DATASHEET

# RTDTempX12

MadgeTech

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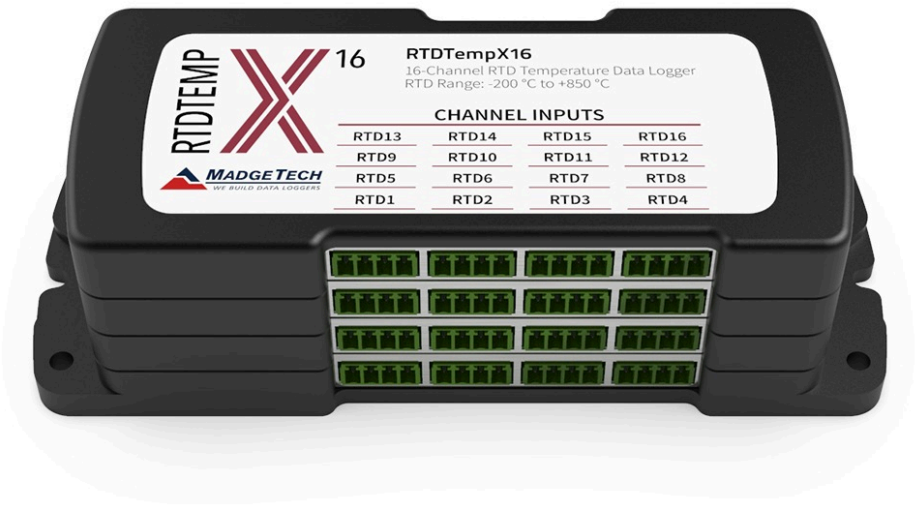
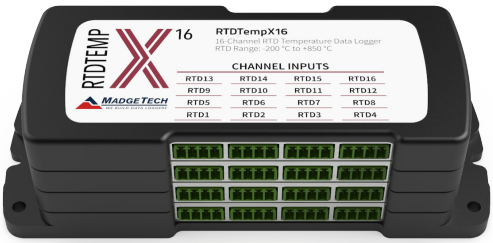


MADGETECH
WE BUILD DATA LOGGERS

# RTDTempX Series

## 4, 8, 12 and 16-Channel RTD Temperature Data Loggers




The new RTDTempX Series consists of 4, 8, 12 and 16-channel RTD based temperature data logger 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.

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.

Using the MadgeTech Software, starting, stopping and downloading from the RTDTempX Series data loggers is simple and easy. Graphical, tabular and statistical data is provided for analysis and data can be viewed in multiple units, using the Engineering Units function. The data can also be automatically exported to Excel® for further calculations.

## Features

- ±0.04 °C Calibrated Accuracy
- Real time Operation
- Up to 4 Hz Reading Rate
- Pushbutton or Programmable Start Time
- Title Channels
- Calibration Certificate included
- External Power or User Replaceable Battery
- Accepts 2, 3 and 4-wire RTD's

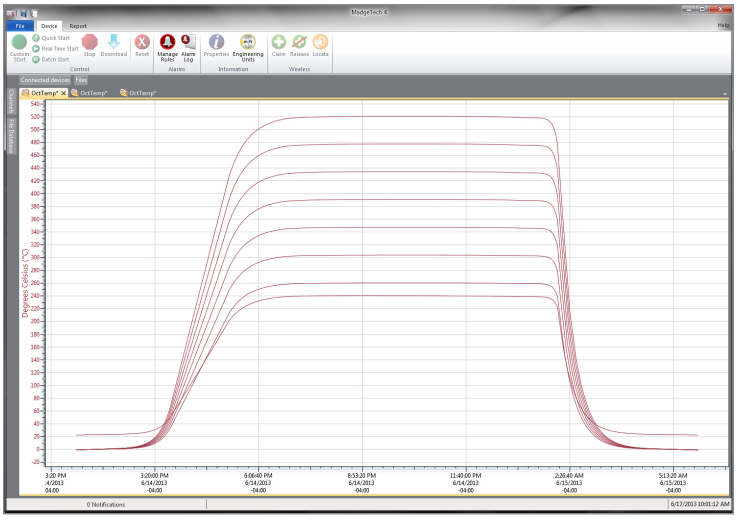
## Benefits

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

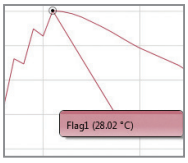
## Applications

- Calibration Chamber Monitoring
- Process Verification/Validation
- Warehouse Monitoring
- Precision Temperature Monitoring
- HVAC
- Clean Rooms
- Medical/Pharmaceutical
- Museum Monitoring
- Environmental Studies
- Replace Costly Strip Chart Recorders

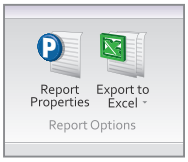
## MadgeTech 4 Software Features



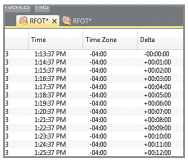
Graph View




Cooling Flags

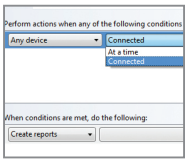



Export to Excel



Tabular Data 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




Automation

# SPECIFICATIONS

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

| TEMPERATURE | |
|---|---|
| **Temperature Range*** | 18.5 Ω to 390.5 Ω<br>-200 °C to +850 °C (-328 °F to +1562 °F)<br>(Probe Dependent) |
| **Temperature Resolution** | 0.0001 Ω<br>0.001 °C (0.0018 °F) (Probe Dependent) |
| **Calibrated Accuracy**** | ±0.015 Ω @ 25 °C (77 °F) ambient<br>±0.04 °C (±0.072 °F) (Probe Dependent) |
| **Specified Accuracy Range** | 18.5 Ω to 175.9 Ω<br>-200 °C to +200 °C (-328 °F to 392 °F) |
| **Input Connection** | Removable screw terminal; 2, 3 or 4 wire interface |
| **Temperature Coefficient** | 2 ppm/°C typical |

| GENERAL | |
|---|---|
| **Start Modes** | Software programmable immediate start or delay start up to six months in advance, programmable in software |
| **Real Time Recording** | May be used with PC to monitor and record data in real time |
| **Memory** | **4-channel:** 698,709 readings<br>**8-channel:** 349,354 readings<br>**12-channel:** 232,903 readings<br>**16-channel:** 174,677 readings |

*Temperature specifications based on ideal 100 Ω Pt RTD compliant with IEC 751 (1983) and ITS-90, 5000 Ω FSR (accuracy based on 36 inch lead wire RTD with 4 wire configuration)

**Calibrated accuracies based on standard MadgeTech calibrations for 0 Ω to 200 Ω range.

Warning: Note the polarity instructions. Do not attach wires to the wrong terminals. 100 Ω, 2 or 4 wire RTD probes are recommended for the most accurate performance. Most 100 Ω, 3 wire RTD probes will work, but MadgeTech cannot guarantee the accuracy. To determine whether or not the 3-wire RTD probe will work, the resistance between the two same colored wires should be less than 1 Ω. (Note: Please contact the manufacturer of the RTD probe for questions on the resistance.)

| | |
|---|---|
| **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; Ω |
| **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 4.2.19.0 or later<br>Secure Software version 4.2.18.0 or later |
| **Operating Environment** | -20 °C to +60 °C (-4 °F to +140 °F),<br>0 %RH to 95 %RH non-condensing |
| **Dimensions** | **4-channel:** 2.70 in x 7.25 in x 1.22 in<br>(65.6 mm x 184.2 mm x 31.0 mm)<br>**8-channel:** 2.70 in x 7.25 in x 1.22 in<br>(65.6 mm x 184.2 mm x 31.0 mm)<br>**12-channel:** 2.70 in x 7.25 in x 1.68 in<br>(65.6 mm x 184.2 mm x 42.7 mm)<br>**16-channel:** 2.70 in x 7.25 in x 2.14 in<br>(65.6 mm x 184.2 mm x 54.4 mm) |
| **Material** | Black anodized aluminum |
| **Weight** | **4-channel:** 13 oz (368 g)<br>**8-channel:** 13 oz (368 g)<br>**12-channel:** 20 oz (580 g)<br>**16-channel:** 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

| | | |
|---|---|---|
| **RTDTempX4** | PN 902175-00 | 4-Channel RTD Data Logger, USB-A to micro USB cable, universal power adapter |
| **RTDTempX8** | PN 902176-00 | 8-Channel RTD Data Logger, USB-A to micro USB cable, universal power adapter |
| **RTDTempX12** | PN 902173-00 | 12-Channel RTD Data Logger, USB-A to micro USB cable, universal power adapter |
| **RTDTempX16** | PN 902174-00 | 16-Channel RTD Data Logger, USB-A to micro USB cable, universal power adapter |
| **U9VL-J** | PN 901804-00 | Replacement battery for RTDTempX Series |

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

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