

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00005FK

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the Fire alarm devices - Sounders

with type designation(s)
AGM 410.1.8.2

Issued to

sm electrics GmbH services & more
Stakendorf, Schleswig-Holstein, Germany

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

Regulation (EU) 2021/1158,

item No. MED/3.53. SOLAS 74 as amended, Regulation II-2/7 & X/3, 1994 HSC Code 7, 2000 HSC Code 7, FSS Code 9, IMO MSC.1/Circ.1242 and IMO MSC.1/Circ.1487

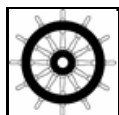
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2026-10-17**.

Issued at **Hamburg** on **2021-10-18**

DNV local station:
Hamburg

Approval Engineer:
Didier Girardin



Notified Body
No.: **0098**

for DNV SE

Christine Mydlak-Roeder
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 SE 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

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 AGM 410.1.8.2 has been designed to generate alarm sound for various marine applications. The main field of application is the ships engine room. The device comes with 8 different alarm inputs which are sorted according to its priority. The fire alarm input has always the highest priority

Application/Limitation

The equipment is found to comply with the following location/application dependent requirements (for definition of each of the location classes, see below the table):

Product	Temperature	Vibration	EMC	Enclosure
AGM 410.1.8.2	Temperature A	Vibration A	EMC B	IP 66

Definition of the location classes with reference to relevant standards:

Temperature A:	Location (-10°C to +55°C) (ref. IEC 60092-504:2016) table 1 item 6-7)	Test: CNBOP 15+17
Vibration A:	(±1mm / 0.7g) (ref. IEC 60092-504:2016 table 1 item 10)	Test: CNBOP 23
EMC B:	Bridge and open deck zone (ref. IEC 60092-504:2016 table 1 item 13-20)	Test: TREO 4.1.3
IP 66:	Outdoor (IP66) (ref. IEC 60092-504 (2016) table 1 item 12)	Test: CNBOP test 5

Type Examination documentation

Hidden

DNV No	Drw No	Rev	Title
	991527-101-20201111	20201111	Drawing Fire Alarm Sounder AGM 410.1.8.2
	991527-401-20211008	20211008	AGM 410.1.8.2 User Manual
	991527-501-20211007	20211007	AGM 410.1.8.2 Electrical & Assembly Drawings
	991527-301-20211007	20211007	AGM 410.1.8.2 technical data sheet
	991527-701-20211007	20211007	AGM type number definition
	991527-601-20211007	20211007	Component List AGM 410.1.8.2
	991527-801-20211007	20211007	Material Data Sheet AGM 410.1.8.2
TR	097-21 Issue 1	20210721	EMC tests
TR	097-21 Issue 2	20210930	EMC tests
TR	CNBOP 866/BA/21	20210701	Test report without TR recording (English language)
TR	CNBOP 866/BA/21	20210622	Test report in polish language
TR	CNBOP 1416/BA/21	20210701	Env. Test (Translation of test protocols to report 866/BA/21)
TR	Test Spec: AGM 410.1.8.2	-	EN 54-3 Cross reference overview

Tests carried out

The relevant tests have been carried out according to the following standards:

- EN 54-3:2014 incl. A1:2019,
- IEC 60092-504:2016,
- IEC 60533:2015.

Marking of product

For identification to this type examination certificate the products shall be marked with:

- Manufacturer's name or trademark
- Type designation
- Mark of Conformity (wheel mark), followed by
 - identification number of the NoBo involved in production control (MED D)
 - the year the mark is affixed.
 - Example: 0098/2021