# Smoke & Particulate Matter monitoring for ships

**Emsys**

*em*issions monitoring for ships



## Key Features;

Measure Opacity (smoke density) and Particulate Matter (PM) in one unit

Proven technology, hundreds of maritime installations

Marine Type Approved (Lloyds Register) tested to ensure suitable for maritime use

Simple installation, supplied as a complete kit just requires a single power supply integrates to vessel alarm system

Low maintenance requirements, just occasional cleaning of lenses

## Typical Applications;

Smoke density monitoring of diesel engines and boilers whilst in port or when transiting close to shore allowing ship's crew instant notification when smoke thresholds are exceeded
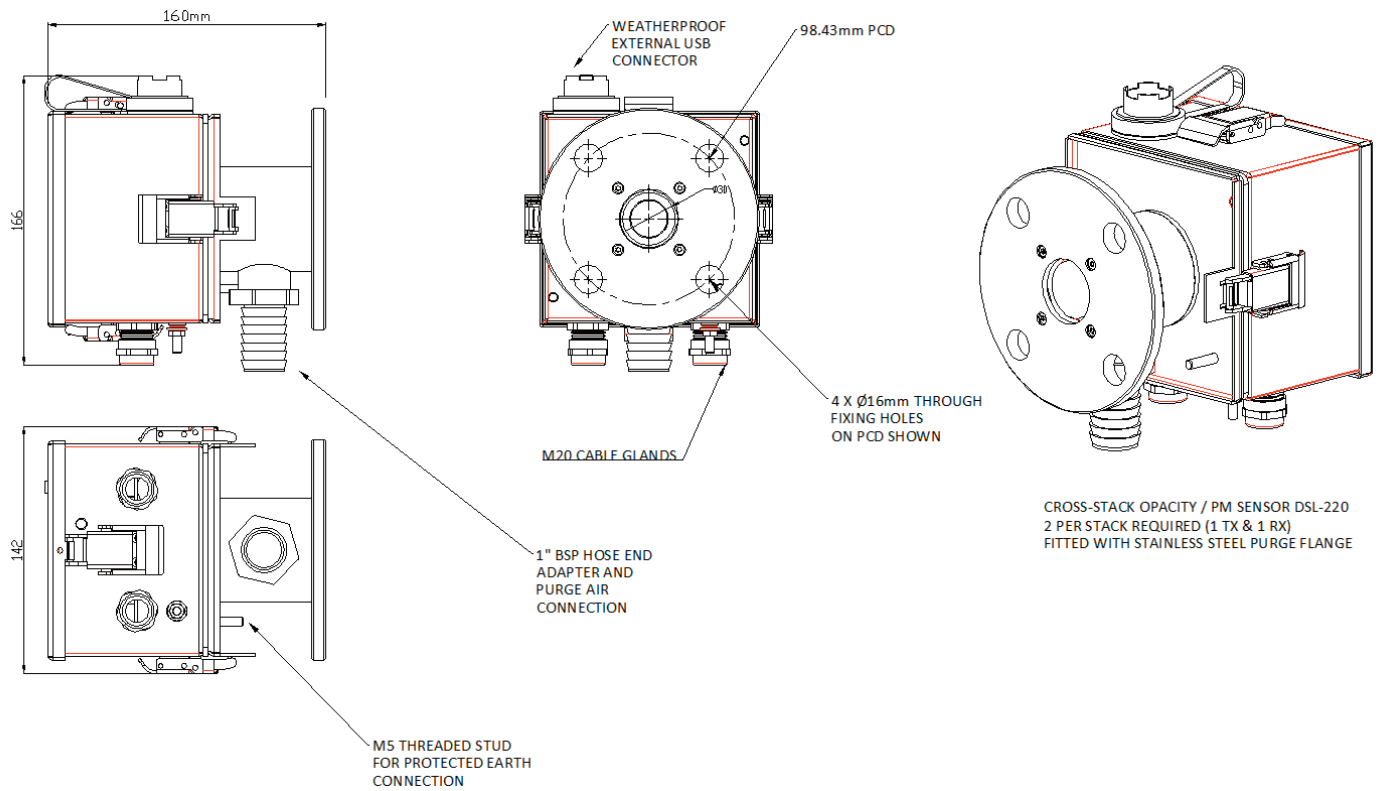
Alaska visible smoke regulations

US EPA visible smoke regulations

Charterer requirements and compliance with standards such as TMSA or environmental Class Notations
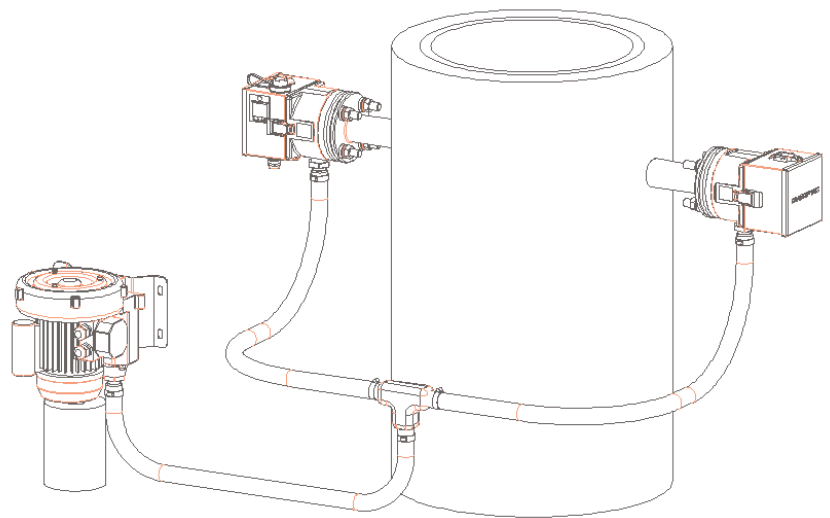
Maintenance indications of diesel engines

Optimisation of combustion in boilers

WEATHERPROOF EXTERNAL USB CONNECTOR

98.43mm PCD

160mm

166

142

4 X Ø16mm THROUGH FIXING HOLES ON PCD SHOWN

M20 CABLE GLANDS

1" BSP HOSE END ADAPTER AND PURGE AIR CONNECTION

M5 THREADED STUD FOR PROTECTED EARTH CONNECTION

CROSS-STACK OPACITY / PM SENSOR DSL-220
2 PER STACK REQUIRED (1 TX & 1 RX)
FITTED WITH STAINLESS STEEL PURGE FLANGE

| | |
|---|---|
| Path length | 0.5 – 5.0 metres |
| Measuring range | 0-100% |
| PM output | mg/m$^3$ |
| Output Protocol | MODBUS RS485 |
| Maximum Stacks | 16 |
| Accuracy | +/- 2% |
| Resolution | 0.1 |
| Voltage | 230VAC or 24VDC |
| IP Rating | IP65 |
| Operating Temperature | -20°C - +55°C |
| Gas Temperature | 550°C Max |
| Material | Stainless Steel 316L |
| Weight | 2.5kg each |
| Type Approval | Lloyds Register |

*Typical cross-stack configuration with optional self-container air purge kit*

# Em|sys

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