DATASHEET

TCTempX12

MadgeTech

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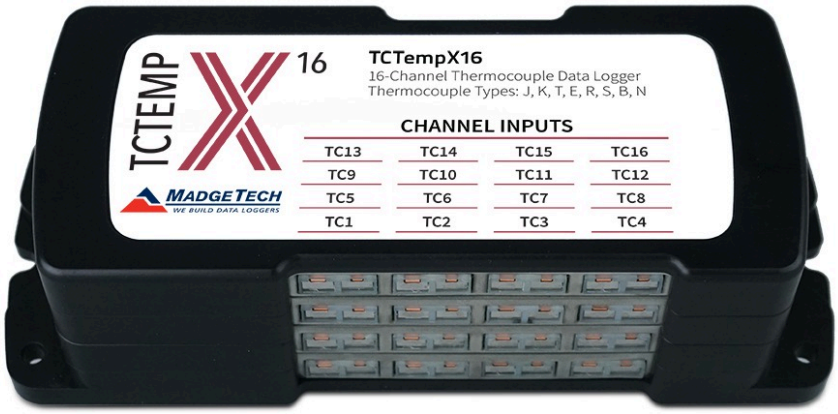
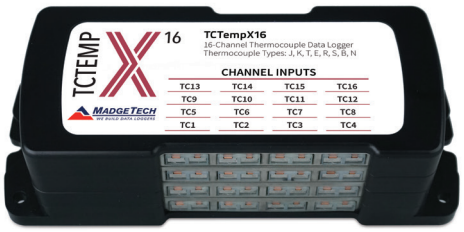


MADGETECH
WE BUILD DATA LOGGERS

X SERIES

TCTempX Series

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



The new TCTempX Series consists of 4, 8, 12 and 16-channel thermocouple data loggers with a reading rate of up to 4 Hz. Improvements include the elimination of an interface cable (uses standard USB-A to Micro USB), increased memory for more readings and increased download speed.

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. For easy identification, each channel can be named with up to a ten digit title. To maximize memory capacity, users can enable or disable channels.

The TCTempX Series are ideal for a variety of applications, whether it is remote temperature monitoring, or multiple points in a central location. Data from all channels is simultaneously logged. After the monitoring cycle is complete, data can be downloaded for analysis.

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

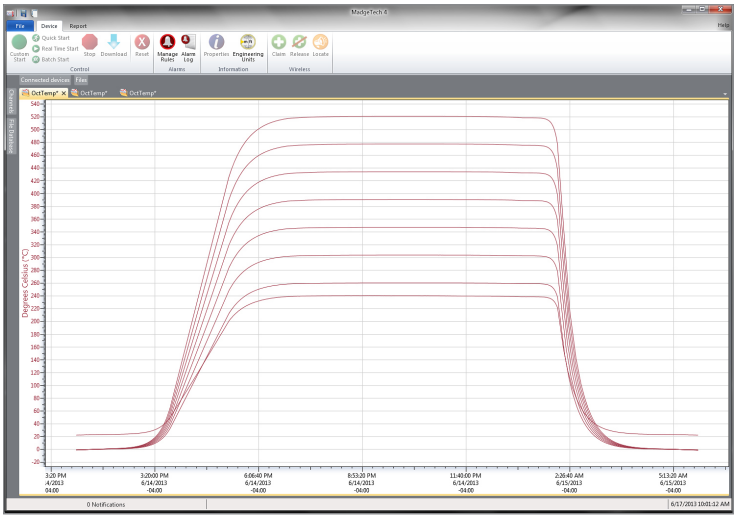
Benefits

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

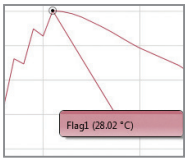
Applications

- Warehouse Monitoring
- Refrigerator Monitoring
- Medical and Pharmaceutical
- Oven Monitoring
- Chamber Validation
- Smoke Houses
- Food Processing
- HVAC
- Engine Studies

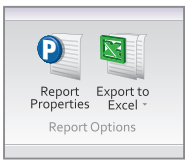
MadgeTech 4 Software Features



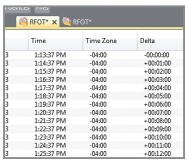
Graph View



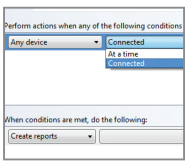
Cooling Flags



Export to Excel



Tabular Data View



Automation

- 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

SPECIFICATIONS

Specifications are subject to change without notice. Specific warranty remedy limitations apply. Call (603) 456-2011 or go to **madgetech.com** for details.

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

*Thermocouple accuracy specified with 24 AWG diameter thermocouple wires.

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

Start Modes	Software programmable immediate start or delay start up to six months in advance
Real Time Recording	May be used with PC to monitor and record data in real time
Memory	**4-channel:** 524,032 readings **8-channel:** 262,016 readings **12-channel:** 174,677 readings **16-channel:** 131,008 readings
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 902178-00	16-Channel Thermocouple Data Logger, USB-A to micro USB cable, universal power adapter
U9VL-J	PN 901804-00	Replacement battery for TCTempX Series

For Quantity Discounts call (603) 456-2011 or email **sales@madgetech.com**

AKRIBIS www.akribis.info contact@akribis.info

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