

TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MERB00006Z1
Revision no.:
1

This Certificate is issued by DNV UK Limited based on authorisation of the Maritime & Coast Guard Agency (MCA) as an UK Approved Body to undertake conformity assessments on marine equipment in accordance with the requirements of the Merchant Shipping (Marine Equipment) Regulations 2016 as amended.

This is to certify:

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

with type designation(s)
NW6000

issued to

Netwave Systems B.V.
Zoetermeer, Netherlands

is found to comply with the Regulation (UK) **MSN 1874 Amendment 10** for
Item no. **UK/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: **2025-06-23**

Expiry date: **2030-06-22**

DNV local unit:
Netherlands CMC

Approval Engineer:
Steinar Kristensen



Approved Body No.: **0097**



for **DNV UK Ltd.**

Digitally Signed By:

Christine Mydlak-Röder

Christine Mydlak-Röder
MER Service Responsible



**Maritime &
Coastguard
Agency**

UK Approved Body Authorised
by the MCA

This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to, and agreed with the approved body named on this certificate.

During the period of validity of this certificate the applicable regulations (international conventions and the relevant resolutions and circulars of the IMO) and testing standards may change, therefore the product conformity may need to be re-assessed by the Approved Body.

"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-control phase module (D, E or F) of Schedule 2 of the Merchant Shipping (Marine Equipment) Regulations 2016, as amended is fully complied with and controlled by a written inspection agreement with an approved body. In case limitations of use apply, these should be indicated in the Annex.

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 NW6000 VDR is to be installed according to the manufacturer's documentation.
- Local Area Network connection may be used for transfer of screen images from ECDIS and Radar using LAN interface protocols in IEC 61996-1, Annex E.
See Installation, operation and maintenance manual for details on recording capacity of screen images.
- The NW6000 VDR is in compliance with IMO Res. MSC.333(90), as amended by Res. MSC.494(104), when installed with Float Free Capsule TRON 40VDR AIS

Type Examination documentation

Please see Appendix: 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 61162-2 (1998), IEC 61162-450 (2018) |
| • Presentation of information: | IEC 62288 (2021) |
| • Bridge Alert Management: | IEC 62923-1 (2018) and IEC 62923-2 (2018) |

Marking of product

The name and contact address of the manufacturer and type designation of the product is to be affixed to the equipment in a clearly visible location. In addition the equipment shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.

APPENDIX

Type Examination documentation

Certificate no.:
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Document No.	Rev.	Title
000019224		Report: Thales, IEC60945 EMC
4543/001/4292687/ 13-1		Report: BSH, IEC60945 6, 11.1 , 13-15
0026-H0203- 0000185261	00	Report: Thales, IEC 60945 test
0026-H0203- 0000185724	00	Report: Thales, Low temp 60945 test
9505 332 926XX 001		Report: Thales, IEC 60945 7,8,9 & 10
4543/001/4292938/ 15		Report: BSH, 61162- 450 test
0606882/1		Report: Lloyds, Fire, penetration and immersion tests
2014-Efectis-R0268	02	Report: Efectis, 61996-1 Fire tests
454.VDR/Orolia NW6000/1	2020-07-15	Report: BSH, Conformance test report for NW-6000 VDR/S-VDR, IEC61996-1 and IEC 61992-2
4543/001/4292687/ 13	2015-02-25	Report: BSH, Conformance test report of Voyage Data Recorder VDR NW6000
4543/001/4292687/ 13-2	2015-01-09	Report: BSH, Conformance test report of VDR Display Bridge Control Unit, IEC 62288
E13261.06	06	Report: Nemko, Tron 40VDR IEC 60945 (2002), IEC 61097-2 (2008), IEC 61996-1 (2013) test report
9505 002 900XX 001		Report: Thales, VDR capsule shock tests
BSH/4542/002/006 2770/14		Statement of Conformity: BSH, PT9 ninety underwater locating device
	A01	Report: Orolia, Test report for NW6410 Bus Coupler and NW64216 NMEA interface unit, IEC 61162-1 and 61162-2
NW6000-61996-3M	A04	Report: Orolia, Test report for IEC 61996 3m 30 day immersion
NW6860/3521/001	A02	Report: Netwave, IEC 61996-1:2013 Fixed Capsule Test Report, 600 bar 24h test
BSH/454.VDR/Net wave NW6000/1-2	2021-12-01	Report: BSH, IEC 62923-1/-2 (2018) test report for NW6000 VDR/S-VDR
BSH/454.VDR/Net wave NW6000/1-1	2021-12-01	Report: BSH, IEC 61162-450 (2018) test report for NW6000 VDR/S-VDR
NW6000-50	1.8	Manual: Netwave, Replay application NW6096 operator manual
NW6000-60	3.4	Manual: Netwave, Authority access Manual, Voyage data recorder
1470539R- ITCEP16V00	v1.0	Report: QuieTek, EMC test report for INS-8528 series Ethernet Switch (NW6000-7001)
20390	1	Report: Applica, Acoustic noise and compass safe distance test of INS-8528M(W) Ethernet switch (NW6000-7001)
VT-140905-1	2014-09-05	Report: King Design, Vibration and low temperature test report for INS-8528M(W) Ethernet switch (NW6000-7001)
UT103098	2014-08-15	Report: Universal Testing Inc, Environmental test report for INS-8528M(W) Ethernet switch (NW6000-7001)
0026~H0203~0000 213498	00	Report: Thales, Damp- and dry heat test report for NW6000 VDR (IACS E10 Rev. 7/ DNV-CG-0339:2021)

0026~H0203~0000 211537	01	Report: Thales, EMC test report for NW6000 VDR (IACS E10 Rev. 7/ DNV-CG-0339:2021)
75950873-07	Issue 03	Report: TÜV SÜD, IEC 61097-2 (2021) test report for Tron 40VDR AIS EPIRB
E21187.00	2022-02-10	Report: NEMKO IEC 61996-1:2013 + AMD1:2021 – Partial test, Tron 40VDR AIS (COSPAS-SARSAT 406 MHz Satellite Emergency Position-Indicating RadioBeacon (EPIRB) with attached Voyager Data Recorder (VDR))
1354	2022-02-04	Certificate: COSPAS SARSAT, Type Approval Certificate for a 406 Megahertz Distress Beacon for use with the Cospas-Sarsat Satellite System for EPIRB Float Free Tron 40VDR AIS
354	2022-02-04	Certificate: COSPAS SARSAT, Type Approval certificate for a 406 Megahertz Distress Beacon for use with the Cospas-Sarsat Satellite System for EPIRB Float Free Tron 40VDR AIS
	G	Manual: Jotron, Tron 40VDR AIS Float-free EPIRB with VDR storage, User manual
75950873-08	Issue 03	Report: TÜV SÜD, IEC 61108-3 test report for Tron 40VDR AIS
75950873-09	Issue 01	Report: TÜV SÜD, IEC 61097-2 (Annex D: 121.5 MHZ Homing transmitter) test report for Tron 40VDR AIS
BSH/454.GNSS/TU VSUDLtd/6	1	Report: BSH, Conformance test of integrated GNSS receiver for Tron 40VDR AIS
75950873-02	Issue 01	Report: TÜV SÜD, IEC 60945, ETSI EN 301 489-1 and ETSI EN 301 489-19 test report for Tron 40VDR AIS
NW6000-10	2.21	Manual: Netwave, Installation, operation and maintenance manual-Voyage data recorder
NW6000/2522/001/ A02	A02	Report: Netwave, NW6000 IEC 62288 (2021) Test Report

APPENDIX

Product Description

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NW6000 is a Voyage Data Recorder (VDR) consisting of the following components:

Component	Type designation	Location ¹⁾
Core Module – Data processor module including Power-, CPU-, Network- and battery backup- modules	NW6000	Protected
Bridge Control Unit	NW6010	Protected
Audio Hub, 6 audio ports	NW6031	Protected
Analogue Microphone, interior and exterior	NW6030	Exposed
WaveNet Buscoupler, including 3x IEC 61162-2 ports	NW6410	Protected
Serial Interface Unit, 8 ports, or 16 ports	NW64208 NW64216	Protected Protected
VHF interface	NW6060	Protected
Float Free Capsule ²⁾ - TRON 40VDR AIS ³⁾	NW6880-AIS	Exposed
Hardened Fixed Recording Medium (Capsule) including: - Netwave PT9-Ninety Underwater Locator Beacon	NW6860 NW4860-695	Exposed

Options:

Component:	Type designation:	Location
Video Interface Unit, VGA, 4 channels	NW6044	Protected
Analogue Interface Unit, 4 channels	NW64404	Protected
8 channels	NW64408	Protected
12 channels	NW64412	Protected
Digital Interface Unit, 8 channels	NW64308	Protected
16 channels	NW64316	Protected
24 channels	NW64324	
DIN enclosure for DAQ adaptors	NW64900	Protected
CM bulkhead enclosure	NW6000-920	Protected
Managed Ethernet Switch	NW6000-7001	Protected

Software:

Module
NW6000

Version
v1.8.x

¹⁾ Location according to environmental categories as defined in IEC 60945 (2002). The final recording medium (capsules) meet the particular requirements for physical protection as specified in IEC 61996-1.

²⁾ Separate certificates are required for EPIRB where the Float Free Capsule is to be used to comply with carriage requirements for EPIRB

³⁾ Tron 40VDR AIS is tested for compliance with IEC 61996-1 (2013) +A1(2021) using a Galileo GNSS receiver in accordance with IEC 61108-3 (2010).