

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB000023U
Revision no.:
2

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

that the **Integrated navigation system**

with type designation(s)
HLD-INS600

issued to

Jiangsu Highland Integration Technology Co.,Ltd.
Nantong, China

is found to comply with the Implementing Regulation (EU) 2024/1975 for
Item no. **MED/4.59 (Row 2 of 2)**
according to the following requirements:

SOLAS 74 Reg. V/19, IMO Res. A.694(17), IMO Res. MSC.36(63)-(1994 HSC Code) 13, IMO Res. MSC.97(73)-(2000 HSC Code) 13, IMO Res. MSC.191(79), IMO Res. MSC.252(83), IMO Res. MSC.302(87), SOLAS 74 Reg. V/15, SOLAS 74 Reg. V/18, SOLAS 74 Reg. X/3

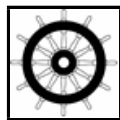
Further details of the equipment and conditions for certification are given overleaf.

Date of issue: **2025-06-06**

Expiry date: **2029-02-26**

DNV local unit:
Nantong

Approval Engineer:
Jörg Rebel



Notified Body
no.: **0098**



for **DNV SE**

Digitally Signed By:

Christine Mydlak-Röder

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 European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment, signed February 27th, 2004, and amended by Decision No 1/2023 dated May 26th, 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 SE 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 Type Approval certificate TAA000035G for HLD-INS600 system platforms in its latest revision at the date of placing the system on the market is part of this certificate, for the relevant revision see also <https://approvalfinder.dnv.com/>.

Type Examination documentation

Please see Appendix: Type Examination Documentation

Tests carried out

- Environmental and EMC testing: IEC 60945 (2002) incl. Corrigendum 1 (2008)
- Interface testing: IEC 61162-1 (2016), IEC 61162-2 (1998) and IEC 61162-450 (2018)
- Presentation testing: IEC 62288 (2021)
- Bridge alert management testing: IEC 62923-1 (2018) and IEC 62923-2 (2018)
- Performance testing: IEC 61924-2 (2021)

Marking of product

According to IEC 60945, Sect.4.9:

The product to be marked with following information, where practicable:

- Identification of the manufacturer,
- Equipment type number or model identification under which it was type tested,
- Serial number of the unit,
- Compass safe distance.

Alternatively, the marking may be presented on a display at equipment start-up, and in case of fixed equipment compass safe distance may be given in the equipment manual.

APPENDIX

Type Examination documentation

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Document No.	Rev.	Title
HLD-INS 600 (26.09.2015)	00N	Report: HLD, Interface test acc. to IEC 61162-450 (2011)
9065 16 39255 61924	00N	Report: HLD, Tests acc. to IEC 61924-2 (2012) incl. Corrigendum 1 (2013)
TAA000035G	Latest rev.	Certificate: DNV, HLD navigation systems platforms
HLD5100UM	2.4	Manual: HLD-INS600 Operation
HLD1800CZ	2.2	Manual: HLD-RADAR900 Operation
HLD3400CZ	3.0	Manual: HLD-ECDIS600 Operation
HLD0700AZ	1.1	Manual: HLD-SC600 Installation
HLD0700CZ	1.0	Manual: HLD-SC600 Operation
HLD0800CZ	2.3	Manual: HLD-TCS600 Installation & Operation Manual
HLD10100CZ	1.5	Manual: HLD-RADAR900S Operation
DNV-2-19-HLD- INS600-02	V01C	Report: HLD, Tests acc. to IEC 62923-1/-2 (2018)
DNV-2-19-HLD- INS600-01	V01C	Report: HLD, Interface tests acc. to IEC 61162-450 (2018)
9065-16-39255- 61162_1	01	Report: HLD, Interface tests acc. to IEC 61162-1 (2010)
9065-16-39255- Network	00N	Report: HLD, Network environment tests for HLD-INS600
DNV-2-19-HLD- INS600-03	V01C	Report: HLD, Tests acc. to IEC 62288 (2021) and MSC.452(99)
HLD1800AZ	2.4	Installation manual for HLD-RADAR900
HLD10100AZ	1.5	Installation manual for HLD-RADAR900S
HLD3400AZ	2.7	Manual: HLD-ECDIS600 Installation
HLD5100AZ	2.4	Manual: HLD-INS600 Installation
DNV-5-22-HLD- INS600	V01B	Report: HLD, Tests for Ubuntu 20.04 acc. to IEC 61174, IEC 62388 and IEC 61924-2

APPENDIX

Product Description

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The integrated navigation system (INS) type HLD-INS600 comprises of:

No.	Designation	Type Designation
1	Not used	
2	Main Processing Unit Display Electronics	as defined in separate certificate ^{*)}
3	Display Units 250mm (for Radar CAT 2 & ECDIS, alternatively)	as defined in separate certificate ^{*)}
4	Display Units 320mm (for Radar CAT 1 & ECDIS alternatively)	as defined in separate certificate ^{*)}
5	Operator Units (alternatively)	as defined in separate certificate ^{*)}
6	Sensor Interfaces (alternatively)	as defined in separate certificate ^{*)}
7	Network Switches (alternatively)	as defined in separate certificate ^{*)}
8	Optional Components	as defined in separate certificate ^{*)}

Software:

No.	Designation	Version no.
1	Application software	V2.0.x with x ≥ 22597
2	Operating system of Display Electronics	Microsoft Windows 7 SP1 or Ubuntu 20.04

Operating system version numbers as defined in separate certificate^{*)}