



IMO Resolution MEPC 107 (49) came into effect on 1st January 2005 and applies to all new installations of oil content monitors within engine room spaces. This applies to existing ships and ships whose keel is laid on or after 1st January 2005.

The Rivertrace "Smart-Cell" Bilge Alarm meets the requirements of MEPC 107 (49) for monitoring of 3 oil types: Fuel Oil, Diesel and Emulsions. By utilising the "Smart-Cell" Detector Array Technology, technology developed by Rivertrace, the Bilge Alarm analyses all three oil types simultaneously without the need for re-calibration.

A manual cell clean device is included as standard to easily enable routine maintenance. Optical cell fouling is recognised as a leading cause of monitor malfunction or incorrect reading. By simple operation of the manual clean device, the "Smart-Cell" remains in optimum operating condition.



SPECIFICATION

Measurement	
Oil types:	Fuel Oil, Diesel and Mixture C (IMO defined)
Clean water calibration:	+/- 2ppm of factory set values
Oil measurement range:	0 - 40 ppm all types
Resolution:	1 ppm
Accuracy oil + solids:	within +/- 5ppm as per IMO requirements
Solids discrimination:	100ppm Iron Oxide
Alarms	
Oil alarm 1 & 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
Alarm contacts:	2 single pole Alarm Relays 5A @ 230Vac (NC in alarm)
User Interface	
LCD display:	4 line x 16 alphanumeric back lit LCD display
Control + Setup:	3 button keypad
Input / Output	
Analogue output:	24v loop powered 4-20mA / 0 - 20mA
Communications:	RS232 protocol
Power and Relay Cable terminals:	up to 2.5mm ²
Analogue Out	
Cable terminals:	up to 1.5mm ²
Switch inputs:	2 x switch inputs for separator & flow status up to 1.5mm ²
Data Storage and Retrieval	
Calibration data:	Stored onboard microcontroller
Storage data:	Stored on board mounted memory media
Data retrieval:	via LCD display or download to PC with Hyperterminal
Environmental & Sample	
Ambient temperature:	-10 to +60°C
Sample / clean water temperature:	+1 to +60°C
Sample / clean water flow rate:	0.5 - 4.0 litres / min
Sample / clean water pressure:	0.1 bar - 10 bar
Sample / clean water select:	3 way universal solenoid valve
Sample pipe fittings:	1/4 inch BSPP
System and Supply	
Supply voltage:	115 / 230V ac, 50 - 60Hz (24V ac available)
Supply voltage Consumption:	< 50 VA including solenoid valve
Protection class:	IP 65
Approvals:	IMO MEPC 107 (49) and Class approval from DNV,NKK GL + USCG.
Overall Dimensions - mm:	289 (w) X 205 (h) X 149 (d)
Weight:	3.3kg

