

Conductivity Sensor 5819/5819R



Conductivity Sensor 5819/5819R is a compact fully integrated sensor for measuring the electrical conductivity of seawater. Designed to be used with SeaGuard or SmartGuard data logger using AiCaP CANbus or as stand-alone sensor using RS-232/RS-422

Advantages:

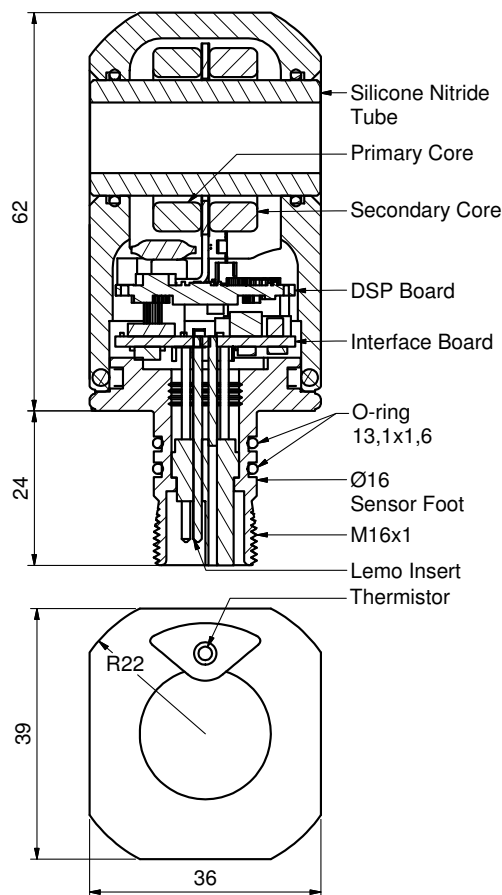
- Smart Sensor for easy integration with SeaGuard and SmartGuard
- Easy integration with most loggers or systems
- Direct readout of engineering data
- Rugged and robust with low maintenance needs
- Output format AiCaP CANbus, RS-232/RS-422
- 3 depth ranges available: 300, 3000 and 6000 meters

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.

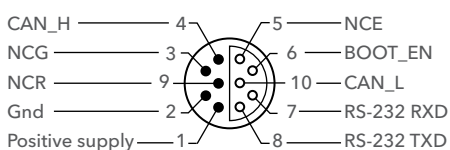
Specifications CONDUCTIVITY SENSOR



PIN CONFIGURATION

5819A, 5819B, 5819C

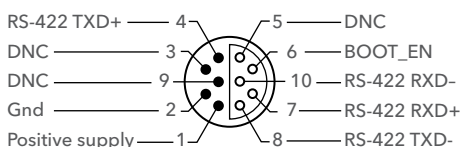
Receptacle, exterior view; pin=● bushing=○



PIN CONFIGURATION

5819RA, 5819RB, 5819RC

Receptacle, exterior view; pin=● bushing=○



DNC= Do Not Connect

Technical Details

Conductivity¹⁾:

Range:	0 - 75 mS/cm
Resolution:	0.002 mS/cm
Accuracy ¹⁾ :	
5819C, 5819RC	±0.004 mS/cm
5819B, 5819RB	±0.018 mS/cm
5819A, 5819RA	±0.05 mS/cm
Response Time (90%):	<0.5 sec ²⁾
Typical Drift	0.001 mS/cm per month
* To convert to S/m divide numbers by 10	

Temperature:

Range:	-5 - 40°C (23 - 104°F) ³⁾
Resolution:	0.002°C
Accuracy ⁴⁾ :	
5819C, 5819RC	±0.003°C (0.0054°F)
5819B, 5819RB	±0.05°C (0.032°F)
5819A, 5819RA	±0.05°C (0.032°F)
Response Time (63%):	<1.2 sec

Output format:

5819A, 5819B, 5819C	AiCaP CANbus and RS-232
5819RA, 5819RB, 5819RC	RS-422

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:

10-pin receptacle mating SP-plug

Dimension (WxDxH):

36 x 39 x 86 mm (1.4" x 1.5" x 3.4")

Weight:

240 g (8.466 oz)

Materials:

Epoxy coated titanium and ceramic bore

Accessories, not included:

Resistor Set 3719 for functional test
Sensor Cable 4762, 4865
Patch Cable 4999, 3880L
Set-up and Config. Cable 3855 (Laboratory use only)

⁽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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