-4H-Self-cleaning Monitoring Box

Revolutionize the thermosalinograph data quality on ships!

Operating principle:

The combination of two Self-cleaning Monitoring Boxes (-**4H-SMB**) measuring continuously physical parameters of surface water leads to high efficiency and accuracy of data. The boxed flow-through sensor system works in **master-slave mode** with one substituting the other during **automated cleaning cycles**.

This redundant system ensures steady measurements without any disturbances of bio-fouling and it additionally gives the opportunity for continuous high quality management for accurately validated data. The cyclone-shaped bin for sensors also facilitates an effective automatic cleaning. Because of its compact construction transporting and handling of the -**4H-SMB** is very easy. Equipped with commonly used interfaces the -**4H-SMB** enables communication with every (research) vessel.

-**4H-SMB** in master-slave installation with cleaning solution container

First system installed onboard R/V Elisabeth Mann Borgese, Leibniz Institute for Baltic Sea Research Warnemünde, Germany

Parameter	*Range*	*Accuracy*
Conductivity	0 … 70 mS/cm	0.003 mS/cm
Temperature	-3 … 35 °C	0.002 °C
Salinity	2 … 42 PSU	0.005 PSU
Sound velocity	1375 … 1625 m/ s	0.025 m/ s
Turbidity	0 … 25 NTU	0.013 NTU (sensitivity)
Chlorophyll	0 … 50 µg Chl-a/l	0.025 µg Chl-a/l (sensitivity)

SMB Dimensions:	
Length: 57cm	Width: 50 cm
Weight: ca. 40 kg	Height: 40 cm

A joint development of

Leibniz-Institut für Ostseeforschung Warnemünde
Seestrasse 15 | 18119 Rostock (Germany)
Phone: +49 (0) 381 5197-0 | Fax: +49 (0) 381 5197 -440
Web : www.io-warnemuende.de

-4H- JENA engineering GmbH
Muehlenstrasse 126 | D-07745 Jena (Germany)
Phone: +49 (0) 3641 2887-0 | Fax: +49 (0) 3641 2887-26
Email: mt@4h-jena.de | Web: www.4h-jena.de