

# Conductivity Sensor 5819



**Conductivity Sensor 5819 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:**

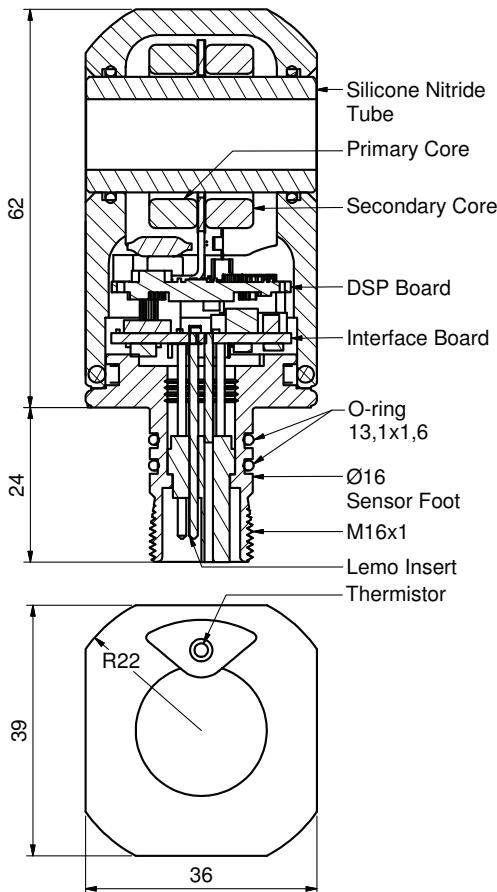
- Smart Sensor for easy integration with SeaGuard and SmartGuard
- Easy integration with most loggers or systems
- Direct readout of engineering data
- Rugged and robust with low maintenance needs
- Output format AiCaP CANbus, RS-232/RS-422
- 3 depth ranges available: 300, 3000 and 6000 meters

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.

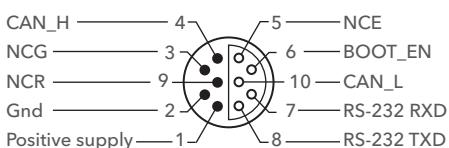
# Specifications CONDUCTIVITY SENSOR



## PIN CONFIGURATION

5818A, 5819B, 5819C

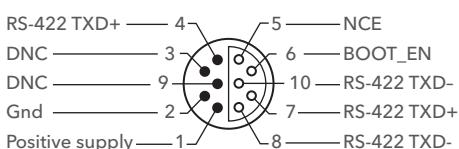
Receptacle, exterior view; pin=● bushing=○



## PIN CONFIGURATION

5818RA, 5819RB, 5819RC

Receptacle, exterior view; pin=● bushing=○



DNC= Do Not Connect

## Technical Details

### Conductivity:

Range:	0 – 7.5 S/m (0 – 75 mS/cm)
Resolution:	0.0002 S/m (0.002 mS/cm)
Accuracy <sup>1)</sup> :	
5819C, 5819RC	±0.0004 S/m (±0.004 mS/cm)
5819B, 5819RB	±0.0018 S/m (±0.018 mS/cm)
5819A, 5819RA	±0.005 S/m (±0.05 mS/cm)
Response Time (90%):	<3 sec <sup>2)</sup>
Typical Drift	<0.0001 S/m per month (0.001 mS/cm per month)

### Temperature:

Range:	-5 – 40°C (23 – 104°F) <sup>3)</sup>
Resolution:	0.001°C (0.0018°F)
Accuracy:	±0.03°C (0.054°F)
Response Time (63%):	<2.6 sec

### Output format:

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

### Output Parameters:

 Conductivity, Temperature, Salinity,  
Density and Sound of Speed, 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):	0-3000 m (0-9843 ft)
Deep Water (DW):	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 (8.46 oz)

### Materials:

Epoxy coated titanium

<b>Accessories</b> , 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)
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<sup>(1)</sup> Calibrated in 208 points

<sup>(2)</sup> Dependent on flow through cell bore

<sup>(3)</sup> Calibrated range is 0 to 36°C (32-96.8 °F)

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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