

The RTE logo consists of the letters 'RTE' in a bold, white, sans-serif font, centered within a dark blue oval with a white border. The background of the entire page is a composite image featuring a large blue and orange curved graphic at the top, a photograph of an oil rig at sea in the middle, and a photograph of an industrial building at night at the bottom.

RIVERTRACE ENGINEERING LTD

"SMART-CELL"

Bilge Alarm To MEPC 107 (49)

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

The Rivertrace "Smart-Cell" Bilge Alarm meets the requirements of 107 (49) by utilising "Smart-Cell" Detector Array Technology, a technology developed within Rivertrace.

With this technology, the Bilge Alarm is able to analyse all three oil types stipulated within the regulation 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.

For more detailed technical specification, please see over:

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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 2.5mm²

Analogue Out

Cable terminals: up to 1.5mm²
Switch inputs: 2 x switch inputs for separator & flow status up to 1.5mm²

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: GL + USCG to IMO MEPC 107 (49)
Overall Dimensions - mm: 289 (w) X 205 (h) X 149 (d)
Weight: 3.3kg