

Spectra Solar Regulators

for solar power management

.....from a company with a vast wealth of experience in renewable energy.



spectra
from Marlec

Solar power systems have a variety of valuable uses in modern living, from battery charging on boats and caravans to professional applications at isolated sites whose operations are critical.

Solar energy can open up many new options for you to use electrical appliances and equipment away from the grid supply. When choosing the solar panels to suit your application a solar regulator is a key element to ensuring that the batteries don't become overcharged.



Spectra Solar Regulators offer more than simple voltage regulation:

- A LCD display provides essential information about the operating status of the solar system
- The 10A and 20A models conveniently include 2 USB charging points for small devices such as mobile phones.
- Built in temperature compensation adjusts the maximum charging point automatically according to the temperature at the installation. This is important in ensuring that batteries are fully charged wherever you are in the world.
- A connection for devices that will run from the battery is built in up to a maximum power rating. When connected these devices will automatically switch off when the battery reaches a critically low level and reconnect when the battery recovers. See the specification data for details.
- A dusk to dawn switching feature can be activated which is especially useful for small lighting systems.



Setting up and operating Spectra Solar Regulators is intuitive and easy with:

- Automatic voltage detection for 12V or 24V operation
- Push buttons for scrolling screens and settings
- Reverse discharge protection prevents discharge from the solar panels in darkness
- Automatic cut off when devices drawing too high current levels are connected to prevent damage to the unit
- User adjustable voltage settings for those special applications



Leisure



Professional



Public Sector



	Spectra Regulator Range		
Model	10	20	30
Input			
Maximum PV Input Voltage	≤50V		
Rated Solar Charge Current	10A	20A	30A
Output			
System Voltage	12V / 24V Auto Detection		
Battery Over-Voltage Protection Level	16V @12V		32V@ 24V
Rated Discharge Current	10A	20A	30A
Self-Consumption	10.5 mA - 13mA (12V) 12.5 mA - 16 mA (24V)		
Charge Loop Voltage Drop	≤0.3V	≤0.21V	≤0.17V
Discharge Loop Voltage Drop	≤0.18V	≤0.1V	≤0.10V
Charging Mode	4 Stage PWM (Bulk, Absorption, Float, Equalized)		
Float Charge Voltage	12V: 13.8V (13V - 15V) 24V: 27.6V (26V - 30V)		
Absorption Charge Voltage	12V: 14.4V (13V - 15V) 24V: 28.8V (26V - 30V)		
Duration of Absorption	2hrs		
Voltage of Equalized Charging	12V: 14.6V (13V - 15.5V) 24V: 29.2 (26V - 31V)		
Duration of Equalized Charging	2hrs		
Low Voltage Disconnection	12V: 10.8V (10V - 14V) 24V: 21.6V (20V - 28V)		12V: 10.7V (10V - 14V) 24V: 21.4V (20V - 28V)
Low Voltage Reconnection	12V: 12.6V (10V - 14V) 24V: 25.2 (20V - 28)		
Lighting Control Modes	Regulator control mode, light control with switch-off point at night and switch on point before dawn, Light control mode		
			Self-timing switch on/off mode
Light Control Voltage	12V: 5V (1V - 10V) 24V: 10V (2V - 28V)		
Battery Type	GEL, SLD, FLD USr (default)		
USB	2 x 5V 1A		N/A
Other			
Interface	LCD, 2 buttons		LCD, 3 Buttons
Wiring	Terminals, ≤10mm ²		Terminals, ≤16mm ²
Working Temp	-20 - +55°C		
Storage Temp	-30 - +65°C		-30 - +80°C
Working Humidity	10% - 90%, no condensation		
Dimension	160 x 88 x 42.5mm	178 x 101.5 x 45.5mm	196 x 111 x 54mm
Weight	290g	310g	400g
IP Code	IP30		
Reverse Polarity Protection	Yes		