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 devise 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.

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.
**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 - 15 ppm (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 ppm)
- **Resolution:** 0.1 ppm
- **Accuracy oil + solids:** +/- 5 ppm up to 30 ppm
- **Solids discrimination:** 100 ppm 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 2.5mm² (HV) and 1.5mm² (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