Certificate no.:
TAA00003HM

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Fire Technical Ancillary Equipment

with type designation(s)
D1x D2x Sounders

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 60945 Ed. 4 (2002-08) Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results

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	**A**
Enclosure	**C/IP66**

Issued at **Høvik** on **2025-04-14**
This Certificate is valid until **2030-04-13**.
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 USD 300 000.

Product description

The E2S Warning Signals D1x and D2x range of alarm horn sounder feature sound outputs of up to 129dB(A).
The range includes alarm horn sounders with multiple alarm tones, UL, cUL, IECEx and ATEX approved.
Type 4/4X, IP66/67 marine grade, corrosion proof aluminium enclosures ensure suitability for all Class I & II Div 1 & Zone 1, 20 and 21 explosion proof applications and all Class I & II Div 2 & Zone 2 and 22 hazardous area applications.

D1x / D2x: Alarm Horn Sounder devices: Item Number: [a] [volt]

[a]		Product	Type
	D1xS1	D1xS1F	<115dB(A) Alarm Horn Sounder, Flare re-entrant horn
		D1xS1R	<110dB(A) Alarm Horn Sounder, Radial omni-directional horn
	D1xS2	D1xS2F	<123dB(A) Alarm Horn Sounder, Flare re-entrant horn
		D1xS2H	<128dB(A) Alarm Horn Sounder, High SPL flare re-entrant horn
	D2xS2	D2xS2F	<123dB(A) Alarm Horn Sounder, Warning Siren, Flare re-entrant horn
		D2xS2H	<129dB(A) Alarm Horn Sounder, High SPL flare re-entrant horn

[volt]	Voltage Range
DC024	11.5-54Vdc
AC230	100-240Vac 50/60Hz

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:
- C|lass guideline DNV-CG-0339, August 2021
- EN 60945:2002 incl. IEC 60945 Corr.1:2008
- EN 54-3:2014 incl. A1:2019

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.

END OF CERTIFICATE