



Cleanroom Management International
Groupe Trescal

HUMIDITY & TEMPERATURE MADE EASY



LogTag[®]

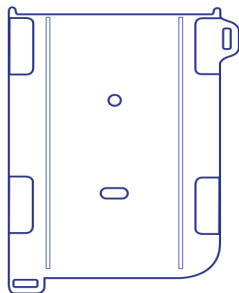
HASO-8
Single-Use Humidity &
Temperature Logger



The LogTag® HASO-8 is a single-use Humidity & Temperature Recorder that measures and stores up to 8000 sets of high resolution humidity and temperature readings.

The HASO-8 is equipped with a unique humidity & temperature sensor arrangement providing fast reaction time to humidity & temperature change and a real time clock which provides date/time stamps for each temperature reading.

Accessories



Wall Mount
Not Included



LTI HID
Not Included

Features



Ideal for single-use transportation applications



Up to 8,000 sets of recordings - enough for the longest trip.



Real time clock provides date/time stamp for every recording.



Supports fast download using the standard LogTag Interface cradle



User configuration for alert settings, logging interval, trip duration etc.



In-transit inspections can be recorded at the push of a button.



Fixed battery of 2 years storage, then followed by 6 months of operation life.



Record and display Temperature & Humidity readings simultaneously.

Applications



Pharmaceuticals



Agriculture



Warehousing



Transportation

Specifications

Product Model	HASO-8.
Sensor Measurement Range	-40°C to +85°C (-40°F to +185°F).
Operating Temperature Range	-40°C to +85°C (-40°F to +185°F).
Storage Temperature Range	+10°C to +50°C (5+0°F to +122°F).
Humidity Measurement Range	0% RH to 100% RH (non-condensing), with limitations.
Humidity Operating Range	0% RH to 100% RH (non-condensing), with limitations.
Storage Humidity Range	20% RH to 60% RH.
Rated Temperature Reading Accuracy	Better than $\pm 0.45^{\circ}\text{C}$ ($\pm 0.8^{\circ}\text{F}$) for $+0^{\circ}\text{C}$ to $+50^{\circ}\text{C}$ ($+32^{\circ}\text{F}$ to $+122^{\circ}\text{F}$), typically $\pm 0.3^{\circ}\text{C}$ (0.6°F). Better than $\pm 0.8^{\circ}\text{C}$ ($\pm 1.4^{\circ}\text{F}$) for $+50^{\circ}\text{C}$ to $+70^{\circ}\text{C}$ ($+122^{\circ}\text{F}$ to $+158^{\circ}\text{F}$), typically $\pm 0.5^{\circ}\text{C}$ (0.9°F). Better than $\pm 0.95^{\circ}\text{C}$ ($\pm 1.7^{\circ}\text{F}$) for -40°C to $+0^{\circ}\text{C}$ (-40°F to $+32^{\circ}\text{F}$), typically $\pm 0.6^{\circ}\text{C}$ (1.1°F). <i>Actual performance is typically much better than the rated values. Accuracy figures can be improved by recalibration.</i>
Rated Humidity Reading Accuracy	Better than $\pm 5\% \text{RH}$ for $10\% \text{RH}$ to $80\% \text{RH}$. Better than $\pm 6\% \text{RH}$ for $0\% \text{RH}$ to $10\% \text{RH}$. Better than $\pm 7\% \text{RH}$ for $80\% \text{RH}$ to $100\% \text{RH}$. <i>Actual performance is typically much better than the rated values. Accuracy figures can be improved by recalibration.</i>
Humidity Resolution	Better than 0.1% RH.
Temperature Resolution	Better than 0.1°C or 0.1°F
Recording Capacity	8,003 pairs of humidity and temperature readings 53 days @ 10min logging, 80 days @ 15min logging.
Sampling Interval	Configurable from 30 seconds to several hours. (Typically 5 minute logging)
Logging Start Options	Push button start or specific date & time. Optional start delay (30 seconds to 18 hours)
Recording Indication	Flashing 'OK' indicator / flashing 'ALERT' indicator.
Download Time	Typically less than 10 seconds for full memory (8,031 pairs of humidity and temperature readings), depending on computer or readout device used.
Environmental	IP61 (when hung or mounted vertically).
Power Source	3V LiMnO ₂ Battery (Fixed).
Battery Life	2 years storage, followed by 6 months of operation life.
Real Time Clock	Built-in real time clock. Rated accuracy $\pm 25 \text{ppm}$ @ 25°C (equivalent to 2.5 seconds/day). Rated temperature coefficient is $-0.034 \pm 0.006 \text{ppm}/^{\circ}\text{C}$ (i.e. typically ± 0.00294 seconds/day/ $^{\circ}\text{C}$).
Connection Interface	Interface Cradle
Software	LogTag® Analyzer
Size	86mm(H) x 54.5mm(W) x 8.6mm(T).
Weight	34g.
Case Material	Polycarbonate.



Chemical vapors or pollutants

Exposure of the internal sensor to chemical vapors or high levels of pollutants may interfere with the internal sensor and cause a shift in both offset and sensitivity, resulting in inaccurate readings to be logged. High levels of pollutants may cause permanent damage to the humidity sensor's polymer.

Re-conditioning Procedure

Exposure of the internal sensor to chemical vapors may interfere with the internal sensor and cause inaccurate readings to be logged. In a clean environment, this will slowly rectify itself. However, exposure to extreme conditions or chemical vapors will require the following reconditioning procedure to bring the internal sensor back to calibration state. 80°C (176°F) at $<5\% \text{RH}$ for 36 hours (baking) followed by $20-30^{\circ}\text{C}$ ($70-90^{\circ}\text{F}$) at $>74\% \text{RH}$ for 48 hours (re-hydration) High levels of pollutants may cause permanent damage to the internal sensor.

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