

Product shown with optional meter.



Morningstar's ProStar is the world's leading mid-range solar controller for both professional and consumer applications. This second generation ProStar:

- Adds new features and protections using highly advanced technology
- Provides longer battery life and improved system performance
- Sets new standards for reliability and self-diagnostics

#### Standard Features:

- Versions available: 15 or 30 amp  
12 / 24 or 48 volt  
negative or positive ground
- Estimated 15 year life
- PWM series battery charging (not shunt)
- 3-position battery select: gel, sealed or flooded
- Very accurate control and measurement
- Jumper to eliminate telecom noise
- Parallel for up to 300 amps
- Temperature compensation

- Tropicalization: conformal coating, stainless steel fasteners & anodized aluminum heat sink
- No switching or measurement in the grounded leg
- 100% solid state
- Very low voltage drops
- Current compensated low voltage disconnect (LVD)
- LED's indicate battery status and faults
- Capable of 25% overloads
- Remote battery voltage sense terminals

#### Electronic Protections:

- Short-circuit — solar and load
- Overload — solar and load
- Reverse polarity
- Reverse current at night
- High voltage disconnect
- High temperature disconnect
- Lightning and transient surge protection
- Loads protected from voltage spikes
- Automatic recovery with all protections

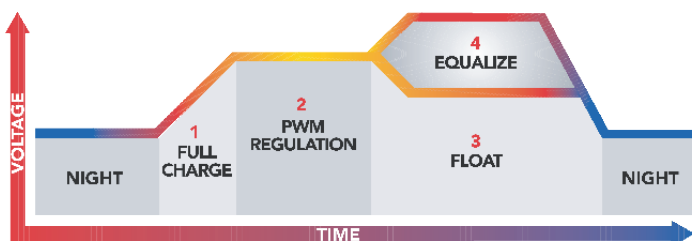
# ProStar™ TECHNICAL SPECIFICATIONS

## ProStar Options

- Digital meter
  - Highly accurate voltage and current display
  - Low self-consumption (1 mA)
  - Includes manual disconnect button
  - Displays 5 different protection functions and disconnect conditions
  - Self-diagnostics (self-test) provides a comprehensive test of the ProStar —
    - Displays 9 different controller status parameters, including temperature
    - Displays detected faults
- Positive ground
- Remote temperature probe

## Optimized Battery Charging

The ProStar has four stages of charging to provide increased battery capacity and life.



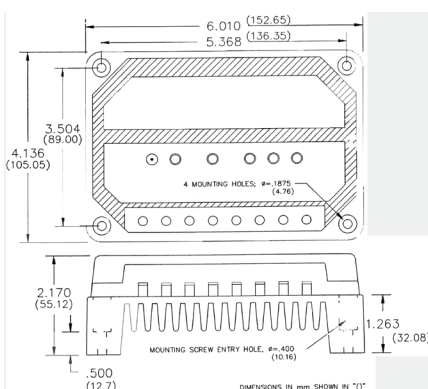
## Mechanical Specifications

Weight:

12 oz  
(0.34 kg)

Wire Size:

#6 AWG  
(16 mm<sup>2</sup>)



## ProStar Versions

	PS-15	PS-30	PS15M-48V
Rated Solar Current	15A	30A	15A
Rated Load Current	15A	30A	15A
System Voltage	15A	30A	15A
Options			
Digital Meter	yes	yes	standard
Positive Ground	no	yes	yes
Remote Temp. Probe	yes	yes	yes

## Battery Voltage Setpoints\*

	Gel	Sealed	Flooded
Regulation Voltage	14.0	14.15	14.4
Float	13.7	13.7	13.7
Equalization	n/a	14.35	14.9/15.1
Load Disconnect	11.4	11.4	11.4
Load Reconnect	12.6	12.6	12.6

Note: values are for 12V. Use 2X for 24V and 4X for 48V.

## Electrical Specifications

	12V	24V	48V
Temp. Comp. (mV/°C)*	- 30mV	- 60mV	- 120mV
Accuracy	40mV	60mV	80mV
Min. Voltage to Operate	8V	8V	15V
Self-consumption	22mA	25mA	28mA
Lvd Current Coefficient**	- 20mV	- 40mV	- 80mV
Charge Algorithm	PWM, constant voltage		
Operating Temperature	- 40°C to + 60°C		
Digital Display:			
Operating Temp.	- 30°C to + 85°C		
Voltage Accuracy	0.5%		
Current Accuracy	2.0%		
Self-Consumption	1 mA		

\* 25°C Reference

\*\* Per Amp of Load

## Authorized Distributor



211, Gargash Center, Deira, Dubai, United Arab Emirates  
Phone: +971-4-2231185 Fax: +971-4-2271505 URL: www.apexpowerconcepts.com

**WARRANTY:** Five year warranty period. Contact Morningstar or your authorized distributor for complete terms.



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