

# 15 PPM OIL CONTENT MONITORS SMART CELL / OCD CM

RTE



**Smart Cell – MEPC 107 (49)**

The Rivertrace “SmartCell” oil content monitor meets the requirements of MEPC 107 (49) for monitoring of 3 oil types: Fuel, Diesel and Emulsions. By utilising the “SmartCell” Detector Array Technology, technology developed by Rivertrace, the OCM 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 “SmartCell” remains in optimum operating condition.



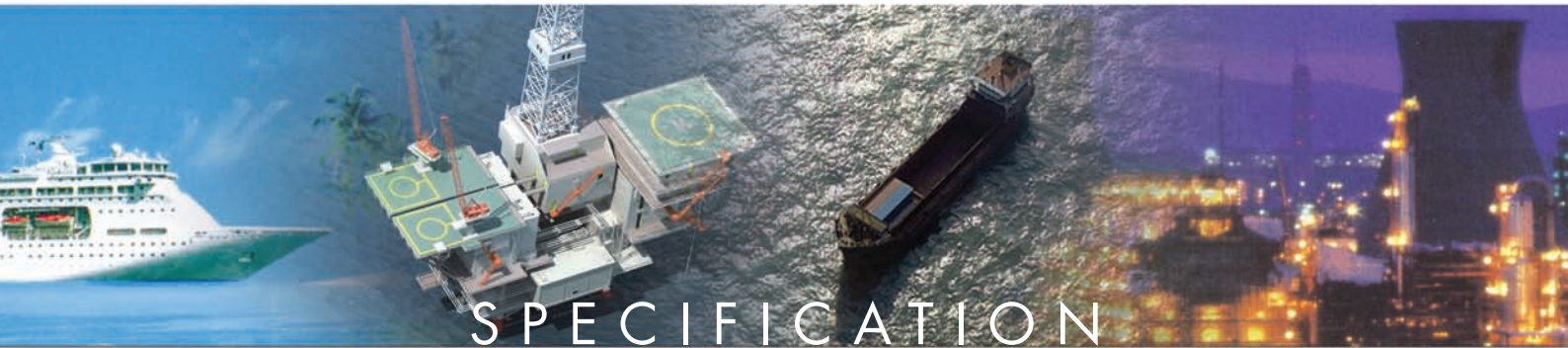
**OCD CM – MEPC 60 (33)**

Rivertrace continue to support a number of old monitors including the OCD 1M, OCD 2M and the OCD CM which met the requirements of the previous IMO Resolution MEPC 60(33).

RTE offer worldwide support and service for all products including calibration facilities and consignment stock at key marine locations.

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

**SPECIALIST IN WATER QUALITY MONITORING**



# SPECIFICATION

## Specification – OCD CM

Range:	0 – 30 ppm (Trend to 40 ppm)
Accuracy:	Better than IMO MEPC 60 (33) (+/- 5 ppm)
Concentration Indication:	2 x 7 segment LED
Alarm Operating Points:	1 - 15ppm (adjustable)
Alarm 1 Operating Delay:	0 - 20 sec (adjustable)
Alarm 2 Operating Delay:	10 - 240 sec (adjustable)
Alarm Contact Rating:	8A @ 240V
Alarm Relay Mode:	De-energised in Alarm State
Fault Indication:	Alphanumeric code
Output Signal:	0–20mA, 4–20mA (820 W max load), 0–5V & 1–5V DC (50 KW min load)
Projected Life (Electronics):	> 50,000 Hours
Ambient Temperature:	+1°C to +55°C
Humidity:	90% RH Max @ 55°C

Sample Temperature:	+1°C TO +60°C
Sample Flow:	0.5 to 2 Litre/Minute
Sample Pressure:	0.1 to 10 Bar
Clean Water Requirement:	Ask for Sample
Weight:	2.25kg (stand alone monitor) 7.5kg (autoclean option)
Size:	215 x 242 x 73mm (stand alone monitor) 290 x 468 x 76mm(autoclean option)
Supply Voltage:	2 models available 230V/115V AC & 24V AC
Supply Variation:	± 10% of Nom. Voltage
Supply Frequency:	50/60 Hz
Consumption:	10VA Max Alarm (stand alone monitor) 50VA (during autoclean cycle)
Degree of Protection:	IP 55
Electrical installation (overvoltage) classification:	EN61010-1EC664 category 11

## Specification – Smart Cell

### Measurement

Oil types:	Fuel Oil, Diesel and Mixture C (IMO defined)
Clean water calibration:	+/- 2ppm of factory set values
Oil range:	0 - 30 ppm (trend to 40) all types
Resolution:	0.1 ppm
Accuracy oil + solids :	+/- 5ppm up to 30 ppm
Solids discrimination:	100ppm Iron Oxide in 10 ppm Diesel
Response time:	< 5 sec (oil reading)

### Alarms

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

### User Interface

LCD display:	4 x 16 alphanumeric back lit LCD display
Control:	3 button keypad

### Input / Output

Analogue output:	Loop powered 4-20mA / 0 - 20mA 24V
Communications:	RS232 - output
Cable terminals:	cores of 2.5mm <sup>2</sup> (HV) and 1.5mm <sup>2</sup> (LV)
Cable glands:	4 x to accept cable diameters 10 – 12mm dia.
Switch inputs:	2 x switch inputs for separator & flow status

### Data Storage and Retrieval

Calibration data storage:	Stored onboard microcontroller
IMO required data:	Stored in Control enclosure
IMO required data retrieval:	Via LCD display or RS 232 communication link

### Environmental & Sample

Ambient humidity:	90%RH Max @ 55°C
Ambient temperature:	0°C - +60°C
Sample / clean water temperature:	+1°C - +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 solenoid valve
Sample pipe fittings:	¼ inch BSPP

### System and Supply

Supply voltage:	115 or 230V AC, 50 – 60Hz (24VAC available)
Supply voltage Consumption:	< 50 VA incl. solenoid valve
Supply voltage tolerance:	+/- 15%
Other supply tolerance:	+/- 10%
Projected life:	> 50,000 hrs
Protection class:	IP 65
Approvals:	EU MED (GL) + USCG to IMO MEPC 107(49)
Manual cell cleaning:	Fitted as standard
Weight:	3.2 Kg

