SunWize Steca Controller

SunWize®

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The SunWize-Steca controller uses an advanced control algorithm that sets new standards for solar charge technology. The state-of-charge algorithm combines battery temperature, battery voltage, and load discharge rate to determine the true battery SOC. The controller's memory of discharge patterns enables the controller to know the degree of battery sulfation. This allows even greater accuracy towards determining true battery SOC. The self-learning controller automatically adjusts for the capacity and age of the battery. The resultant battery SOC is displayed within a 10% accuracy range. The patented hybrid regulator design combines both series and shunt technology for nominal power consumption. Maximum wire gauge for terminal: 4 AWG.

The Tarom features adjustable set points that are stored in the controller's memory. Available Tarom options are an external data logger, external shunts for measuring current and a remote temperature sensor. Other options include control modules that load shed or PV shed based on the battery SOC that is communicated with the controller over a DC databus. Two-year warranty.

Options:

- LCD display
- Audible buzzer fault condition warning alarm (not available with the LCD display)
- Opto-isolated fault condition warning alarm that can be connected to any analog input monitoring device (not available with the LCD display)

Other Features Include:

- TUV and UL recognized component
- Automatically adjusts for 12 V or 24 V system
- Automatic battery equalization can be disabled when using gel or AGM type lead-acid batteries
- Protection against over temperature, battery overvoltage, module overcurrent, and load overcurrent
- Low voltage disconnect and a low voltage warning
- Tricolor information LED and tricolor "SOC" LED annunciating controller status, errors, and battery SOC
- IP 22 (NEMA 12) protection
- Operating temperature range is -25° C to +50° C
- Manual setting to override the SOC algorithm to allow SOC to be determined by temperature compensated voltage levels. This is useful when other loads are connected directly to the battery.

Model	Voltage	Rated PV Current	Rated Load Current	Dimensions	Unit Weight (lbs.)	MSRP
Alpha	12/24VDC	8 amps	8 amps	7.4" x 4" x 1.93"	1	$82.00
Alpha with LCD	12/24VDC	8 amps	8 amps	7.4" x 4" x 1.93"	1	$136.00
Gamma	12/24VDC	12 amps	12 amps	7.4" x 4" x 1.93"	1	$99.00
Gamma with LCD	12/24VDC	12 amps	12 amps	7.4" x 4" x 1.93"	1	$150.00
Sigma	12/24VDC	20 amps	20 amps	7.4" x 4" x 1.93"	1	$119.00
Sigma with LCD	12/24VDC	20 amps	20 amps	7.4" x 4" x 1.93"	1	$175.00
Omega	12/24VDC	30 amps	30 amps	7.4" x 4" x 1.93"	1	$150.00
Omega with LCD	12/24VDC	30 amps	30 amps	7.4" x 4" x 1.93"	1	$209.00
Tarom 235	12/24 VDC	35 amps	35 amps	7.4" x 4" x 1.93"	1	$319.00
Tarom 245	12/24VDC	45 amps	45 amps	7.4" x 4" x 1.93"	1	$369.00
Tarom 430	48VDC	30 amps	30 amps	7.4" x 4" x 1.93"	1	$425.00

SunWize-Steca and Solsum Controller Operational Settings

Set point values based on:	SunWize-Steca SOC algorithm	SunWize-Steca Battery Voltage	SunWize-Steca Solsum Battery Voltage
Load Disconnect Prewarning	SOC < 40%	11.7 Volts	NONE
Low Voltage Disconnect (LVD)	SOC < 30%	11.1 Volts	11.1 Volts
Reconnection of Load after an LVD	SOC > 50%	12.6 Volts	12.6 Volts
Equalization Charge* of 14.7 V occurs after	SOC < 40%	11.7 Volts	12.4 Volts
Cycle Charge of 14.4 V occurs after	SOC < 70%	12.4 Volts	12.4 Volts
Final Charge Voltage	13.7 Volts	13.7 Volts	13.7 Volts
Temperature Compensation	-4mV/K/Cell	-4mV/K/Cel	-4mV/K/Cell

Voltage Values are doubled for 24 V systems

* Not applicable to sealed gel or AGM batteries, equalization charge of 14.4 volts for Solsum controllers