

Highest standards for calibration with Sea & Sun Technology (SST)

After production every probe is calibrated as a whole system. SST carries lifetime files since the beginning for every produced probe. The contents of these files is shared with the clients on demand, so that SST clients are able to proof the quality of their measurements.

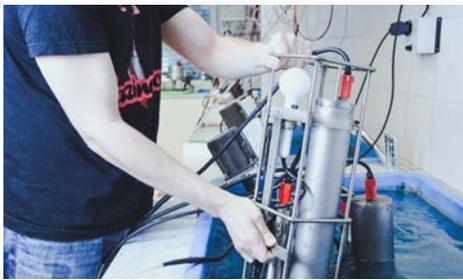
If clients require a recalibration of their probes, they send back their probes to our headquarters and there we will recalibrate the probes.

Every recalibration we will finish within two weeks and then send back the probes to the client. In urgent cases recalibrations are available within 3 days (50% express surcharge).

Also if available we are able to provide our clients temporarily with a replacement probe (chargeable).

For a long lifetime of SST probes, we recommend the probes to be recalibrated and serviced once a year in our factory.





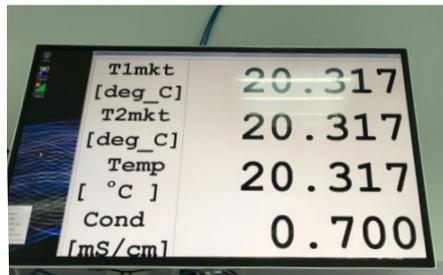
Sensor calibration:

Temperature

In temperature calibration we use four different reference standards from different manufacturers. We calibrate against milli-kelvin thermometers.

We can offer two temperature calibration ranges:

-2 °C – + 36 °C
-2 °C – + 60 °C



PT-100 24 Bit Temperature sensor

Conductivity

The water in the SST calibration basins for conductivity is totally free from airbubbles and micro airbubbles.

The reference electrodes are permanently monitored against standard seawater by help of two Guidline salinometers and a density meter.

For the regression analysis we measure 13 to 21 points in the conductivity range from

0 to 75 mS/cm
0 to 300 mS/cm



Salinometer: Guidline Portasal



Conductivity sensor

Depth / Pressure

For the calibration of the pressure sensor SST is using high precision pressure gauges with several ranges up to 10.000 dbar. In the whole pressure range SST is measuring 11 points.

Every pressure sensor is calibrated with the complete electronics compensate disturbing effects. This method results in the unique precision of SST products.



Pressure gauge 0 -10.000 dbar



Pressure sensor



pH (standard or pH resistant)

The pH sensors are calibrated against the highest calibration standards with help of precision buffer solutions.

pH Ranges:
 4 – 10 pH
 0 – 14 pH

Redox (standard or pH resistant)

The Redox sensors are calibrated against the highest calibration standards with help of precision buffer solutions.



Buffer Solution for pH / Redox



pH sensor

O₂ / Oxygen

The oxygen calibration is carried out against „WINKLER titration“ (iodometric titration) as reference. SST has developed an own precision calibration method, which corresponds to the winkler titration but is more precise.



Winkler Titration



Optical Oxygensensor

Chlorophyll / Chlorophyll-A

SST has at their disposal an own laboratory, to breed algae-derived for specific Chlorophyll calibrations. This enables SST to win algae-derived for the calibration of diverse fluorescence sensors. The calibration is done depending on the wavelength with which the algae are illuminated.

SST sensors are calibrated on the demand of clients on specific algae. Further adaptations to additional algal species are possible at any time. Examples for available specific calibrations of fluorescence sensors:

- blue algae (Cyanobacteria);
- Chlorophyll A;
- CDOM;
- CDOM (Organicmatter);
- Fluorescein Dye; Rhodamin Dye;
- Phycocyanine; Phycoerythrine;
- Tryptophane; PTSA Dye





Sea & Sun
Technology



Sea & Sun Technology GmbH

As a system supplier we are specialized in the development, production and sales of high-tech underwater metrology. The Sea & Sun Technology has become an important partner when it comes to innovative underwater measurement technology for complex tasks. Our worldwide distribution network ensures the international availability of products and services.



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