25A at 12Vdc
Product shown with optional meter

SUNSAVER DUO™ SOLAR CONTROLLER

TWO BATTERY SOLAR CONTROLLER WITH REMOTE METER

- Lower Cost
- Easy to Install
- Longer Battery Life
- Highly Reliable

Morningstar's SunSaver Duo is an advanced PWM two battery controller designed for smaller solar applications, such as RV/caravans, boats and small homes or cabins. It's capable of charging two separate and isolated batteries at the same time, such as a "house" battery and an engine battery, based on user selectable priorities.

SunSaver Duo is built on the same platform as Morningstar's legendary SunSaver, the world's leading small solar controller for industrial and consumer use. Its long-term track record for high reliability and improved battery charging is well-recognized in the solar industry.

KEY FEATURES AND BENEFITS

Two Battery Charging
Solar charge current is shared between the two batteries based on a user selectable priority. When one battery is fully charged, all of the charge current flows to the other battery.

Information Display
The remote meter and LED's on the SunSaver Duo display system status data and any system errors. Custom icons and back lighting make the meter easy to read and understand.

User Adjustable
Easily set parameters with on-board DIP switches or further customize with a PC using Morningstar MSView software.

Lower Cost
Two-battery charging eliminates the added cost of two separate solar chargers and the need for isolation between the batteries.

Easy to Install
The controller is installed near the batteries using the clearly labeled large wire terminals. The remote meter may be mounted in the wall or on the wall using the included frame. Also includes the meter wiring with RJ-11 connector.

The SunSaver Duo, like the SunSaver, is exceptionally rugged with epoxy encapsulation to protect against dust and high humidity. Extensive electronic protections include short-circuit, over-current, and reverse polarity to guard against damage caused by wiring mishaps or overloads. SunSaver Duo also includes a backlit remote meter which may be mounted in or on a wall, to display digital and pictorial status information about the solar power system. It is user adjustable via DIP switch or connection to a personal computer, and has an optional remote temperature sensor.

"Love it... it was worth the extra money over other brands that seemed to be of lesser quality"

Longer Battery Life
Four stage series PWM pulse charging and temperature compensation increases the useful life of the batteries.

Extensive Electronic Protections
The controller is designed to resist damage caused by wiring mistakes during installation. There are no fuses to replace, and the controller will automatically re-set after a wiring mishap.

Highly Reliable
Epoxy encapsulation protects the controller against dust and high humidity. Efficient electronics and a conservative thermal design allow the controller to operate reliably at high temperatures. Advanced thermal design means no cooling fans are needed, which eliminates moving parts, improves long-term reliability, and increases efficiency.

Technical Specifications

Versions	SSD-25, SSD-25RM
Electrical	
Rated Solar Input	25 amps
Rated Load Output	Not applicable
Battery Voltage	12 volts
Min. Battery Voltage	1 volt
Max. Battery Voltage	15 volts
Max. Solar Voltage	30 volts
Self Consumption	
Controller	6 to 10 milliamps
Remote meter	6 to 15 milliamps
Environmental	
Operating Ambient Temp.	
Controller	–40°C to +45°C / –40°F to +113°F
Meter	–20°C to +60°C / –4°F to +140°F
Humidity	100% non-condensing
Tropicalization	
Controller	Epoxy encapsulation Anodized aluminum case Corrosion resistant terminals
Meter	Conformal coated printed circuit board
Meter Displays	
Backlighting	Push button activated
LED's	Charging status Errors Battery level
Displays	Battery #1 & #2 voltage Battery charge priority Minimum / maximum voltages Solar charging amps / amp-hours Temperature Errors

In Wall Mount   Frame Mount   Back

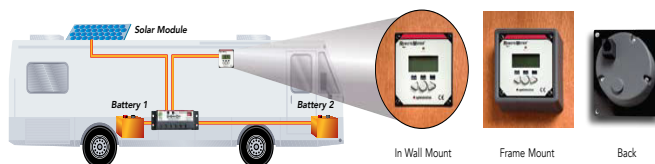| Battery Charging	
Regulation Voltage	
Sealed Battery	14.1 volts (at 25°C, 77°F)
Flooded Battery	14.4 volts (at 25°C, 77°F)
Float Voltage	13.7 volts
Equalization Voltage	14.8 volts
Temp. Compensation	–30 millivolts per °C (25°C reference)
Type of Charging	Series PWM 4 stage: bulk, PWM, float, and equalize* *used on flooded battery only
Battery Charging Priority	90% / 10% 50% / 50% Customize via PC connection
Mechanical	
Controller	17.0 x 5.6 x 4.1 cm / 6.7 x 2.2 x 1.6 in.
Meter	9.7 x 9.7 x 3.1 cm / 3.8 x 3.8 x 1.2 in.
Meter back	7.4 cm / 2.9 in. diameter 2.8 cm / 1.1 in. deep Fits 7.6 cm / 3 in. round hole
Weight	
Controller	260 g / 0.57 lb
Meter	135 g / 0.30 lb
Largest wire	16 mm² (#6 AWG)
Meter wire	10 m / 33 ft

Electronic Protections:
- Solar Short Circuit
- Solar Over Current
- Reverse Polarity
- High Temperature
- Lightning
- Reverse Current at Night

Notes:
There is no load connection on the SunSaver Duo.

The EIA-485 / RS-232 Adapter can be used in conjunction with the PC MeterBus Adapter to enable these devices to communicate over a 485 network.

Options:
Remote Temperature Sensor — Measures temperature at battery for improved battery charging.

Certifications:
- CE, RoHS and REACH Compliant
- Manufactured in a Certified ISO 9001 Facility

Warranty:
Five years, limited. Contact Morningstar or your authorized distributor for complete terms.