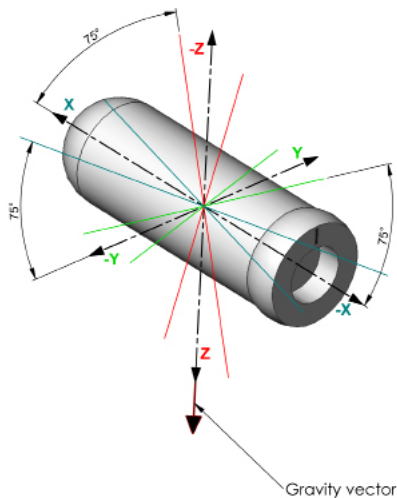


DST tilt

Three direction (3-D) tilt logger with sensors for tilt, temperature and depth



OVERVIEW

Sensors: Tilt (in 3-D), temperature and depth
Memory size: 29,000 measurements per parameter
Battery life: 2 years
Dimensions: 15 mm x 46 mm
Depth: Down to 3000m
Tilt measuring range: 360°
Tilt accuracy: +/-2°

EXAMPLES OF APPLICATION

- Orientation studies of trawl doors and fishing gear
- Fishing gear behavior at different depths and bottom contact verification
- Analyzing tilt angle of ROVs, AUVs and other underwater gear
- Analyzing fish movements/direction over longer periods

DESCRIPTION

DST tilt is a temperature, pressure (depth) and tilt logger with a 360° tilt range measured in three directions with reference to the Earth's gravity. The housing is centi size (15mm x 46mm).

DST tilt can be used as a stand-alone logger for analyzing orientation of fishing equipment and underwater gear. A special protective housing is available for that purpose.

The logger is also suitable for analyzing fish movements and patterns over a long period of time as well as for studying marine mammals with a high range of vertical, horizontal and rotating movements. It can be attached externally or implanted.

Up to 29,000 measurements per parameter can be recorded by the DST tilt. With default programming depth, temperature and tilt are recorded at the same time. Optionally temperature-depth and tilt can be recorded with different sampling intervals. That way memory partitioning can be customized according to individual preferences.

The pressure sensors are available for various depth ranges, up to 3000m (300bar).

EASY TO USE

DST tilt 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 within a measurement sequence. 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.



PRODUCT FAMILY

The DST product family features three different sizes: centi, milli and micro. The DST loggers vary in size, memory size, battery life and sensors.

TECHNICAL SPECIFICATIONS

Sensors	Tilt in 3-D, temperature and pressure (depth)*
Size (Diameter x Length)	15 mm x 46 mm
Volume	8.1 cm ³
Housing material	Alumina (Ceramic)
Weight (in air/in water)	19g / 12g
Battery life	2 years**
Memory type	Non-volatile EEPROM
Memory capacity	87,000 measurements in total***
Memory management	-Custom programming -Primary and secondary parameter (uncoupling tilt and temp-depth)
Data resolution	15 bits
Tilt resolution	0.2°
Tilt accuracy	+/-2°
Temperature range	-1°C to +40°C (30°F to 104°F)****
Temperature resolution	0.032°C (0.058°F)
Temperature accuracy	+/-0.1°C (0.18°F)
Response time temperature	Time constant (63%) reached in 20 sec.
Standard depth ranges (user defined)	30m, 50m, 100m, 270m, 800m, 1500m, 2000m, 3000m
Depth resolution	0.03% of full scale (FS)
Depth accuracy	+/-0.4% of selected range
Depth response time	Immediate response
Data retention	25 years
Clock	Real time clock. Accuracy +/-1 min/month
Sampling interval (user defined)	In second(s), minute(s) or hour(s)
Number of different sampling Intervals	1 to 7
Communication	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

* Temperature and pressure sensor optional.

** For sampling interval of 10 minutes; tilt, temperature and pressure recorded simultaneously.

*** Divided between the three parameters, temperature and depth measurements can be skipped, increasing the memory size to 43,000 tilt measurements.

**** Outside ranges available upon request.

Specifications may change without notice.

ACCESSORIES

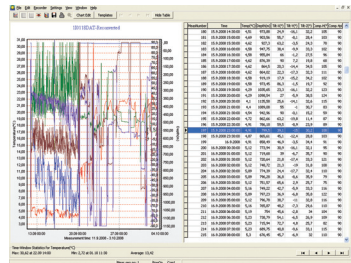
Communication Box

For communicating with the DST Series, a special Communication Box from Star-Oddi is required. Communication between the recorder and the box is wireless (RF). The Communication Box is connected to a computer using either the supplied 9 pin serial cable or the USB cable.



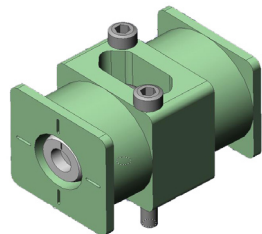
SeaStar

SeaStar is the supporting software for DST tilt loggers. It allows the user to program the recorder according to individual needs. SeaStar offers options such as start date/time of recordings, sampling intervals and more. After retrieving the data through the Communication Box, recorded measurements can be viewed in graphic and tabular form. Data can be easily exported into other programs such as Microsoft Excel.



Plastic protective housing

Star-Oddi offers a protective housing especially designed for the DST tilt to immobilize and fasten the recorder to trawl doors, cables and other gear.



STAR : ODDI

Vatnagardar 14 104 Reykjavik Iceland
Tel: +354 533 6060 Fax: +354 533 6069
star-oddi@star-oddi.com
www.star-oddi.com