



Conductivity is a key parameter for in-situ determination of several fundamental physical properties of seawater.

For seawater, the ability to conduct electrical current is mostly dependent on temperature and the amount of inorganic dissolved solids. This means that, together with temperature and depth information, a good estimate of the salinity may be determined.

Salinity is defined as the concentration of dissolved solids. Other important properties of seawater are again dependent on the salinity. Among these are the density and the speed of sound.

The Conductivity Sensor 5860 is based on an inductive principle. This provides for stable measurement without electrodes that

## Conductivity Sensor 5860

is a compact fully integrated sensor for measuring the electrical conductivity of seawater. 5860 is designed to be used as stand-alone sensor using RS-232. For other applications with 10-pin lemo insert and either AiCaP, RS-232 or RS-422 please refer to Conductivity sensor 4319/4419.

### Advantages:

- Direct readout of engineering data
- Internal pressure never exceeds 1 bar therefore electronics and sensors are unaffected by sea depth
- Rugged and robust with low maintenance needs
- Output format: RS-232
- 3 depth ranges available max. 6000 meters

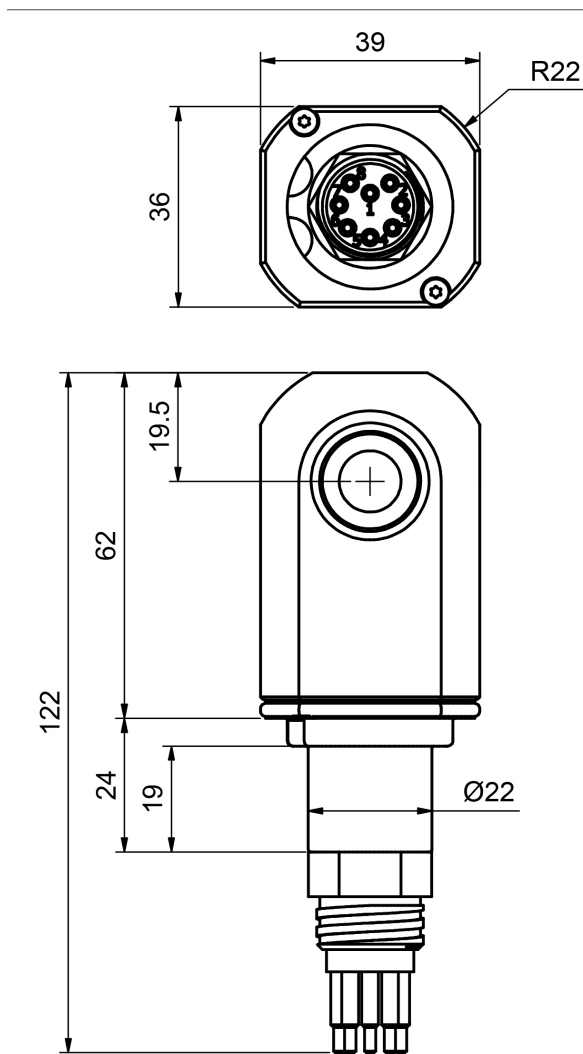
are easily fouled and may wear out in the field.

Utilization of miniature components have made it possible to integrate all the required electronics.

The output format for 5860 are RS-232.

Output parameters are conductivity, temperature, salinity, density and sound speed. Data can be presented in engineering units or raw data.

Aanderaa offer a easy to use configuration software; AADI Real-Time Collector, both for configuration but also logging of data. As alternative to this software you may also use a terminal software like Terra Term or Hyper Terminal.



**Conductivity:**  
 Range: 0-7.5S/m (0-75mS/cm)  
 Resolution: 0.0002S/m (0.002mS/cm)  
 Accuracy: 5860A ±0.005S/m (±0.05mS/cm)  
 5860B ±0.0018S/m (±0.018mS/cm)  
 Response Time (90%): <3s<sup>1)</sup>

**Temperature:**  
 Range: -5-40°C (23-104°F)<sup>2)</sup>  
 Resolution: 0.01°C (0.018°F)  
 Accuracy: ±0.05°C (0.09°F)/  
 (±0.1°C (0.18°F) for interval <30s.)  
 Response Time (63%): <10 seconds

**Output format:** RS-232  
**Output Parameter:** Conductivity, temperature, salinity, density and sound of speed

**Sampling interval:** 2 sec - 255 min

**Supply voltage:** 5 to 14VDC  
**Current drain:**  
 Average: 0.16 +48mA/S where S is sampling interval in seconds  
 Maximum: 100mA  
 Quiescent: 1.5mA

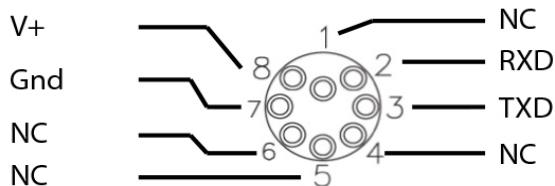
**Operating depth:**  
 Shallow Water (SW): 0-300m (0-984.3ft)  
 Intermediate Water (IW): 0-3000m (0-9843ft)  
 Deep Water (DW): 0-6000m (0-19690ft)

**Electrical connection:** 8-pin Subconn MCBH8M  
**Dimension (WxDxH):** 36 x 39 x 122mm (1.4"x1.5"x4.8")

**Weight:** 280g (8.466oz)  
**Materials:** Epoxy coated titanium

**Accessories, not included:** Resistor Set 3719 for functional test  
 Sensor Cable 5335

**PIN CONFIGURATION SUBCONN MCBH8**



Male Face View  
 NC=Not Connected

<sup>(1)</sup> Dependant on flow through cell bore  
<sup>(2)</sup> Calibrated range is 0 to 36°C (32-96.8 °F)

*The above specifications are for the stand-alone sensor only, not the installation it is utilized with.*

Specifications subject to change without prior notice.



Visit our Web site for the latest version of this document and more information [www.aanderaa.com](http://www.aanderaa.com)

Aanderaa Data Instruments AS  
 Sanddalsringen 5b, P.O. Box 103 Midtun,  
 5843 Bergen, Norway  
 Tel +47 55 60 48 00  
 Fax +47 55 60 48 01