

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).



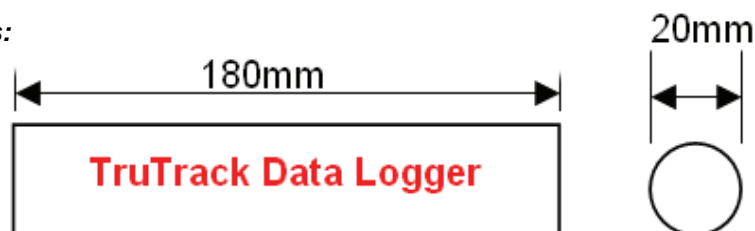
Features:

- 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 now be processed, by the 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:

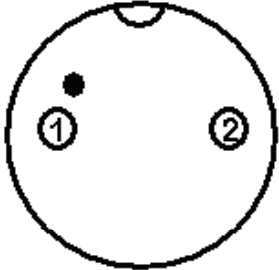


Putting into service (OmniLog Version 1.53 or greater):

1. From the SWDL-DLC OmniLog software and Download cable kit, **first install the OmniLog software**, then plug the Download cable into a spare USB or serial port on your PC (depending on which type you have). 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 TruTrack 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.

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

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	Max Temp
This is the logger accuracy only and does not include inaccuracies in the particular thermocouple probe used.		J	±1.0°C	±0.5°C	±1.0°C
		K	±1.0°C	±0.5°C	±1.0°C
		N	±2.0°C	±1.0°C	±1.0°C
		R	±3.5°C	±2.0°C	±2.0°C
		T	±1.0°C	±0.5°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 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		
	Battery	One to Five year life depending on usage			
		One TruTrack 7.2V lithium cell; User Replaceable			
		The data is retained in the case of battery failure			
		Battery Status Monitor in 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.

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.

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