

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00007F5
Revision No:
1

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 Compass Bearing Device

with type designation(s)
PV 23 (Type 2535, 2535-AA), PV 24 (Type 2695), PV 25 (Type 5042)

Issued to

**Northrop Grumman Sperry Marine B.V. - German Branch
Hamburg, Germany**

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2022/1157**,
item No. MED/4.54. SOLAS 74 as amended, Regulations V/18 & V/19

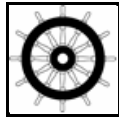
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2026-04-29**.

Issued at **Hamburg** on **2022-10-07**

DNV local station:
Hamburg – CMC North/East

Approval Engineer:
Jörg Rebel



Notified Body
No.: **0098**

for **DNV SE**

Christine Mydlak-Roeder
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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 300,000 USD.



Product description

The compass bearing device PV 23 is an azimuth reading device with vanes, i.e. of Group I according to ISO 25862, Annex C.1.1. It is constructed to be used with a bearing repeater type 4881 or 5016 with a card diameter of 172 mm.

The compass bearing device PV 24 is an azimuth reading device with vanes, i.e. of Group I according to ISO 25862, Annex C.1.1. It is constructed to be used with a magnetic compass type 2060 or 2555 with a card diameter of 180 mm.

The compass bearing device PV 25 is an azimuth reading device with vanes, i.e. of Group I according to ISO 25862, Annex C.1.1. It is constructed to be used with a magnetic compass type 2060 or 2555 with a card diameter of 180 mm.

Application/Limitation

None

Type Examination documentation

DNV No	Document ID	Rev.	Description
17	056376	C1	Manual: Operation, Installation and Service for analogue compass repeaters (PV 23)
15	056406	A	Manual: Operation, Installation and Service for NAVIPOL CP
14	GL_CP1_2012	2012-11-01	Report: GL, Tests according to ISO 25862 (2009), Annex C for PV 25
10	056016	E	Manual: Operation and installation for magnetic compass JUPITER (type 2060)
9	056376	B	Manual: Operation, Installation and Service for analogue compass repeaters (type 5016)
8	9049 15 48909 157	A	Report: DNV GL, Performance test for PV 23 and PV 24 acc. to ISO 25862, 6 and Annex C
7	-	2016-05-17	Report: Hein & Oetting, Performance test for PV 24 according to ISO 25862, 6 and Annex C
6	-	2016-05-17	Report: Hein & Oetting, Performance test for PV 23 according to ISO 25862, 6 and Annex C
5	-	2016-02-15	NG Sperry Marine, Material declaration for Bearing Devices PV 23 and PV 24 acc. to IEC 60945, 8.12 (Corrosion test)
4	-	2016-03-02	Report: Hein & Oetting, Dry heat test for PV 24 according to IEC 60945, 8.2
3	-	2016-03-02	Report: Hein & Oetting, Dry heat test for PV 23 according to IEC 60945, 8.2
2	107-16	Issue 1	Report: Treo, Vibration test according to IEC 60945, 8.7
1	106-16	Issue 1	Report: Treo, Cold test according to IEC 60945, 8.4

Tests carried out

- Environmental and EMC testing: IEC 60945 (2002) incl. Corrigendum 1 (2008)
- Performance testing: ISO 25862 (2019)

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.

END OF CERTIFICATE