

# RIVERTRACE

## SMART BILGE



The SMART BILGE 15ppm Oil Content Monitor was developed in 2005 to meet and exceed the requirements for MEPC.107(49) regulations.

The SMART BILGE is made up of 2 key components, the SMART BILGE 'Module' and the SMART 'CELL' measuring cell. The SMART CELL utilises a unique Detector Array Technology, developed by Rivertrace, allowing the OCM to analyse all three oil types (HFO, Diesel and Emulsions) simultaneously without the need for re-calibration. This innovative design allows for simple routine maintenance of the OCM while maintaining optimal conditions.

Optical cell fouling is recognised as a leading cause of monitor malfunction or incorrect reading. A manual cell cleaning device is included as standard to easily enable routine maintenance.

Replacement calibrated measuring cells can be purchased for easy change over on board the vessel and calibration check kits enable the crew to demonstrate the monitor is within factory calibration to PSC Surveyors.

## APPLICATIONS

- MEPC.107(49) Bilge Water Discharge
- Oily Water Separator
- Deck Drains Discharge
- Rig Slop Tank Discharge

## KEY FEATURES

- Digital Certifications
- Automated electronic calibration reminders
- Worldwide approved service centres for calibration checks

## FLEXIBLE SOLUTIONS

- **5PPM Alarm** - The Smart Cell Bilge Alarm is readily available as a 5ppm version if required.
- **Autoclean** - our pneumatic autoclean solution has been designed to ensure the measuring cell glass tube is kept free from fouling. Cell fouling is recognised as a leading cause of monitor malfunction. Fitting the autoclean removed the need for the ship's crew to remember to clean the cell manually.
- **Flowswitch** - The flowswitch option has been designed to ensure that bilge water is flowing through the measuring cell when in monitoring mode. An error is shown on the display if there is no flow. The flowswitch monitors the flow of water through the cell. This ensures that the flow cannot be shut off accidentally or maliciously. In case of no flow, the Smart Bilge will close the overboard discharge valve.
- **Hazardous Environments (Zone 1 & 2)** - The SMART BILGE can be offered in an explosion proof cabinet
- All options can be ordered from new or retrofitted to existing Rivertrace Smart Bilge monitors.

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### SPECIFICATION

<b>MEASUREMENT</b>	
Oil types:	HFO, Diesel and Mixture C (IMO defined)
Clean water calibration:	+/- 2ppm of factory set values
Oil range:	0 – 40 ppm
Accuracy oil + solids:	+/- 5ppm up to 30 ppm
Solids discrimination:	100ppm Iron Oxide in 10 ppm Diesel
Response time:	< 5 sec (oil reading)
<b>ALARMS</b>	
Oil alarm 1 setpoint:	1 – 15 ppm user adjustable
Oil alarm 2 setpoint:	1 – 15 ppm user adjustable
Oil alarm 1 delay:	0 – 5 seconds user adjustable
Oil alarm 2 delay:	0 – 600 seconds user adjustable
<b>INPUT / OUTPUT</b>	
Analogue output:	Active 4-20mA / 0 – 20mA
Switch inputs:	2 x switch inputs for separator and backflush status
<b>DATA STORAGE AND RETRIEVAL</b>	
Calibrate on data storage:	Stored in cell
IMO required data:	Stored in Control enclosure
IMO required data retrieval:	Via LCD display, RS 232 comms link or USB
<b>SYSTEM AND SUPPLY</b>	
Supply voltage:	115 or 230V AC, 50 – 60Hz (24V AC & 12V DC available)
Supply voltage Consumption:	< 50 VA incl. solenoid valve
Supply voltage tolerance:	+/- 15%
Projected life:	> 50,000 hrs
Protection class:	IP 65
Approvals:	MEPC 107(49) – DNV-GL, USCG, CCS, , Russian Register, Transport Canada.
Weight:	3.2 Kg / 7.05lb

\*SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE