

DST centi - TD

Data Storage Tag centi - Temperature and Depth

Overview

- Dimensions** (diameter x length): 15mm x 46mm
- Sensors:** Temperature and pressure (depth)
- Standard temperature range:** -1°C to +40°C
- Temperature accuracy:** +/-0.1°C
- Depth ranges:** 30m, 50m, 270m, 800m, 1500 m, 3000 m
- Depth accuracy:** +/- 0.4% of selected range
- Memory size:** 174,000 measurements
- Battery life:** 7 years
- Housing material:** Alumina (implantable, biocompatible ceramic material)

Description

The DST centi-TD is a miniature underwater data logger with temperature and pressure (depth) sensors. Recorded data is stored in the logger's internal memory with a real-time clock reference for each measurement.

The DST centi-TD is supported by the SeaStar 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 SeaStar, 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.

With default programming temperature and depth are recorded as pairs. Optionally, the two parameters can be set separately as primary and secondary parameters with different sampling frequency. That way memory partitioning can be customized according to individual preferences.

After recovering the DST recorded data is uploaded to SeaStar 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 software needs to be purchased with the first order.

Star-Oddi also offers protective logger housings for use at fixed locations or in harsh environments.

Features on Request

Extended memory

DST centi-TD and DST centi-T can be delivered with an extended memory capacity of 523,800 measurements in total (DST centi-ex).

Logic feature

The Logic feature allows users to choose a depth limit where the logger starts and stops recording. The logger is in sleep mode while above the predetermined depth, saving memory and battery life. If the Logic feature is used in a logger all parameter measurements are taken at the same time – primary and secondary parameter settings are not possible. The logic feature can be applied on DST centi with extended memory (DST centi-ex), DST CTD and DST pitch & roll.

Temperature calibration outside standard range

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

Examples of Application

DST centi-TD can be used as a stand-alone logger for recording depth and temperature in ocean and freshwater environments. The DST can be fastened to fishing gear, deployment lines, cables, moorings or other underwater equipment, collecting valuable data. The DST - TD is ideal for tagging fish and marine animals, externally or internally with implantation providing information on e.g. fish behavior and migration.

The DST centi is suitable for studies in e.g.:

- Marine Animal tagging
- Fisheries research
- Oceanography
- Marine biology
- Ichthyology
- Hydrology
- Ecosystems research

Technical Specifications

Sensors	Temperature and pressure (depth)
Size (diameter x length)	15mm x 46mm
Housing material	Alumina (Ceramic)
Weight (in air/in water)	in air: 19g in water: 12g
Battery life	7 years
Memory type	Non-volatile EEPROM
Memory capacity	174,000 measurements
Memory capacity bytes	261,819 bytes / temperature 1.5 bytes, pressure 1.5 bytes
Memory extension option	786,099 bytes (EEPROM memory)
Memory management	- Custom programming - Primary and secondary parameter
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 20 sec.
Standard depth ranges	30 m, 50 m, 100 m, 270 m, 800 m, 3000 m
Depth resolution	0.03% of selected range
Depth accuracy	+/-0.4% of selected range
Depth response time	Immediate
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 and 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; temperature and pressure recorded simultaneously.  
\*\* Total memory is divided between the two sensors. \*\*\* Outside ranges available upon request. Specifications may change without notice.



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