DNV·GL

Certificate No:
TAA00001UC

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Monitoring System

with type designation(s)
LAS-10 Detector, LAS-10 Control Unit, LAS-10 Monitor, LAS-10 Power supply unit, LAS-10 USB Interface

Issued to
DASPOS A/S
Herlev, Denmark

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Location classes:

Type	Temperature	Humidity	Vibration	EMC	Enclosure
LAS-10 Detector	**B**	**B**	**A**	**A**	**B**
LAS-10 Control Unit	**B**	**B**	**A**	**A**	**B**
LAS-10 Monitor	**B**	**B**	**A**	**A**	**B**
LAS-10 Power supply unit	**B**	**B**	**A**	**A**	**A**
LAS-10 USB Interface	**B**	**B**	**A**	**A**	**B**

Issued at **Høvik** on **2018-05-30**
This Certificate is valid until **2023-05-29**.
DNV GL local station: **Copenhagen**

Approval Engineer: **Frode Nygård**

for **DNV GL**

Odd Magne Nesvåg
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Product description

The Leakage Alarm System, LAS-10 is an atmospheric oil mist- and gas detection system for open engine rooms, comprising the following units:

Unit	Part number	Component Name
Detector	D-1115 M-1010 M-1012 P-2869	LAS-10 Detector, Complete Detector bracket Wire Set Power/Communication plug, 5-pole
Control Unit	P-3269	LAS-10 Control Unit, Complete
Monitor	P-3301 P-3302	LAS-10 Monitor 12”, Complete LAS-10 Monitor 17”, Complete
USB Interface	M-2002	LAS-10 USB interface, Complete
Power supply unit	P-2010 P-2011	LAS-10 Power Supply unit 1000W, Complete LAS-10 Power Supply unit 3000W, Complete

Software Version Number: V3.12

Place of manufacture

DASPOS A/S
Gammel Klausdalsbrovej 495, 1. tv
2730 Herlev
Denmark

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Software control
All changes in software are to be recorded as long as the system is in use on board. Documentation of major changes is to be forwarded to DNV GL for evaluation and approval before implemented on board.

Application/Limitation

LAS-10 is intended used in engine rooms for early detection of fuel oil leakage.

The Hydrocarbon gas detection and alarm functionality have not been considered against DNV GL rules for classification of ships Pt.6 Ch.2 Sec.5 (Gas fuelled Ship Installations) and is not covered by this Type Approval Certificate.

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Type Approval documentation

Tests carried out
Applicable tests according to class guideline DNVGL-CG-0339, November 2016.
Functional test required by IMO MSC/Circ. 1086: Performed on Atmospheric Oil Mist Detector

Marking of product
The products to be marked with:
- manufacturer name
- model name
- serial number
- power supply ratings

Periodical assessment
The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:
- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE