TYPE APPROVAL CERTIFICATE

Certificate no.:
TAA00003KC
Revision No:
1

This is to certify:

that the Speakers

with type designation(s)
D1x D2x Loudspeakers

issued to
European Safety Systems Ltd.
London, LO, United Kingdom

is found to comply with
DNV rules for classification – Ships, offshore units, and high speed and light craft
IEC 60092-504 Ed. 4.0 (2016-09) Electrical installations in ships – Part 504: Automation, control and instrumentation

Application:

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

Location classes:

Temperature	**D**
Humidity	**B**
Vibration	**A**
EMC	**B**
Enclosure	**C / IP66**

Issued at **Høvik** on **2025-12-10**
This Certificate is valid until **2030-04-21**.
DNV local unit: **UK & Ireland CMC & VMC**

for **DNV**

Approval Engineer: **Frode Nygård**

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

Product description

The audible signaling range of PA loudspeakers with multiple transformer tapping, UL, cUL, IECEx and ATEX approved. Type 4/4X, IP66 marine grade, corrosion proof aluminium enclosure ensures suitability for all Class I & II Div 1 & Zone 1, 20 and 21 explosion proof applications.

Audible signaling devices: Item Number: [a] [volt]

[a]		Product	Type
	D1xL1	D1xL1F	<117dB(A), 15W Speaker, Flare re-entrant horn
	D1xL2	D1xL2F	<123dB(A), 25W Speaker, Flare re-entrant horn
		D1xL2H	<126dB(A), 25W Speaker, High output flare re-entrant horn
	D2xL1	D2xL1F	<120dB(A), 15W Speaker, Flare re-entrant horn
	D2xL2	D2xL2F	<124dB(A), 25W Speaker, Flare re-entrant horn
		D2xL2H	<129dB(A), 25W Speaker, High output flare re-entrant horn

[volt]	Voltage Range	
V100	100V Line Transformer	
V070	70V Line Transformer	(Only D1xL1 and D1xL2)
V725	25V/70V Line Transformer	

Place of manufacture

European Safety Systems Ltd.
Impress House, Mansell Road, Acton,
London,
UK
W3 7QH

Application/Limitation

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

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, 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 rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Type Approval documentation

Tests carried out

Applicable tests according to:
- Class guideline DNV-CG-0339, August 2021
- EN 60945:2002 incl. IEC 60945 Corr.1:2008

Marking of product

The products to be marked with:
- manufacturer name
- item number
- 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.

This certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in https://approvalfinder.dnv.com

END OF CERTIFICATE