



## **AMBIENT OIL MIST DETECTOR**



# Cost-Effective Protection



The G2000 Ambient Oil Mist Detector is used to detect oil mist in pump rooms, engine rooms, and other facilities. Oil mist is highly ignitable and poses a potential fire hazard. As the International Maritime Organization points out, most engine-room fires are the result of the formation of oil mist. OCIMF's "Ship Inspection Report (SIRE) Programme" also draws particular attention to the oil mist hazard from hydraulic aggregate pumps and transmission pipes under high pressure.

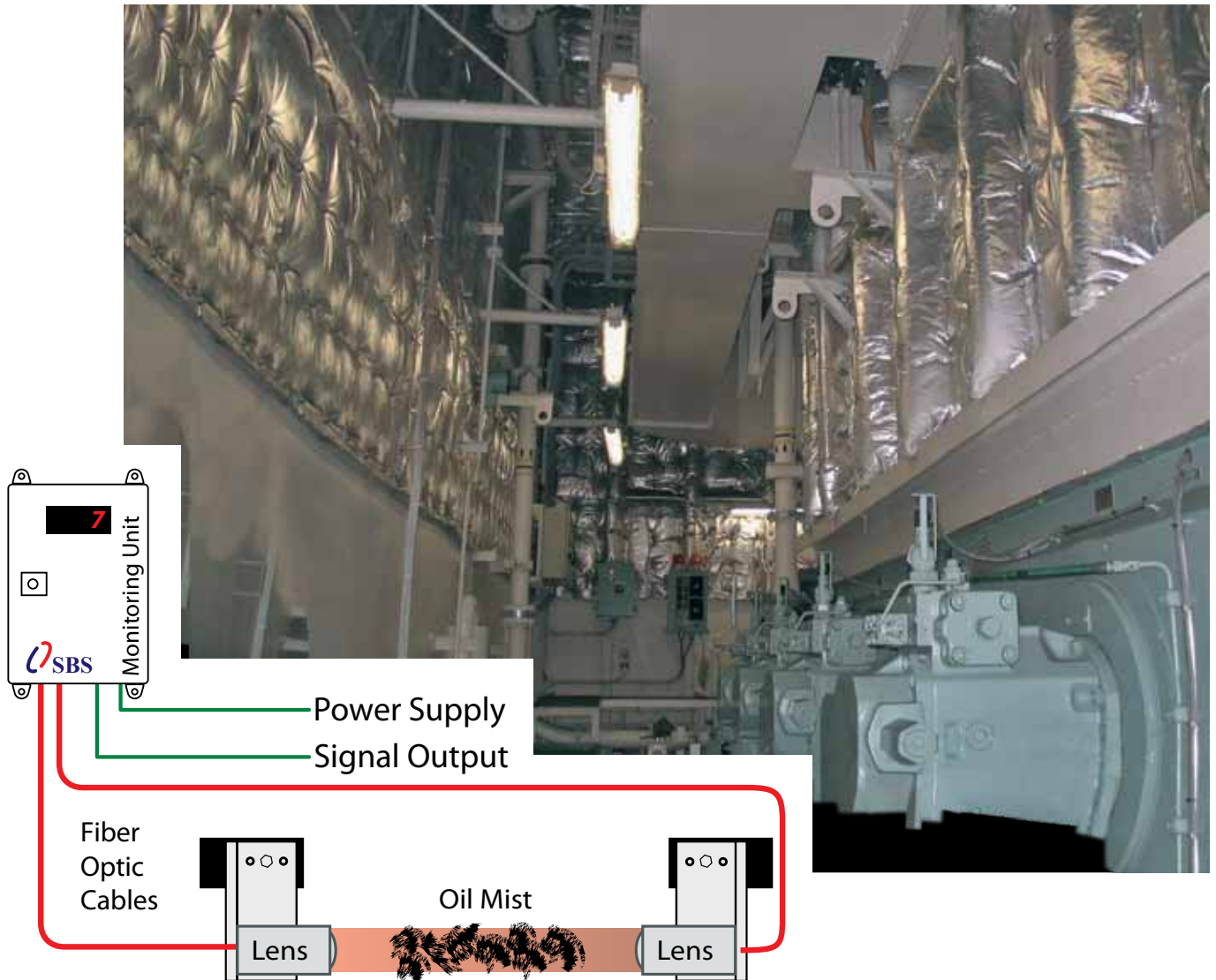
As a result, early alarms on the formation of oil mist are important. This small safety investment also yields great benefits while more and more vetting inspectors would like to see this equipment onboard. The G2000 is ideal for applications where an accurate response to oil mist is required in unattended machinery spaces.

Atmospheric oil mist can be formed in one of two ways. First, oil leaks in pressurized oil lines produce a very fine atomized spray. Second, evaporating oil on a hot surface produces what is known as blue smoke. These tiny droplets of oil in the air have a particularly low ignition temperature or can be sparked off by other sources.



G2000 AOMD Optic Mini Head with Fiber Optic Cable

# For Hydraulic Installations and Fuel Lines



G2000 Ambient Oil Mist Detector System Layout

## Key Features

- Early oil mist alarm
- Cost effective protection
- Compliant with inspection programs, such as SIRE
- Satisfy vetting inspectors
- Large area coverage per unit
- Integrate the output signal into your on-board alarm system
- Two freely configurable alarm relays
- Multiple alarm levels: lens cleaning alarm and oil mist alarm
- Reliable result
- Durable and robust design
- Easy to configure, operate, and maintain
- Easy cleaning of open lenses
- Worldwide customer support via service partners



The G2000 Ambient Oil Mist Detector is a line-of-sight opacity meter. It sends a high-power infrared beam across the monitored section (from lens to lens). If the beam is interrupted by oil mist, it is scattered and absorbed which reduces the amount of light sent to the transceiver. The monitoring unit displays the opacity of the air in the monitored section. The alarms will be activated if the opacity exceeds the preset limits.

The line-of-sight measurement principle has the decisive advantage of covering a larger area than single-point extractive-sampling systems. Using the G2000, you avoid the risk of having placed a sensor in an area where oil mist does not occur. The system has a scanning distance from 3 to 9 meters.

The G2000 reacts to oil mist as well as smoke, dust and other obstructions which will possibly trigger an alarm. Although the purpose of the system is to detect oil mist, the reaction to other obstructions can be considered an indication of other malfunctions. The system has two alarms that can be adjusted to specific requirements. The alarms are preset at 5 and 10%. The lower alarm level is used as a lens-cleaning warning.

# Specifications

## Monitoring Unit:

Power Supply	standard 210–250 V AC – 50/60 Hz – 20 VA max. — optional 105–130 V AC or 20–30 V DC
Ambient temperature	0°C – 55°C
Output signal (linearized)	4...20 mA (4 mA ≈ 100% – 20 mA ≈ 0% Opacity) max. 800 Ω or 0...10 V DC (0 V ≈ 100% – 10 V ≈ 0% Opacity) max. 10 mA
Dimensions / Weight	H×W×D: 300 × 200 × 150 mm / 5.5 kg (monitoring unit alone)
Enclosure	IP 65 Steel box

## Digital Display (& Optional Remote Digital Display):

Display	0...100% opacity level (programmable)
Alarm delay	default 5 s (programmable 0–99 s)
Relay function	2 relays, volt free, freely configurable – lens cleaning alarm and oil mist alarm – max. 250 V AC, max. 2A (NO/NC)
Power supply	22...250 V AC – 50/60 Hz or 20...300 V DC – 4 VA (only relevant if remote)
Dimensions	H×W×D: 48 × 96 × 120 mm – for panel cut-out 44.5 × 91.5 mm

## Fiber-Optic Heads and Cables:

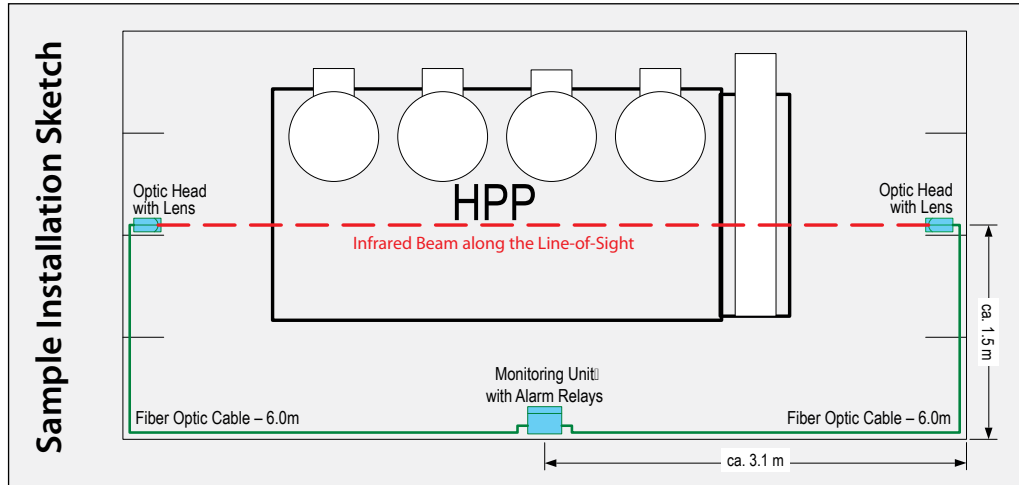
Operating temperature	0°C – 65°C
Head dimensions	H×W×D: < 120 × 100 × 60 mm
Socket	Grade A steel - welded to structure
Scanning distance	3 to 9 m — optional 1 to 3 m
Optic fibers	glass-fiber core in stainless steel jacket - Length: 4.5 m - optional 6.0 m, 7.5 m or others

# Optional Equipment

Alarm Annunciator - Remote Display Data-system integration via various busses such as RS485 and CAN

Visualization and data logging

Specifications subject to changes without notice



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