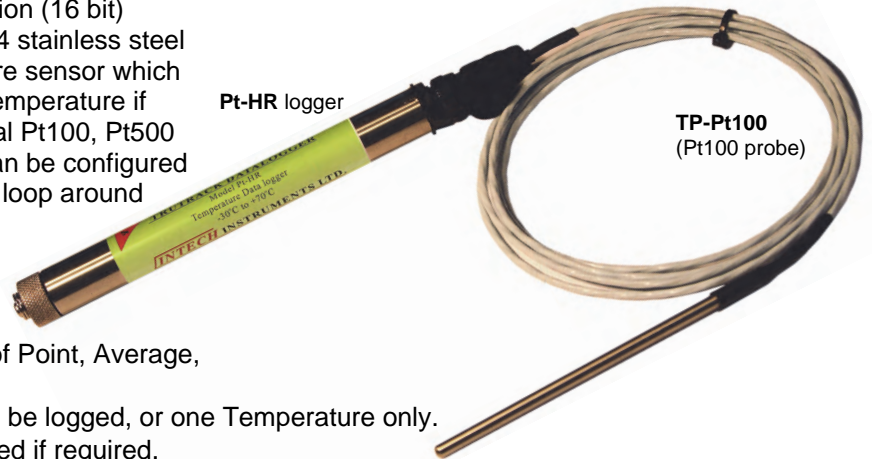


TruTrack Data Logger

External RTD Temperature Logger Model Pt-HR mark 4

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

The Pt-HR is a small Two Channel High Resolution (16 bit) Temperature data logger housed in a rugged 304 stainless steel case. The logger contains an internal temperature sensor which can be used for convenient logging of ambient temperature if desired, which is logged separately to an external Pt100, Pt500 or Pt1000 temperature sensor probe. Logging can be configured to: start on time, immediate start, stop when full, loop around (overwrite oldest data).



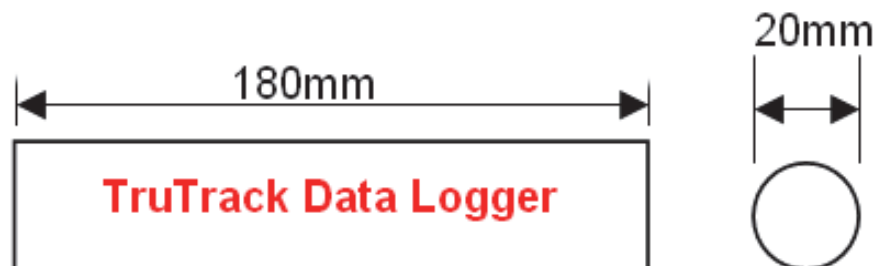
Features.

- Temperature can be set to any combination of Point, Average, Maximum & Minimum readings.
- Both the RTD and Internal Temperatures can be logged, or one Temperature only.
- 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” or started at a given time in the future.
- The data from any logger that records Temperature can now 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. Pt-HR External Pt100/Pt500/Pt1000 Temperature data logger

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

Pt-HR Dimensions.



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

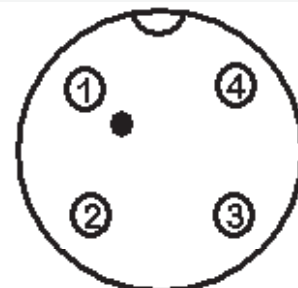
1. From the SWDL-DLC Omni7 software and Download cable kit, **first install the Omni7 software**, then plug the Download cable into a spare USB or serial port on your PC (depending on which type you have). The Omni7 has an excellent “Help”. This will need to be read to enable successful operation of 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.

RTD Pt100 / Pt500 / Pt1000 Input:	External Sensor Connector	4 pin Switchcraft Plug (EN3C4M)		
		Weatherproof; IP66		
Pinout	2 Wire RTD Connection			
1 B	A to 3			
2 B	B to 2	View from Front		
3 A	Connect 1 to 2	of Socket or		
4 A	Connect 3 to 4	Rear of Plug		
3 Wire RTD Connection	4 Wire RTD Connection			
A to 3	A to 3			
B to 2	A to 4			
B to 1	B to 1			
Connect 3 to 4	B to 2			
Temperature Range	Pt100 / Pt500 / Pt1000	-200°C to +600°C		
Resolution	0.1°C			
Accuracy	Type	at Min Temp	at 0°C	at Max Temp
	Pt100	±1.0°C	±0.5°C	±1.0°C
	Pt500	±1.0°C	±0.5°C	±1.0°C
	Pt1000	±2.0°C	±1.0°C	±1.0°C



Note: This is the logger accuracy only and does not include inaccuracies in the particular RTD probe used.

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 RTD Pt Temperature only		
		362 days with 1 min logging interval, RTD only		
		4.9 years with 5 min logging interval, RTD only		
	Alarms	Two independent Alarms		
		Triggered on any combination of six user configurable alarm conditions		
		Both alarms can be configured to send SMS messages		
	Start modes	Alarms can be visually checked using the Omni7/OmniLog software		
Start immediately		Start on date/time		
Stop modes	Start on condition (e.g. Temperature > 20°C)			
	Stop when memory is full	Stop on date/time		
Logging modes	Loop around (continues logging)			
	Each channel can be set to log any combination of:			
	- Point readings	- Average reading		
	- Maximum 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			
Download time	Battery Status Monitor in Omni7/OmniLog software			
	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 Pt-HR to a computer.

RTD Probe Setup.

The Pt-HR is factory set for use with RTD Pt-100 probes.

For other RTD probe types the Pt-HR needs to be setup for the correct RTD probe type using a computer and the Omni7/OmniLog software. There is no need to alter these settings if you are using a RTD Pt-100 probe!

To set the RTD probe type of the Pt-HR:

- Run the Omni7/OmniLog software.
- Connect to the logger using a **DLC3USB** [USB] or **DLC3** [RS232] **download cable**.
- Select the Logger Control window.
- Select the 'Channel and Probe Setup' tab.
- Select the 'Ext Temperature (Ch1)' tab.
- In the Probe box, select the required RTD Probe Type.
- Click on the "Write Unit Scaling and Calibration Values to the Logger" button.

The screenshot shows the 'Logger Control' software window with the 'Channel and Probe Setup' tab selected. The 'Ext Temperature (Ch1)' channel is active. The 'Probe' dropdown menu is open, showing the following options: PT100 Digital, PT100 Digital, PT500 Digital, and PT1000 Digital. The 'Units and Scaling' section shows the following settings: Offset: 0.00000000, Gain: 1.00000000, Units: °C, and Decimal Places: 1. The 'Calibration' section shows the following settings: First Point: 0.00 °C, Second Point: 0.00 °C. A 'Write Unit, Scaling and Calibration values to the Logger' button is visible at the bottom right.

Note: For complete calibration instructions for each RTD probe type, please refer to the Omni7/OmniLog Help.

