



Certificate No:
TAA000039J

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Public Address and General Alarm System

with type designation(s)
VX-3000

Issued to

TOA Electronics Europe GmbH
Hamburg, Germany

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft
LSA Code VII 7.2
IMO MSC Circ 808

Application :

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

Temperature: A

Humidity: A/*B

Vibration: A

EMC: A/B**

Enclosure: A

Issued at **Hamburg** on **2023-06-28**

This Certificate is valid until **2028-04-20**.

DNV local unit: **Hamburg – CMC North/East**

for **DNV**

Approval Engineer: **Jens Dietrich**

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.



Form code: TA 251

Revision: 2022-12

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Product description

The TOA VX-3000 Public Address and General Alarm system can be used for either application:

- PA system only
- Integrated PA and GA system

When used for PA on passenger vessels or integrated PA and GA on any vessel, the system shall be a duplicated (A+B system). When used for passenger vessels the A and B systems shall be installed in separate fire zones.

The VX-3000 Public Address and General Alarm System consists of the following equipment:

TOA component scope

Model	Description	Requirement
VX-3004F	System manager, 4 zones	Minimum 1 out of these
VX-3008F	System manager, 8 zones	
VX-3016F	System manager, 16 zones	
VX-015DA	amplifier module, 150 watts	Minimum 1 out of these
VX-030DA	amplifier module, 300 watts	
VX-050DA	amplifier module, 500 watts	
VX-3000DS CE	Power supply for 2000 watts audio power, German AC-mains plug	Minimum 1 out of these
VX-3000DS CE-GB	Power supply for 2000 watts audio power, British AC-mains plug	
VX-3150DS HCE	Power supply for 1000 watts audio power, German and British AC-mains plug	
RM-300X *	desktop microphone	Minimum 2 out of these
PM-1200X */**	emergency microphone	
RM-200SF */**	wall-mount remote microphone	
RM-210F *	button expansion for RM-300X	Option
AN-9001	sensor microphone for ambient noise sensing	Option
IES-2042FX-MM-SC	Ethernet switch with 2 fiber optical paths from ORing (Taiwan)	One per location when more than 1 location
BZGen	Tone generator being controlled by fire alarm system	When fire alarm system controls GEA

*/** Deviating location classes: see page 1.

Necessary Parts

Model	Description	Requirement
VX series	Cabinet rack (series) from Rittal	Minimum 1
3140100	Rittal roof fan	Minimum 1 per cabinet rack
FN2090-16-06	AC-mains filter from Schaffner	1 out of these per VX-3000DS or two VX-3150DS
WE-CLFS 810913014	AC-mains filter from Würth Electronics	
B84142B0016R000	AC-mains filter from TDK/Epcos	
DPA M CLE RJ45B 48	Surge protector from Dehn for RJ45/Cat5/5e/6/7 cables	1 per each RM-200SF, RM-300X

Software Version 5.22.

Application/Limitation

1. VX-3000 Application for Maritime Applications, Part 2 has to be observed for construction / setting.

2. The mounting location with regard to the above location classes are to be observed.
3. Call Stations which are not used for emergency PA activation shall have a lower priority than GA.
4. Call Stations with functions for activation of Emergency PA and GA are to be installed in locations with access control.
5. Call Stations with functions for activation of Emergency PA and GA shall be provided with means to avoid unintended use, i.e. cover for protection of keys. Keys shall be clearly labelled.
6. When used as combined PA/GA system, a minimum two independent speaker loops are required.
7. Interconnection to other IP network/LAN is subject to separate case-by-case approval.
8. The duration of the emergency power supply is to be according to Pt.4 Ch.8 Sec.2, par.3.
9. The power supply concept with battery back-up is to be submitted for the individual vessel project.
10. Any entertainment content used on the speaker systems must be muted in case of PA/GA announcements.
11. If local volume control is used, this needs to be overridden in case of PA/GA announcements.
12. The requirements stipulated in SOLAS Ch. III, Part B, Reg.6 are to be observed for the respective vessel.
13. For the acoustic representation of emergency signals the IMO Code on Alerts and Indicators A.1021(26) has to be observed.
14. Compliance with minimum sound pressure levels required by the LSA Code Ch.VII, 7.2 is to be checked onboard.

Tests carried out

- Applicable tests according to DNV-CG-0339, August 2021
- Functional performance tests according to DNV GL Type Approval program 848.22

Marking of product

Racks are labelled with: Company name and address, system type designation, production no., firmware revision, manufacturing date.

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