Madgetech

TCTempX Temperature Data Logger

The **TCTempX** Series includes 4, 8, 12 and 16-channel thermocouple-based temperature data loggers with a reading rate of up to 4 Hz, ideal for a variety of applications, whether it is remote temperature monitoring or multiple points in a central location.

This device simultaneously measures and records up to 2,096,128 readings, and users can disable channels to maximize memory capacity. For easy identification, each channel can be named with up to a ten-digit title.

In addition, the TCTempX Series features individual cold junction compensation for each channel providing increased accuracy and response time, and if a probe is removed or severed during logging, the software automatically annotates the data.

The TCTempX Series is compatible with the latest MadgeTech 4 Software making starting, stopping, and downloading simple and easy. Graphical, tabular, and summary data is provided for analysis and can be viewed as customizable engineering units.

Contact Chess Controls Inc.
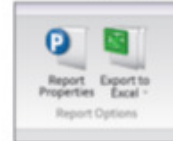For more information at
705-682-2828
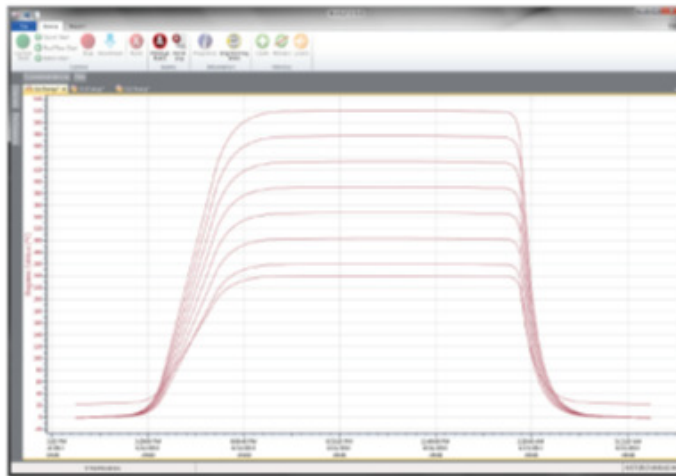
Graph View

- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/ zoom out
- Lethality equations (F0, PU)
- Mean Kinetic Temperature
- Full time zone support
- Data annotation
- Min./Max./Average lines
- Summary view
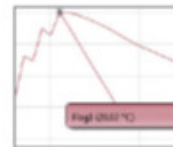
Cooling Flags

Export to Excel

Tabular Data View
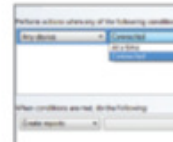
Automation

Features

- Up to 4 Hz Reading Rate
- Open Channel Detection
- Title Channels
- Accepts Thermocouple Types J, K, T, E, R, S, B, N
- External Power or User Replaceable Battery
- Pushbutton or Programmable Start
- Calibration Certificate included

Benefits

- Simple Setup and Installation
- Minimal Long-Term Maintenance
- Long-Term Field Deployment

SPECIFICATIONS

INTERNAL CHANNELS

Temperature Range	-20 °C to +60 °C (-4 °F to +140 °F)
Temperature Resolution	0.01 °C (0.018 °F)
Calibrated Accuracy	±0.5 °C (0 °C to 50 °C)

REMOTE CHANNELS

Remote Channel Thermocouple Types	J, K, T, E, R, S, B, N
Thermocouple Connection	Female subminiature (SMP)
Cold Junction Compensation	Automatic, based on internal channel
Maximum Thermocouple Resistance	1000 Ω, <100 Ω recommended

Thermocouple	Range (°C)	Resolution	Accuracy*
J	-210 to +760	0.1 °C	±0.5 °C
K	-270 to +1370	0.1 °C	±0.5 °C
T	-270 to +400	0.1 °C	±0.5 °C
E	-270 to +980	0.1 °C	±0.5 °C
R	-50 to +1760	0.5 °C	±2.0 °C
S	-50 to +1760	0.5 °C	±2.0 °C
B	+50 to +1820	0.5 °C	±2.0 °C
N	-270 to +1300	0.1 °C	±0.5 °C

Start Modes	Software programmable immediate start or delay start up to six months in advance

*Thermocouple accuracy is specified with a 24 AWG.

BATTERY WARNING: BATTERY MAY LEAK, FLAME OR EXPLODE IF DISASSEMBLED, SHORTED, CHARGED, CONNECTED TOGETHER, MIXED WITH USED OR OTHER BATTERIES, EXPOSED TO FIRE OR HIGH TEMPERATURE. DISCARD USED BATTERY PROMPTLY. KEEP OUT OF REACH OF CHILDREN.

GENERAL

Real Time Recording	May be used with PC to monitor and record data in real time
Memory (all channels enabled)	**4-channel:** 524,032 readings per channel **8-channel:** 262,016 readings per channel **12-channel:** 174,677 readings per channel **16-channel:** 131,008 readings per channel
LEDs	1 per channel and 2 status LEDs
Reading Rate	4 Hz up to 1 reading every 24 hours
Calibration	Digital calibration through software
Calibration Date	Automatically recorded within device
Battery Type	9 V lithium battery included, **user replaceable**
Battery Life	18 months typical
Data Format	Date and time stamped °C, °F, K, °R, mV, V
Time Accuracy	±1 minute/month
Computer Interface	USB-A to micro USB cable (included); 460,800 baud
Operating System Compatibility	Windows XP SP3 or later
Software Compatibility	Standard Software version 4.2.17.0 or later Secure Software version 4.2.16.0 or later
Operating Environment	-20 °C to +60 °C (-4 °F to +140 °F), 0 %RH to 95 %RH non-condensing
Dimensions	**4-channel:** 2.70 in x 7.25 in x 1.22 in (65.6 mm x 184.2 mm x 31.0 mm) **8-channel:** 2.70 in x 7.25 in x 1.22 in (65.6 mm x 184.2 mm x 31.0 mm) **12-channel:** 2.70 in x 7.25 in x 1.68 in (65.6 mm x 184.2 mm x 42.7 mm) **16-channel:** 2.70 in x 7.25 in x 2.14 in (65.6 mm x 184.2 mm x 54.4 mm)
Weight	**4-channel:** 13 oz (368 g) **8-channel:** 13 oz (368 g) **12-channel:** 20 oz (580 g) **16-channel:** 28 oz (800 g)
Material	Black anodized aluminum
Approvals	CE

Ordering Information

TCTempX4	PN 902169-00	4-Channel Thermocouple Data Logger, USB-A to micro USB cable, universal power adapter
TCTempX8	PN 902171-00	8-Channel Thermocouple Data Logger, USB-A to micro USB cable, universal power adapter
TCTempX12	PN 902177-00	12-Channel Thermocouple Data Logger, USB-A to micro USB cable, universal power adapter
TCTempX16	PN 902174-00	16-Channel Thermocouple Data Logger, USB-A to micro USB cable, universal power adapter
U9VL-J	PN 901804-00	Replacement battery for TCTempX Series

MADGETECH
WE BUILD DATA LOGGERS

X SERIES

TCTempX Series
4, 8, 12 and 16-Channel
Thermocouple Data Loggers