DNV·GL

Certificate No:
MEDB00001W7

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 Rate-of-turn indicator (ROTI)

with type designation(s)
Rate of Turn Indicator

Issued to
Raytheon Anschütz GmbH
Kiel, Germany

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2015/559,**
Annex A.1, item No. A.1/4.9 and Annex B, Module B in the Directive; SOLAS 74 as amended, Regulation V/18, V/19 & X/3, IMO Resolution A.526(13) & A.694(17), IMO Resolution MSC. 191 (79) and 2000 HSC Code 13

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

This Certificate is valid until **2021-11-02**.

Issued at **Hamburg** on **2016-11-03**

DNV GL local station:
Hamburg

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

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Product description

The Rate Of Turn Indication System consists of the following equipment necessary for operation:
Rate Of Turn Gyro: 410-026 with
Operator Unit: 430-009.NG010 or 430-009.NG013 (+-30 degree/minute)

The following indicators may be additionally connected:
Type NB09-066.00-xxx containing measuring instruments LSP144.
Type KLPQ-144WP-xxx / KLPQ-144-xxx / BCI-240-144-xxx, containing measuring instruments D3v144S

Optional equipment:
Operator Unit: 430-009.NG011 or 430-009.NG014 (+-100 degree/minute)
Operator Unit: 430-009.NG012 or 430-009.NG015 (+-300 degree/minute)

Documentation:
Operator Manual 3207E.DOC012
Service Manual 3207E.DOC032

Application/Limitation

None

Type Examination documentation

Tests carried out

Applicable tests according to ISO 20672 (2007) incl. Corrigendum 1 (2008), IEC 60945 (2002) incl. Corrigendum 1 (2008), IEC 62288 Ed. 2.0 (2014) and IEC 61162 series.

Marking of product

According to Article 10 of the Council Directive (MED):

- The wheel mark shall 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.
- The wheel mark shall be affixed at the end of the production phase.
- The wheel mark shall be followed by the identification number of the notified body, where that body is involved in the production control phase, and by the year in which the mark is affixed.
- The identification number of the notified body shall be affixed by the body itself or, under its instructions, by the manufacturer or the manufacturer's authorised representative.

For specific products, manufacturers may use an appropriate and reliable form of electronic tag instead of, or in addition to, the wheel mark.