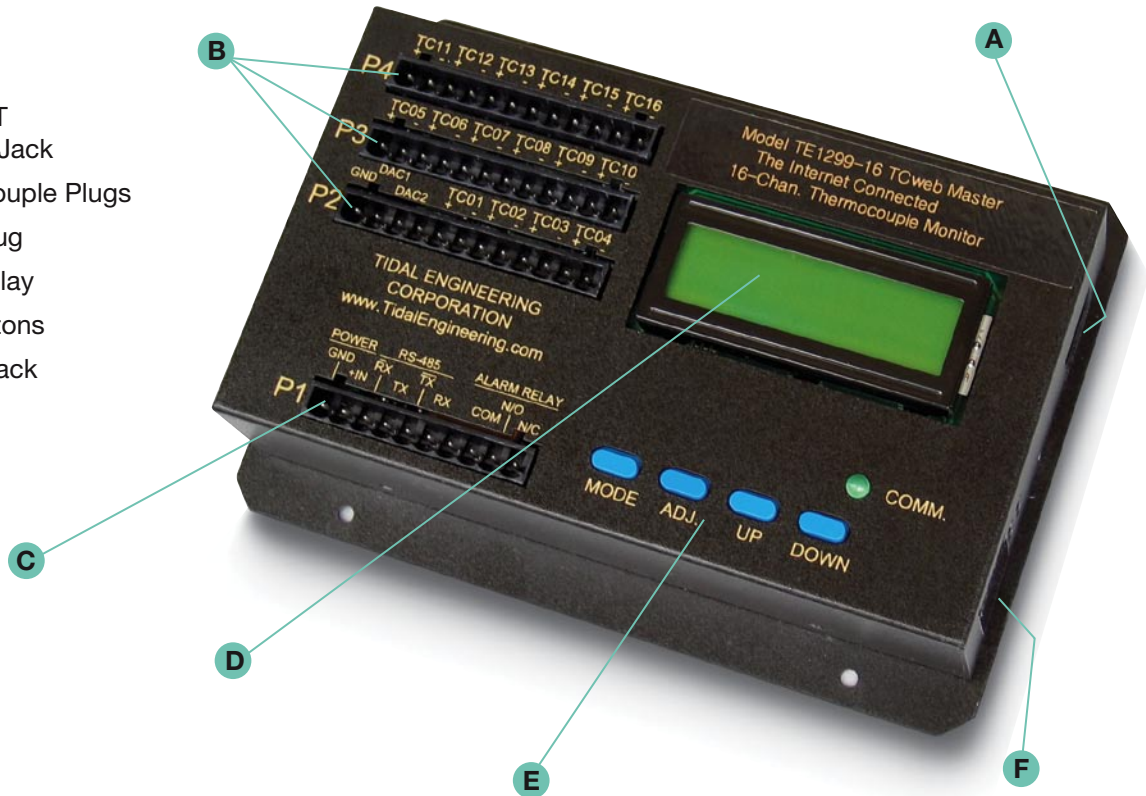


# TC WEB

Internet Enabled Thermocouple Monitoring System

INCLUDES FREE DATA LOGGER AND DDE/OPC SERVER

- A** 10-Base T Ethernet Jack
- B** Thermocouple Plugs
- C** Power Plug
- D** LCD Display
- E** Push Buttons
- F** Modem Jack



One of the most flexible and functional temperature acquisition instruments available, the TCweb connects to the Internet via its built-in 10BaseT Ethernet communication port or optional 56K fax modem. It is therefore configurable to automatically send e-mail reports, and alarm messages, as well as create and serve HTML report pages to any browser with a built-in Web server. In addition to offering the power to acquire, analyze, and rapidly furnish precise data, up to 16 units may be connected in a master/slave

Type	Name	Value	Logging
C1	BATTERY	77.1	Yes
C2	AC Out	34.8	Yes
C3	SW32	81.7	Yes
C4	JTC Tape	80.2	Yes
C6	Room Temp	76.2	No
C6	T06	Open	No
C7	T07	Open	No
C8	T08	Open	No
C9	T09	Open	No
C10	T10	Open	No
C11	T11	Open	No
C12	T12	Open	No
C13	T13	Open	No
C14	T14	Open	No
C15	T15	Open	No
C16	T16	Open	No
A	Inhibit	0.0	No

RS-485 daisy chain arrangement allowing 256 sensors to be monitored on a single Web server.

As temperature limits, thermocouple type and alarms may be set for each individual channel to facilitate unequalled versatility in the configuration of the instru-

ment, the TCweb is ideal for use in a broad range of industries. It is appropriate for such applications as environmental chamber monitoring and validation, drug and food storage monitoring, heat treatment monitoring, and air conditioning and central heating product testing. The unit also is designed for use in automotive R&D testing, domestic and commercial refrigeration, cookers, stoves, and heater product tests.

Tidal's monitor supports J, E, K, R, S, T, B, N, and C-type thermocouples, and boasts a display resolution of 0.1°C. Temperature measurements can be made up to 16 times per second with values reported in either Fahrenheit or Celsius. The TCweb incorporates built-in cold junction compensation and provides two digital-to-analog output channels to transmit two analog voltages for charting. In addition, a Form C alarm relay can be programmed to operate under specified conditions to energize an audible or visual annunciator. It features a backlit LCD, and may be ordered with up to 8 MB non-volatile flash memory for data logging.

Web Interface

**TIDAL ENGINEERING CORPORATION**  
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# TC WEB



The TCweb Data Logger is a free PC based data logging and reporting application used in conjunction with the TCweb. It is designed to connect to multiple TCwebs over TCP/IP and capture data from their thermocouple monitors and present that data in various forms for graphing, data analysis and control.



Additionally, the TCweb Data Logger functions as both a DDE (Dynamic Data Exchange) server and an OPC server which makes it compatible with a large number of industrial HMI/MMI applications including Wonderware™. An unlimited number of sensors can be DDE and OPC enabled and read from external applications.

The professional version of the TCweb Data Logger adds support for multiple configurations, sensor alarms and the e-mail/fax alarm notification system. For more information see the TCweb Data Logger Quick Start Guide at [www.tidaleng.com](http://www.tidaleng.com)

## SPECIFICATIONS

### Thermocouple Specifications

**Channels per Unit:**  
16 Differential  
Maximum Linked Units:  
16 (one Master, 15 slaves, 256 sensors max.)

**Thermocouple Types:**  
B, E, J, K, R, S, T

**Display Units:**  
Degrees Celsius or Degrees Fahrenheit

**Display Resolution:**  
0.1 Degree

**Open Check Current:**  
150 uA

**Accuracy:**  
± 2° Celsius (excluding thermocouple error)

### Scanning and Data Logging

**Scan Interval:**  
2 to 32000 seconds

**Alarm Relay:**  
1 Form C contact:  
0.6 Amperes at 125 Volts AC  
2.0 Amperes at 30 Volts DC

**Auto Scan:**  
Automatically cycles through channels

**Scan Rate:**  
16 sensors per interval per module, up to 256 sensors per second

**Data Memory:**  
8 Megabytes 140 K standard Optional Flash

**DAC Outputs:**  
2 Channels, each 0 to 5 Volts DC,  
Programmable Scaling

### Operation Specifications

**Operating Temperature:**  
32° to 122° Fahrenheit  
(0° to 50° Celsius)

**Storage Temperature:**  
-4° to 158° Fahrenheit  
(-20° to 70° Celsius)

**Humidity:**  
20% to 90%, non-condensing

**Environmental Air:**  
No corrosive gases

**Warm-Up Time:**  
5 Minutes typically to 1° Celsius  
Repeatability

### Cold Junction Compensation:

Built-in Semiconductor Sensor:  
Analog Device: AD22103

### Common Mode Range:

-1.25 to +1.25 Volts DC  
Absolute Maximum Ratings;  
Fault protected inputs to ± 30 Volts DC

### Equipment Specifications

**Size:**  
Length: 7 inches  
Width: 5 inches  
Height: 1.625 inches

### Display (Master Unit Only)

Backlit Liquid Crystal Display,  
2 rows of 16 characters

### Communication Interfaces

Ethernet: 10 BaseT RJ-45  
Serial: RS-485

### Converter:

24 Bit LTC2415

### Modem Specifications (OPTIONAL):

V.90/56K Kilobytes Baud Rate, Serial,  
Binary, Asynchronous Data Format  
Industry-standard error correction and  
data compression

### Modem Compatibility:

ITU V.90, K56flex;  
ITU-T V.34 enhanced, V.34, V.32bis, V.32,  
V.22bis, V.22;  
Bell 212A and 103/113;  
ITU-T V.29, V.42, V.42bis;  
ITU-T V.21 & V.23 in international versions

### External Power Supply

3.5 Watts, 12 to 28 Volts DC

## ABOUT TIDAL ENGINEERING

Headquartered in Randolph, NJ, Tidal Engineering Corporation has been designing and building award winning embedded hardware and software for test and measurement and data acquisition applications since 1992. The company further provides product development services together with engineering support, and is recognized for technical expertise in such areas as Embedded IEEE 488, and turnkey SCADA (Supervisory Control and Data Acquisition) systems.

Tidal's products are available exclusively through ADI American Distributors Inc., an ISO-9002 Certified distributor of electronic and electromechanical components and assemblies.

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