

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

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 GL AS under the authority of the Government of Norway.

This is to certify:

That the Voyage data recorder (VDR) and Simplified voyage data recorder (S-VDR)

with type designation(s)
NW6000

Issued to

Orolia B.V.
Zoetermeer, Zuid-Holland, Netherlands

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2020/1170**,

item No. MED/4.29. SOLAS 74 as amended, Regulations V/18, V/20 & X/3, IMO Res. A.694(17), IMO Res. MSC.36(63), IMO Res. MSC.97(73), IMO Res. MSC.191(79), IMO Res. MSC.302(87), IMO Res. MSC.333(90)

item No. MED/4.47. SOLAS 74 as amended, Regulation V/20, IMO Res. A.694(17), IMO Res. MSC.163(78), IMO Res. MSC.191(79), IMO Res. MSC.302(87)

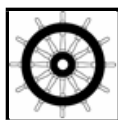
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2021-08-29**.

Issued at **Høvik** on **2020-10-13**

DNV GL local station:
Netherlands CMC

Approval Engineer:
Steinar Kristensen



Notified Body
No.: **0575**

for **DNV GL AS**

Roald Vårheim
Head of Notified 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-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 GL 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.



Product description

NW-6000 is a Voyage Data Recorder (VDR) consisting of the following components:

Component:	Type designation:	Location ^{*)}
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	Protected
	NW64216	Protected
VHF interface	NW6060	Protected
Float Free Capsule TRON40 MKII	NW6880	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 8 channels 12 channels	NW64404	Protected
	NW64408	Protected
	NW64412	Protected
Digital Interface Unit, 8 channels 16 channels 24 channels	NW64308	Protected
	NW64316	Protected
	NW64324	Protected
DIN enclosure for DAQ adaptors	NW64900	Protected
CM bulkhead enclosure	NW6000-920	Protected

^{*)} 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

Application/Limitation

- The NW6000 VDR is to be installed according to 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.

Type Examination documentation

DNV GL No	Document Id	Rev.	Description
36		A01	Report: Orolia, Test report for NW6410 Bus Coupler and NW64216 NMEA interface unit, IEC 61162-1 and 61162-2
29	BSH/4542/002/0062770/14		Statement of Conformity: BSH, PT9 ninety underwater locating device
27	9505 002 900XX 001		Report: Thales, VDR capsule shock tests
17	E13261.06		Report: Nemko, Tron 40 60945, 61097-2, 61996-1
16	4543/001/4292687/13-2	2015-01-09	Report: BSH, Conformance test report of VDR Display Bridge Control Unit, IEC 62288
15	4543/001/4292687/13	2015-02-25	Report: BSH, Conformance test report of Voyage Data Recorder VDR NW6000
14	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
13	2014-Efectis-R0268	02	Report: Efectis, 61996-1 Fire tests
12	0606882/1		Report: Lloyds, Fire, penetration and immersion tests
11	4543/001/4292938/15		Report: BSH, 61162- 450 test
10	9505 332 926XX 001		Report: Thales, IEC 60945 7,8,9 & 10
9	0000185724		Report: Thales, Low temp 60945 test
8	0000185261		Report: Thales, IEC 60945 test
7	4543/001/4292687/13-1		Report: BSH, IEC60945 6, 11.1 , 13-15
6	000019224		Report: Thales, IEC60945 EMC
5	NW6000-50	1.6	Manual: Orolia, Replay application NW6096 operator manual
4	NW6000-60	3.3	Manual: Orolia, Authority access Manual, Voyage data recorder
3	NW6000-10	2.9	Manual: Orolia, Installation, operation and maintenance manual- Voyage data recorder

Tests carried out

- Performance testing: IEC 61996-1 (2013) and IEC 61996-2 (2007)
- Environmental testing: IEC 60945 (2002) incl. Corrigendum 1 (2008)
- Interface testing: IEC 61162-1 (2016),
IEC 61162-2 (1998),
IEC 61162-450 (2011) incl. Am.1 (2016)
- Presentation of information: IEC 62288 (2014)

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.