



PROSTAR MPPT™ SOLAR CHARGE CONTROLLER

WITH MAXIMUM POWER POINT TRACKING

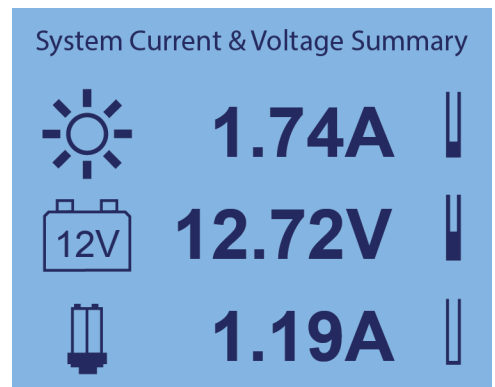
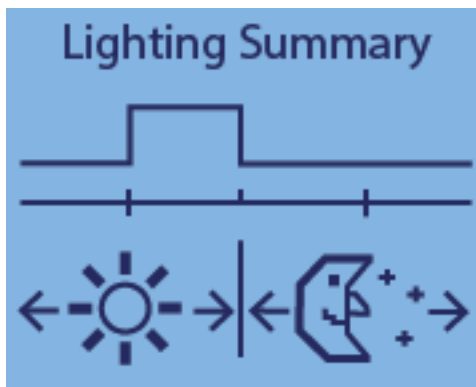
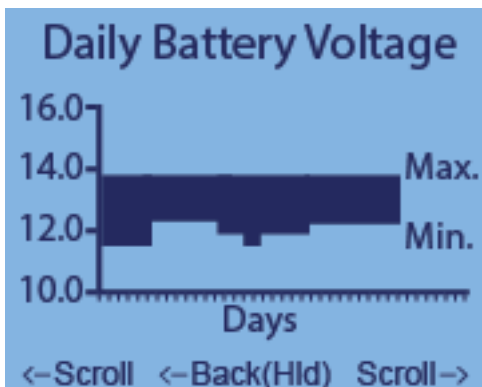
The Prostar MPPT™ solar charge controller with TrakStar Technology™ is an advanced maximum power point tracking (MPPT) battery charger for off-grid photovoltaic (PV) systems up to 1200 watts. This controller allows two modules in series on a 12V battery system and two or three modules in series on a 24V battery system. Detailed battery programming options allow for advanced battery support for the latest Lithium, Nickel Cadmium, and Lead Acid battery types. Automatic PV based lighting load control is provided out of the box.



25 or 40 amps at up to 120 Voc version with optional Wire Box and Meter

KEY FEATURES AND BENEFITS

- High Reliability – conformally coated circuit board and corrosion resistant terminals
- Maximizes Energy Harvest – using TrakStar MPPT Technology to determine and adjust to the true maximum power point as insolation changes throughout the day
- High Efficiency across low, medium, and high power levels
- Data Logging – detailed logging of power and load data confirms performance and helps isolate system inconsistencies
- Low noise design – meets FCC Class B specifications
- Automatic PV Based Lighting Control – multi-event load control enables powerful options for PV lighting systems and settings can easily be adjusted in the field
- MODBUS Communications – Solar Industry Standard MODBUS communications protocol allows for easy programming, control, remote data access and charge synchronization with other system hardware
- High Strength / Polycarbonate Case and extruded aluminum heatsink
- Self Diagnostics – The ProStar MPPT continuously monitors and reports any internal hardware issues or system problems through its status LED's, optional display or communication port



TECHNICAL SPECIFICATIONS

Electrical	Model			
	PS-MPPT-25	PS-MPPT-25M	PS-MPPT-40	PS-MPPT-40M
Nominal Battery Voltage	12V or 24V	12V or 24V	12V or 24V	12V or 24V
Battery Voltage Range	8-35V	8-35V	8-35V	8-35V
Voltage Accuracy	<= 0.1% +/- 50mV			
Max. Battery Current	25 Amps	25 Amps	40 Amps	40 Amps
Max. PV Open Circuit Voltage	120 Volts (without damage to unit)			
Load Current Rating	25 Amps	25 Amps	30 Amps	30 Amps
Self-Consumption	31mA	86mA	31mA	86mA
LED Indications	(1) status, (3) Battery S.O.C.			
Transient Surge Protection	4500 Watts (solar, battery, load)			
Peak Efficiency	98%	98%	98%	98%
Environmental				
Operating Temperature	-40 C to +60 C	-30 C to +60 C	-40 C to +60 C	-30 C to +60 C
Storage Temperature	-40 C to +80 C	-30 C to +80 C	-40 C to +80 C	-30 C to +80 C
Humidity	100% non-condensing			
Tropicalization	Conformal coating, marine-rated terminals			

Load & Lighting Control

LVD, LVR Settings: 11.4V/12.6V or custom (x2 for 24 volt systems)
Lighting Settings: Dusk-down or custom

Mechanical

Dimensions
Standard: 205(W) x 167(L) x 65(D) mm
w/ Wire Box: 205(W) x 100(L) x 85(D) mm

Weight
Standard: 1.4 kg
w/ Wire Box: 1.5 kg

Wire Size Range
Power terminals: 2.5 - 35 mm² / 14 - 2 AWG
Battery/Temp. sense: 0.25 - 1.0 mm² / 24 - 16 AWG
Knockouts (wiring box option): M20, 1/2", 1" (trade sizes)
Enclosure: IP20, Type 1

Electronic Protections

Automatic recovery without fuses
Solar Input: overload, short-circuit, high voltage, reverse polarity, high temperature, nighttime reverse current
Load Output: overload, short-circuit, high temperature, reverse polarity
Battery: reverse polarity (no battery removal)

Battery Charging

4-stage charging: bulk, Absorption, Float, Equalize
7 standard Battery settings and customization
Temperature Compensation
Coefficient: -5 mV / C /cell (25 C ref.)
Range: -30 C to +60 C
Setpoints: Absorption, Float, Equalize

Data & Communications

Communication Port: MeterBus
Protocols: Morningstar MeterBus, MODBUS
Datalogging: 190 days, daily records
PC Software: MSView

Accessories

Ground Fault Protection Device (GFPD-150)
Remote Temperature Sensor (RTS)
Remote Meter (RM-1)
Wiring Box
RS-232 Communications Adapter (MSC-1)
USB Communications Adapter (UMC-1)
Ethernet Communications Adapter (EMC-1)
Meter Hub (HUB-1)
Relay Driver (RD-1)

Certifications

CE; RoHS; UL1741/CSA.107.1; IEC 62109; FCC Part-15 class B compliant
Manufactured in a certified ISO 9001 facility