

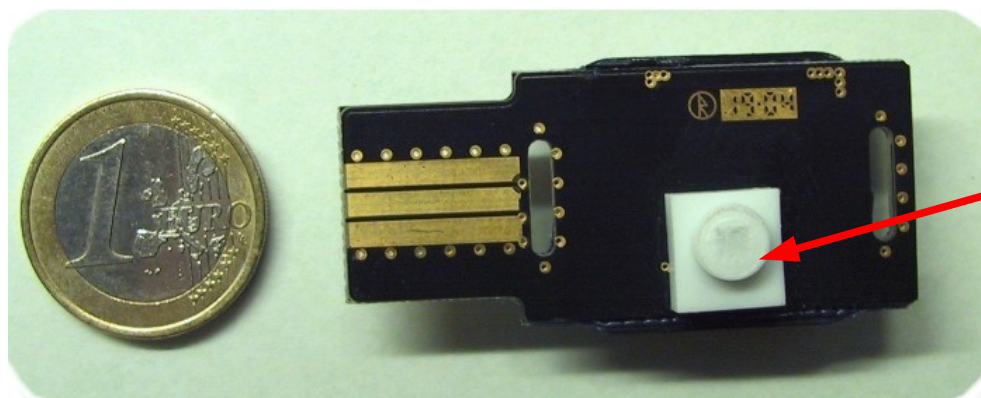


## HUMISTICK



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.



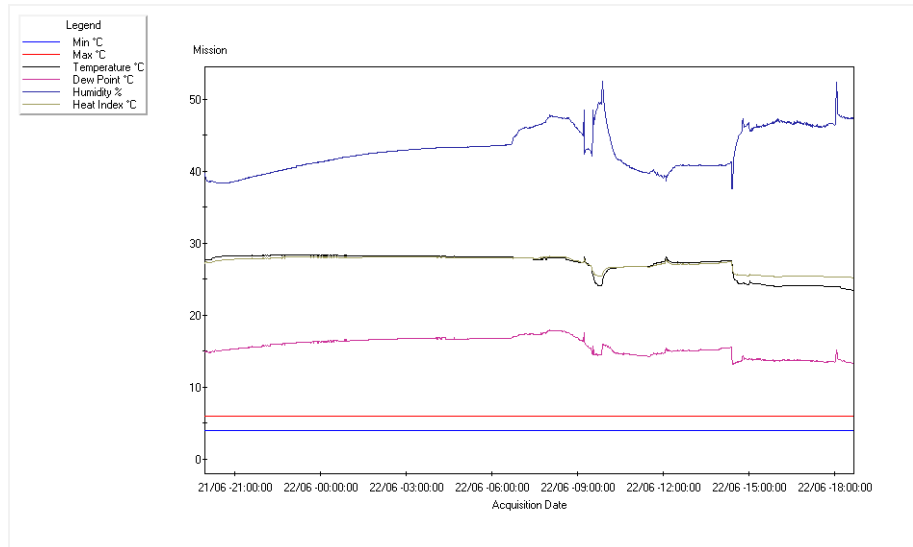
The **HumiStick** is a miniature temperature and humidity data logger, measuring just 50 X 22 mm and is 14 mm high. It has several applications, including temperature and humidity monitoring of transported and stored goods, monitoring of fridges/freezers and other sensitive environments and for monitoring 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 datalogger 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
- On-line help in English, Italian, French, German.

| HumiStick High Accuracy                  |  |
|--|--|
| RH measurement range                     | 0% ÷ 100%  |
| RH Accuracy                              | ±2% (10%-90% RH); ±4% (0%-100% RH)   |
| RH Resolution                            | 0,1 RH   |
| RH stability                             | <0,5% RH/year  |
| Temperature measurement range            | -30°C ÷ +65°C  |
| Accuracy in temperature measurement      | ±0,4°C from +5°C to +40°C<br>±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<br>with 1 acq. every 255 mins. |
| Expected product life (internal battery) | 10 years or 3.000.000 acquisitions   |
| Protection degree                        | IP67   |
| 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. <b>HTM-fdv</b> version for <u>Pharmaceutical</u> has login and password access     |
| Languages                  | English, Italian, French, German   |



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UNI EN ISO 9001:2000 certified for Firmware and Software development