TYCON Power®

TPDIN-Monitor-WEB3

INDUSTRIAL STRENGTH

DATA SHEET

TPDIN™ Remote Monitor and Control

Features

- **Remotely Measure 4 Voltages, 4 Currents, 2 Temperatures**
- **Remotely Control Equipment with 4 Relays: 2 NC and 2 NO**
- **Interfaces to Tycon MPPT Solar Controllers via Serial Cable**
- **Automatic Control of Relays by Volts, Amps, Temp, Ping, Time and MPPT Data**
- **Access via Web or SNMP. Automatically Send Email Alerts**
- **On-Board Datalogger and History Graphs**
- **Accepts power via PoE (802.3af or Passive) or wire terminal**
- **DIN Rail Mounting**

Description

The TPDIN-Monitor-WEB3 Based Remote Monitor and Control System is a versatile tool which enables the equipment designer and installer to remotely monitor their equipment and site. The unit can be accessed via the network (web and SNMP) to remotely monitor up to 4 voltages, 4 currents, 2 temperatures and control power to various equipment using 4 on-board relays.

In addition to the flexible interfaces mentioned above, the WEB3 interfaces with Tycon MPPT solar controllers using a single serial cable to read PV Volts, PV Amps, Battery Volts, Battery Amps, Battery Temperature, Load Volts and Load Amps from the MPPT solar controller. It also allows manual turn on/off of the MPPT solar controller load output via the web interface. This makes it very easy to monitor and control a remote power system remotely, log and graph the trends, send email alerts and control relay actions based on embedded sensor or MPPT data.

 The system has built-in surge protection to prevent damage from electrical surges.

On board data-logging and graphing capabilities allow the user to see history of the various parameters being measured. The graphical interface allows the user to control relays via a single mouse click and monitor all the measurement parameters real-time via any web browser. The web interface allows access and control via desktops, laptops, tablets and smartphones. The Tycon APP for IOS and Android facilitates remote access.

The system allows control of the relays based on Voltage, Current, Temperature, Time, Ping Watchdog and MPPT controller data. This provides almost unlimited flexibility.

The relays have a special one-click cycle feature with programmable cycle times which can be used to turn a device off and then back on after the predetermined time with a single button click. This is useful for rebooting a device like a PoE Switch by power cycling it, thereby rebooting all devices attached to the switch. Relay CH1 and CH2 are Normally Closed type, Relay CH3 and CH4 are Normally Open type. Relays don't use any power when they are in their default position.

Two of the current ports provide bi-directional current (+/-), showing direction of current flow. This is useful for monitoring batteries so you can see when the battery is charging and when it is discharging. One of these current ports supports external current shunts so very large currents can be monitored. The User Interface provides for quick calibration of external shunts by entering the shunt rated mV and Current.

Connections are via removable wire terminal connectors. This allows for easy troubleshooting and maintenance because the unit can be removed from the system without disturbing the system wiring.

User defined labels for each parameter makes sure that when viewing the web interface or graphs that users can quickly identify the parameter they are concerned about. An internal real time clock based on PC time or Internet time ensures that data logging is accurate. Each Monitor can also have a unique name to identify it on the network. This makes it easy to manage multiple units on a network.

Each parameter has programmable +/- offsets to be able to perform field calibration to compensate for things such as line loss or variations in measuring equipment. This provides unsurpassed flexibility as each device can be tailored by the user to their specific needs.

The unit can be setup to send emails of the present parameter readings based on a periodic time period or based on parameters exceeding programmable preset limits. Using SNMP allows the user to create a fully automated remote data collection and control system.

A free discovery tool is available via download to assist in finding the Tycon® units on the network. It works across different subnets. This is helpful if a user forgets the IP address of the unit or has the unit configured for DHCP client and he is unsure what IP address the unit is operating on.

Specifications

	TPDIN-Monitor-WEB3
Voltage Measurement (DC)	V1, V2, V3, V4 = 0-80VDC
Voltage Measurement Accuracy	+/- 0.1V
Current Measurement (DC)	I1, I2 = 0.1A to 15A (20A Peak) using 12AWG Wire, I3 = +/-10A I4 Supports External Current Shunts – Input Range +/-25mV
Current Measurement Accuracy	+/- 0.1A
Common Mode Voltage Range	-14V to +80V
Temperature Measurement	T1,T2 = -40C to 125C
Temperature Measurement Type	T2 = Embedded, T1 = External Sensor (included)
Temperature Measurement Accuracy	+/- 1 degC
Relays	CH1, CH2 (NC); CH3, CH4 (NO) = 10A 30VDC, 125-250VAC
Relay Control	CH1, CH2, CH3, CH4 = Manual or Automatic based on Volts, Amps, Temperature, Ping(5 secs Interval, 3 min Holdoff) or Time
Power Requirements	10-57VDC Wire Terminal or 802.3af/at Class 0 PoE or 24V Passive PoE 1.5W All Relays Off, 3.5W All Relays On
Accessibility	Via Web Browser and SNMP
Data-Logger	FIFO, Max 4048 data sets, Programmable log interval
Data Connections	8 Pin RJ45, 6pin RJ12 RS232/485 Interface to Tycon MPPT Solar Controllers
Measurement Connections	Removable Wire Terminal
Wire Size	12AWG Max
Mounting	DIN Rail
MTBF	111,199 hrs
Operating Temperature	-40C to +75C (-40F to 167F)
Humidity (RH)	0% - 90%
Dimensions (LxWxH)	125 x 102 x 46mm (4.9" x 4" x 1.8")
Weight	410g (14.5 oz)
Certifications	FCC & CE
Warranty	3 Years
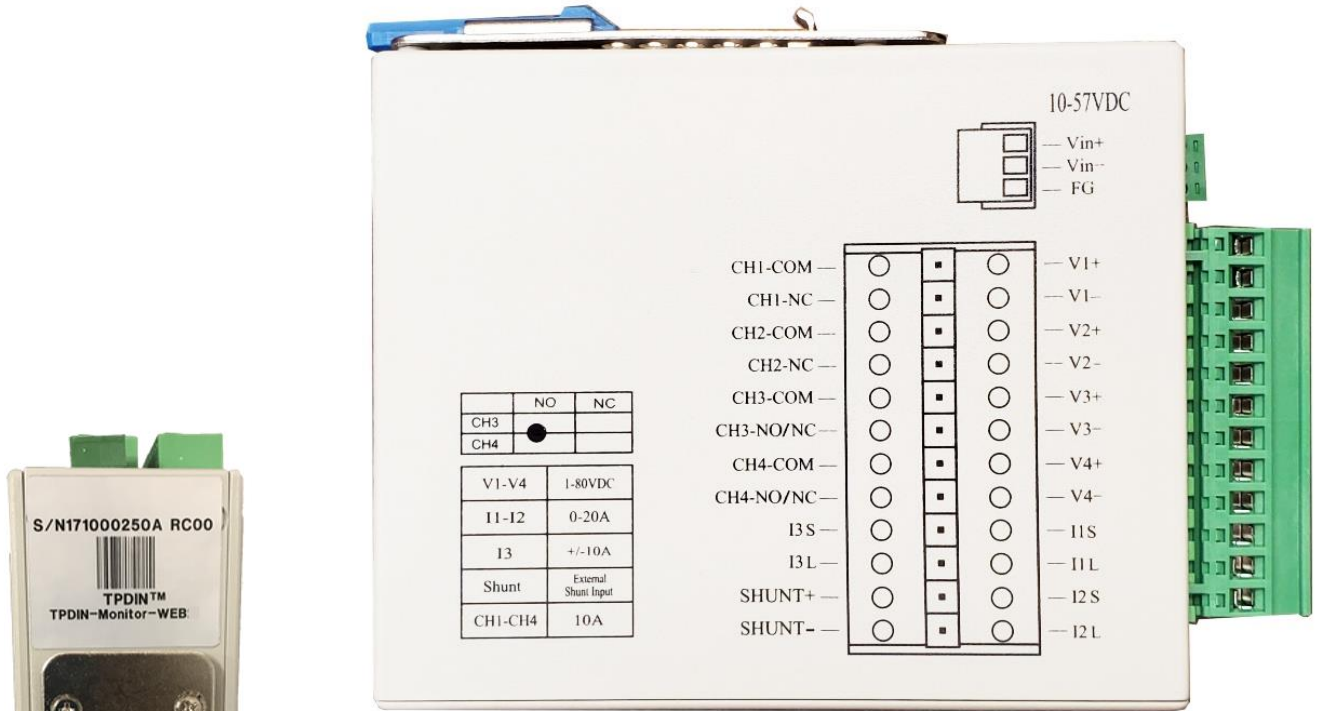
TPDIN-Monitor-WEB3

TPDIN® Connector Pinout

TPDIN® DIN Rail Attachment

Pin	Function
1	RS232-RX
2	RS232-TX
3	GND
4	GND
5	RS485 B/Z
6	RS485 A/Y
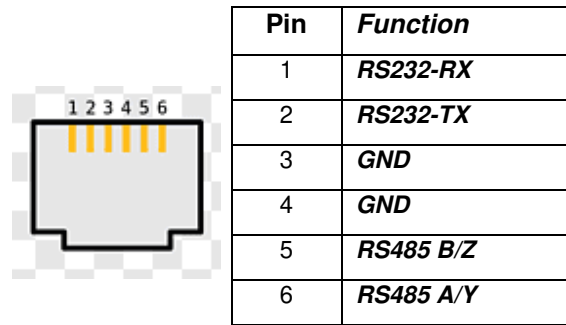
Serial Port Pinout

Ordering:

TPDIN-Monitor-WEB3   TPDIN® Remote Monitor and Control System with MPPT Controller Data Interface

For further information contact:

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