

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

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

This is to certify:

That the Radar equipment CAT1, CAT2, ; with a chart option CAT 1C, CAT 2C

with type designation(s)
HLD-RADAR 900C

Issued to

Beijing Highlander Digital Technology Co., LTD
Beijing, China

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

Regulation **(EU) 2018/773,**

item No. MED/4.34. SOLAS 74 as amended, Regulations V/18 & V/19, IMO Res. A.278(VIII), IMO Res. A.694(17), IMO Res. MSC.191(79), IMO Res. MSC.192(79), IMO Res. MSC.302(87), ITU-R M.1177-4 (04/11)

item No. MED/4.35. SOLAS 74 as amended, Regulations V/18 & V/19, IMO Res. A.278(VIII), IMO Res. A.694(17), IMO Res. MSC.191(79), IMO Res. MSC.192(79), IMO Res. MSC.302(87), ITU-R M.1177-4 (04/11)

item No. MED/4.38a. SOLAS 74 as amended, Regulation X/3, IMO Res. A.278(VIII), IMO Res. A.694(17), IMO Res. MSC.36(63), IMO Res. MSC.97(73), IMO Res. MSC.191(79), IMO Res. MSC.192(79), IMO Res. MSC.302(87), ITU-R M.1177-4 (04/11)

item No. MED/4.38b. SOLAS 74 as amended, Regulation X/3, IMO Res. A.278(VIII), IMO Res. A.694(17), IMO Res. MSC.36(63), IMO Res. MSC.97(73), IMO Res. MSC.191(79), IMO Res. MSC.192(79), IMO Res. MSC.302(87), ITU-R M.1177-4 (04/11)

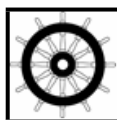
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-06-21**.

Issued at **Hamburg** on **2018-10-29**

DNV GL local station:
Dalian

Approval Engineer:
Harald Bluhm



Notified Body
No.: **0098**

for **DNV GL SE**

Sven Dudszus
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 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.



Product description

X- and S-Band Radar upmast version, for marine navigation.

List of components

No.	Identification code	Description
1.1	HLD-MCU 200	RADAR Computer
1.2	HLD-MCU 600	RADAR Computer
2.1	HLD-TU 125	Radar Transceiver
2.2	HLD-TU 130	Radar Transceiver
3.1	HLD-AT 106	Radar Antenna
3.2	HLD-AT 108	Radar Antenna
3.3	HLD-AT 112	Radar Antenna
4	HLD-PCU 600	Power Conversion Unit
5	HLD-IU 600	Human Interface Unit
6.1	HLD-DU 134	Monitor TFT 24"
6.2	HLD-DU 140	Monitor TFT 24"
6.3	HLD-DU 150	Monitor TFT 24"
6.4	HLD-DU 135	Monitor TFT 26"
6.5	HLD-DU 136	Monitor TFT 26"
6.6	HLD-DU 137	Monitor TFT 26"
Additional equipment		
7.1	PC SMART-UPS RT 1000VA 230V	UPS (SURT1000 XLIM)
7.2	APC SMART-UPS RT 2200VA 230V	UPS (SURTD2200 XLIM)
7.3	SURT023M-APC 3000VA FILTER	EMC Filter (SURT023M)
8	HLD-LS 600	LAN Switch
9	HLD-SCU 600	Signal Convert Unit

Table of combinations

No.	Identification code	CAT 1, CAT 1C		CAT 2, CAT 2C	
		X-Band	S-Band	X-Band	S-Band
1	HLD-MCU 200 or HLD-MCU 600	X	X	X	X
2.1	HLD-TU 125	X		X	
2.2	HLD-TU 130		X		X
3.1	HLD-AT 106 or HLD-AT 108	X		X	
3.2	HLD-AT 112		X		X
4	HLD-PCU 600	X	X	X	X
5	HLD-IU 600	X	X	X	X
6.1	HLD-DU 134 or HLD-DU 140 or HLD-DU 150			X	X
6.2	HLD-DU 135 or HLD-DU 136 or HLD-DU 137	X	X		

Software

RADAR Computer: HLD-MCU 200, or HLD-MCU 600

Software: Windows7 Operating System Radar Software version: 1.x

Human Interface Unit: HLD-IU 600 Software version: 1.x

Radar Transceiver: HLD-TU 125, or, HLD-TU 130 Software version: 1.x

Additional function:

HLD-RADAR 900 supports the video display from optoelectronic system.

Type Examination documentation

Tests carried out

IEC 60945 (2002) incl. IEC 60945 Corr. 1 (2008), IEC 61162 series: IEC 61162-1 ed5.0 (2016-08), IEC 61162-2 ed1.0 (1998-09), IEC 61162-450 ed1.0 (2011-06), IEC 62388 Ed. 2.0 (2013), IEC 62288 Ed. 2.0 (2014-07).

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.

According to Article 10 of the Council Directive (MED):

- Wheel mark to be affixed visibly, legibly and indelibly to the product or to its data plate and, where relevant, embedded in its software. Where that is not possible or not warranted on account of the nature of the product, it shall be affixed to the packaging and to the accompanying documents.

- Wheel mark to be affixed at the end of the production phase.

For specific products, manufacturers may use an appropriate and reliable form of electronic tag instead of, or in addition to, the wheel mark.

END OF CERTIFICATE