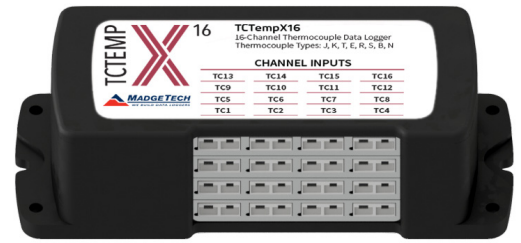# TCTEMPX16
16-Channel Thermocouple Data Logger

The TCTempX16 is a 16-channel thermocouple data logger with a reading rate of up to 4 Hz. It can measure and record 131,008 readings per channel. To maximize memory capacity, users can enable or disable channels. For easy identification, each channel can be named with up to a ten digit title.

In addition, the TCTempX16 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 TCTempX16 is 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.
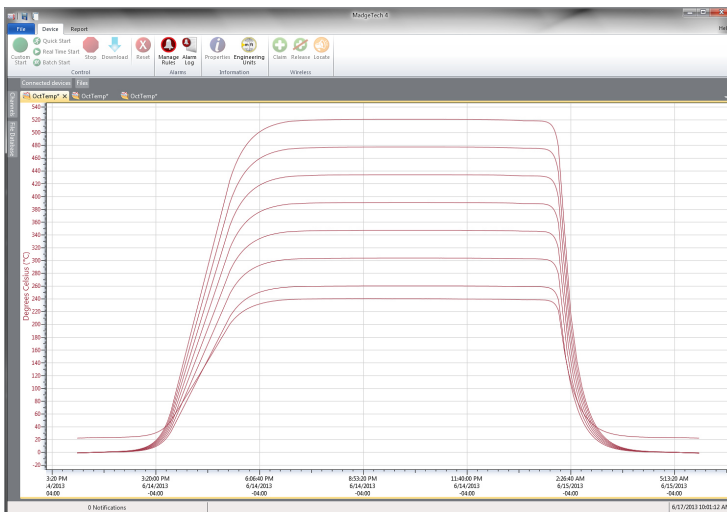
Features

- Up to 4 Hz Reading Rate
- 131,008 Readings per Channel
- 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
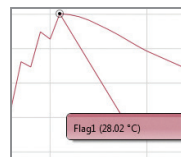- Calibration Certificate included

Benefits

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

Applications

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

MadgeTech 4 Software Features

Graph View

Cooling Flags

Export to Excel

Tabular Data View

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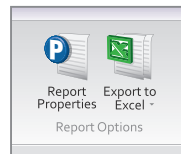
- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/ zoom out
- Lethality equations (F0, PU)
- Mean Kinetic Temperature
- Full time zone support
- Data annotation
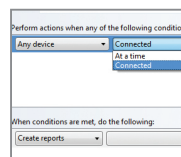- Min./Max./Average lines
- Summary view

SPECIFICATIONS

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

16 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)

16 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.

GENERAL

Real Time Recording	May be used with PC to monitor and record data in real time
Memory	131,008 readings per channel
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 or alkaline battery included, **user replaceable with any 9 V battery**
Battery Life	18 months typical
Data Format	Date and time stamped °C, °F, K, °R, mV, V
Time Accuracy	±16 seconds/month
Computer Interface	USB (Interface cable required); 115,200 baud
Software	Windows XP SP3 or later
Software Compatibility	Standard Software version 4.2.16.0 or later Secure Software version 4.2.17.0 or later
Operating Environment	-20 °C to +60 °C (-4 °F to +140 °F), 0 %RH to 95 %RH non-condensing
Dimensions	2.7 in x 7.25 in x 2.15 in (69 mm x 184 mm x 54 mm)
Material	Black anodized aluminum
Weight	28 oz (800 g)
Approvals	CE

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.

Ordering Information

TCTempX16	PN 902174-00	16-Channel Thermocouple Data Logger
U9VL-J	PN 901804-00	Replacement battery for TCTempX16