

## QuadRTD and OctRTD

Description	QuadRTD	OctRTD
Temperature Sensor	External: 2, 3 or 4 wire 100Ω platinum RTD	
Temperature Range	-200 °C to +850 °C (-328 °F to +1562 °F)	
Temperature Resolution	0.01 °C (0.018 °F)	
Calibrated Accuracy	±0.1 °C	
Memory	21,845/channel	10,922/channel
Reading Rate	1 reading every 2 seconds up to 1 reading every 12 hours	
Channels	4	8
LED Indicator	None	
Required Interface Package	IFC110 or IFC200	
Baud Rate	2,400	
Battery Type	9V lithium or alkaline battery included, <b>user replaceable</b>	
Typical Battery Life	1 year	
Operating Environment	-20 °C to +60 °C (-4 °F to +140 °F), 0 %RH to 95 %RH (non-condensing)	
Material	Anodized aluminum	
Weight	11.9 oz (335 g)	15.9 oz (450 g)
Dimensions	3.5 in x 4.4 in x 1.0 in (89 mm x 112 mm x 26 mm)	3.5 in x 4.4 in x 1.5 in (89 mm x 112 mm x 39 mm)

### Battery Warning

**WARNING: FIRE, EXPLOSION, AND SEVERE BURN HAZARD. DO NOT SHORT CIRCUIT, CHARGE, FORCE OVER DISCHARGE, DISASSEMBLE, CRUSH, PENETRATE OR INCINERATE. BATTERY MAY LEAK OR EXPLODE IF HEATED ABOVE 60 °C (140 °F).**

*Specifications subject to change.  
See MadgeTech's terms and conditions at [www.madgetech.com](http://www.madgetech.com)*

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### QuadRTD

4-Channel, 100 Ω RTD Based Temperature Data Logger

### OctRTD

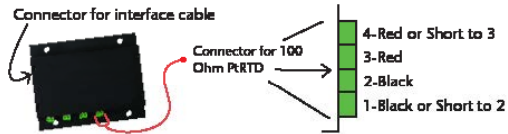
8-Channel, 100 Ω RTD Based Temperature Data Logger

## Wiring the Data Logger

### Wiring Options

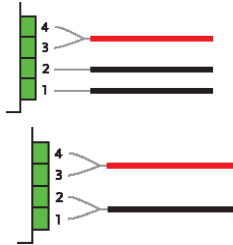
For 4-wire RTD probes, connect the four lead wires to your RTD logger as shown in the figures below.

KEY	
4-	Excitation Current Out (+)
3-	Measurement (+) Input
2-	Measurement(-) Input
1-	Ground (-)



For 3-wire RTD probes, short inputs 3 and 4 together, then connect the lead wires to inputs 1, 2 and 3.

For 2-wire RTD probes, short inputs 3 and 4 together and inputs 1 and 2 together, then connect the RTD lead wires to inputs 2 and 3.



*Warning: Note the polarity instructions. Do not attach wires to the wrong terminals. 100  $\Omega$ , 2 or 4 wire RTD probes are recommended for the most accurate performance. Most 100  $\Omega$ , 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  $\Omega$ . (Note: Please contact the manufacturer of the RTD probe for questions on the resistance)*

## Installation Guide

### Installing the Interface cable

- IFC200  
Insert the device into a USB port. The drivers will install automatically.
- IFC110  
Plug the serial cable into the port and verify it is secure.
- USB-1 or USB-101  
Install the USB drivers from the CD provided in the kit, then plug the USB cable into the computer and the serial cable into the serial port.

### Installing the software

The Software can be downloaded from the MadgeTech website at the following link: [www.madgetech.com/software-download](http://www.madgetech.com/software-download). Follow the instructions provided in the Installation Wizard.

## Device Operation

### Connecting and starting the data logger

- Once the software is installed and running, plug the interface cable into the data logger.
- Connect the USB end of the interface cable into an open USB port on the computer.
- The device will appear in the Connected Devices list, highlight the desired data logger.
- For most applications, select **"Custom Start"** from the menu bar and choose the desired start method, reading rate and other parameters appropriate for the data logging

application and click **"Start"**. (**"Quick Start"** applies the most recent custom start options, **"Batch Start"** is used for managing multiple loggers at once, **"Real Time Start"** stores the dataset as it records while connected to the logger.)

- The status of the device will change to **"Running"**, **"Waiting to Start"** or **"Waiting to Manual Start"**, depending upon your start method.
- Disconnect the data logger from the interface cable and place it in the environment to measure.

*Note: The device will stop recording data when the end of memory is reached or the device is stopped. At this point the device cannot be restarted until it has been re-armed by the computer.*

### Downloading data from a data logger

- Connect the logger to the interface cable.
- Highlight the data logger in the Connected Devices list. Click **"Stop"** on the menu bar.
- Once the data logger is stopped, with the logger highlighted, click **"Download"**. You will be prompted to name your report.
- Downloading will offload and save all the recorded data to the PC.

## Device Maintenance

### Battery Replacement

Materials:

3/32" HEX Driver (Allen Key)

Replacement Battery (U9VL-J)

- Remove the cover from the device by unscrewing the four screws.
- Remove the battery from its compartment and unsnap it from the connector.
- Snap the new battery into the terminals and verify it is secure.
- Replace the cover taking care not to pinch the wires. Screw the enclosure back together securely.

*Note: Be sure not to over tighten the screws or strip the threads.*

### Recalibration

The QuadRTD or OctRTD standard calibration is at two points, 50  $\Omega$  and 150  $\Omega$ .

### Additional Services:

Custom calibration and verification point options available, please call for pricing.

*Call for custom calibration options to accommodate specific application needs.*

*Prices and specifications subject to change. See MadgeTech's terms and conditions at [www.madgetech.com](http://www.madgetech.com)*

*To send devices to MadgeTech for calibration, service or repair, please use the MadgeTech RMA Process by visiting [www.madgetech.com](http://www.madgetech.com), then under the services tab, select RMA Process.*