

Conductivity Sensor 5990



Conductivity Sensor 5990 is a compact fully integrated sensor for measuring the electrical conductivity of seawater. Designed to be used as stand-alone sensor using RS-232.

Advantages:

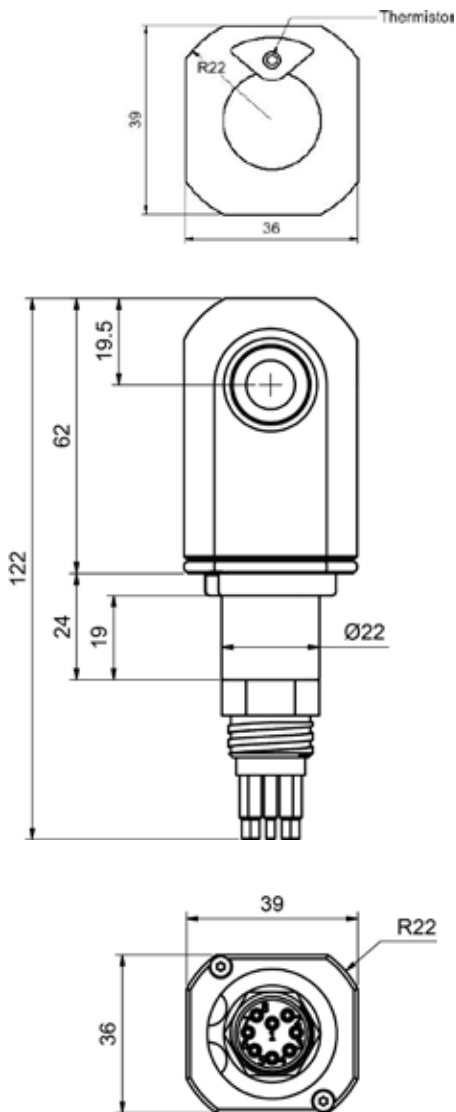
- Easy integration with most loggers or systems
- Direct readout of engineering data
- Rugged and robust with low maintenance needs
- Output format RS-232
- 3 depth ranges available: 300, 3000 and 6000 meters

Measuring conductivity together with temperature and depth information, gives a good estimate of the salinity.

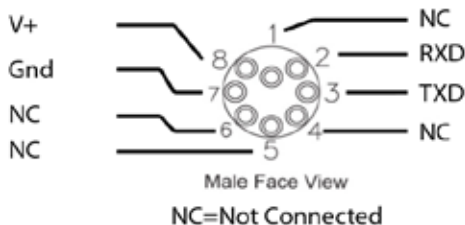
Salinity is defined as the concentration of dissolved salts, mainly sodium and chloride ions. Other important properties of seawater are again dependent on the salinity. Among these are the density and the speed of sound.

The Conductivity Sensors uses an inductive principle and is the fourth generation from Aanderaa. It offers top accuracy and stability.

Specifications CONDUCTIVITY SENSOR



PIN CONFIGURATION SUBCONN MCBH8



Technical Details

Conductivity:

Range:	0 – 7.5 S/m (0 – 75 mS/cm)
Resolution:	0.0002 S/m (0.002 mS/cm)
Accuracy ¹⁾ :	
5990C	±0.0004 S/m (±0.004 mS/cm)
5990B	±0.0018 S/m (±0.018 mS/cm)
5990A	±0.005 S/m (±0.05 mS/cm)
Response Time (90%):	<0.5 sec ²⁾
Typical Drift	<0.0001 S/m per month (0.001 mS/cm per month)

Temperature:

Range:	-5 – 40°C (23 – 104°F) ³⁾
Resolution:	0.001°C (0.0018°F)
Accuracy ⁴⁾ :	
5990C	±0.003°C (0.0054°F)
5990A/5990B	±0.05°C (0.032°F)
Response Time (63%):	<1.2 sec

Output format:

5990	RS-232
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Output Parameters:

Conductivity, Temperature, Salinity, Density and Speed of Sound, Raw data

Sampling interval:

2 sec – 255 min

Supply voltage:

5 to 14VDC

Current drain:

Average:	0.16 + 48 mA/S where S is sampling interval in seconds
Maximum:	100 mA
Quiescent:	0.16 mA

Operating depth:

Shallow Water (SW):	0–300 m (0–984.3 ft)
Intermediate Water (IW) ⁵⁾ :	0–3000 m (0–9843 ft)
Deep Water (DW) ⁵⁾ :	0–6000 m (0–19690 ft)

Electrical connection:

8-pin Subconn MCBH8M

Dimension (WxDxH):

36 x 39 x 122 mm (1.4" x 1.5" x 4.8")

Weight:

280 g (8.466 oz)

Materials:

Epoxy coated titanium

Accessories, not included:

Resistor Set 3719 for functional test
Sensor Cable 5335

⁽¹⁾ Calibrated in 208 points, referenced to accredited salinity standard

⁽²⁾ Dependent on flow through cell bore

⁽³⁾ Calibrated range is 0 to 36°C (32–96.8 °F)

⁽⁴⁾ For highest accuracy the sensor has dual temperature - internal and external

⁽⁵⁾ All deep water sensors are pressure tested to specified depth

Internal pressure never exceeds atmospheric pressure therefore electronics and sensors are unaffected by deployment depth

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

Specifications subject to change without prior notice.

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