

MPPT Solar Controller w/ Monitor and PoE Switch

Features

- TPDIN® MPPT 48V 20A Solar Controller
- Temperature Compensated Smart Battery Charging
- 7 Port Gigabit Passive PoE Switch
- Remote Monitor and Control
- 48V or 24V User Selectable Output Voltage
- 2.25A Auxiliary Wire Terminal Output
- Total 200W Power Output
- Automatic Low Voltage Battery Disconnect
- DIN Rail or Screw Tab Mounting



Description

The newest in our TPDIN® series of products is the TPDIN-SC48-20. It is a web manageable MPPT Solar Controller with built-in 7 Port Gigabit Passive PoE switch. The controller uses temperature compensated smart battery charging to properly charge GEL or AGM batteries and extend their life. It has a balance charge mode for periodic battery bank maintenance. There are 3 Gigabit Passive PoE+ 35W and 4 Gigabit Passive PoE 18W ports. There is a wire terminal auxiliary output capable of 2.25A maximum. Total from all outputs is set at 150W at 48VDC and 72W at 24VDC for a max total of 222W. Outputs can be switched by user between 48VDC and 24VDC or OFF through the web interface.

The web interface has full capabilities to measure and log battery voltage, battery current, input current, load current and battery temperature. Ports can be controlled by a settable ping watchdog to power cycle the port if communications to the unit are interrupted. Auxiliary port can be controlled by voltage or temperature or time so it can be programmed to control lights, pumps, generators, heaters, fans, etc. The unit supports automated Email alerts if user programmed limits are exceeded so that the user can be alerted in case of developing problems at the site.

The controller can also be powered through an external AC to DC power supply in order to charge the batteries from an AC source like grid power or generator. The solar input of the controller always takes priority so if the sun is shining the external DC input isn't used.

All inputs and outputs are surge and overload protected. Connectors and battery fuse are removable for easy maintenance. The controller can be mounted using the integral DIN rail mount bracket or using 2 mounting tabs.

Specifications

TPDIN-SC48-20	
Solar Input Voltage	56VDC to 80VDC
Solar Input Current	20A Maximum
Typical Controller Efficiency	96% (68VDC Input, 10A Load, 25C)
MPPT Tracking Frequency	19 times/sec or 19 Hz
Battery Voltage	48VDC (Controller will function down to 11VDC)
Battery Current	20A Maximum
Battery Type	GEL or AGM
Charging Volts at 25C	Float: 53.7, Bulk:55.6V, Balance:57V (60 Min)
Fuse Type	58V 20A Fast Blo Automotive Blade Type (Littlefuse 142.6185.5206)
Low Voltage Disconnect	42 to 47.8 – settable in web interface

Low Voltage Disconnect Recovery	44.6V to 49.2V – settable in web interface
External DC Power Input Voltage	62VDC to 80VDC
External DC Power Input Current	Internally regulated to 3A. Power source must be >= 3A
External DC Power Input Connector	4 pin Mini DIN – Mating connector CUI Inc. Model PDP-40 
Auxiliary DC Output Voltage	24VDC or 48VDC – settable in web interface
Auxiliary DC Output Current	2.25A Maximum Continuous, 3A Max peak
Auxiliary DC Output Controls	Temperature, Voltage, Time – settable in web interface
PoE Switch	Qty 7 RJ45, 10/100/1000MB Gigabit Ethernet, Layer 2, Auto Crossover
PoE Output Voltage	48VDC or 24VDC or OFF – settable in web interface
PoE Output Power	Port 1-3 35W Passive PoE+ at 48VDC, 18W at 24VDC Ports 4-7 17W Passive PoE at 48VDC, 9W at 24VDC PoE Power supplied on pins 4,5 (V+) and 7,8 (V-) (Mode B)
Port Surge Protection	IEC 61000-4-2 (ESD) 15kV (air), 15kV (contact) IEC 61000-4-4 (EFT) 40A (5/50ns) IEC 61000-4-5 (Lightning) 25A (8/20µs)
Maximum Power Output	222W Total (150W @ 48VDC and 72W @ 24VDC) from all output ports (including Aux Output), Auto Shutdown and Autorecovery from Fail
Indicator LED's	Charge (Green), 24VDC (Green) or 48VDC (Yellow) Port Voltage, External DC Power is ON (Green), Overload (Red)
Measurement Accuracy (V/I/T)	+/- 0.1V , +/- 0.1A , +/- 1 Deg C
Power Consumption	3.5W Typ
Accessibility	Via Web Browser and SNMP
Data-Logger	FIFO, 15,000 data sets, Programmable log interval
Wire Size	Solar and Battery – 8AWG, Aux DC Output -12AWG
Mounting	DIN Rail or 4mm Screw Tab
Operating Temperature	-40C to +65C (-40F to 149F)
Humidity (RH)	0% - 90%
Dimensions (LxWxD)	151mm x 111mm x 138mm (5.9 x 4.4 x 5.4")
Weight	1.5kg (3.3lbs)
MTBF	>100,000 Hrs
Certifications	FCC/CE EN55022 (EMC) ; CE EN55024 (EMC); CE/UL EN60950-1 (LVD)
Warranty	3 Years

Monitor Graphs Log System Control SNMP Upgrade

Port Controls

Port 1 ON Cycle 24V	Port 2 ON Cycle 24V	Port 3 ON Cycle 24V	Port 4 ON Cycle 48V	Port 5 ON Cycle 48V	Port 6 ON Cycle 48V	Port 7 OFF Cycle OFF	Aux ON Cycle 24V
Battery Voltage	50.2V	<input type="checkbox"/> Disable Confirm					
Battery Current	1.9A						
Input Voltage	62.3V	Load Voltage Setting:	24V/48V Enabled				
Input Current	1.9A	Controller Time:	08/16/2016 12:26:37				
Load Watts	12W	Uptime:	0 days 01:00:25				
Battery Temp	77.3F	MPPT Version:	1.700				
Battery Status	BULK	Version:	2.3.6				

TPDIN® Web Interface Monitor Page



TPDIN® DIN Rail Attachment Bracket

Ordering:

TPDIN-SC48-20 TPDIN® MPPT 20A Manageable Solar Controller with PoE Switch

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