

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:  
**MEDB00002UG**  
Revision no.:  
**4**

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 **Rudder angle indicator**

with type designation(s)

**Rudder Angle Indicator System**

issued to

**Sperry Marine B.V. - German Branch**  
**Woltmanstr. 19 20097 Hamburg Germany,**

is found to comply with the Implementing Regulation (EU) 2025/1533 for

Item no. **MED/4.20 (Row 2 of 3)**

according to the following requirements:

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

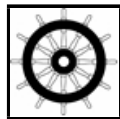
Further details of the equipment and conditions for certification are given overleaf.

Date of issue: **2026-06-04**

Expiry date: **2027-10-06**

DNV local unit:  
**Hamburg – CMC North/East**

Approval Engineer:  
**Jörg Rebel**



Notified Body  
no.: **0098**



for **DNV SE**

*Digitally Signed By:*  
**Permoda, Jowita**  
on behalf of

**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

The Sperry Marine B.V. Rudder angle indicator system consists of the following equipment:

Rudder angle calibrator (RAC) P/N: 074849-0000-xxx  
Software Version 1.xxx

Three-face panorama rudder angle indicator for ceiling mounting, IP23, with built-in dimmer, yellow figures with red/green ribbon on black background, with yellow pointer, illuminated:

Rudder angle indicator	Range $\pm 45^\circ$	P/N: 060396-0000-xxx
		or P/N: 061042-0000-xxx
Rudder angle indicator	Range $\pm 70^\circ$	P/N: 060397-0000-xxx
		or P/N: 061043-0000-xxx

Rudder angle indicator in housing with bracket, watertight IP66, with built-in dimmer, red/green figures on white background, with black pointer, illuminated:

Rudder angle indicator	192 mm	Range $\pm 45^\circ$	P/N: 060357-0000-xxx
			or P/N: 061027-0000-xxx
Rudder angle indicator (Panama type)	192 mm	Range $\pm 45^\circ$	P/N: 060332-0000-xxx
			or P/N: 061026-0000-xxx
Rudder angle indicator	192 mm	Range $\pm 70^\circ$	P/N: 060359-0000-xxx
			or P/N: 061028-0000-xxx
Rudder angle indicator (Panama type)	192 mm	Range $\pm 70^\circ$	P/N: 060362-0000-xxx
			or P/N: 061029-0000-xxx
Rudder angle indicator	144 mm	Range $\pm 45^\circ$	P/N: 060327-0000-xxx
			or P/N: 061020-0000-xxx
Rudder angle indicator (Panama type)	144 mm	Range $\pm 45^\circ$	P/N: 060325-0000-xxx
			or P/N: 061018-0000-xxx
Rudder angle indicator	144 mm	Range $\pm 70^\circ$	P/N: 060328-0000-xxx
			or P/N: 061021-0000-xxx
Rudder angle indicator (Panama type)	144 mm	Range $\pm 70^\circ$	P/N: 060326-0000-xxx
			or P/N: 061019-0000-xxx

Rudder angle indicator for console mounting, frontside IP56, yellow figures with red/green ribbon on black background, with yellow pointer, illuminated:

Rudder angle indicator	192 mm	Range $\pm 45^\circ$	P/N: 060352-0000-xxx
			or P/N: 061030-0000-xxx
Rudder angle indicator (Panama type)	192 mm	Range $\pm 45^\circ$	P/N: 060354-0000-xxx
			or P/N: 061032-0000-xxx
Rudder angle indicator	192 mm	Range $\pm 70^\circ$	P/N: 060353-0000-xxx
			or P/N: 061031-0000-xxx
Rudder angle indicator (Panama type)	192 mm	Range $\pm 70^\circ$	P/N: 060355-0000-xxx
			or P/N: 061033-0000-xxx
Rudder angle indicator	144 mm	Range $\pm 45^\circ$	P/N: 060338-0000-xxx
			or P/N: 061022-0000-xxx
Rudder angle indicator (Panama type)	144 mm	Range $\pm 45^\circ$	P/N: 060340-0000-xxx
			or P/N: 061024-0000-xxx
Rudder angle indicator	144 mm	Range $\pm 70^\circ$	P/N: 060339-0000-xxx
			or P/N: 061023-0000-xxx
Rudder angle indicator (Panama type)	144 mm	Range $\pm 70^\circ$	P/N: 060341-0000-xxx
			or P/N: 061025-0000-xxx
Rudder angle indicator	96 mm	Range $\pm 45^\circ$	P/N: 060334-0000-xxx
			or P/N: 061015-0000-xxx
Rudder angle indicator (Panama type)	96 mm	Range $\pm 45^\circ$	P/N: 060331-0000-xxx
			or P/N: 061014-0000-xxx
Rudder angle indicator	96 mm	Range $\pm 70^\circ$	P/N: 060335-0000-xxx
			or P/N: 061016-0000-xxx
Rudder angle indicator (Panama type)	96 mm	Range $\pm 70^\circ$	P/N: 060337-0000-xxx
			or P/N: 061017-0000-xxx

Feedback unit: 4136, 4968, 4132, 4134, 4137

### Application/Limitation

According to the Commission Implementing Regulation (EU) 2025/1533, the last date for first installation of the product in its functional position on board an EU ship is 2028-09-23.

### Type Examination documentation

Document No.	Rev.	Title
06/17	2017-09-22	Manual: Installation instructions for RAI system
056357	C	Manual: Operation, installation and service of RAI system
5014	2009-04-29	Type Approval Test Procedure, Rev. B (IEC 61162)
08/8189-1	2008-12-23	Report: EMV Services, Tests for Rudder Angle Calibrator (RAC) type 5014 according to IEC 60945, Clauses 9 and 10
6628b/08	2009-01-26	Report: BFSV, Tests for RAC type 5014 according to IEC 60945, Clauses 8.2 to 8.4 and 8.7,
594/1	-	Certificate: BSH, Compass safe distance for RAC type 5014 acc. to IEC 60945, Clause 11.2
9065 17 69609 157	2017-09-05	Report: DNV GL, Tests for RAI system according to ISO 20673 (2007) and IEC 62288 (2014)
5014-0141-01	A	Report: Sperry Marine, Tests acc. to approved test plan 5014-0113-01 Rev. 01

### 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 (2021) incl. Amendment 1 (2024)
- Performance testing: ISO 20673 (2022)

Note: The Rudder Angle Indicator System does not issue alerts, hence testing according to IEC 62923-1 and IEC 69923-2 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.