

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the Alarm devices - Sounders

with type designation(s)

Audio and Audio Visual Warning Signals: SONF1, SONFL1X, AL105NX, AL112NX

Issued to

**European Safety Systems Ltd.
London LO, United Kingdom**

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2015/559,**

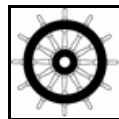
Annex A.1, item No. A.1/3.53 and Annex B, Module B in the Directive; SOLAS 74 as amended, Regulation II-2/7 & X/3, 1994 HSC Code 7, 2000 HSC Code 7, FSS Code 9 and IMO MSC.1/Circ.1242

Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-02-28**.

Issued at **Høvik** on **2017-03-01**

DNV GL local station:
Southampton



for **DNV GL AS**

Approval Engineer:
Nils Jarem

Notified Body
No.: **0575**

Vidar Dolonen
Head of Notified Body



The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Product description

SONFL1XDC024 Alarm Horn & Xenon Strobe Beacon:

The SONFL1X features the 100dB (A) SONF1 alarm horn sounder combined with the L101X Xenon strobe beacon. The 5 Joule Xenon strobe generates over 200 candelas of light output. DC versions have multiple flash rates selectable during installation. Sounder & beacon may be connected from a single supply for simultaneous operation or from separate supplies for independent operation.

AL105NXDC024 combined sounder / xenon beacon

The AL105NX features the 112dB (A) A105N alarm horn sounder combined with the L101X Xenon strobe beacon. The compact, robust housing is ideal for all general signalling applications including fire, security and process control.

AL112NXDC024 combined sounder / xenon beacon

The AL112NX features the 119dB (A) A112N alarm horn sounder combined with the L101X Xenon strobe beacon. The compact, robust housing is ideal for all general signalling applications including fire, security and process control.

SONF1DC024 sounder (type B)

The SONF1 is a compact, high output, 100dB(A) alarm sounder. Low current consumption and high SPL in a robust fire retardant housing ensure the SONF1 is suitable for all general signalling applications including fire, security and process control

Supply Voltages: 24V DC/AC

Application/Limitation

MODEL	TEMPERATURE	VIBRATION	EMC	ENCLOSURE (IP)
SONFL1XDC024	TEM-C	VIB-A	EMC-A	IP33C
AL105NXDC024	TEM-D	VIB-A	EMC-A	IP33C
AL112NXDC024	TEM-D	VIB-A	EMC-A	IP33C
SONF1DC024	TEM-C	VIB-A	EMC-A	IP33C

Definition of the location classes with reference to relevant standards:

Temperature

TEM-C Location (-25°C/+55°C) (ref. IEC 60092-504 (2001) table 1 item 6-7)

TEM-D Location (-25°C/+70°C) (ref. IEC 60092-504 (2001) table 1 item 6-7)

Vibration

VIB-A For general applications. (ref. IEC 60092-504 (2001) table 1 item 10)

EMC

EMC-A General power distribution zone (ref. IEC 60092-504 (2001) table 1 item 19-20)

Type Examination documentation

Equipment	Scope	Document	No.
SONFL1XDC024	EN 54-3	VdS Test Report BMA 05306 dated 2005-05-09	7
		VdS Test Report BMA 14023 dated 2014-03-14	10
	IEC 60092-504, IEC 60533	MS Testing TL16146C-ENV dated 2017-01-04	22
		Intertek 102769306LHD-001a rev. 1	23
		Intertek 102769306LHD-002a rev. 1	26
		VdS Test Report BMA 05306 dated 2005-05-09	7
		VdS Test Report BMA 13012 dated 2013-02-26	6
	EN 54-23	VdS Test Report BMA 14024 dated 2014-03-13	5
		VdS Test Report BMA 13012 dated 2013-02-26	6
	Product data	VdS Test Report BMA 14024 dated 2014-03-13	5
E2S: 2-31-050 dated 2014-12-15		3	

Job Id: **344.1-005796-1**
 Certificate No: **MEDB00001EH**

Equipment	Scope	Document	No.
AL105NXDC024	EN 54-3	VdS Test Report BMA 05119 dated 2005-10-17	8
		VdS Test Report BMA 14023 dated 2014-03-14	10
	IEC 60092-504, IEC 60533	MS Testing TL16146B-ENV dated 2017-01-04	21
		Intertek 102769306LHD-001b rev. 1	24
		Intertek 102769306LHD-002b rev. 1	27
		VdS Test Report BMA 05119 dated 2005-10-17	8
		VdS Test Report BMA 13012 dated 2013-02-26	6
		VdS Test Report BMA 05306 dated 2005-05-09	7
	EN 54-23	VdS Test Report BMA 13012 dated 2013-02-26	6
		VdS Test Report BMA 14024 dated 2014-03-13	5
Product data	E2S: 2-31-120 dated 2014-12-15	2	
AL112NXDC024	EN 54-3	VdS Test Report BMA 07080 dated 2007-09-10	9
		VdS Test Report BMA 14023 dated 2014-03-14	10
	IEC 60092-504, IEC 60533	MS Testing TL16146A-ENV dated 2017-01-04	20
		Intertek 102769306LHD-001c rev. 1	25
		Intertek 102769306LHD-002c rev. 1	28
		VdS Test Report BMA 07080 dated 2007-09-10	9
		VdS Test Report BMA 13012 dated 2013-02-26	6
		VdS Test Report BMA 05306 dated 2005-05-09	7
	EN 54-23	VdS Test Report BMA 13012 dated 2013-02-26	6
		VdS Test Report BMA 14024 dated 2014-03-13	5
Product data	E2S: 2-31-180 dated 2014-12-15	1	
SONF1DC024	EN 54-3	VdS Test Report BMA 05036 dated 2005-05-09	7
	IEC 60092-504, IEC 60533	MS Testing TL16146C-ENV dated 2017-01-04	22
		Intertek 102769306LHD-001a rev. 1	23
		Intertek 102769306LHD-002a rev. 1	26
	Product data	VdS Test Report BMA 05306 dated 2005-05-09	7
		E2S: 2-21-010 dated 2016-01-05	4

Tests carried out

- IEC 60092-504 (2001) incl. Corr. 1 (2011)
- IEC 60533 (2015)
- EN 54-3 (2014)
- (Additional tests for lights: EN 54-23)

Marking of product

In general, and for identification to this type examination certificate the products shall be marked with:

- Manufacturer's name or trade mark
- Type designation
- Mark of Conformity (see below)

Mark of Conformity

The Mark of Conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-control phase module (D, E, or F) of ANNEX II of the Directive is fully complied with and controlled by a written inspection agreement with a notified body.

Module D: The quality system for production and testing shall be approved by the Notified Body.

Module E: The quality system for inspection and testing shall be approved by the Notified Body.

Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a of Certificate Conformity.