

# *Temperature & Depth Recorders*

## *models*

### *TD301 – TD302 – TD303*

*Accuracy: Depth 0.01% - Temperature 0.01 deg. C*



*TD301/3*

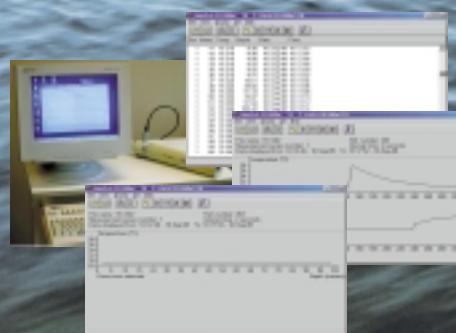
#### ***Applications:***

- Bathymetry
- Temp & depth profiles
- Autonomous recording
- R.O.V.
- Towed systems

#### ***Features:***

- Compact & robust design
- Long term stability sensors
- High memory capacity
- Year-long battery capacity
- Windows based software
- Output in physical units
- On-line plotting

*web: [www.saivas.no](http://www.saivas.no)*



#### ***Extended version TD302:***

- 
- Temperature
  - Depth/Pressure
  - Turbidity
  - Flourescence
  - Oxygen

*Extended memory capacity*

***SAIV A/S***   *Environmental Sensors & Systems*   *Post Office Box 3513*  
*5845 Bergen, Norway*

Tel.: +47 55 22 03 88, Fax: +47 55 22 03 89, e-mail: [saivas@rocketmail.com](mailto:saivas@rocketmail.com)  
Street address: Stamsneset 100, 5251 Søreidgrend

# Temperature & Depth Recorders

The TD301/TD302/TD303 are precision instruments measuring temperature and depth (pressure) in the sea, lakes, water reservoirs, groundwater, rivers and on R.O.V. etc. The sensors are Plug- and -Play compatible with PC's. All settings like measuring interval, real time clock etc, are accessed via menu. All the programmed settings and calibration coefficients are maintained in non volatile eeprom, and will not be changed/lost if power is disconnected. Up to three optional sensors can be added on the TD302: dissolved oxygen, fluorescence and turbidity. The models TD301/TD302 have a built-in replaceable battery for self-contained recording applications. On/Off- switching is by a magnetic key or from key-board. The model TD303 is for on-line applications with external power supply. Robustness and complete protection from leakage has been obtained by vacuum molding the electronic and all other components in solid polyurethane. All units have a built-in data memory. The models TD301 and TD303 have a "ring memory" where the oldest data will be overwritten when memory is full. The TD302, which has a much larger memory, will seize recording when memory is full, but continue measurements when on-line cable is connected. Data are recorded in physical units and simultaneously transmitted via an RS-232 I/O water tight connector for on-line use. A comprehensive PC-program is supplied with the units for easy communication, programming and presentation/processing of data.



TD302 in it's case

## Specifications:

### Pressure:

Ranges: (absolute) 20,50,100,200,500 - 6000 m\*  
 Resolution: 0.001 dbar (m)  
 Accuracy: +/- 0.01% FS  
 Response time: 0.1 sec

\* Specify desired depth range with order

### Temperature:

Range: -2 to +40°C  
 Resolution: 0.001°C  
 Accuracy: +/- 0.01°C  
 Response time: < 0.5 sec

### Dissolved oxygen:

(optional) TD302 only  
 Sensor type: SAIV205  
 Range: 0 to 20 mg/l  
 Resolution: 0.01 mg/l  
 Accuracy: +/- 0.2 mg/l

### Fluorescence:

(optional) TD302 only  
 Sensor type: Seapoint (Chlorophyll/Rhodamine/CDOM)  
 Ranges: 2.5, 7.5, 25, 75 µg/l  
 Resolution: 0.03 µg/l

### Turbidity:

(optional) TD302 only  
 Sensor type: Seapoint  
 Ranges: 12.5, 62.5, 250, 750 FTU  
 Linearity: < 2%

### Memory:

CMOS SRAM  
 Capacity:  
 TD302 77000 data sets of TD  
 TD301/303 22000 data sets of TD  
 (ring memory)

### Data output:

CMOS SRAM

RS232 ASCII code.  
 1200-9600 baud, 1 start,  
 7 data, 1 stop, even parity  
 (real time & recorded)

### Interval:

Programmable: 1 sec to 180 min

### Real time clock:

+/- 2 sec/day

**Material:** Vacuum molded polyurethane and  
Stainless steel (316)

### Power:

TD302: 2 ea 3.6V lithium C-cells.  
 Recommended type: SAFT LS26500/  
 Electrochem BCX72C  
 (Sufficient for 1.500.000 data sets)  
 TD301: 2 ea 3.6V lithium AA-cells.

Recommended type:  
 SAFT LSH 14500  
 (Sufficient for 1.000.000 data sets)  
 TD303: External power supply 7 - 16 VDC

### Current consumption:

Active: < 10 mA  
 Quiescent: < 60 µA

### Dimensions:

TD302: Length 400 mm. Diameter 60 mm  
 TD301/303: Length 170 mm. Diameter 45 mm

### Weight:

TD302: In air: 2.5 kg. In water: 1.3 kg.  
 TD301/303: In air: 0.5 kg. In water: 0.3 kg.

### Accessories:

Common: MiniSoft SD200W program diskette  
 Operating Manual  
 On/Off magnetic key,  
 PC communication cable (3m)  
 TD301/302: Connector and 1.5m pigtail

### TD303:

Connector and 1.5m pigtail

**Warranty:** Two years against faulty materials  
and workmanship.

**SAIV A/S Environmental Sensors & Systems, Post Office Box 3513 5845 Bergen, Norway**  
 Tel: +47 55 22 03 88, Fax: +47 55 22 03 89 e-mail: [saivas@rocketmail.com](mailto:saivas@rocketmail.com) web: [www.saivas.no](http://www.saivas.no)