.0 Kgs	6.0 Kgs	3.0 Kgs	4.0 Kgs	6.0 Kgs
Operational Display Method	6 x LED's			4x20 Alphanumeric Back-lit STN LCD, and 6 LED's		
Warning Annunciation	LED colours			Buzzer, LCD, & LED colours		
Inclusions	Regulator, Manual (on CD), Battery Temperature Sensor, & Mounting Screws					
Design & Construction	Australian designed and manufactured					
Standards	AS/NZS CISPR11:2004					
OPTIONS						
SD Card	Not Applicable			1GB or 2 GB		
Redundancy C/O Module	Works with any model combination					
3RU RACK MOUNTED UNIT SPECIFICATIONS						
Model # (Single Regulator)	SR20R	SR40R	SR60R	SRX20R	SRX40R	SRX60R
Imark Stock #					804863	804868
Model # (Dual Regulators)	SR20RD	SR40RD	SR60RD	SRX20RD	SRX40RD	SRX60RD
Imark Stock #					804864	804869
Nominal Cabinet Size	19" 3RU Nominal 483mm (W) x 132mm (H) x 290mm (D) or 19" (W) x 5 ³ / ₁₆ " (H) x 11½" (D) (excl. protrusions)					
Weight	Up to 12 KG (26½ Lbs) depending on how many & which regulators are employed.					
Shipping Size & Weight	575(L) x 540(W) x 180(H) mm up to 14.0 Kilograms					
Others	Other Specifications are as described above					
REMOTE LCD UNIT SPECIFICATIONS						
Imark Stock #	804870					
Size	160mm (W) x 130mm (H) x 55mm (D) or 19" (W) x 53/16" (H) x 2¼" (D) (excl. protrusions)					
Weight	1.3 Kgs (2.9 Lbs)					
Shipping Dimensions	180 x 170 x 80 mm 1.4 Kgs					