MicroW L Ultra Freeze



MicroW L Ultra Freeze is a data logger for ultra low temperatures from -80°C to 140°C (calibration from -40°C to 140°C) with 20, 100 mm or on demand length external probe (probes cannot be switched) on a 3 mm base (base height is not counted for probe length), managed with Windows software and USB interface (DiskInterface HS, Multibay). **Battery** is **user replaceable** and the data logger is **provided with a Reference traceable cetificate** on 6 points.
With calibration from -40°C it can be used also at -80°C with an accuracy within ± 0,5 °C within range -80 °C ÷ -40 °C. If -80°C is requested to be on the certificate, an extra calibration point for very low temperatures must be purchased. It is particularly indicated for monitoring and **validation of ultra freezers**.

Note: if used below -30°C, battery life will be highly reduced. Mission max duration at -80°C: 12 hours. Using the logger for long periods below -40°C will constantly reduce mission max duration. For longer missions purchase the -80°C special battery for S-MicroW L Ultra Freeze. With -80°C special battery mission max duration at -80°C with the special battery: 2 months. Using the logger for long periods below -40°C will constantly reduce mission max duration. Max temperature of use of the -80°C battery is 80°C: REMOVE IT AND USE STANDARD BATTERY TO USE THE LOGGER IN AUTOCLVE OR ABOVE 80°C.

Main features

- With different lengths rigid probe for penetration
- Completely food grade and waterproof
- **All software calculate 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
- Reference traceable calibration certificate included **from -40°C**
- Available **extended calibration from -80°C** (order extra calibration points; in case of wide calibration range the accuracy might be worse)

Plus

- Extremely high accuracy and precision: with an accuracy of ± 0,1°C these devices can be employed in any application involving pharmaceuticals, food&beverages, validation, laboratory and medical field
- High accuracy even outside the calibration range
- Save money on calibration costs with calibration from -40°C included
- High accuracy even from -80°C
- 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)

Applications

Validation

Sterilisation

Pharmaceutical

Healthcare

Medical

Cosmetics

Laboratories

Food & Beverages

Pasteurisation

Freeze-drying

The system

The system is made up by:
- MicroW L Ultra Freeze temperature data logger
- DiskInterface HS or Universal Multibay
- TS Manager 3 software (compatible with the FDA 21 CFR Part 11 regulation)

Accessories

- TS Manager 3
- Tecno Calib
- DiskInterface HS
- Universal multibay
- Locking bolt
- Fastening system
- MicroW L battery kit
- MicroW L Ultra Freeze -80°C battery kit

Technical specifications

Dimensions	39 h X 20 Ø (mm)
Probe dimensions	Probe base dimensions 3 h X 14 Ø (mm) - Probe 20/100/on demand l X 3 Ø (mm) (l on demand: min. 12 mm / max. 175 mm. For longer probes ask for quotation)
Weight	50 g
Materials	Stainless steel AISI316L, PEEK, FKM (o-ring)
Temperature range	-80 °C ÷ +140 °C
Standard calibration points (temperature)	-40/-20/0/25/50/75/100/121/140°C
Extra calibration points (temperature)	Within the range -80 °C ÷ +140 °C
Temperature resolution	0,01 °C
Temperature accuracy	± 0,1 °C (within the calibration range) / ± 0,5 °C (- 80 °C ÷ -40°C without -80°C point)
Memory (n. of acquisitions)	20.224
Acquisition step	From 1 every second up, with 1 second steps
Protection degree	IP68
Battery life	+10.000.000 acquisitions at 1 second step continuously (calculated time @25°C. Battery life may be shorter if used in low temperatures)
Software&Mobile App	SPD, TS Manager
Accessories	DiskInterface HS, Multibay universale

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