



SHS™

SOLAR CONTROLLER FOR SOLAR HOME SYSTEMS UP TO 170 WATTS

Morningstar's well-known high quality and reliability is now available in a low cost solar controller. The **SHS Controller** is ideal for rural electrification systems with one to three solar panels. This controller meets World Bank specifications and provides many features and benefits.



Benefits of a Solar Controller

It is important to include a controller in a solar power system.

■ Reduces Cost of Battery Replacements

The low voltage disconnect will increase battery life. The loads are automatically disconnected when the battery is low and automatically reconnected after the battery is recharged.

Complete charging will increase battery life and storage capacity. The controller will maximize the amount of solar energy into the battery and avoid drying out the battery.

■ Provides Useful Information

LEDs display status information and battery level which helps the user to better operate the solar power system.

Advantages of the SHS Controller

Morningstar's SHS controller has many advantages compared to other controllers:

■ Low Cost

The SHS was specifically designed to meet the needs of the rural electrification market. The low cost resulted from using the latest electronic technology and high volume manufacturing.

■ High Reliability

Morningstar is a world-leading supplier of solar charge controllers. All our controllers are designed for high quality and high reliability. The SHS controller has a low failure rate and will last a long time.

■ Electronic Protections

The SHS has built-in electronic fuses that do not require replacement. Any wiring mistakes during installation will not damage the controller.

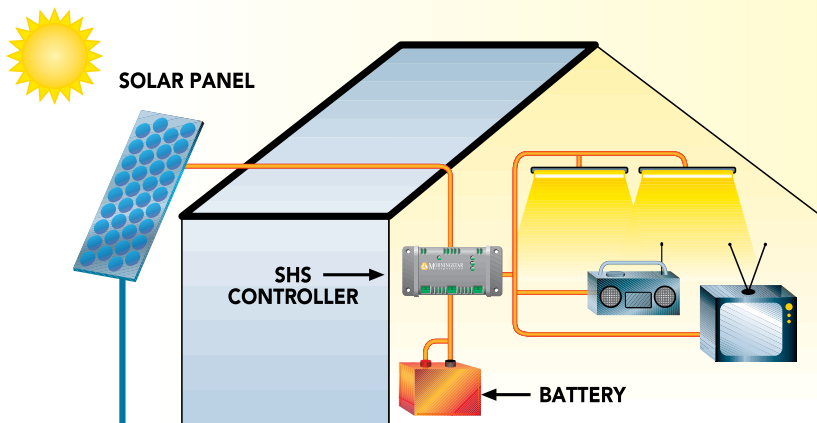
■ Tropicalization

The SHS electronics are protected with a moisture-tight coating, minimizing damage from humidity and from nesting insects.

■ Easy to Use

The SHS controller is fully automatic and requires no adjustments or user selections.

SHS™ SOLAR CONTROLLER



TECHNICAL INFORMATION

RATINGS: (ALL 12 VOLT)

SHS-6 100 WATTS OR 6 AMPS FOR SOLAR AND LOAD

SHS-10 170 WATTS OR 10 AMPS FOR SOLAR AND LOAD

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|--------------------------|---|--------------------|-------------------------------------|
| • Regulation Point | 14.3 Volts | • Terminals | For wire sizes to 4 mm ² |
| • Low voltage Disconnect | 11.5 Volts | • Dimensions | 15.1 x 6.6 x 3.6 cm |
| • Low voltage Reconnect | 12.6 Volts | • Weight | 113 g |
| • Type of Charging | Series PWM
4 Stage: Bulk, PWM, Boost and Float
Temperature compensated charging | • Self-consumption | 8 mA maximum |
| • Electronic Protections | Short circuit and overcurrent —
solar and load
Reverse polarity — solar, load, battery
Reverse current at night
High voltage — load
Lightning — solar, load, battery | • Temperature | -25°C to +50°C |
| • Tropicalization | Circuit Board — conformal coated
Terminals — corrosion protected | • Humidity | 100% non-condensing |
| • LED Indications | Green charging
Green-Yellow-Red battery levels
Red low voltage warning
and disconnect
All 3 LEDs blink — to show mistakes | • Enclosure | IP 22 |
| | | • Compliance | CE, World Bank |

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

AUTHORIZED MORNINGSTAR DISTRIBUTOR:

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