Nomad Data Logger

Thermocouple Temperature Logger Tc-HR
With Cold Junction Compensation
High Resolution

The Tc-HR is a small dual channel logger which will accept an external thermocouple and temperature probe and also includes an internal temperature sensor.

The logger may be operated in the following modes:

⇒ Single channel internal temperature logger to give you 32600 readings.

⇒ Dual channel Thermocouple plus internal temperature logger giving you a total of 10890 readings for each temperature

The Thermocouple input is a high-resolution input designed for one of the following thermocouple types: K, J, T, N, R. The internal temperature is a low-resolution temperature probe designed to provide cold junction temperature compensation but can be used without the thermocouple.

Specification

General

Working and storage Temperature -30ºC to +70ºC

Sampling Rate	1 second to 10 hours in 1 second intervals
Storage capacity	32600 readings internal temperature only
Logging Modes. Each channel can be set to log any combination of:	Point readings (actual) Average readings (since last sample) Maximum readings (since last sample)
Batteries	one 3.6V lithium cell.
Download time 16336 readings	<70 seconds
Battery life	>5 years. Factory replaceable
Case material	304 Stainless tube.
Screw on end cap	Plated brass
Weight	120g
Size	20mm diameter * 160mm long

Temperature (External Type K Thermocouple Probe)

Working Temperature	Depends on probe used
Resolution	< 0.5ºC See Graph (12 Bit)
Accuracy @25ºC	$\pm$1ºC $\pm$ Thermocouple accuracy

Temperature (Internal Probe)

Resolution	See Graph
Absolute accuracy	See Graph
Linear accuracy over range	$\pm$0.2ºC
Time Response	<40 minutes

Internal temperature probe resolution and accuracy.
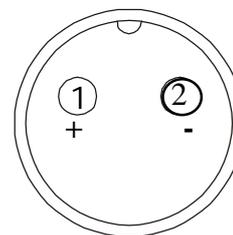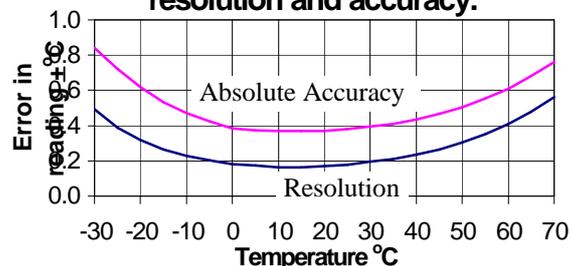
Note: When soldering thermocouple wire onto plug, use phosphoric acid as flux. Clean thoroughly before use.

Putting into service.

1. From the SWDL-HRC101 OmniLog software and Down Load cable kit, plug the Down Load cable into a spare serial port on your PC, and load the OmniLog software. The OmniLog has an excellent "Help". This will need to be read to enable successful operation of the OmniLog Data Management Program and gain familiarisation of the many advanced features available.

2. Connect the Nomad Logger. Under healthy circumstances, a "Logger Control" screen will load. If the "Logger Control" screen does not load, click on the button labelled "Connect to a Logger for the first time". The OmniLog will run a test on the serial ports and advise if the port the logger is connected to is not available, in which case, plug the logger into an available port. (Refer to "Help" for further assistance.)

3. On the "Logger Control" screen, click on "Channel and Probe Setup" button, and check the Battery Condition, plus other configurations if connecting to the pH-HR or mV-HR loggers.

4. Now click on the "Start Logger" tab for the final configurations, before putting the logger into service.