DNV·GL

Certificate No:
TAA00001HX

TYPE APPROVAL CERTIFICATE

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 GL 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 GL.

Type	Temperature	Humidity	Vibration	EMC	Enclosure
DS 5, DS 10 **Options: -MX, -TAS, -TAV, -3G/3D**	**D**	**B**	**A**	**B**	**IP67**

Issued at **Hamburg** on **2017-11-27**
This Certificate is valid until **2022-11-26**.
DNV GL local station: **Hamburg**

Approval Engineer: **Didier Girardin**

for **DNV GL**

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.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

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 DNVGL-CG-0339, Nov 2016

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