

MPPT Solar Controller w/ Monitor and PoE Switch

Features

- TPDIN® MPPT 48V 20A Solar Controller
- Temperature Compensated Smart Battery Charging
- 7 Port Gigabit 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, AGM, or Lithium batteries and extends their life. It has a balance charge mode for periodic battery bank maintenance. There are 4 Gigabit 802.3at or 24/48V Passive PoE and 3 Gigabit 24/48V Passive PoE ports. Each port is capable of 0.645A Max. 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 802.3at (port 1-4 only), 48VDC, 24VDC or OFF through the web interface.

The web interface has full capabilities to measure and log battery voltage, battery current, input voltage/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 connected to the PV+/PV- input to charge the batteries from an AC source like grid power or generator.

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 Min to 100VDC Max
Max Solar Panel Open Circuit Voltage (Voc)	100VDC (Maximum worst case over full temperature range)
Max Solar Panel Power Point Voltage (Vmp)	90VDC
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 20VDC)
Battery Current	20A Maximum
Battery Type	GEL or AGM or WET or Lithium
Charging Volts at 25C	AGM= Float:55.2, Bulk:57.6V, Balance:58.4V (60 Min)

	GEL= Float:55.2, Bulk:56.8V, Balance: Disabled WET= Float:55.2, Bulk:58.4V, Balance:59.2V (60 Min) Lithium= Float: Disabled, Bulk:57.6V, Balance: Disabled
Temperature Compensation	-3mV/°C/2V
Fuse Type	58V 20A Automotive Mini Blade Type (Littelfuse 0997020.WXN)
Low Voltage Disconnect	42V to 48V – settable in web interface
Low Voltage Disconnect Recovery	44V to 54V – settable in web interface
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	802.3at (port 1-4 only), 48VDC or 24VDC or OFF – settable in web interface
PoE Output Power	0.645A per PoE Port Max 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, 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
Battery Current: 1.9A
Input Voltage: 62.3V
Input Current: 1.9A
Load Watts: 12W
Battery Temp: 77.3F
Battery Status: BULK

Load voltage Setting: 24V/48V Enabled
Controller Time: 08/16/2016 12:26:37
Uptime: 0 days 01:00:25
MPPT Version: 1.700
Version: 2.3.6

Disable Confirm



TPDIN® Web Interface Monitor Page

TPDIN® DIN Rail Attachment Bracket

Ordering:

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

For further information contact:

Tyconsystems.com

