

# SEATURTLE V5T/V5TP

## ADD-ON UNIT FOR WATER SAMPLING BOTTLES. SAMPLES TEMPERATURE & DEPTH

OCEAN ORIGO's SeaTurtle is an accurate, mercury-free electronic thermometer. It is cost-efficient, battery powered, microprocessor-controlled and designed for operation down to 500 m depth. Instrument fits on virtually all types of water sampling bottles, detects when the bottle releases and samples water temperature and optionally also water pressure/depth at release depth. Data is presented on a back-light display. SeaTurtle may be set to operate in two sampling modes:

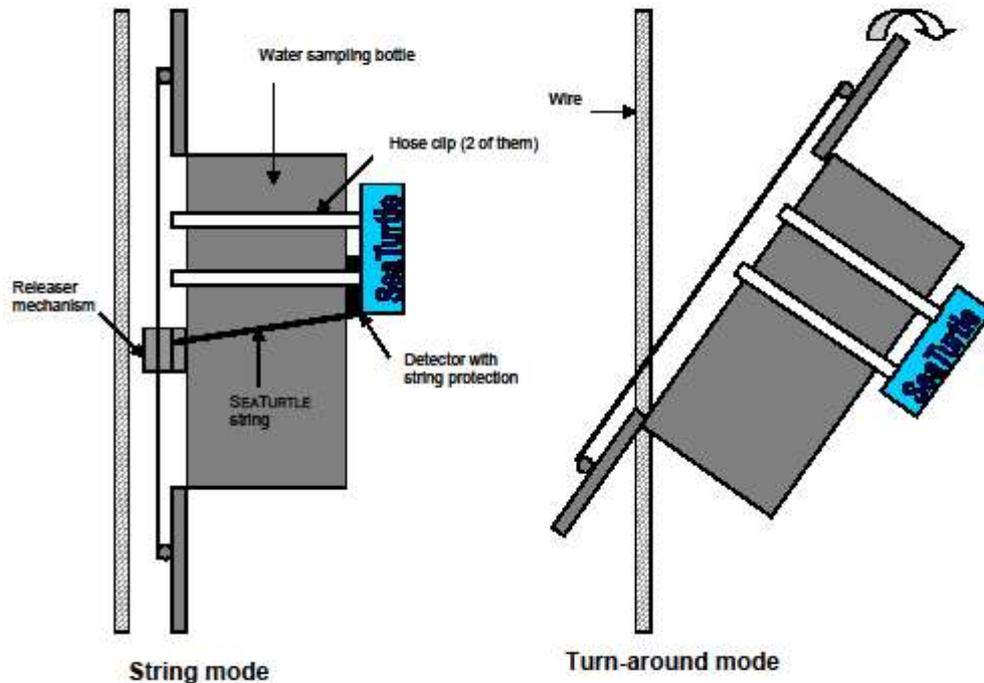
- Turn-around      SeaTurtle detects when bottle turns around.
- String             SeaTurtle detects when bottle releases.



The operator controls SeaTurtle using a small handheld permanent magnet. The instrument can be programmed to enter turn-around mode, string mode, sleep mode, continuously update current temperature/pressure value on the display, show last temperature/pressure registration, etc. SeaTurtle runs on a single ordinary 9 V alkaline or lithium battery cell, easily replaceable by the operator.



- *Replaces existing mercury thermometers.*
  - *Fits on almost all types of water sampling bottles.*
  - *Upgrades new or old water sampling bottles.*
  - *Sharp back-light display. Easy to read in light and dark conditions.*
  - *Long battery operation time, 9 V standard battery.*
  - *Great for "Close-to-bottom" sampling.*
  - *Operation down to 500 m depth.*
  - *Strong and durable plastic transport case included.*
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- *Easy to use. A single "click" with the handheld magnet starts SeaTurtle and reads out the value.*
  - *Reliable, accurate temperature registration, optionally also depth registration.*
  - *No-drift technology and platinum resistance thermometer for excellent long term stability.*



#### SPECIFICATION SEATURTLE V5T / V5TP

<b>Max. operation depth</b>	500 m.
<b>Dimensions (excluding holds)</b>	Diameter = 40 mm. Length = 280 mm. Weight 300 g
<b>Material</b>	Acryl, acetal plastic and stainless steel (A4)
<b>Storage temperature</b>	-20 to +40 ° C
<b>Range sensors</b>	Temp: -3 to + 35 ° C. Pressure: 0-650 dBar. Optionally 350 dBar.
<b>Resolution</b>	Temp: 0.01/0.001° C. Pressure: 0.1 dBar. User settable.
<b>Repeatability (ex. resolution)</b>	Temp: +/- 0.005 ° C. Pressure : +/- 0.03 % FSR max, +/- 0.01 % FSR typ
<b>Accuracy (ex. resolution)</b>	Temp: +/- 0.02 ° C. Pressure (typ): Non-linearity +/- 0.1% FSR . Temp effect +/- 0.5% FSR over 82°C.
<b>Measurement method</b>	Stainless steel encapsulated platinum resistor thermometer. 4-thread interface, no-drift technology. Piezoresistive semiconductor pressure sensor chip in isolated oil housing. Stainless steel membrane. EEPROM calibration coefficients.
<b>Wait time (time between release and sampling)</b>	String mode: 10 s Turn-around mode: 4 s. Note: Must wait min. 10 s on position before releasing.
<b>Mounting on bottle</b>	Stainless steel hose clip (included). Temperature sensor position "Up" or "Down".
<b>Power supply</b>	Ordinary 9 V battery (alkaline, lithium or rechargeable).
<b>Current consumption (typical)</b>	Sleep mode: 10 uA,
<b>Battery lifetime</b>	Depends on operation. Alkaline: Approx. 5 years in sleep mode or 45 h in continuous update mode. Approx. 2500 deployments down to 100 m. Lithium: 2-2.5 times better
<b>Modes (user programmable)</b>	<ul style="list-style-type: none"> <li>• String</li> <li>• Sleep</li> <li>• Show battery voltage</li> <li>• Set display backlight mode</li> <li>• Update/show temperature and pressure value continuously</li> <li>• Turn around</li> <li>• Show last registration</li> <li>• Set temperature resolution</li> <li>• Set/show calibration constant</li> </ul>
<b>Trigging</b>	String mode: Magnet motion detection. Turn-around mode: Turn more than 75 deg. Shock and vibration insensitive.
<b>Display</b>	2x8 characters alphanumeric. Back light programmable.
<b>Scope of delivery</b>	Transport case with SeaTurtle electronic unit incl. battery, hold, 2 x hose clips, ferrule press fit, manual, protocol and handheld permanent magnet.
<b>Options</b>	<ul style="list-style-type: none"> <li>• Fast response temperature sensor (PT100)</li> </ul>

Ocean Origo for oceanographic instrumentation and consulting