

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 Magnetic compass – Class A for ships

with type designation(s)
MK2020 - SR4, MK2020 - 1812

Issued to
John Lilley & Gillie Ltd
North Shields, United Kingdom

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2018/773**,
item No. MED/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)
Manufacturers authorised representative
Zöllner Signal GmbH
Kiel, Schleswig-Holstein, Germany

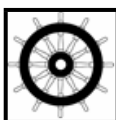
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2023-09-26**.

Issued at **Hamburg** on **2018-09-27**

DNV GL local station:
Bremerhaven

Approval Engineer:
Jörg Rebel



Notified Body
No.: **0098**

for **DNV GL SE**

Sven Dudszus
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.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

Components necessary for operation:

1. Standard Compass
Magnetic Compass Class A (N under N) SR4
Use alternatively with the binnacles:
 - binnacle with correcting devices card height 1200 mm MK2020
 - alternatively card height between 920 and 1800 mm
2. Steering Compass SR4
Magnetic Compass Class A (N under N)
Use alternatively with the binnacles: MK2020
 - binnacle with correcting devices card height 1200 mm
 - alternatively card height between 920 and 1800 mm
3. Bearing Compass
Reflector/Bearing compass Class A (N under N) SR4
Use alternatively with the binnacles:
 - binnacle with correcting devices and card height 1200 mm MK2020
 - alternatively card height between 920 and 1800 mm
 - with remote reading only, as listed under options
4. Standard Compass
Magnetic Compass Class A (N under N) 1812
Use alternatively with the binnacles:
 - binnacle with correcting devices card height 1200 mm MK2020
 - alternatively card height between 920 and 1800 mm
5. Steering Compass 1812
Magnetic Compass Class A (N under N)
Use alternatively with the binnacles: MK2020
 - binnacle with correcting devices card height 1200 mm
 - alternatively card height between 920 and 1800 mm
6. Bearing Compass
Reflector/Bearing compass Class A (N under N) 1812
Use alternatively with the binnacles:
 - binnacle with correcting devices and card height 1200 mm MK2020
 - alternatively card height between 920 and 1800 mm
 - with remote reading only, as listed under options

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.

Job Id: **344.1-008499-1**
Certificate No: **MEDB00004E2**

Heading difference alarm unit courseCOMPARATOR
Off heading alarm unit SENSOfcourse

* 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

Type Examination documentation

DNV GL No	Document ID	Rev.	Description
14	-	2009-09-01	Report: SR4 - Statement of Manufacturer acc. to ISO 25861
15	ENV-VIB0017-SR4	2010-03-16	Report: Tests acc. to IEC 60945, Sects. 8.2 to 8.4 and 8.7
17	330	C	Manual: SENSOfcourse
18	331	C	Manual: course COMPARATOR
19	293	C	Manual: digital:mag NEMAcourse
20	275	C	Manual: analog:mag NEMAcourse
21	251	D	Manual: NETcourse
22	385	-	Manual: TRUEcourse
23	-	-	Manual: MK2020
24	-	-	Manual: MK2020S

Tests carried out

- Performance testing: ISO 25862 (2009)
- Environmental testing: IEC 60945 (2002) incl. Corrigendum 1 (2008)
- Serial interface testing: IEC 61162-1 (2016), IEC 61162-2 (1998)
- Presentation of navigational information: IEC 62288 (2014)

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