



SUNGUARD™ SOLAR CONTROLLER

THE MOST COMPACT, ADVANCED, ECONOMICAL
SOLAR CHARGE CONTROLLER ON THE MARKET

- Rugged Design
- Longer Battery Life
- Easy to Install

SunGuard is a single module, compact solar charge controller for small systems, ideal for both professional and consumer use. Featuring the same components, charging circuit, and build quality of Morningstar's industry-leading SunSaver controllers, SunGuard is easily the most compact, advanced and economical solar charge controller on the market today. With SunGuard, there's no reason not to insist on Morningstar quality with any system design—no matter how small.

KEY FEATURES AND BENEFITS

- ISO 9002 quality programs
- Series design (not shunt)
- 100% solid state (no relays)
- True 0 to 100% PWM duty cycle
- Setpoint accuracy to 60 mV
- Temperature compensation
- Rated for 25% overcurrents
- Rated for 100% continuous duty
- Includes 1500W of lightning surge protection
- Self-consumption is 6 mA
- Fully encapsulated in epoxy potting
- ABS plastic, impact-resistant case
- Outdoor rated, Hypalon connecting wires

- Rugged design—100% solid state, epoxy encapsulated; rated for 25% overcurrents (no need to de-rate)
- Longer battery life—series design PWM charging (instead of shunt) with temperature compensation, low self-consumption
- Easy to install—outdoor rated connecting wires make a waterproof connection to the solar module and battery



Technical Specifications

Advantages

SunGuard's PWM charging compared to On-Off solar regulators:

- Typically 30% more solar energy into the battery per day
- Average battery State-of-Charge is 90 – 95% compared to 55 – 60% for On-Off regulators

Mechanical Specifications

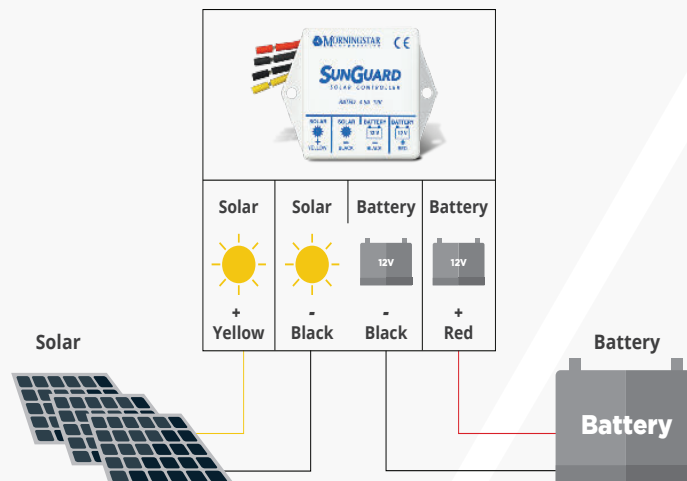
- Wire size #16 AWG
- ABS plastic case
- Epoxy encapsulated
- Weight is 3 oz (0.09 kg)

Dimensions:

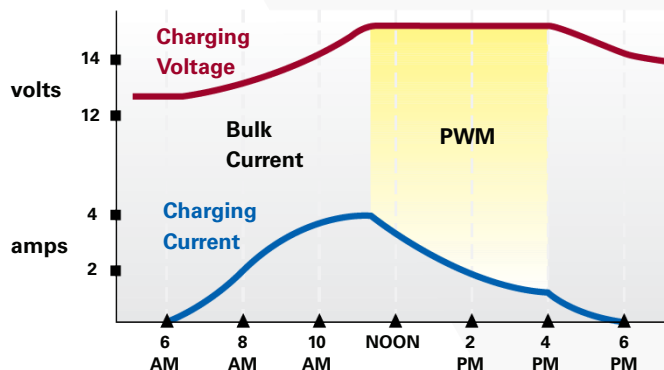
6.4 x 5.1 x 3.8 cm / 2.5 x 2.0 x 1.5 in

Electronic Specifications

- Rated Solar Input 4.5 Amps
- Max. Input (5 min.) 5.5 Amps
- System Voltage 12 Volts
- Max. Solar Voltage 30 Volts
- Regulation Voltage 14.1 Volts
- Accuracy 60 mV
- Self-consumption 6 mA
- Temp. Compensation -28 mV/°C
- Operating Temperature -40 to +60°C



Advanced PWM Battery Charging



Warranty:

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