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Digital output cable sensors for integrations

The digital output cable sensors work with RS232 or RS485 communications and DC 12 V. The sensors can be easily integrated on various platforms and seamlessly output digital data with commands.

Features

- **RS232 or RS485 communications**
- **Operating with DC 12 V**
- **20m cable with D-sub 9pin connector**
- **Anti-fouling wiper for conductivity and optical sensors**

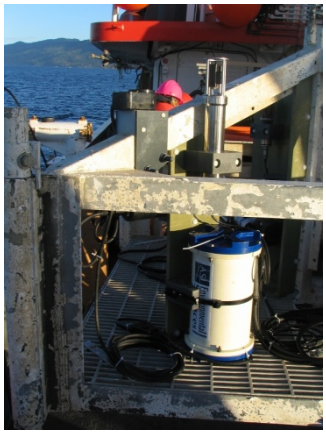
Model list of digital output cable sensors

Model designation	Parameter								
	C	T	D	Chl Turbidity	DO	PAR	Wave Height	Current	Wiper
A7CT-CAR/CAD	○	○							
ACTW-CAR/CAD	○	○							○
ARO-CAR/CAD		○			○				
AROW2-CAR/CAD		○			○				○
ACLW2-CAR/CAD		○		○					○
ALW-RS/Di						○			○
AWH-CAR/CAD			○				○		
AEM-CAR/CAD		○						○	
MFLW-CAR/CAD		○	○	*◎					○

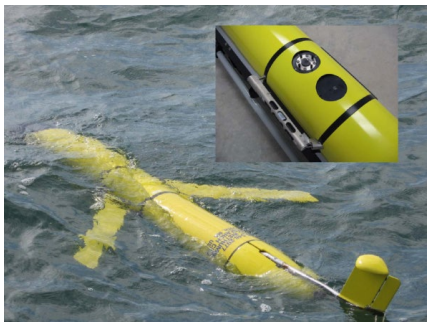
*MFLW-CAR/CAD measures excitation spectra of phytoplankton.

■ Applications

ACTW and ***ACLW2*** moored on the buoy system (Ise bay in Japan).



ACTW integrated on the VENUS platform (Photo courtesy of Paul Macoun, VENUS project)



ARO integrated on the glider (University of Southern Mississippi).

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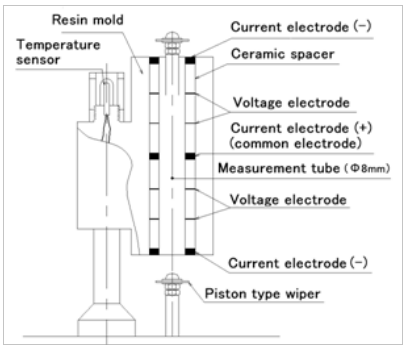
■ Bio-fouling mitigation for long-term deployments

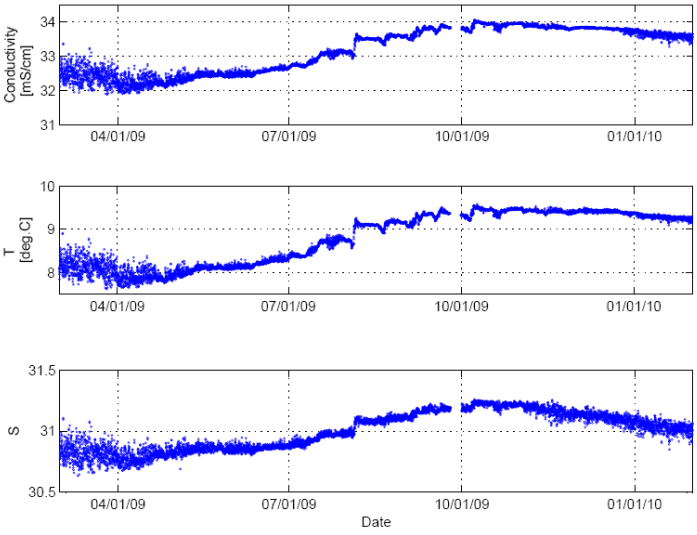
Generally, the data qualities of conductivity and optical sensors are degraded by bio-fouling for the deployment period. That is a challenging issue for the sensor integrations on long-term mooring platforms. The sensitive sensors to bio-fouling have models (***ACTW-CAR/CAD***, ***ACLW2-CAR/CAD, AROW2-CAR/CAD***, ***ALW-RS/Di*** and ***MFL05/10/50W-CAR/CAD***) with an anti-fouling mechanical wiper to inhibit biological growths. They provide high accuracy data, even if they are integrated on mooring platforms in high biological activity fields.

The ACTW salinity sensor's stability in the coastal ocean and lake were evaluated by the Alliance for Coastal Technologies (http://www.act-us.info/evaluations.php#Salinity , ACT code: ACT-VS-09-06).

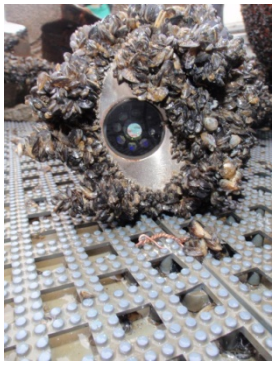


ACTW conductivity cell and the wiper mechanism

Bio-fouling covers the ***ACTW*** instrument but the conductivity electrode is clean by the anti-fouling wiper.



Stabilities of conductivity, temperature and salinity observed by a platform of VENUS project. The conductivity cell did not have any cleaning maintenances during the period.



Wiping performance of ***ACLW2*** chlorophyll and turbidity sensors and ***ALW*** PAR sensor.