

**Morningstar SunSaver  
SS-6L-12V Solar Controller**



[SunSaver SPEC Sheet](#)

<b>System Volts</b>	12 volts
<b>Maximum PV volts</b>	25 volts
<b>Rated PV Input</b>	6.5 amps
<b>Rated Load</b>	6 amps
<b>Load Disconnect</b>	11.5 volts
<b>LVD Reconnect</b>	12.6 volts
<b>Self Consumption</b>	8 milliamps
<b>Operating Temp</b>	-40 to +85 Å°C

Morningstar's SunSaver is the world's leading small solar controller for both professional and consumer applications

The SunSaver is a sophisticated controller using advanced technology and series switching PWM charging

The battery charging process has been optimized for longer battery life and improved system performance

---

**Morningstar SunSaver  
SS-10L-12V Solar Controller**



[SunSaver SPEC Sheet](#)

<b>System Volts</b>	12 volts
<b>Maximum PV volts</b>	25 volts
<b>Rated PV Input</b>	10 amps
<b>Rated Load</b>	10 amps
<b>Load Disconnect</b>	11.5 volts
<b>LVD Reconnect</b>	12.6 volts
<b>Self Consumption</b>	8 milliamps
<b>Operating Temp</b>	-40 to +85 Å°C

Morningstar's SunSaver is the world's leading small solar controller for both professional and consumer applications

The SunSaver is a sophisticated controller using advanced technology and series switching PWM charging

The battery charging process has been optimized for longer battery life and improved system performance

---

**Morningstar SunSaver  
SS-20L-12V Solar Controller**



[SunSaver SPEC Sheet](#)

<b>System Volts</b>	12 volts
<b>Maximum PV volts</b>	25 volts
<b>Rated PV Input</b>	20 amps
<b>Rated Load</b>	20 amps
<b>Load Disconnect</b>	11.5 volts
<b>LVD Reconnect</b>	12.6 volts
<b>Self Consumption</b>	8 milliamps
<b>Operating Temp</b>	-40 to +85 Å°C

Morningstar's SunSaver is the world's leading small solar controller for both professional and consumer applications

The SunSaver is a sophisticated controller using advanced technology and series switching PWM charging

The battery charging process has been optimized for longer battery life and improved system performance

---

**Morningstar SunSaver  
SS-10L-24V Solar Controller**



[SunSaver SPEC Sheet](#)

<b>System Volts</b>	24 volts
<b>Maximum PV volts</b>	44 volts
<b>Rated PV Input</b>	10 amps
<b>Rated Load</b>	10 amps
<b>Load Disconnect</b>	23.0 volts
<b>LVD Reconnect</b>	25.2 volts
<b>Self Consumption</b>	9 milliamps
<b>Operating Temp</b>	-40 to +85 Å°C

Morningstar's SunSaver is the world's leading small solar controller for both professional and consumer applications

The SunSaver is a sophisticated controller using advanced technology and series switching PWM charging

The battery charging process has been optimized for longer battery life and improved system performance

---

**Morningstar SunSaver  
SS-20L-24V Solar Controller**



[SunSaver SPEC Sheet](#)

<b>System Volts</b>	24 volts
<b>Maximum PV volts</b>	44 volts
<b>Rated PV Input</b>	20 amps
<b>Rated Load</b>	20 amps
<b>Load Disconnect</b>	23.0 volts
<b>LVD Reconnect</b>	25.2 volts
<b>Self Consumption</b>	9 milliamps
<b>Operating Temp</b>	-40 to +85 Å°C

Morningstar's SunSaver is the world's leading small solar controller for both professional and consumer applications

The SunSaver is a sophisticated controller using advanced technology and series switching PWM charging

The battery charging process has been optimized for longer battery life and improved system performance

---

**Morningstar Prostar  
PS-30M Solar Controller**



Morningstar™s ProStar is the world™s leading mid-range solar controller for both professional and consumer applications

### [Prostar SPEC Sheet](#)

#### **Product Features**

- 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
- Very low voltage drops
- Current compensated low voltage disconnect (LVD)
- LED™s indicate battery status and faults
- Adds new features and protections using highly advanced technology
- Provides longer battery life and improved system performance

#### **Electrical Specifications**

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

#### **Mechanical Specifications**

Weight: 12 oz (0.34 kg)  
Dimensions: 6.01" x 4.14" x 2.17" (152.7 x 105.2 x 55.1 mm)  
Wire Size: #6 AWG / 16 mm<sup>2</sup>

---



**Morningstar TriStar TS-45  
12/24/48V 45 Amps - Charge Controller**



[TriStar TS-45 Product Sheet](#)

The controller is a three-function controller that provides reliable solar battery charging, load control or diversion regulation

Uses advanced technology and automated production to provide exciting new features at a competitive cost

The controller is UL listed and is designed for both solar home systems and professional applications

This controller operates in only one of these modes at a time but two or more controllers may be used to provide multiple functions

The digital meter option displays self-test results, system information and controller setpoints

## **PRODUCT FEATURES**

Standard model switch selectable  
for 12/24V or 48V battery

Choice of 7 regulation or LVD setpoints  
Conduit-ready enclosure for large wire sizes

RS-232 comm port provides custom setpoints  
Self test runs continuously

PWM may be changed to "on-off" controller to  
minimize any possible telecom noise

### Load Control Mode:

Starts all loads including inductive Short circuit  
and overload protection with automatic reconnect

### Diversion Control Mode:

May be used for solar, wind or hydroelectric



## **Morningstar TriStar TS-RM TriStar Digital Remote Meter**





## TriStar TS-RM Product Sheet

The TriStar is a technically advanced and professional solar system controller

Two digital LCD meter versions are available for the TriStar controller, and their displays are identical

### **PRODUCT FEATURES**

UL Recognized for use with TriStar controllers

Complies with CE and LVD standards

Suitable for 12, 24, 48 Vdc systems

Fully protected from wiring faults

Can be added to a TriStar at any time

Nonvolatile memory will retain settings with no power

Extended LCD temperature rating  
( $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ )

Provides for manual resets

Remote version supplied with 30m  
(98.4 ft) connecting cable

Connections are by standard RJ-11  
6-position modular plugs



## Morningstar SunSaver Duo With Remote Meter



[Sun Saver Duo Data Sheet](#)

[Sun Saver Duo Owner's Manual](#)

Morningstar's SunSaver Duo is an advanced PWM two battery controller for RVs, caravans, boats and cottages

Rated for 25 amps at 12 volts DC, this product will charge two separate and isolated batteries at the same time such as a "house" and an engine battery, based on user selectable priorities

This controller also includes a backlit remote meter which may be mounted in or on a wall, and displays digital and pictorial status information about the solar power system

## **PRODUCT FEATURES**

Two Battery Charging  
Provides More System Information  
Easy to Install  
Will Result in Longer Battery Life  
Extensive Electronic Protections  
Highly Reliable - Estimated 15 year life  
RATED SOLAR CURRENT - 25A



### **Morningstar SunSaver MPPT Solar Controller**



[Sun Saver MPPT Data Sheet](#)

[Sun Saver MPPT Owner's Manual](#)

Maximizes energy harvest  
with peak efficiency of 97.5%

Converts 36V or 24V to 12V battery charging

Morningstar's SunSaver MPPT solar controller  
with TrakStar Technology is an advanced maximum power  
point tracking (MPPT) battery charger  
for off-grid PV systems

**PRODUCT FEATURES**

LOWER COST

INCLUDES LOAD CONTROL

MAXIMIZES ENERGY HARVEST

PROVIDES POWER BOOST

USE OF HIGH VOLTAGE MODULES

FULLY ADJUSTABLE AND PROGRAMMABLE

EXTENSIVE ELECTRONIC PROTECTIONS

CONVERTS 36V OR 24V PV ARRAYS

DATA LOGGING