

**BLUE OCEAN
VDR / S-VDR**

Operator's Manual

SAFETY INSTRUCTIONS

WARNING

ELECTRICAL SHOCK HAZARD

Do not open the equipment.

Only qualified personnel should work inside the equipment.

Immediately turn off the power at the switchboard if water leaks into the equipment or something is dropped in the equipment.

Continued use of the equipment can cause fire or electrical shock. Contact a COMAS agent for service.

Do not disassemble or modify the equipment.

Fire, electrical shock or serious injury can result.

Do not place liquid-filled containers on the top of the equipment.

Fire or electrical shock can result if a liquid spills into the equipment.

Use the proper fuses.

Use of the wrong fuse can cause fire or permanent damage to the equipment.

WARNING LABEL

A warning label is attached to the AC-DC power supply. Do not remove the label. If the label is missing or damaged, contact a COMAS agent or dealer about replacement.

Immediately turn off the power at the switchboard if the equipment is emitting smoke or fire.

Continued use of the equipment can cause fire or electrical shock. Contact a COMAS agent for service.

Make sure no rain or water splash leaks into the equipment.

Fire or electrical shock can result if water leaks in the equipment.

Do not operate the equipment with wet hands.

Electrical shock can result.

FOREWORD

Features

The BlueOcean VDR/SVDR is build according to IEC60945(2002), IEC61996(2000) or IEC61996-2, IEC61162-1(2000)

Important Notices

- No part of this manual may be copied or reproduced without written permission.
- If this manual is lost or worn, contact your dealer about replacement.
- The contents of this manual and equipment specifications are subject to change without notice.
- The example screens (or illustrations) shown in this manual may not match the screens you see on your display. The screen you see depends on your system configuration and equipment settings.
- COMAS will assume no responsibility for the damage caused by improper use or modification of the equipment or claims of loss of profit by a third party.

SYSTEM CONFIGURATION

Configuration A: SVDR

According to IEC61996-2

Model: VDU1M-S Plus

Main characteristics

Radar: optional, can be replaced by AIS

Alarms: optional

Configuration B: VDR

According to IEC61996(2000)

Model: VDU1M-F Plus

Main characteristics

Radar: mandatory

Alarms: mandatory, up to 250 supported

Doors: supported (up to 250)

Openings: supported (up to 250)

SPECIFICATIONS

Configuration A: SVDR

According to IEC61996-2

Model: VDU1M-S

The specification for S-VDR differs significantly from that for VDR in two areas:

- a) the requirements for monitoring certain sensors are reduced when the data is not provided in IEC 61162 format, and
- b) the requirements for the protective S-VDR capsule are different from the VDR capsule, both for the fixed and float-free versions.

Protective Capsule

Both fixed and floating type supported.

Capsules that can be used:

L3 model SVR02

MacMurdo Model C1

Interfaces

A. Mandatory

IEC61162 (NMEA): 8 channels

Audio: 8 microphones, 4 VHF inputs

Radar: up to 1280x1024

B. Optional (not required by the standard)

Analogue inputs for old equipment

Digital inputs for alarms, openings and doors

Data items to be recorded

Recorded at least for 12 h

A. Full configuration data in special database

B. Status data

Internal conditions monitoring:

- Power supply
- Record function
- Module function
- Microphone condition
- Errors and diagnostics

Ship Data

Mandatory items

Date and time: internal clock continuously synchronised with external source (digital PLL). In case of loss of external source drift is less than 1 sec /hour. Resolution of recordings is 0.01 sec.

Ship's position

Speed

Heading

Bridge Audio: 8 microphones and 4 VHF inputs supported

RADAR: resolution up to 1280x1024. Where there is no commercial off-the-shelf interface available to obtain radar data then AIS target data shall be recorded

AIS

Depth

Ruder order

Ruder response

Engine order

Engine response

Items that can be recorded if presented on the bridge:

Main alarms: includes the status of all IMO mandatory alarms on the bridge. Other alarms can be included optionally

Accelerations and hull stresses

Wind speed and direction

Hull openings (doors) status

Watertight and fire door status

The last 2 item classes can optionally be classified as alarms

Other Items: auxiliary items can be recorded if presented in NMEA format

All data are stored in a format that allows correlation in date and time by the playback equipment

Operation

Normal operation fully automated

Optional display shows most significant items (not required by the standard)

Termination of normal operation is key and password protected

Power source

Normal: 230 Vac nominal, 1A (max 1,5A), 85-275 Vac

Ship's emergency power: 24 Vdc, 3A (max 4A), 18-36V

Reserve power: Internal 12 Vdc batteries, 2h minimum, internal charger

2 Ah required, use ship approved type

SPECIFICATIONS

Configuration B: VDR

According to IEC61996(2000)

Model: VDU1M-F

Protective Capsule

Both fixed and floating type supported.

Capsules that can be used:

L3 model HVR02

Interfaces

A. Mandatory

IEC61162 (NMEA): 8 channels, 16-24 optional

Audio: 8 microphones, 4 VHF inputs

Radar: up to 1280x1024

Analogue inputs for old equipment

Digital inputs for alarms, openings and doors

Data items to be recorded

A. Full configuration data in special database

B. Status data

Recorded at least for 12 h

Internal conditions monitoring:

- Power supply
- Record function
- Module function
- Microphone condition
- Errors and diagnostics

Ship Data

Mandatory items

Date and time: internal clock continuously synchronised with external source (digital PLL). In case of loss of external source drift is less than 1 sec /hour.

Resolution of recordings is 0.01 sec.

Ship's position

Speed

Heading

Bridge Audio: 8 microphones

Communications Audio: 4 VHF inputs supported

RADAR: resolution up to 1280x1024.

Depth

Main alarms: includes the status of all IMO mandatory alarms on the bridge as per 61996 annex B . Other alarms can be included optionally (up to 250 total)

Ruder order

Ruder response

Engine order

Engine response

Hull openings (doors) status: up to 250 supported

Watertight and fire door status: up to 250 supported

Some of the last 2 item classes can optionally be classified as alarms if needed

Accelerations and hull stresses: if fitted on ship

Wind speed and direction: applicable where a ship is fitted with a suitable sensor.

Other Items: auxiliary items can be recorded if presented in NMEA format

All data are stored in a format that allows correlation in date and time by the playback equipment

Operation

Normal operation fully automated

Optional display shows most significant items (not required by the standard)

Termination of normal operation is key and password protected

Power source

Normal: 230 Vac nominal, 1A (max 1,5A), 85-275 Vac

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