

## Fires on board ships are devastating



Fires on board ships are both dangerous and costly. Every year, a couple of hundred fires are registered on board merchant ships. The majority of fires start in the engine room and are caused by leakages in the fuel supply and resulting in high repair costs as well as losses incurred due to logistical issues and being out of operation for repair. The importance of safety for crew and passenger is of course not for debate.

The engine room presents considerable risk, because you here will find pressurized fuels being pumped to engines and hereby meeting hot surfaces, although unintentionally, which may result in the ignition of leaking gasses or oil mist vapours.

The devastating engine room fire has started.



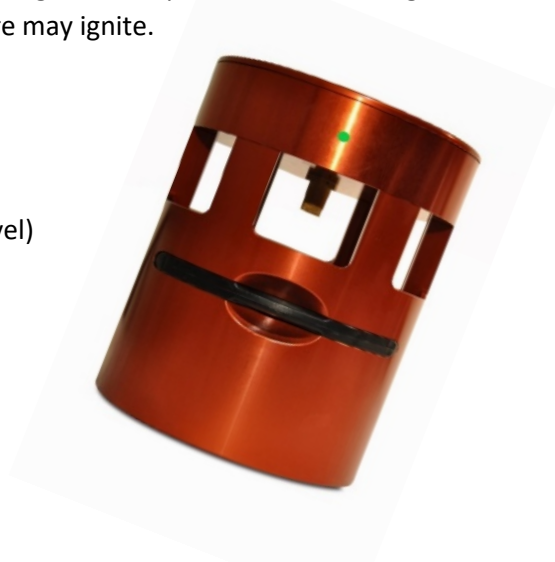
## LAS-10 All-In-One Leakage Alarm Detector

Based on experience from installations of greater LAS-10 installations on ships in need of several detectors in serial setup, we designed a supplementary model for smaller ships like **work boats, pilot boats, fishing vessels, private yachts, coastguard etc.** with limited sized open engine room. The developed LAS-10 All-In-One model can operate without integration with control boxes, internal alarm systems etc. This version just requires connection to own power supply and will then be ready to operate without any additional commissioning. Outputs for audio or visual signals are available and easy to connect.

The main purpose with this model is to safeguard the open engine rooms or hydraulic rooms in a simple and quick, but very effective way based on the large amount of air ( $600\text{m}^3 = 21,000\text{ft}^3/\text{Hour}$ ) flowing through the detector analyzing it for hydrocarbons in gasses, droplets or mist and to give the crew a swift alarm in order to react in due time before a fire may ignite.

## Facts about LAS-10 All-In-One Detector

- Easy installation – **detect to protect**
- 90-305 Vac input power
- Pre-set alarm levels – 17/33% of LEL (Lower Explosion Level)
- Detects oil mist vapours
- Detects invisible and odourless gasses
- Easy maintenance
- No false alarms
- Operates regardless on light
- Detection not affected by human interference



# LAS-10 - AIO

LAS-10 Detector - AIO (All-In-One)	
Detection range	> 0,002 mg/l
Airflow	10.000 Ltr/Min or 600 [m³/h] - 2600 gpm or 21.000 [ft³/h]
Reaction time	5-10 sec. depending on preset alarm limit
Gas Detection	Hydrocarbons
Material, enclosure rating	Anodized Aluminum - IP44
Dimensions - Weight	Ø190 x 235mm - 5,5kgs
Power supply	24 Vdc (Internal)
Power consumption	45 W
Operating temperature	-20 ~ +60°C
Operating Humidity	0 - 95% rH
Output Signal	Bi-colored LED
Preset Alarm Levels	Gas Alarm settings 17% or 33% LEL. Mist Alarm setting 5% above actual level of differential Pressure



Power supply / Relay Unit	
Number of detectors	1
Material	Aluminum
Dimensions - Weight	255 x 190 x 90 mm - 3.3 kg
Power supply	Input voltage: 90 - 305 Vac Output voltage: 24 Vdc
Power consumption	5 W
Enclosure rating	IP65
Operating temperature	-20 ~ +70°C
Operating Humidity	0 - 95% rH
Output signals	Alarm/fault relays - RS485/422 Full-duplex

