

TYPE APPROVAL CERTIFICATE

Certificate no.:
TAA00003DF
Revision No:
2

This is to certify:

that the **Fire Technical Ancillary Equipment**

with type designation(s)

D1xS1FDC024, D1xB2X05, D1xB2X10

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:

| Type | Temperature | Humidity | Vibration | EMC | Enclosure |
|--------------------|-------------|----------|-----------|----------|-----------------|
| D1xS1FDC024 | D | B | A | B | C / IP66 |
| D1xB2X05 | D | B | A | B | C / IP66 |
| D1xB2X10 | D | B | A | B | C / IP66 |

Issued at **Høvik** on **2025-06-10**

This Certificate is valid until **2029-04-25**.

for **DNV**

DNV local unit: **UK & Ireland CMC & VMC**

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 AlertAlarm & AlertAlight devices are UL, cUL, ULC, IECEx and ATEX approved explosion proof, Type 4/4X, IP66 marine grade, corrosion proof aluminium enclosure, IEC60945 location is classed Exposed.

AlertAlarm device: [a] [volt]

| [a] | Type | Product |
|--------|--------|---|
| | D1xS1F | Alarm Horn Sounder, sound output 115dB(A) |
| [volt] | Model | Voltage Range |
| | DC024 | 20 - 28Vdc |

AlertAlight devices: [a] [volt]

| [a] | Type | Product |
|--------|----------|--|
| | D1xB2X05 | 5 Joule Xenon strobe beacon, effective candela 156.65cd |
| | D1xB2X10 | 10 Joule Xenon strobe beacon, effective candela 645.21cd |
| [volt] | Voltage | Voltage Range |
| | DC024 | 20 - 28Vdc |
| | DC048 | 42 - 54Vdc |
| | AC115 | 110-120Vac |
| | AC230 | 220-240Vac |

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
- EN 54-3:2014 incl. A1:2019
- EN 54-23:2010 (additional test for the D1xB2X05/ D1xB2X10 Xenon Strobe Beacon).

For the bridge mounted components the 'Acoustic noise and signals' were measured according to sections 11.1 of IEC 60945, 4th edition (2002) with enclosure models as above.

For the bridge mounted components the 'Compass safe distance' was measured according to section 11.2 of IEC 60945 4th edition (2002) in the enclosure models type as below with the following results:

- Xenon Beacon (48V DC & 115V AC): minimum compass safe distance: 60cm

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