

RIVERTRACE

SMART PFM 107 OIL-IN-WATER MONITOR



APPLICATIONS

- FPSO/FSO/FSU Produced Water Discharge
- Drill Rig Slop Tanks
- Oily Water Separator Discharge
- Regulatory Compliance

PRINCIPLE OF OPERATION

The monitor measures particulates in the sample stream on a continuous basis by passing the process fluid through a proprietary photo optical measuring cell developed by Rivertrace Technologies.

Using a combination of optical recognition algorithms and light intensity it is possible to differentiate between Oil particles, Gas/Air Bubbles and Solid particulates in the range 0-500 microns. Flow and particulate characteristics can be visualised live via remote access and via optional dedicated software on any Windows PC or via the 7" display.

Oil concentration, pressure, temperature and oil alarm status are displayed on an easy to read back lit alpha numeric LCD display. Oil concentrations, alarms and fault log are stored within the system to comply with the reporting requirements of IMO resolution MEPC.107(49) and can be accessed remotely or downloaded onto a pc via LAN or USB for further analysis.

When connected to the internet it is possible for remote diagnostics to be performed by the manufacturer or an approved service centre. The Smart-PFM 107 offers a choice of auto cleaning methods to ensure the accuracy is maintained at all times. Dependant of the utilities available you can choose from air driven solenoid or electronic actuator. The cleaning is fully automatic and operates whenever it senses contamination of the optical windows.

FEATURES

- Oil, gas, suspended solid inflow measurements
- Oil type independent – no calibration required
- Solid particles and gas contamination independent
- Measure concentration, size and number density of oil, solids and gas
- Embedded windows with full auto restore via secondary hard Disk



Exd version

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SPECIFICATION

Oil concentration range	0 - 40 ppm for MEPC 107(49) – higher ranges available
Oil concentration accuracy	+/- 1 ppm
Particle size range	1 to 500 µm
Oil alarm 1 & 2 operating point	5 ppm or 15 ppm maximum (adjustable)
Oil alarm 1 operating delay	1 - 5 seconds
Oil alarm 2 operating delay	10 to 600 seconds
Alarm contact rating	5 Amps at 230 VAC
Alarm relay mode	De-energised in alarm state
Output signal	4-20 mA
Network communication	Ethernet (RJ45) – remote access – Wi-Fi optional with additional hardware
IMO Data transfer	USB 2 Memory stick
Ambient temperature	0°C to 55°C (32°F to 131°F)
Humidity	95% maximum non condensing
Sample temperature	1 to 70°C (33.8°F to 158°F)
Sample flowrate	0.5 to 5 l/min (0.26 to 1.3 gpm)
Sample pressure	1 to 10 bars (14.5 to 145 psi)
Clean water requirements	None
Cleaning system	Compressed air at 6 bar (87 psi)
Weight	28 kg (62 lbs)
Dimensions [mm]	Height: 528mm (20.8"), Width: 600mm (23.6"), Depth: 280mm (11")
Supply voltage	100-240 VAC or 24 VDC option available
Supply variation	+/- 10% of nominal voltage
Supply frequency	50 - 60 Hz
Power consumption	50 VA normal, 100 VA peak
Degree of ingress protection	IP65
Approvals	MEPC.107 (49), MED, UL (pending)
Display :	7" capacitive touchscreen