



TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MERB000010G
Revision No:
0

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 Magnetic compass – Class A for ships

with type designation(s)

REFLECTA/1 (add. tradename: AlphaBinnacle H Mk2) - Type/11, REFLECTA/2 - Type/12, REFLECTA/1 - Type/4

Issued to

Cassens & Plath GmbH
Bremerhaven, Germany

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

Regulation **MSN 1874 Amendment 9,**

item No. UK/4.1. SOLAS 74 as amended, Regulations V/18, V/19 & X/3, IMO Res. A.382(X), IMO Res. A.694(17), IMO Res. MSC.36(63), IMO Res. MSC.97(73), IMO Res. MSC.302(87)

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

This Certificate is valid until **2026-07-11**.

Issued at **London** on **2024-10-28**

DNV local unit:
Hamburg – CMC North/East



for **DNV UK Ltd.**

Approval Engineer:
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Approved Body No.: **0097**

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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 300,000 USD.

Product description

Components necessary for operation:

- | | | |
|----|---|---------------------|
| 1. | Standard Compass
Magnetic Compass Class A (N under N)
Use alternatively with the binnacles: | Type/11 |
| | - binnacle with correcting devices card height 1200 mm | REFLECTA/1 |
| | - alternatively card height between 920 and 1800 mm | |
| 2. | Standard Compass
Magnetic Compass Class A (N under S)
Use alternatively with the binnacles: | Type/12 |
| | - binnacle with correcting devices card height 1200 mm | REFLECTA/2 |
| | - alternatively card height between 920 and 1800 mm | |
| 3. | Steering Compass
Magnetic Compass Class A (N under N)
Use alternatively with the binnacles: | Type/11 |
| | - binnacle with correcting devices card height 1200 mm | REFLECTA/1 |
| | - alternatively card height between 920 and 1800 mm | |
| | - with remote reading only, as listed under options | |
| 4. | Bearing Compass
Reflector/Bearing compass Class A (N under N)
Use alternatively with the binnacles: | Type/11 |
| | - binnacle with correcting devices and card height 1200 mm | REFLECTA/1 |
| | - alternatively card height between 920 and 1800 mm | |
| | - with remote reading only, as listed under options | |
| 5. | Standard Compass
Magnetic Compass Class A (N under N)
Use alternatively with the binnacles: | Type/4 |
| | - binnacle with correcting devices card height 1200 mm | REFLECTA/1 |
| | - alternatively card height between 920 and 1800 mm | |
| 6. | Steering Compass
Magnetic Compass Class A (N under N)
Use alternatively with the binnacles: | Type/4 |
| | - binnacle with correcting devices card height 1200 mm | REFLECTA /1 |
| | - alternatively card height between 920 and 1800 mm | |
| | - with remote reading only, as listed under options | |
| 7. | Bearing Compass
Reflector/Bearing compass Class A (N under N)
Use alternatively with the binnacles: | Type/4 |
| | - binnacle with correcting devices and card height 1200 mm | REFLECTA/1 |
| | - alternatively card height between 920 and 1800 mm | |
| | - with remote reading only, as listed under options | |
| 8. | Standard Compass
Magnetic compass Class A (N under N)
Use alternatively with the binnacles: | Type/11 |
| | - binnacle with correcting devices and card height 1200 mm | AlphaBinnacle H Mk2 |
| | - alternatively card height between 920 and 1800 mm | |

Options:

Alternatively, instead of or additional to an optical transmission

	Detector (Sensor)	CP 102 B
	Electronic Unit	NETcourse
	Display Unit	analog:mag NEMAcourse
or	Display Unit	digital:mag NEMAcourse
or	for the indication of true magnetic heading	TRUEcourse *

Additional equipment:

The repeater compass analog:magNEMAcourse and digital:magNEMAcourse may be used as steering repeater with heading devices with standard IEC 61162-1 or IEC 61162-2 outputs.

The analog:trueNEMAcourse and digital:trueNEMAcourse repeater was tested successfully with the following GPS compasses: Furuno SC 30, SC 50, SC 110, JRC JLR 21 and JLR 31.

Heading difference alarm unit courseCOMPARATOR
Off heading alarm unit SENSOCourse

* For the automatic calculation of the true magnetic heading a valid RMC data sentence from an approved Electronic Position Fixing System (EPFS) or manually input of the deviation will be necessary.

Application/Limitation

None

Tests carried out

- Environmental and EMC testing: IEC 60945 (2002) incl. Corrigendum 1 (2008)
- Interface testing: IEC 61162-1 (2016) and IEC 61162-2 (1998)
- Presentation testing: IEC 62288 (2014)
- Performance testing: ISO 25862 (2019)

Note: The magnetic compasses (including their binnacles) covered by this certificate do not issue alerts, hence, testing according to IEC 62923-1/-2 is deemed as not being applicable.

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.

Type Examination documentation

END OF CERTIFICATE