

Solar Charge Controller

Features

- 3 Stage PWM Temperature Compensated Charging
- Fully Automatic Operation, USB Charging Port
- LCD Displays Battery Voltage, Temp, Load Current and Solar Current.
- Autoranging 12V or 24V Battery Arrays
- Supports AGM, GEL, Flooded, Lithium Batteries
- Multimode Load Operation – Normal (default) or Light Control
- Soft Start 20A Load Output to Power High Capacitive Loads
- TVS lightning protection, Industrial Temperature Range
- Conformal Coated for Environmental Protection
- Low self consumption <0.3W



TP-SC24-20 Solar Charge Controller

Applications

- Remote Power Systems
- Solar Lighting
- Solar Power Applications



Description

Tycon Solar®'s new TP-SC24-20 solar controllers are 3 stage PWM type temperature compensated battery charging controllers. The controllers are auto-ranging to accommodate 12V and 24V battery systems. They are designed to charge AGM or GEL type sealed lead acid batteries. They also support Flooded lead acid and Lithium battery charging. They have an integral LCD display that shows battery voltage, temperature, load current and solar current.

They have multiple load operating modes which can be set through the button on the controller.

The load output has a soft start feature so it can smoothly and reliably power up high capacitance loads up to 20A. There is a convenient On/Off button to disconnect load power when the unit is operated in the default mode (15).

MODE NUMBER	DEFINITION	DESCRIPTION
0	Light switch control	The PV voltage turns on the load switch in time of light control delay
1 ~ 14	Light + Time control	The PV voltage turns on the load switch and shut it down in time of settings
15	Manual switch	Turns on/off the load by press the load button
16	Testing switch	Turns on the load immediately with no delay and then turns off
17	Always on	The load keeps on until battery low voltage disconnect

They have full electronic protections for short circuit, reverse current, overvoltage, overcharge, over-discharge and over-temperature. The built-in over-discharge protection and low self consumption ensures the battery is not over-discharged, which greatly increases the life of the batteries. All protections are auto-recovery.

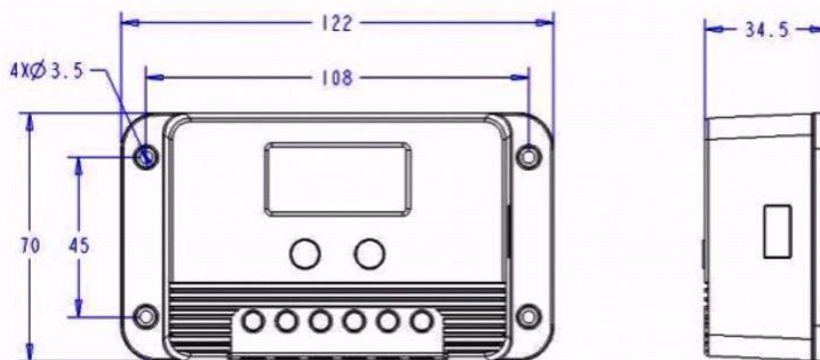
The units are protected against lightning strikes with TVS diode protection. They operate over a wide industrial temperature range.

A special feature is the 5V 1A USB charging port, so a technician can charge his phone or tablet while on site.

Connections are via 6 screw terminals for wire size up to 10AWG. There are four screw holes(3.5mm) for mounting. The controllers are internally fused for protection, but we recommend always using an external 20A fuse between the controller and the battery. There are four screw holes(3.5mm) for mounting.

Specifications

	TP-SC24-20			
Rated Voltage	12/24 (Auto Detect)			
Rated Current (Solar and Load)	20A			
Maximum Solar Panel Size	340W @ 12V ; 680W @ 24V			
Maximum Solar Input Voltage	<55V			
	SEL (AGM)	GEL	FLd (Flooded)	LI (Lithium)
Equalize Charge Voltage (Every 30 days)	14.6V @ 12V 29.2V @ 24V	N/A	14.8V @ 12V 29.6V @ 24V	N/A
Boost (Absorption) Charge Voltage	14.4V @ 12V 28.8V @ 24V	14.2V @ 12V 28.4V @ 24V	14.6V @ 12V 29.2V @ 24V	14.4V @ 12V 28.8V @ 24V
Float Voltage	13.8V @ 12V 27.6V @ 24V	13.8V @ 12V 27.6V @ 24V	13.8V @ 12V 27.6V @ 24V	N/A
Overvoltage Protection	17.0V @ 12V ; 34V @ 24V			
Over-Discharge Voltage	OFF: 11.1V @ 12V ; 22.2V @ 24V ON: 12.6V @ 12V ; 25.2V @ 24V			
Light Control Voltage	Light Control On: 5V @ 12V ; 10V @ 24V Light Control Off: 6V @ 12V ; 12V @ 24V			
Light Control Delay Time	10 seconds			
Self-Consumption	< 0.3W			
Temperature Compensation	-3.0mV/°C/Cell			
Max Wire Size	10 AWG			
Voltage and Current Accuracy	+/-2%			
Environmental Protection	IP30			
Certifications	CE, RoHS			
Operating Temp	-25°C to 65°C (-13°F to 149°F)			
Dimensions	122 x 70 x 34.5mm (4.8 x 2.8 x 1.4")			
Weight	200 g (7 oz)			
Warranty	3 years			



System Ordering:

TP-SC24-20 12/24V 20A PWM Temperature Compensated Solar Charge Controller

For further information contact:

Tyconsystems.com

