

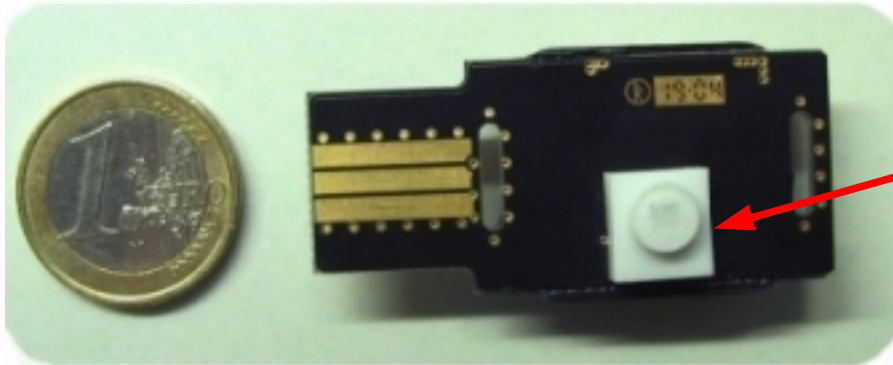


HUMISTICK



For temperature, humidity, dewpoint and heat index measurement

Humistick is a temperature and humidity data acquisition system made up of the **Humistick** data logger, a serial interface and a software program for PC. **Humistick** is available in different versions and kits.



Temperature and Humidity sensor filter

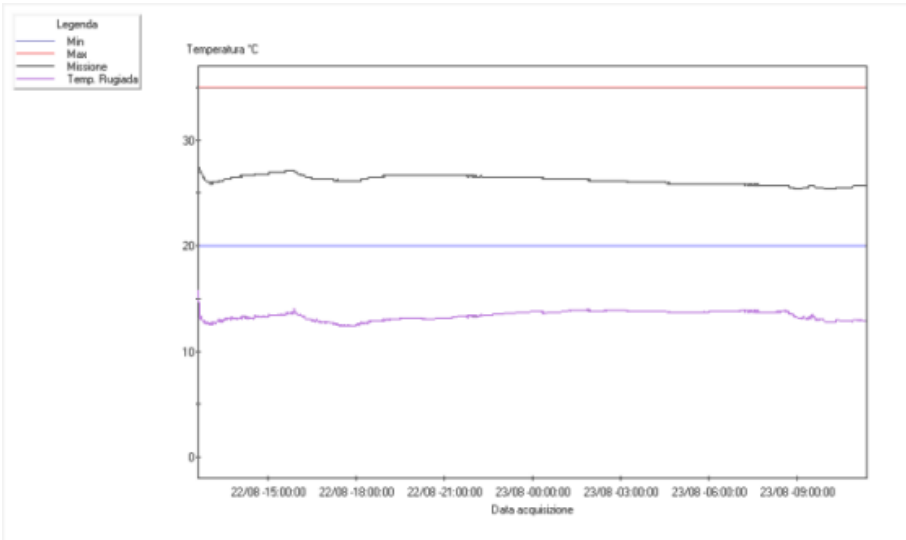
The **HumiStick** is a miniature temperature and humidity data logger, measuring just 50 X 22 mm and is 14 mm high. It has several applications, including temperature and humidity monitoring of transported and stored goods, monitoring of fridges/freezers and other sensitive environments and for monitoring environmental conditions. Its reduced size together with the fact that it does not need an external power supply makes the **HumiStick** an extremely versatile system. A special filter protects the sensor from external contaminants and guarantees correct readings.

System features:

- Windows 2000/XP compatible software (**HTM**);
- multi language (Italian, English, French, German);
- each data logger holds a unique serial number that is tamper proof and so cannot be modified;
- a number of parameters enable the missions to be suited to the particular application: acquisition start delay (from immediate start to maximum delay of 45 days, 12 hours and 15 minutes; all intermediate values can be set); acquisition interval (from 1 acquisition per minute to 1 every 4 hours and 15 minutes; all intermediate values can be set); maximum and minimum thresholds (these may be set to any value within the specified operating temperature range, with up two decimal resolution); time synchronization; fields for Sender, Receiver and Operator (for transports); fields for objects/sites monitored; mission notes;
- the device recordings may be checked/viewed without stopping the acquisition mission;
- download of mission data includes: data logger's parameters; temperature, humidity, maximum and minimum thresholds, heat index and dew point graph; the possibility to exclude one or more lines from the graph being displayed; possibility of copying the graph to the clipboard and then paste it in other documents (Word, Paint, etc.); date/time range selection to zoom in the graph; table exported in Excel format; table indicating time periods outside thresholds; data stored in the database; report printing complete with graph and table; possibility to send the acquisition immediately via email;
- missions database with several search parameters: start and finish time; serial number; sender, receiver and operator; products or sites monitored.

HumiStick High Accuracy	
RH measurement range	0% ÷ 100%
RH Accuracy	±3% from 10% to 90% RH ±4% from 0% to 100% RH
RH Resolution	0,1% RH
RH stability	<1% RH/year
Temperature measurement range	-30°C ÷ +65°C
Accuracy in temperature measurement	±0,4°C from +5°C to +40°C ±1°C from -20°C to +65°C
Resolution in temperature measurement	0,2°C
Calibration certificate if requested.	
N° of acquisitions	1365 (date, time, RH and T)
Acquisition interval	from 1 acquisition per minute to 1 every 255 minutes
Acquisition mission length	from 23 hours and 45 mins. with 1 acq. per minute till 241 days with 1 acq. every 255 mins.
Expected product life (internal battery)	10 years or 3.000.000 acquisitions
Protection degree	IP54
Response Time	30 seconds; conditions:1/e (63%) in slowing moving air (0,03 m/s)

The graph shown on the right, automatically generated by the **HTM** management software displays the plots of typical recorded acquisitions. The graph shows a plot of temperature, the maximum and minimum thresholds (programmed in advance using the software), the Dew Point and the Heat Index.



HTM Software	
Operating Systems	Windows 2000, XP
Data management	Database organized on data loggers' serial number (unique for each) and description (customizable)
Protections (HTM-fdv only)	Multi-user and multi-level software (administrator can set permissions for other users)
Data display	Graph and table (exportable into Excel) and report of all the data printing
Parameters	Temperature thresholds can be set for the alarms. It shows temperature, humidity, heat index and dew point
CFR21 Part 11 compliant	Data cannot be changed. HTM-fdv version for <u>Pharmaceutical</u> has login and password access
Languages	English, Italian, French, German



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UNI EN ISO 9001:2008 certified for Firmware and Software development