

Temperature & Humidity Data Logger

Logger Model HT-HR mark 4

Dual Channel High Resolution (16 bit)
Humidity & Temperature Data Logger.



The HT-HR is a small Dual Channel High Resolution (16 bit) Humidity and Temperature data logger housed in a rugged 304 stainless steel case. The humidity and temperature sensors are housed in a 60 micron Stainless Steel filter at the top of the logger. The HT-HR mark 4 uses a Sensirion SHT15 humidity sensor giving $\pm 2.0\%$ RH accuracy from 10% RH to 90% RH. The logger contains an integral internal temperature sensor which is logged separately to humidity. Logging can be configured to: start on time, immediate start, start on condition, stop when full, loop around (overwrite oldest data).

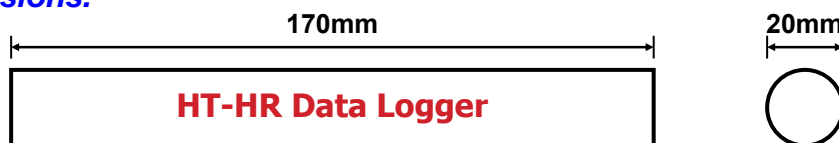
Features.

- Temperature & Humidity can be set to any combination of Point, Average, Maximum & Minimum readings.
- The data from any logger that records Temperature and Relative Humidity can be processed, by the Omni7 software, to add Absolute Humidity and/or Dew Point readings to the data.
- The logger can be set to log Humidity only, Temperature only or both Humidity and Temperature.
- 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 be processed, by the Omni7 software, to give daily, weekly and monthly accumulated Grow Degree Day reports for a wide range of horticultural crops.

Ordering Information. HT-HR Humidity / Temperature data logger.

DLC3USB [USB] or DLC3 [RS232] download cable (2m) to connect HT-HR with computer.

HT-HR Dimensions.



Putting into service with Omni7 Data Management software.

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 [standard size] or RS232 serial port on your computer (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'.

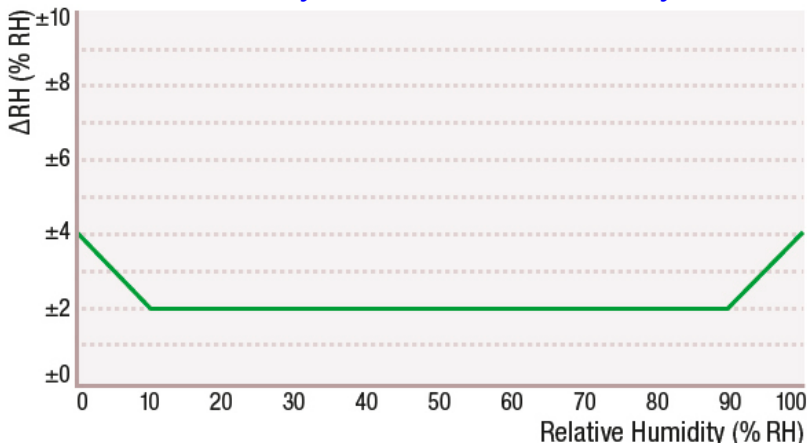
Warning: These products are not designed for use in, and should not be used for patient connected applications. In any critical installation an independent fail-safe back-up system must always be implemented.

Specifications.

Humidity:	Sensor Type	Sensirion SHT15, Digital humidity sensor	
		Long-term stability, Fully calibrated by Sensirion	
		Sensor response time is 4 seconds, Range 0%~100%	
		Actual response time of logger is slower than this because of the 60 micron Stainless Steel filter used to protect the sensor	
	Accuracy	±2.0%RH from 10% to 90%	
	Resolution	±4%RH from 0% to 10% and 90% to 100%	
	Filter	0.1%RH	
		60 micron Stainless Steel	
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 Relative Humidity only
			362 days with 1 min logging interval (Relative Humidity only)
			4.9 years with 5 min logging interval (Relative Humidity only)
			174,080 samples logging Relative Humidity Dew Point and Temperature
	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 software
		Start immediately	
		Start on date/time	
Stop modes		Start on condition (eg Humidity < 30%RH)	
		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	
<p>Warning: When using the Average, Maximum or Minimum reading(s), the logger reads the at-</p>			
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 software	
Download time		9 minutes 30 seconds for Full Logger	
Case material		304 Stainless tube	
Screw on end cap		Plated brass	
Weight		143g	
Size		20mm diameter X 170mm long	

A **DLC3USB** [USB] or **DLC3** [RS232] **download cable** (2m) is required to connect the HT-HR to a computer.

Accuracy Limits for Relative Humidity.



HT-HR Maintenance.

Maintenance needed for the HT-HR depends on the environment. Often no maintenance is necessary.

However, it is necessary to keep the filter clean. If the filter is dirty then remove it and soak it in meths, then use compressed air to ensure it is completely dry before reattaching to the logger.

Intech
Instruments

www.intech.co.nz

Christchurch Ph: +64 3 343 0646

Auckland Ph: 09 827 1930

Email: sales@intech.co.nz