

# DST micro-T

## Ultra small thermo logger

### Overview

**Dimensions** (diameter x length): 8.3mm x 25.4mm

**Sensor:** Temperature

**Standard temperature range:** 0 to +45°C

**Temperature accuracy:** +/- 0.2 °C

**Memory size:** 43,000 measurements

**Battery life:** 18 months

**Housing material:** Alumina (implantable, biocompatible ceramic material)



### Description

DST micro-T is an ultra small data logger that measures and records temperature. Recorded data is stored in the logger's internal memory with a real-time clock reference for each measurement. The recorder is based on ultra small microelectronics and microprocessor.

The DST micro-T is supported by the SeaStar and Mercury software and the Communication Box which serves as an interface between the logger and a PC. Communication between the logger and the Communication Box is wireless.

In the software, the user sets the start time, start date and sampling interval before starting the recorder. A single interval can be defined, in second(s), minute(s) or hour(s). Optionally up to seven different intervals can be set for the same measurement sequence. Number of measurements is then defined for each interval. This is especially useful when more frequent measurements are needed at certain time periods.

After recovering the DST recorded data is uploaded to the software where the results are displayed both in graphic and tabular form. When recorded data has been retrieved, the DST can be re-programmed and reused as long as the battery lasts. Each DST micro-T has its serial no. marked on the housing.

A set of Communication Box and Mercury (or SeaStar) software needs to be purchased with the first order.

### Features on Request

### Applications

DST micro-T is designed as an implantable temperature logger for animals, with its biocompatible material, spherical shape and small size. The logger can also be fitted in tight spaces, small packages or vials, for heat studies. With its waterproof housing and great pressure survival, the DST micro-T can be used for collecting temperatures in waters or liquids. The housing is resistant to many different types of chemicals and liquids.

The DST micro-T temperature logger is suitable for studies within e.g.:

- Laboratory animal science
- Preclinical researches
- Quality control (e.g. packaging)
- Tagging of small fish and marine animals
- Industries where logger size and weight is critical

## Technical Specifications

<b>Sensors</b>	Temperature
<b>Size (diameter x length)</b>	8.3 mm x 25.4mm
<b>Housing material</b>	Alumina (Ceramic)
<b>Weight (in air/in water)</b>	In air: 3.3g In water: 1.9g
<b>Battery life</b>	18 months
<b>Memory type</b>	Non-volatile EEPROM
<b>Memory capacity</b>	43,000 measurements
<b>Memory capacity bytes</b>	65,214 bytes / temperature 1.5 bytes
<b>Memory management</b>	Custom programming
<b>Data resolution</b>	12 bits
<b>Temperature resolution</b>	0.032°C (0.058°F)
<b>Temperature accuracy</b>	+/- 0.2 °C (+/- 0.36°F)
<b>Temperature range</b>	-1 to +40°C (30.2°F to 104°F)
<b>Temperature response time</b>	Time constant (63%) reached in 10 sec.
<b>Data retention</b>	25 years
<b>Clock</b>	Real time clock Accuracy +/-1 min/month
<b>Sampling interval</b>	In second(s), minute(s), or hour(s)
<b>Number of different sampling intervals</b>	1 to 7
<b>Communications</b>	Communication Box, RS-232C 9 pin serial or USB
<b>Attachment hole</b>	(diameter) 0.5 mm
<b>Pressure range (user defined)</b>	Down to 100 bar (customer defined)
<b>Operation temperature</b>	-23° to + 85°C

\* For sampling interval of 10 min. \*\* Outside ranges available upon request. Specifications may change without notice.