

DST milli - T

Data Storage Tag milli Temperature

Overview

Dimensions (diameter x length): 12.5mm x 38.4mm

Sensor: Temperature

Standard temperature range: -1°C to +40°C

Temperature accuracy: +/-0.1°C

Memory size: 43,000 measurements

Battery life: 5 years

Housing material: Alumina (implantable, biocompatible ceramic material)



Description

The DST milli-T is a miniature submersible data logger that measures and records temperature. Recorded data is stored in the logger's internal memory with a real time reference for each measurement.

The DST milli-T is supported by the SeaStar and Mercury softwares 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. Up to seven different intervals can be set for the same measurement sequence. This is especially useful when more frequent measurements are needed at a certain time period.

After recovering the DST recorded data is uploaded in the supporting software where results are displayed both in graphic and tabular form. After retrieving the data, the DST can be re-programmed and reused as long as the battery lasts.

A set of Communication Box and SeaStar or Mercury software needs to be purchased with the first order. Star-Oddi also offers a protective housing for the DST which protects the logger when used in harsh environments and gives more attachment points.

Features on Request

Memory extension

DST milli-T, DST milli-TD and DST milli-L are available with an extended memory capacity that can store up to 682,000 measurements in total (DST milli-F).

Temperature calibration outside standard range

Temperature calibration outside of standard ranges is available for all products on request.

Examples of Application

DST milli-T is ideal for implanting in animals (land or aquatic) for monitoring temperature fluctuations. The tag can also be attached externally in aquatic animals, providing information on preferred environmental temperatures. The DST milli-T can be used as a stand-alone logger for temperature measurements underwater, soil or air. The temperature loggers can for example be attached to moorings, deployment lines or strings to form a thermistor chain underwater.

The DST milli-T is suitable for studies in e.g.:

- (Marine) animal tagging
- Oceanography
- Limnology
- Hydrology
- Ecosystems research
- Temperature measurements in liquids, vials etc.
- Pharmaceutical research studies
- Packaging industry
- Transportation, tracing temperature conditions of shipments
- Temperature measurements in air or soil

Technical Specifications

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|---|--|
| Sensors | Temperature |
| Size (diameter x length) | 12.5 mm x 38.4 mm |
| Housing material | Alumina (Ceramic) |
| Weight (in air/in water) | in air: 9.2g in water: 5g |
| Battery life | 5 years |
| Memory type | Non-volatile EEPROM |
| Memory capacity bytes | 65,375 bytes / temperature 1.5 bytes |
| Memory extension option | 1,048,064 bytes (FLASH memory) |
| Memory management | Custom programming |
| Data resolution | 12 bits |
| Temperature resolution | 0.032°C (0.058°F) |
| Temperature accuracy | +/-0.1°C (0.18°F) |
| Temperature range | -1°C to +40°C (30°F to 104°F) |
| Temperature response time | Time constant (63%) reached in 12 sec. |
| Pressure tolerance | Up to 900 m (customer defined) |
| Data retention | 25 years |
| Clock | Real time clock Accuracy +/-1 min/month |
| Sampling interval | In second(s), minute(s), or hour(s) |
| Number of different sampling intervals | 1 to 7 |
| Communications | Communication box, RS-232C 9 pin serial or USB |
| Attachment hole | 0.9 mm (in diameter) |
| Corrosive resistance | Oil, water, salt, antifreeze, brake fluid, diesel and gasoline |

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