

Starmon-Mini

High accuracy temperature recorder



Starmon mini is a underwater temperature recorder designed for use in oceans, rivers, and lakes. Starmon mini records the temperature at preset intervals and stores the data into solid state memory under the control of a microprocessor. The recorder is operated with Windows software via a PC communication cable. When Starmon mini is connected to a PC, the software can be used to set up the sampling interval and start time of the recordings. After the recorder has been recovered from the deployment site, the data can be retrieved by connecting the Starmon mini to a PC computer and use the software to upload data from the recorder. The data can be processed and presented in graphs and in tabular form. All measurements are time related. Data can be exported into other data processing software packages. Starmon mini has an all plastic housing that is robust and does not corrode in the sea. For more extreme pressure the Starmon mini is available in non-corrosive titanium housing.

Features

- Starmon mini is an accurate, stable, durable, reliable, robust and easy-to-use temperature data logger with large memory capacity and long battery life
- Designed for use in oceans, rivers and lakes
- Accuracy better than $\pm 0.05^{\circ}\text{C}$
- -2 to $+40^{\circ}\text{C}$ measuring range (Starmon mini can also be calibrated for temperatures outside this range)
- Can store 350,000 measurements
- Non-corrosive and strong housing (plastic 400m and titanium 11,000m depth)
- 7 years battery life (battery can be replaced)

Simple to use

Simply unscrew the end cap and connect the communication cable between the recorder and a PC computer. The cable has a 9 pin RS232C serial connector, but an optional USB serial converter is available. SeaStar software for Windows is used for communicating with the recorder.

The Starmon mini is a low power consumption recorder. It is powered by a single lithium battery (1/2 AA size) that lasts for 7 years or more, depending on sampling interval and usage. Should the battery fail, data are always kept in the non-volatile EEPROM memory. Battery can be replaced using a soldering iron.

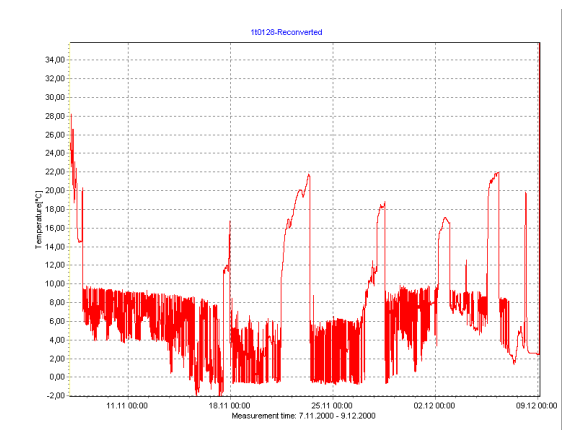
The data can be processed and presented in graphs and in tabular form. All measurements are time stamped. Data can be exported into other data processing software packages.

Specifications

Size	25mm diameter x 130mm length
Pressure tolerance	Plastic version: 40 bar (400 m) Titanium version: 1100 bar (11000 m)
Weight (in air)	Plastic version: 80 g. Titanium version: 170 g.
Memory capacity	350,000 measurements
Memory increase (optional)	525,000 or 699,000 measurements
Memory	350K
Memory type	Non-volatile EEPROM
Data retention	25 years
Temperature range	-2°C to +40°C (28°F to 104°F) Other ranges available upon request
Average resolution	0.013°C (0.023°F)
Measuring accuracy	+/-0.05°C (0.09°F)
Response time	Plastic: Time constant (63%) is 18 sec. and final value reached in 3 min.* Titanium: Time constant (63%) is 6 sec. and final value reached in 1 min.*
Clock Real time clock.	Accuracy +/-1 min/month
Sampling interval time	From 1 second and up to 90 hours First recording At once or at any future time
Computer interface	RS-232C standard serial interface
Battery life	7 years ** (battery can be replaced)

* For a 40°C (104°F) temperature step response in stirred liquid.

** For a sampling interval of 5 minutes or greater.



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