

# TruTrack Data Logger

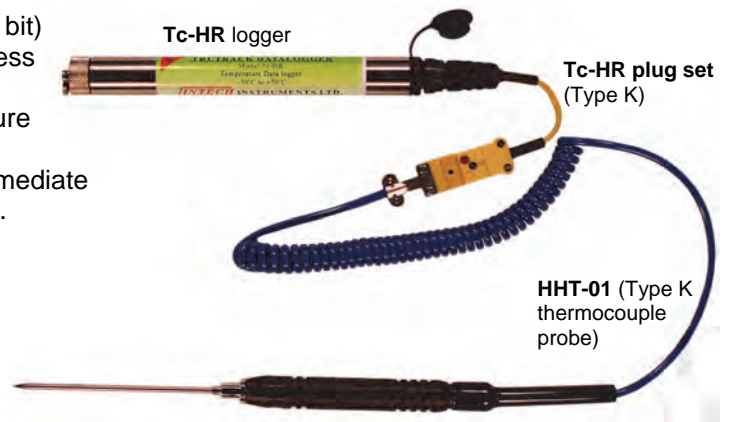
## Thermocouple Temperature Logger Model Tc-HR mark 4

Two Channel High Resolution  
(16 bit) Temperature Data Logger.

The Tc-HR is a small Two Channel High Resolution (16 bit) Temperature data logger housed in a rugged 304 stainless steel case. The logger connects to an external Thermocouple probe and also has an internal temperature sensor for convenient logging of ambient temperature if desired. Logging can be configured to: start on time, immediate start, stop when full, loop around (overwrite oldest data).

### Features:

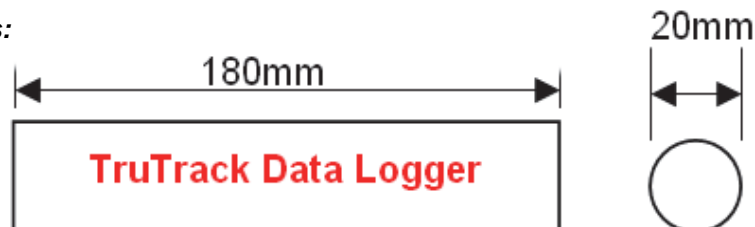
- Over 500,000 samples can be logged (when logging thermocouple only)!
- The logger accepts Type J, K, N, R and T thermocouple probes (factory set to Type K).
- Temperature can be set to any combination of Point, Average, Maximum & Minimum readings.
- The battery voltage of the logger can be logged if required.
- The logger can be run in either "Stop when memory is Full", "Loop Around" mode or set to stop at a future time.
- The logger can be started "Now", started at a given time in the future or on a condition (e.g. temperature >20°C).
- The data from any logger that records Temperature can be processed, by the Omni7/OmniLog software, to give daily, weekly and monthly accumulated Grow Degree Day reports for a wide range of horticultural crops.



**Ordering Information:**    **Tc-HR**    Thermocouple Temperature data logger  
   **Tc-HR plug set**    70mm lead c/w plugs (specify thermocouple type)

*Please Note:*    *The Tc-HR data logger is not supplied with a thermocouple probe. These can be ordered separately from Intech Instruments Ltd if required.*

### Tc-HR (mark 4) Dimensions:



### Putting into service (Using Omni7 - the original OmniLog differs slightly):

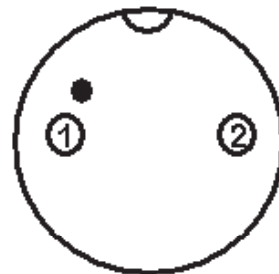
1. From the SWDL-DLC Omni7 software and Download cable kit, **first install the Omni7 software**, then plug the Download cable into a spare USB or serial port on your PC (depending on which type you have). The Omni7 has an excellent "Help". This will need to be read to enable successful operation of the Omni7 Data Management Program and gain familiarisation of the many advanced features available.
2. Connect the data logger to the download cable. Select the correct connection type on the Omni7 screen. Omni7 requires manual connection and disconnection to the data logger using the Green 'Connect' and Red 'Disconnect' buttons. It will not connect to a data logger automatically. (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.
4. Now click on the "Start Logger" tab for the final configurations, before putting the logger into service.

**Product Liability.** This information describes our products. It does not constitute guaranteed properties and is not intended to affirm the suitability of a product for a particular application. Due to ongoing research and development, designs, specifications, and documentation are subject to change without notification. Regrettably, omissions and exceptions cannot be completely ruled out. No liability will be accepted for errors, omissions or amendments to this specification. Technical data are always specified by their average values and are based on Standard Calibration Units at 25C, unless otherwise specified. Each product is subject to the 'Conditions of Sale'.

**Warning: These products are not designed for use in, and should not be used for patient connected applications. In any critical installation an independent fail-safe back-up system must always be implemented.**

**Specifications:**

Thermocouple Input:	External Sensor Connector	2 pin Switchcraft Plug (EN3C2M)		
		Weatherproof; IP66		
	Pinout	1 Positive		
		2 Negative		
	Temperature Coefficient	±0.1% per °C of logger Temperature		
	Temperature Range	Type	Min Temp	Max Temp
		J	-200°C	900°C
		K	-250°C	1300°C
		N	-250°C	1300°C
		R	-50°C	1760°C
		T	-250°C	400°C
	Accuracy	Type	Min Temp	At 0°C
This is the logger accuracy only and does not include inaccuracies in the particular thermocouple probe used.		J	±1.0°C	±0.5°C
		K	±1.0°C	±0.5°C
		N	±2.0°C	±1.0°C
		R	±3.5°C	±2.0°C
		T	±1.0°C	±0.5°C
	Resolution	±0.1°C		
The thermocouple input can also be used as a -50mV to +50mV DC input.		Resolution	0.01mV	
		Accuracy	±0.02mV	



Internal Temperature:	Sensor Type	Thermister
	Linear accuracy over range	±0.3°C (0°C to 70°C)
	Repeatability	±0.1°C
	Long term stability	±0.1°C

Logger:	Working Temperature	-30°C to +70°C
	Storage Temperature	-30°C to +70°C
	Sampling Rate	1 second minimum, 10 hours maximum; in 1 second intervals
	Storage capacity	522,240 samples logging thermocouple only
		362 days with 1min logging interval; 4.9 years with 5min logging interval
	Alarms	Two independent Alarms
		Triggered on any combination of six user configurable Alarm Conditions
		Both alarms can be configured to send SMS messages
		Alarms can be visually checked using the Omni7/OmniLog Software
	Start modes	Start immediately / Start on date/time / Start on condition (e.g. temperature > 20°C)
	Stop modes	Stop when memory is full / Stop on date/time / Loop around (continues logging)
	Logging modes	Each channel can be set to log any combination of: - Point readings                      - Maximum reading - Average reading                      - Minimum reading

**Warning:** When using the Average, Maximum or Minimum reading(s), the logger reads the attached sensor(s) every second. **This will reduce battery life.**

Battery	One to Five year life depending on usage as above
	Using the logger in temperatures below -5°C (23°F) will reduce battery life
	One TruTrack 7.2V lithium cell; User Replaceable
	The data is retained in the case of battery failure
	Battery Status Monitor in Omni7/OmniLog software
Download time	9 minutes 30 seconds for Full Logger
Case material	304 Stainless tube
Screw on end cap	Plated brass
Weight	140g
Size	20mm diameter X 180mm long

A **DLC3USB [USB]** or **DLC3 [RS232]** **download cable** is required to connect the Tc-HR to a computer.

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Tc-HR 100712