



TYPE APPROVAL CERTIFICATE
No. ELE117918XG

This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	PUBLIC ADDRESS AND GENERAL ALARM SYSTEM
<i>Type</i>	SPA-V2 PA and GA SYSTEM
<i>Applicant</i>	ZENITEL NORWAY AS BROMSVEIEN 17 N-3194 HORTEN NORWAY
<i>Manufacturer</i>	ZENITEL NORWAY AS
<i>Place of manufacture</i>	BROMSVEIEN 17 N-3194 HORTEN NORWAY
<i>Reference standards</i>	RINA Rules for Classification of ships, Part C Machinery systems and fire protection, Ch.3, Sect.6, Table 1; // Resolution A.1021 (26) - Code on Alert and Indicators; MSC. 48(66) LSA Code; MSC/Circ. 808; IACS E10: Corr.1 July 2003

Issued in **HAMBURG** on **June 29, 2018**. *This Certificate is valid until* **June 29, 2023**

RINA Services S.p.A.
Giuseppe Russo

This certificate consists of this page and 1 enclosure





RINA

TYPE APPROVAL CERTIFICATE

No. ELE117918XG

Enclosure - Page 1 of 3

SPA-V2 PA and GA SYSTEM

...Product Description:

The SPA-V2 system can be configured in different ways. The following variant are possible:

- SPA2-xx-P; only PA system (minimum one approved amplifier)
- SPA2xx-GD; Integrated PA/GA system for standard vessels (minimum two approved amplifier)
- SPA2-xx-GP; Integrated PA/GA system for passenger vessels (minimum two approved amplifier divided in two different racks)

Power Supply:

- 230 V AC, 50-60 Hz, max. 2A per 100 Watt amplifier.
- 24 V DC Emergency power, max. 8 a per 100 Watt amplifier

RACKS

ID	Description
SPA-120-V2	12HU rack with 1x SPA-TERM-V2 & 1x VPA-120
SPA-240-V2	12HU rack with 1x SPA-TERM-V2 & 1x VPA-240
SPA-400-V2	12HU rack with 1x SPA-TERM-V2 & 1x VPA-400
SPA-BASIC-12-V2	12 HU rack for one amplfier with SPA-TERM-V2, SPA-EE3-V2, SPA-AL-REL-V2 SPA-CHIME-V2, SPA-UPS
SPA-BASIC-16-V2	16 HU rack for two amplfier with SPA-TERM-V2, SPA-MUL-V2, SPA-EE3D-V2, SPA-AL-REL-V2 SPA-CHIME-V2, SPA-UPS

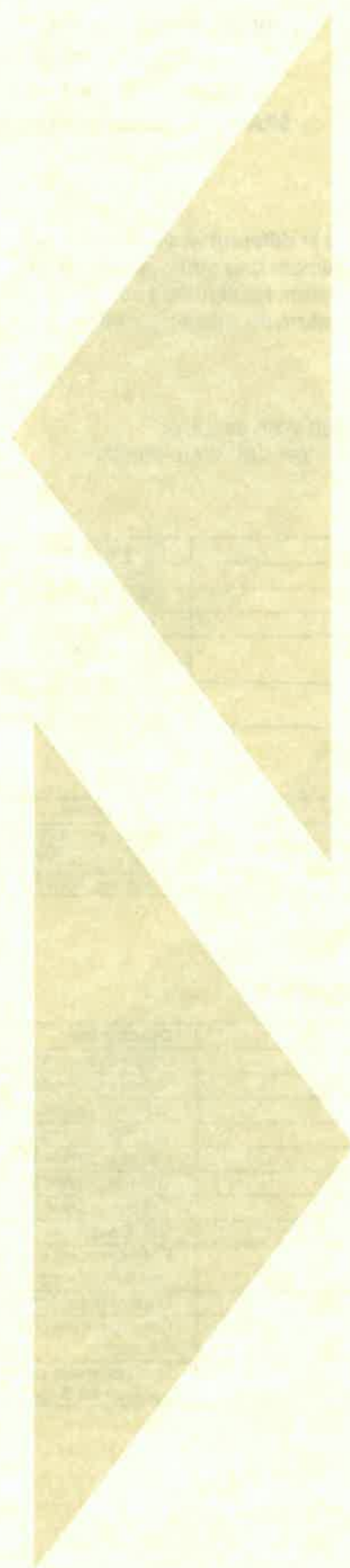
AMPLIFIERS

ID	Description
VPA-120	Pastrong 120W @ 100V audio
VPA-240	Pastrong 240W @ 100V audio
VPA-400	Pastrong 400W @ 100V audio

VOLUME CONTROL & PROGRAM SELECTOR

ID	Description
VCOR-15	Volume controller w/24VDC override, 15W
VCOR-15F	Volume controller w/24VDC override, fail-safe, 15W
VCOR-60	Volume controller w/24VDC override, 60W
VCOR-60F	Volume controller w/24VDC override, fail-safe, 60W
VM-15RD	Volume control 15W dual
VM-50RD	Volume control 50W dual
VM-15RDF	Volume control 15W fail-safe dual
VM-50RDF	Volume control 50W fail-safe dual
SPA-PROG4-RDF	Entertainment selector for 4 external 100V sources with 100V PA and override input fail-safe dual
SPA-PROG2	Control panel for SPA-ENTP2X2I dual
ENT-4F	Entertainment panel for 4 external 100V sources override and 100V PA audio
ENT-2D	Entertainment panel for 2 programs 100V with override and separate speaker for B loop





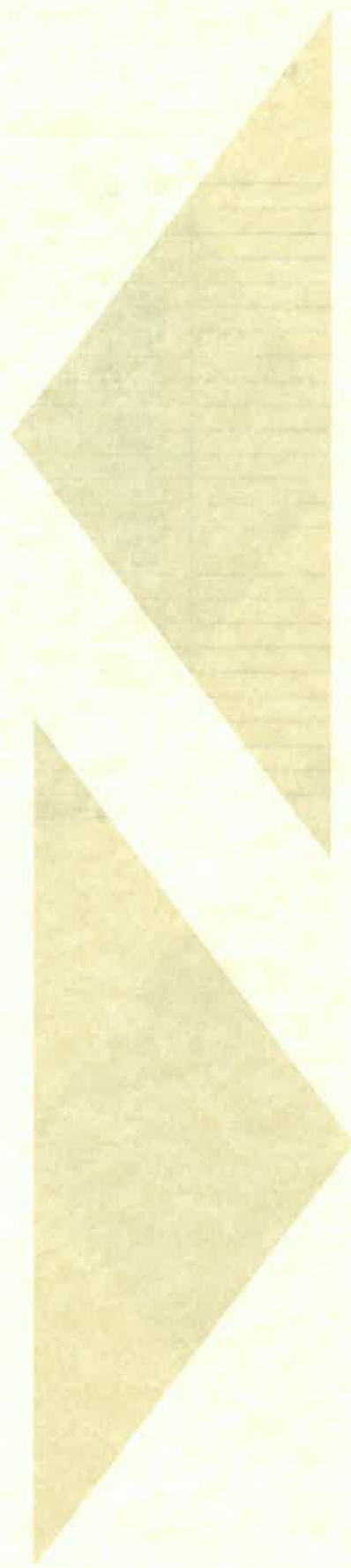
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TYPE APPROVAL CERTIFICATE
No. ELE117918XG
Enclosure – page 2 of 3

PANELS & ACCESSORIES

ID	Description
SPA-M1-V2	All-call microphone panel with goose mic flush
SPA-M1-D	All-call microphone panel with goose mic flush dual
SPA-M6-V2	6 zone microphone panel with goose mic flush
SPA-M6S-D	6 zone microphone panel with goose mic flush dual
SPA-M6HM-V2	SPA-M6H-V2 with zone selection memory
SPA-M6SM-V2	SPA-M6S-V2 with zone selection memory
SPA-M6HDM-V2	SPA-M6H-D with zone selection memory
SPA-M6SDM-V2	SPA-M6S-D with zone selection memory
SPA-AC6	6 button alarm panel
SPA-AC6-D	6 button alarm panel dual
SPA-W1-V2	All-call microphone panel with hand mic IP-66
SPA-W1-D	All-call microphone panel with hand mic IP-66 dual
SPA-W1AR-V2	All-call microphone panel with hand mic & two alarm buttons IP-66
SPA-W1AR-D	All-call microphone panel with hand mic & two alarm buttons IP-66 dual
SPA-W2-D	2 zone microphone panel with hand mic IP-66
SPA-W6A4	6 zone microphone panel with hand mic & 4 alarm buttons IP-66
SPA-W6A4-D	6 zone microphone panel with hand mic & 4 alarm buttons IP-66 dual
MB-30G	Electret goose microphone
ETC-1	Dynamic hand microphone
P-66	Hand microphone IP-47
P-66/10	P-66 with 10 meter cable
SPA-REM7	Remote panel for SPA-DARP16
SPA-MON1	Monitor panel
ETC-1-TB	Dynamic hand microphone





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TYPE APPROVAL CERTIFICATE**No. ELE117918XG****Enclosure – page 3 of 3****SPEAKERS**

ID	Description
CL-200T	Ceiling10W IP-44
CAU-4T	Wall 4W IP-55
CW-4T	Wall 4W
CW-4T/VOF	Wall 4W w/ volume control override fused
CAR-4TF	Wall double face 4 fused
BF-560STT	Ceiling tropicalized 6W fused
VES-360TF	Ceiling 6W fused
213000101	Dual flush 6W
SAFE-10PTF	Wall 10W IP-44
VML-15T	Horn 15W IP-66
HP-15TF	Horn 15W fused IP-65
HP-30T	Horn 30W IP-67
DST-100 & DH-30/ DH-50	Driver and horn 100W IP-67
CAREEX-6T	Double face 6W Atex
DSP-15EExeNT	Horn 15W Atex iP-67
2340020001	Driver and horn 40W Atex
HP-20ST	Horn 20W Ex Z2 IP-67

Reference documents:

- Installation and configuration manual A100K10370
- User Manual A100K10371
- Equipment list GR 11-001, Rev. V0.1
- DNV Type Approval Certificate No. A-12740

Test reports:

- DELTA Test Report DANAK-1911533, dated of 19.08.2011

Remarks:

System block diagram and project documentation is to be approved for each installation.

The certificate supersedes previous RINA certificate No. ELE138412XG.

HAMBURG June 29, 2018

A handwritten signature in blue ink, appearing to be 'J. M.', is written over the page.

