

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB00005J4
Revision no.:
14

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV AS under the authority of the Government of Norway.

This is to certify:

that the **Voyage data recorder (VDR)**

with type designation(s)

DM100 VDR G2 (trade name Sperry Marine Voyage Master IV VDR G2, Wärtsilä VDR 4380); DM100 VDR G3 (trade name Sperry Marine Voyage Master IV VDR G3, NACOS Marine VDR 4380)

issued to

Danelec Marine A/S
Farum, Denmark

is found to comply with the Implementing Regulation (EU) 2024/1975 for Item no. **MED/4.29 (Row 2 of 2)**

according to the following requirements:

SOLAS 74 Reg. V/20, IMO Res. A.694(17), IMO Res. MSC.191(79), IMO Res. MSC.302(87), IMO Res. MSC.333(90), SOLAS 74 Reg. V/18, SOLAS 74 Reg. X/3, IMO Res. MSC.36(63)-(1994 HSC Code) 13, IMO Res. MSC.97(73)-(2000 HSC Code) 13

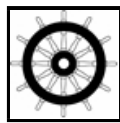
Further details of the equipment and conditions for certification are given overleaf.

Date of issue: **2025-08-13**

Expiry date: **2026-06-20**

DNV local unit:
Denmark CMC

Approval Engineer:
Steinar Kristensen



Notified Body
no.: **0575**

for **DNV AS**

.....
Christine Mydlak-Röder
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the Agreement between the United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment signed 17 October 2005, and amended by Decision No 1/2023 dated August 21st, 2023.



The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

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 USD 300 000.

Product description

Please see Appendix: Product Description

Application/Limitation

- The VDR:
 - is to be installed in accordance with installation documentation.
 - supports connection of 25 ECDIS or RADAR stations.
 - supports receiving images using binary file transfer according to IEC 61162-450 ed.1 (2011), IEC 61162-450 ed.2 (2018), IEC 61162-450 ed.3 (2024) and IEC 62388, Annex H.4.
 - may support up to 4 Remote Video Interfaces with 2 inputs each.
 - may support up to 36 serial line interfaces.
 - may support MODBUS over TCP/UDP.
 - may support Serial MODBUS RTU.
 - is in compliance with IMO Res. MSC.333(90), as amended by Res. MSC.494(104), when installed with Float Free MK2 or Float free MK2-HB
 - has been tested for cyber security requirements according to IEC 61162-460 (2024) (460-Node) and DNV CS Sp1 (Essential) (incorporating IACS UR E27 Ed.Sept. 2023). Cyber secure installation shall be according to DNV Type Approval Certificate TAA00003D4.
- Float free MK2 and MK2-HB are tested for compliance with IEC 61996-1 (2013) +A1(2021) using a Galileo GNSS receiver in accordance with IEC 61108-3 (2010)

Type Examination documentation

Tests carried out

- Performance testing: IEC 61996-1 (2013) + A1 (2021)
- Environmental testing: IEC 60945 (2002) incl. Corr. 1 (2008)
- Interface testing: IEC 61162-1 (2016), IEC 61162-1 (2024), IEC 61162-2 (1998), IEC 61162-2 (2024), IEC 61162-450 ed.2 (2018), IEC 61162-450 ed.3 (2024)
- Presentation testing: IEC 62288 (2021)
- Alert Management: IEC 62923-1 (2018), IEC 62923-2 (2018)
- Security testing: IEC 61162-460 (2024) (According to 460-Node requirements)
- Security testing: DNV CS SP1 (Essential) (incorporating IACS UR E27 Ed.Sept. 2023)

Marking of product

The type designation and name and contact address of the manufacturer shall be affixed visibly, legibly and indelibly to at least one part of the product. In addition, the various equipment shall be marked with serial number. Safe distance to magnetic compass and power consumption and/or supply voltage may be stated in the individual installation manuals.

APPENDIX

Product Description

Certificate no.:
MEDB00005J4
 Revision no.:
14

DM100 VDR G2 with trade names Sperry Marine Voyage Master IV VDR G2 and Wärtsilä VDR 4380 and DM100 VDR G3 with trade name Sperry Marine Voyage Master IV VDR G3 and NACOS Marine VDR 4380 consist of the components below:

Components necessary for operation:

Component	Designation	Type designation		
		Danelec	Sperry	Wärtsilä/ NACOS Marine
Data Acquisition Unit G2 ¹⁾ or, Data Acquisition Unit G2 for 19" Rack ¹⁾ Data Acquisition Unit G3 ^{2) 3)} or, Data Acquisition Unit G3 for 19" Rack ²⁾	DAU G2 DAU-R19 G2 DAU G3 DAU-R19 G3	1305085 1305469 1306355 1306512	1305461 N/A 1306520 N/A	1305428 N/A 1306505 N/A
Bridge Control Panel	BCP	1302379	1302380	1305430
Bridge Microphone Unit	Indoor: BMU-003	1302646	1302646	1302646
	Outdoor: BMU-004	1302647	1302647	1302647
	Indoor: BMU-005	1306433	N/A	N/A
	Outdoor: BMU-006	1306311	1306311	1306311
Data Protective Capsule MK4 64 GB ⁴⁾	Capsule MK4 C64	1305078	1305078	1305431
Float free MK2 ^{4) 5)} or, Float free MK2-HB ^{4) 5)} (Heated bracket)	Float-free MK2 Float-free MK2-HB	1305474 1305475	1305474 1305475	1305474 1305475
90 Days Underwater Locating Beacon	AUB-90	2302841	2302841	2302841

- 1) Wärtsilä VDR 4380 is to be installed with DAU G2.
- 2) DM100 VDR G3 is to be installed with either DAU G3 or DAU-R19 G3.
- 3) Sperry Marine Voyage Master IV VDR G3 and NACOS Marine VDR 4380 are to be installed with DAU G3.
- 4) VDR installations shall include Protective Capsule MK4 and one Float-free capsule (MK2 or MK2-HB).
- 5) Separate certificates are required for EPIRB where the Float free is to be used to comply with carriage requirements for EPIRB.

Optional components:

Component	Designation	Type designation		
		Danelec	Sperry	Wärtsilä/ NACOS Marine
Modular Sensor Interface Unit	SIU	1000717	1000609	N/A
Compact Sensor Interface Unit	CSIU	1301871	1301871	1305496
Remote Video Interface with PoE – BNC	RVI-PoE	1302358	1302358	1302358
Remote Video Interface with PoE – DVI-I	RVI-PoE	1302365	1302365	1302365
Remote Audio Interface (8Ch) with PoE	RAI	1302859	1302859	1302859
Remote Serial Data Interface	RDI 08-001S	1303223	1303223	1303223
Ext. Extended Backup Disk (NAS 01-001)	NAS	1302370	1302370	1302370
Remote Digital Data Interface	RDI 24-001D	1303220	1303220	1303220
Remote Analog Data Interface	RDI 08-001A	1303222	1303222	1303222
Fiber optical Ethernet switch	EDS-208A-MM-SC-T	EDS-208A-MM-SC-T		

Software version: 3.xx