

TYPE APPROVAL CERTIFICATE

Certificate No:
TAA00001HX
Revision No:
1

This is to certify:

That the Sound Signal Appliances (Whistle / Bell & Gong)

with type designation(s)

DS 5, DS 10, Options: -MX, -TAS, -TAV, -3G/3D

Issued to

PfannenberG GmbH
Hamburg, Germany

is found to comply with

DNV rules for classification – Ships and offshore units

Application :

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

Type

DS 5, DS 10

Options: -MX, -TAS, -TAV, -3G/3D

Temperature	Humidity	Vibration	EMC	Enclosure
D	B	A	B	IP67

Issued at **Hamburg** on **2023-03-27**

This Certificate is valid until **2028-03-26**.

DNV local unit: **Hamburg**

Approval Engineer: **Didier Girardin**

for **DNV**



Digitally Signed By: Papanuskas, Joannis
Location: DNV GL SE Hamburg, Germany

Joannis Papanuskas
Head of Section

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

Electronic, Acoustical Alarm Sounder with Hooting and Siren Tone

Power supply:	12V DC, 24V DC, 48V DC, 115V AC, 230V AC available
Sound level at 1m distance:	DS 5: 105 dB(A) DS 10: 110 dB(A), 12V DC: 106 dB(A)
Signals:	31 different warning and emergency signals
Duty cycle:	100 %
Material of housing:	GD-Al Si12 Cu
Degree of protection:	IP 67
Software version:	30007-200 SW-P, dtd. 12.11.2002

Option -MX (24V DC): Soft Start Module and resistor for line monitoring

Option -TAS, -TAV: Extern tone selection stage 2,3 and 4

Option -3G/3D: Sounders for use in an explosion-hazard environment

Application/Limitation

None

Type Approval documentation

See ANNEX

Tests carried out

Applicable tests according to Class Guideline DNV-CG-0339, December 2019

Marking of product

The products to be marked with:

- manufacturer name
- model name
- production order 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



ANNEX
Hidden

Job Id: **262.1-025552-2**
Certificate No: **TAA00001HX**
Revision No: **1**