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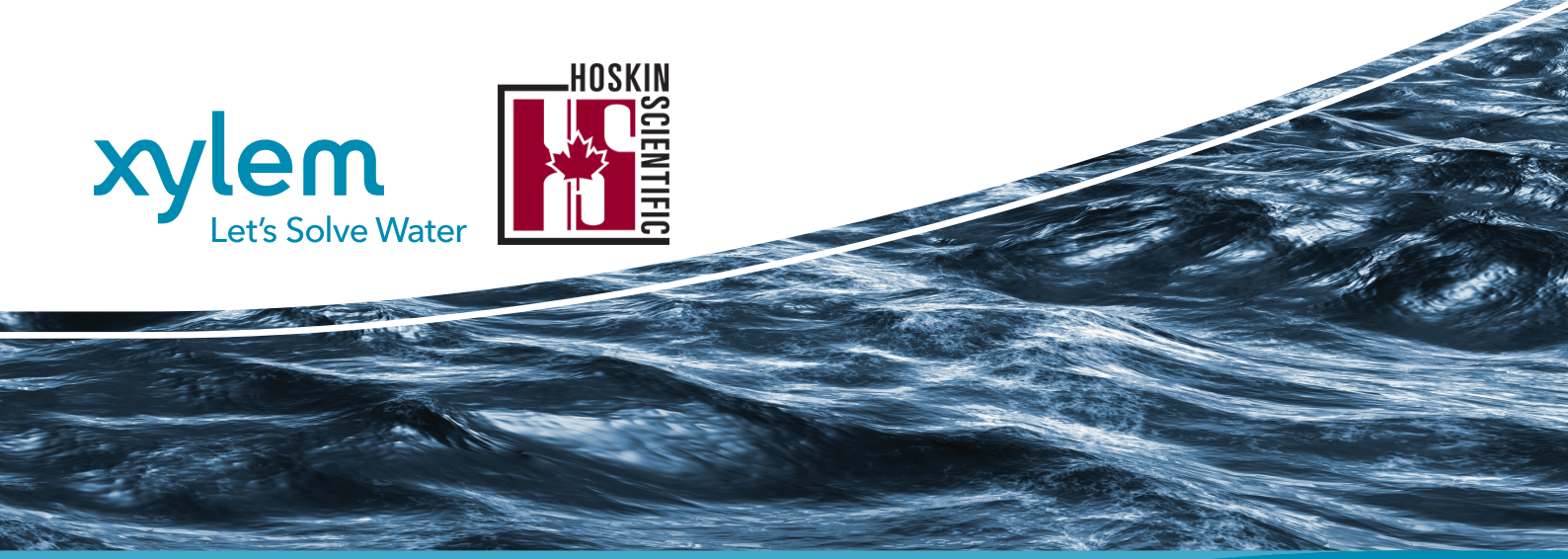

# Conductivity Sensor 4319


**The Conductivity Sensor 4319 is a compact fully integrated sensor for measuring the electrical conductivity of seawater. It is designed to be used with SeaGuard or SmartGuard datalogger using AiCaP CANbus or as stand-alone sensor using RS-232**

- Smart Sensor for easy integration with SeaGuard and SmartGuard
- 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 AiCaP CANbus, RS-232
- 3 depth ranges available max. 6000 meters

The Conductivity Sensor 4319 is based on an inductive principle. This provides for stable measurement without electrodes that 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 SeaGuard datalogger and the Smart sensors are interfaced by means of a reliable CANbus interface (AiCaP), using XML for plug and play capabilities. The Smart sensors can be mounted directly on the top end plate of the Aanderaa SeaGuard, in a String System node or connected to the SmartGuard and are automatically detected and recognized.

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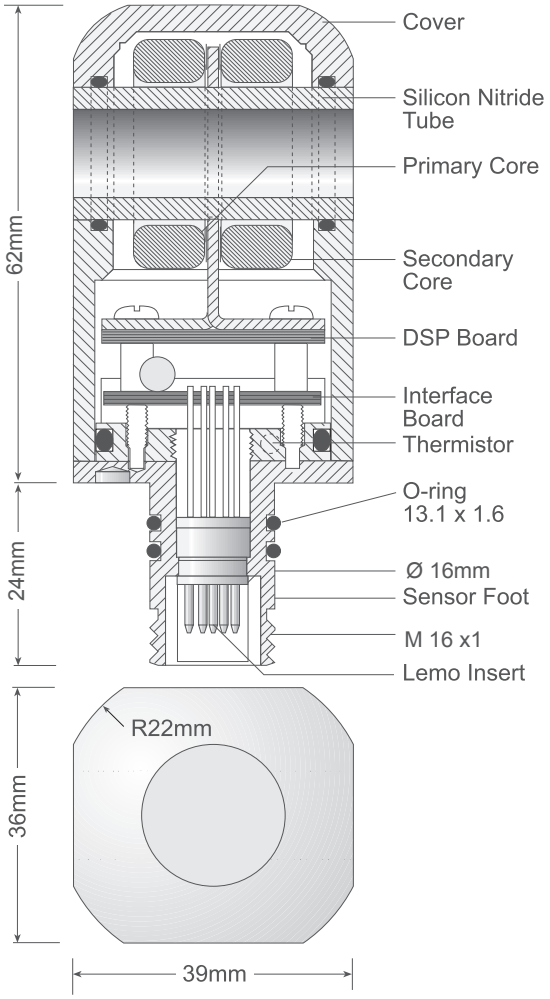
# Specifications CONDUCTIVITY SENSOR

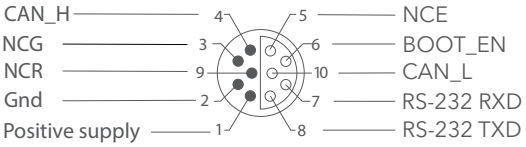



## Technical Details

| | |
|---|---|
| **Conductivity:** | |
| Range: | 0–7.5S/m (0–75mS/cm) |
| Resolution: | 0.0002S/m (0.002mS/cm) |
| Accuracy: | |
| 4319A | ±0.005S/m (±0.05mS/cm) |
| 4319B | ±0.0018S/m (±0.018mS/cm) |
| Response Time (90%): | <3s [1] |
| **Temperature:** | |
| Range: | -5–40°C (23-104°F) [2] |
| 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:** | AiCaP CANbus and RS-232 |
| **Output Parameters:** | |
| AiCaP: | Conductivity, Temperature |
| RS-232 | 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: | 0.16mA |
| **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:** | 10-pin receptacle mating SP-plug |
| **Dimension (WxDxH):** | 36 x 39 x 86mm (1.4"x1.5"x3.4") |
| **Weight:** | 240g (8.466oz) |
| **Materials:** | Epoxy coated titanium |
| **Accessories,** not included: | Resistor Set 3719 for functional test<br>Sensor Cable 4762,4865<br>Patch Cable 4999,3880L<br>Set-up and Config. Cable 3855 [3] |

PIN CONFIGURATION

Receptacle, exterior view; pin = • bushing = ◦




The 10-pin receptacle in the sensor foot mates with Aanderaa SP (Sensor Plug) giving access to both outputs. In RS-232 mode, use Sensor Cable 4865 for connection to a Personal Computer (PC). Cable 4865 is furnished with a watertight 10-pin SP-plug at the sensor end. An additional USB plug is used for providing power to the sensor.

[1] Dependent on flow through cell bore

[2] Calibrated range is 0 to 36°C (32-96.8 °F)

[3] Laboratory use only

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

**Specifications subject to change without prior notice.**