Temperature data logger up to 140°C with probe of various lengths

Temperature data logger from 0°C to 140°C and the probe 0°C to 220°C (standard calibration from 25°C to 140°C, calibratable from 0°C to 220°C, only the probe can withstand above 140°C) with different lengths external probe and managed with Windows software and USB interface: DiskInterface HS Mini (For S-Micro) and DiskInterface HS and Multibay (for all models).

With every new S-Micro, a spare battery kit is included. Battery is user replaceable and the data logger is provided with an Accredia (NIST equivalent) traceable certificate on 6 points (calibration standard points: 25/50/75/100/121/140°C). It is supported by the TS Manager software for validation compatible with the FDA 21 CFR Part 11 and GAMP 5 regulations.

Note: when device is calibrated above 140°C accuracy and resolution might be less than what declared.

Main features

- Extremely reduced size: the smallest volume available for high temperature loggers
- With different lengths (*20, 50, 100, 150 mm and on demand*) rigid probe for penetration
- Completely food grade and waterproof
- All software calculates lethality value (F0, PU, A0 ecc.)
- Low battery consumption for an extended battery life
- User replaceable battery (software shows battery status)
- Very easy to deploy in any type of package
- Accredia (NIST equivalent) traceable calibration certificate included
- Available extended calibration from 0°C to 220°C
- For calibration over 140°C the minimum probe length is 140 mm
- Heat protections available for use above 140°C

Plus

- Extremely high accuracy and precision: with an accuracy of ± 0,1°C these devices can be employed in any application involving food, pharmaceuticals, validation, laboratory and medical
- Fast response time thanks to the 3 mm diameter probe
- Printed reports compliant with health regulations and ISO (data are not editable in the software)
- NO NEED TO DRILL ANY LIDS, NO NEED TO MODIFY YOUR PRODUCT PACKAGING: PROGRAM THE DATA LOGGER, PLACE IT IN YOUR PRODUCT AND START YOUR PROCESS!

The system

The system is made up by:

- S-Micro temperature data logger
- DiskInterface HS Mini or DiskInterface HS or Universal Multibay
- SPD software or TS Manager software (compatible with the FDA 21 CFR Part 11 regulation

    SPD: freely downloadable from Tecnosoft website; **TS Manager:** Validation software compatible with FDA 21 CFR Part 11 regulation, for SterilDisk, S-Micro (all versions), (USB protection key has to be purchased).
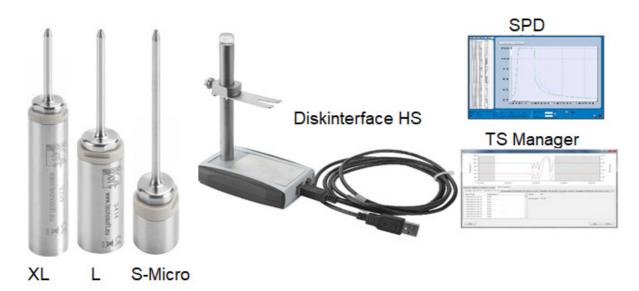
Interface

DiskInterface HS: – Interface for SterilDisk and S-Micro (all versions), supported by SPD and TS Manager software, connected to the PC via USB cable (included). With status LED.

Technical specification			
Main base dimension	S-Micro: 14 h X 17 Ø (mm)	S-Micro L: 39 h X 17 Ø (mm)	S-Micro XL: 64 h X 17 Ø (mm)
Probe base dimension	3 h X 14 Ø (mm)		
Probe dimension	Probe 20/50/100/150/on demand l (min. 12 mm / max. 175 mm) x 3 Ø (mm)		
Material	Stainless steel AISI316L, PEEK		
Temperature range	Sensor: 0°C to +220°C Base : 0°C to +140°C	Sensor-40°C to +220°C Base: -40°C to +140°C	
Temperature resolution	0.01 °C		
Temperature accuracy	± 0.1 °C (within the calibration range		
Standard calibration points	25/50/75/100/121/140°		
Extra calibration points	Up to 220°C (using the heat protections)		
Memory	Number of acquisitions: 20,224		
Acquisition step	1 second steps		
Battery type	3.0V lithium user replaceable		
Battery life (Calculated time @25°C)	560,000 acquisitions for S-Micro; 10,000,000 acquisitions for S-Micro L and 17,000,000 acquisitions for S-Micro XL at 1 second step continuously Battery life may be shorter if used in low temperatures		
Accessories	DiskInterface HS Mini, DiskInterface HS, Universal Multibay		

Software

TS Manager: The software meets all requirements of FDA 21 CFR Part 11, GAMP5, Annex 11 regulations. It is dedicated to process and instrument, particularly autoclaves, validation.

- Data in the devices not editable. Access for each user through login and password
- Client/server setup and shared database
- Multi-user access; multi-level users, with different functions for each one
- Customers and validated Instruments database for validators activity
- Logbook: recording, not editable, of all carried out operations
- Multi graph analysis
- Graph divided into Sections with analysis and statistics for each section
- Theoretical temperature calculation based on pressure in saturated steam environment
- Data and reports export in HTML and XLS (MS Excel) format

SPD: The software It allows to

start the devices setting the start delay, mission duration, notes. After download data are then displayed on graph, with zoom function, and table, exportable in Excel. A multi-graph function is also present to display many curves on a single graph. It is possible to put two vertical markers (lines) to highlight a particular area of the process, giving a name to the markers too: for example, it is possible to select the begin and the end of the process, or a particular phase of it, calculating the lethality value for that portion only. The software calculates the lethality value (F0, PU, A0 etc.) of the process to evaluate the level of sterilisation or pasteurisation. In the configuration window it is possible to set the parameters, such as Z and reference temperature, for the lethality calculation according to the process you want to monitor. It is also possible to see the battery status of the connected device.

Software	SPD	TS Manager
Operating Systems	Windows 8, 10 (32, 64 bit)	
Regulation compatibility	NA	FDA 21 CFR Part 11
Data management	Missions sorted by start date and logger serial number	Client/server database with single missions, groups, customers, instruments, devices, programming profiles
Data display	Graph (with zoom) and table (exportable into Excel) and report of all the data printing	
Customizable parameters	Acquisition step, mission duration, notes, Z and reference temperature value for lethality calculation (F0, PU, A0 etc.)	Acquisition step, mission duration, analysis type (lethality with Z and reference temperature values setting, Overkilling for validation)
Multi-graph display	Two or more missions can be displayed on a single graph for comparison	
Calculated Parameters	Lethality (F0, PU. A0 etc.)	
Accessories	DiskInterface HS Mini, DiskInterface HS, Multibay universal	
	Freely downloadable	Licensed