HUMIDITY AND TEMPERATURE DATA LOGGERS

COMPACT, DEPENDABLE AND INEXPENSIVE.

- Measurement accuracy of ±3.0 %RH and ±0.3 °C
- Compact design with a high IP protection
- Large storage capacity: 64,000 data point memory
- Programmable start and stop time with the HW4 software
- MIN/MAX/AVG statistical function
- Includes HW4-lite programming and analysis software
- Clear LCD with visual alerts
- Appropriately long battery life (up to 3 years)
- Conforms to FDA 21 CFR Part 11 / GAMP 5 with HW4-P

TECHNICAL INFORMATION

Dimensions / Ports

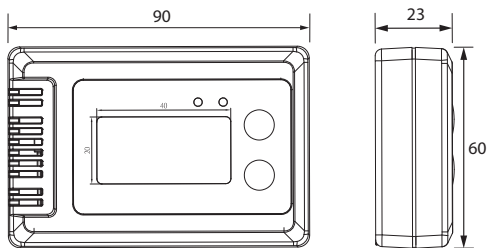**Type HL-1D**

Type TL-1D

USB-Mini port
(settings and data
download)

Battery compartment

90

23

40

60

Data Logging

The values stored in the HL-1D or the TL-1D are available for download with the HW4 software. After downloading the saved data, a graphical display of the values is possible. Via the HW4 software, the logging interval, logging mode, alarms and other such functions can be setup or enabled.

General Specifications (only for V2.0)	
Parameters	HL-1D: Humidity and temperature TL-1D: Temperature
Temperature sensor	NTC
Humidity sensor	HL-1D: ROTRONIC HYGROMER® IN-1 TL-1D: --
Accuracy at 23 °C ±5 °C	HL-1D: ±3.0 %RH / ±0.3 °C TL-1D: ±0.3 °C
Range of application	-20...70 °C / 0...100 %RH
IP rating	IP67
Weight	85 g
Dimensions	90 x 60 x 23 mm
Logging interval	30 s...24 h
Battery	1 x CR2
Battery life	3 years (at a logging interval of 1 h)
Battery charge indicator	Yes (HW4 software, display and LED indicator)
Storage capacity	HL-1D: 32,000 data point memory (RH & T) TL-1D: 64,000 data point memory (T)
Function	MIN/MAX/AVG statistical data
Display	LCD, 2 lines, 1 decimal resolution
Display refresh rate	5 sec. (Standard) (when logging same refresh rate as log interval)
LED indicator	2 LEDs Right LED flashes green during data logging Left LED flashes red when alarm limits breached or low battery
Communication	USB-Mini port
Adjustment	Humidity 1-point
FDA/GMP compatibility	Conforms to 21 CFR Part 11 and GAMP5
Software	HW4 V3.4.1 or later
Accessory	
USB-Mini cable	AC0003

Included	- CR2 Battery - Short instruction manual - Function and calibration certificate - HW4-lite software key code (software to be downloaded from www.rotronic.com)

Subject to technical change without notice. Printing and other errors reserved.

If you require any futher information about these data loggers, please don't hesitate to contact us or visit our website **www.rotronic.com**, where you can find a complete, up to date overview of our data loggers and other products.

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MEASUREMENT SOLUTIONS

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