

## PROSTAR™ SOLAR CHARGE CONTROLLER

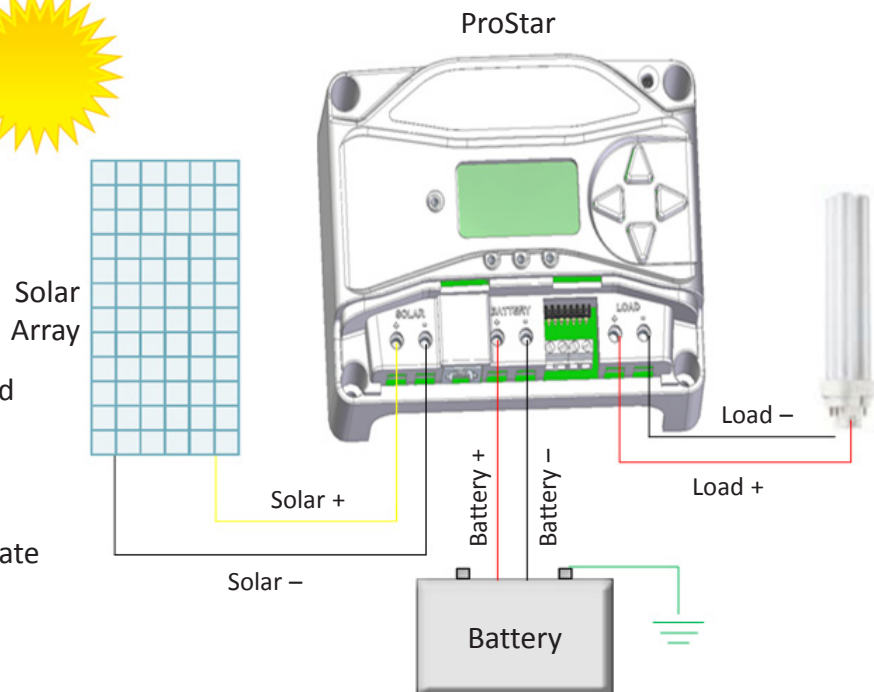
The ProStar solar charge controller has been the leading mid-range pulse width modulation (PWM) controller since 1995. With over 350,000 units installed in the harshest environments in over 100 countries, the ProStar has developed a strong reputation for reliable performance. This third generation ProStar maintains the same quality and form factor as previous models, while offering new data, lighting control, graphical interface, and protection features to better meet the needs of off-grid solar applications.



*New ProStar (Gen3) shown with optional meter*

### KEY FEATURES AND BENEFITS

- **High reliability** – latest electronic and environmental protections, quality control, and design considerations comply with IEC 62109 and promote longevity in the harshest environments.
- **High Temperature Design** – full nameplate current rating, both solar and load up to 60°C continuous.
- **Auto-battery-select** – 12V and 24V systems.
- **Data Logging** – up to 256 days of solar charge and load consumption data.
- **Low Noise Design** – meets US Federal Communications Commission Class B specifications.
- **Automatic Solar Based Lighting Control** – field adjustable, multi-event load control enables powerful options for solar lighting systems.
- **MODBUS Communications** – open standard MODBUS communications protocol allows for control and remote data access.
- **Durable Design** – high strength polycarbonate case with protective terminal cover and extruded aluminum heatsink.
- **Self Diagnostics** – continuous monitoring and reporting of any errors or system faults through its status LED's, optional display and communication port.
- **Meter** – high resolution LCD, multi-lingual backlit graphical display of system voltage, current, temperature, lighting settings, etc.
- **Custom Programming** – dip switches, meter interface, or connection with a computer can be used to adjust charging, load, communications, and lighting control.





## PROSTAR TECHNICAL SPECIFICATIONS

### Electrical

- Nominal Battery Voltage: 12V or 24V
- Battery Voltage Range: 10-35V
- Voltage Accuracy:  $\leq 0.1\%$  +/- 50mV
- Maximum Battery Current: 15A or 30A
- Maximum Solar Input Voltage (12V/24V bat): 60Voc
- Load Current Rating: 15A or 30A
- Self-Consumption: 20 mA\*
- LED Indications: (1) status, (3) Battery state of charge
- Transient Surge Protection: 1500 Watts (solar, battery, load)

### Environmental

- Operating Temperature: -40°C to + 60°C
- Meter Operating Temperature: -20°C to + 60°C
- Storage Temperature: -40°C to + 80°C
- Humidity: 100% non-condensing
- Tropicalization: conformal coating, marine-rated terminals

### Meter

- Resolution: 128 X 64 pixels
- Viewing Area: 5.0 cm x 2.5 cm
- Display Color: Blue on white
- Backlight: LED

### Battery Charging

- Battery Types: 7 Standard Battery Settings + Custom
- 4-Stage Charging: Bulk, Absorption, Float, Equalize
- Temperature Compensation
  - Coefficient: -5 mV / °C / cell (25°C ref)
  - Range: -30°C to + 60°C
  - Set Points: Absorption, Float, Equalize

### Mechanical

- Dimensions:
  - 15.3(W) x 10.5(L) x 5.5(D) cm
  - 6.0(W) x 4.1(L) x 2.2(D) in
- Weight: 0.4 kg / 1.0 lbs
- Wire Size Range:
  - Power Terminals: 2.5 - 16 mm<sup>2</sup> / 14 - 6 AWG
  - Battery/Temp. Sense: 0.25 - 1.0 mm<sup>2</sup> / 24 - 16 AWG
- Enclosure: IP20, Type 1

### Electronic Protections

- 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)

### Load & Lighting Control

- Low Voltage Disconnect, Low Voltage Reconnect Settings: 11.4 V / 12.6 V or Custom (x2 for 24 volt systems)
- Lighting Settings: Dusk to Dawn or Custom
- LVD Current Compensation: -20 mV per Amp @ 12 Volts / -40 mV per Amp @ 24 Volts
- LVD Warning Timer: 10 minutes
- Lighting Test Timer: 5 minutes

### Data & Communications

- Communication Port: MeterBus
- Communication Protocols: Morningstar MeterBus, MODBUS
- Datalogging: Up to 256 days, daily records
- PC Software: MSView

### Accessories

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

### Certifications

- CE; RoHS; ETL Listed: UL62109/CSA.107.1; IEC 62109; FCC Part-15 class B compliant
- Manufactured in a certified ISO 9001 facility

\*35 mA for metered versions when meter is at 50% brightness; 50 mA when meter is at 100% brightness.