

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:  
**MEDB000019J**  
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 Rudder angle indicator**

with type designation(s)  
**NORIMETER 3**

Issued to

**NORIS Automation GmbH**  
**Nürnberg, Bayern, Germany**

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

Regulation **(EU) 2020/1170**,

**item No. MED/4.20. SOLAS 74 as amended, Regulations V/18, V/19 & X/3, IMO Res. A.694(17), IMO Res. MSC.36(63), IMO Res. MSC.97(73), IMO Res. MSC.191(79), IMO Res. MSC.302(87)**

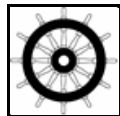
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2026-04-15**.

Issued at **Hamburg** on **2021-04-16**

DNV local station:  
**Augsburg**

Approval Engineer:  
**Jörg Rebel**



Notified Body  
No.: **0098**

for DNV SE

**Christine Mydlak-Roeder**  
**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) 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 rudder angle indicator system NORIMETER 3 consists of the following equipment:

Indicators:

NIQ3-072 (72x72 mm), NIQ3-096 (96x96 mm) or NIQ3-144 (144x144 mm)  
NIR3-060 (ø 60 mm), NIR3-080 (ø 80 mm), NIR3-100 (ø 100 mm) or NIR3-130 (ø 130 mm)  
with pointer up to max. 300°

NIQ31-072 (72x72 mm), NIQ31-096 (96x96 mm) or NIQ31-144 (144x144 mm)  
with instrument faceplate 360°

Rudder angle feedback unit:

DWA<sub>xx-y-(z)</sub>

xx = 50, 60, ..., 320 degrees / y = mechanical size 1 or 2 / z = n/a  
e. g. DWA50-1 (±25deg), DWA302-2(±160deg) by using SA502-3G

xx = 10, 20, ..., 360 degrees / y = mechanical size 1 or 2 / z = I2 or U2  
e.g. DWA360-1-I2 (±180deg), DWA90-2-U2 (±45deg)

R-U-I-Converter: SA502-3G

## Application/Limitation

The rudder angle indicator is to be connected to a type-approved transmitter (including junction box or signal converter) providing the interface required by the indicator (see Product description) and being compliant with the requirements of ISO 20673.

The indicator system comprising indicator (receiver) and transmitter is to be installed according to the installation requirements of the manufacturer.

## Tests carried out

- Environmental and EMC testing: IEC 60945 (2002) incl. Corrigendum 1 (2008)
- Presentation testing: IEC 62288 (2014)
- Performance testing: ISO 20673 (2007)

Note: The rudder angle indicator systems NORIMETER 3 do not issue alerts, hence, testing according to IEC 62923-1/-2 is deemed as not being applicable.

The rudder angle indicator systems NORIMETER 3 have no interfaces according to IEC 61162 series, thus, testing according to IEC 61162 series is deemed as not being applicable, as well.

## Type Examination documentation

Data sheets:

DB-NIR3/NIQ3-EN, V01.06, dated 2020-08-05; DB-NIQ31-EN, V01.05, dated 2020-08-05; DB-DWA-EN, V01.04, dated 2017-06-27.

Test reports NIQ3.../NIR3...:

ISO 20673 Noris, dated 2011-02-09; LGA E5.214-21152593, dated 2010-07-29; 21146111\_001, dated 2010-02-02; 2114612\_001, dated 2010-02-02; 20-102, dated 2020-09-04.

Test reports DWA...:

BV ECL-EMC 16-133, rev.01; BV ECL-ENV 16-009, rev.01; BV ECL-ENV 16-010, rev.02; Noris IT16-001, vers. 01, dated 2016-02-18; Noris Product Test Report KE1151, dated 2016-03-08; Noris IP06-001, EN60529, dated 2006-07-26; Schwille test report nr. 4394, dated 2011-04-06.

## 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