TS-SC48-60P-MPPT

DATA SHEET

MPPT Solar Charge Controller

Features

- **MPPT Temp Compensated Charging (99.5% Efficient)**
- **Included Bluetooth Interface for Monitor and Control**
- **OLED Blue Display for higher visibility in varying light conditions**
- **Auto-ranging 12V, 24V,36V or 48V Battery Arrays**
- **Adjustable Battery Charging Current**
- **Multimode Load Operation – 4 selectable modes**
- **Soft Start 30A Load Output to Power High Capacitive Loads**
- **TVS lightning protection, Industrial Temperature Range**
- **Low self-consumption <1.2W**

Applications

- **Remote Power Systems**
- **Solar Lighting**
- **Solar Power Applications**

Included: Bluetooth adapter and Battery Temperature Probe

Description

The Tycon Solar™ TS-SC48-60P-MPPT solar controllers are MPPT (Maximum Power Point Tracking) temperature compensated battery charging controllers with RS485 interface. A Bluetooth Adapter and battery temperature probe is included. The controllers are auto-ranging to accommodate 12V,24V,36V and 48V battery systems. They are designed to charge Sealed (AGM), GEL, Flooded, and Lithium batteries. They also have a USER setting for customizable battery charge settings. They have an integral OLED blue display that shows Battery charging parameters. The display turns off automatically to save power. Press the OK button to view.

They have multiple load operating modes which can be set through the Mobile or PC app. On/Off Manual Mode, PV Voltage Control Mode, Dual-Time Control Mode, PV & Time Control Mode. Load modes are not settable from the front panel. Default is ON/Off Manual Mode.

The 30A load output has a soft start feature so it can smoothly and reliably power up high capacitance loads. The load can be turned on/off from the front panel or via the PC or Mobile Apps. They have full electronic protections for surge, short circuit, over current, reverse polarity 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. The cooling fan is thermostatically controlled to only run when needed.

Connections are via 6 screw terminals for wire size up to 4AWG. The controllers are internally fused for protection, but we recommend always using an external fuse between the controller and the battery. The controller can be mounted to a flat plate using 2 or 4 screws.

The MPPT controllers have an included Bluetooth interface that allows control and monitoring via the Solarmate mobile app for Android and iOS. See the QR Codes →

Android   iOS

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Also available are an RS485 interface adapter to connect to a PC using the Tycon #TP-SC-USB-RS485 and the MyGreen PC Software. (*not included*)
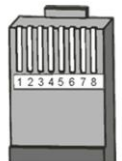
Tycon's #TPDIN-Monitor-WEB3 V2 interfaces to the MPPT controller via a #TPDIN-CABLE-485 and provides remote datalogging and load control via Ethernet and SNMP in addition to many other features available in the TPDIN-Monitor-WEB3. (*not included*)

Specifications

	TS-SC48-60P-MPPT
Rated Battery Voltage	12/24/36/48VDC (Auto-Detect)
Battery Types Supported	Lead Acid: AGM, GEL, Flooded Other: Lithium, Custom
Solar (PV) Input Voltage	200VDC Max (Panel Open Circuit Voltage)
Battery Max Charge Current	60A (Adjustable)
Max Solar Panel Size	12V Battery = 780W, 24V Battery = 1560W, 36V Battery = 2340W, 48V Battery = 3120W
Rated Load Current	30A Max
Battery Charge/Float Voltage	AGM = 14.4V / 13.8V, GEL = 14.2V / 13.8V, Flooded = 14.6V / 13.8V Note: multiply x2 for 24V Batteries, x3 for 36V and x4 for 48V Batteries
Temperature Compensation	-3.0mV/℃/Cell
Lithium Activation	Standard
MPPT Efficiency	99.5%
Communication Port	Qty 1 RS485
Self-Consumption	< 1.2W
Max Wire Size	4 AWG
Grounding	Positive Ground
Display Accuracy	Voltage +/-5%, Current +/-.5A, Temperature +/-5%
Environmental Protection	IP21
Certifications	CE, FCC, RoHS
Operating Temp	-30°C to 60°C (-22°F to 140°F)
Dimensions	240 x 166 x 65mm (9.5 x 6.6 x 2.6")
Weight	1.7kg (3.7lb)
Warranty	3 years

No.	DEFINITION
1	RS485-A
2	RS485-B
3	-
4	-
5	GND
6	GND
7	+5V
8	+5V

RS485 Communications Interface

System Ordering:

TS-SC48-60P-MPPT 12/24/36/48V 60A 200V MPPT Solar Charge Controller

For further information contact:

Tyconsystems.com

RoHS compliant

TYCON Solar®