

Certificate of Conformity

This is to certify that the equipment identified below has been tested to verify their conformity to the type as described in the EC Type Examination Certificate.

Product Description: **Autopilot, Heading Control System**

Product Type: **SEM300, FAP-3000**

Maker: **EMRI A/S
37A, Marielundvej
DK-2730, Herlev, Denmark**

Specified Standards: **Regulation (EU) 2020/1170,
item No. MED/4.16. SOLAS 74 as amended,
Regulations V/18 & V/19, IMO Res. A.342(IX),
IMO Res. A.694(17), IMO Res. MSC.191(79),
IMO Res. MSC.64(67) Annex3,
IMO Res. MSC.302(87)**


EC Type Examination
Conformity Assessment
Procedure **MEDB00003SJ-revision4
B**

QS Cert. of Assesment - EC
Conformity Assessment
Procedure **MEDD00001EJ-revision3
D**

Item No. **A.1/4.16**

EC Identification No.: **0098**

Issued on: **2021-11-23**

Certified by: 

Claus Nørtoft Thomsen
CEO of EMRI A/S



EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00003SJ
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 Heading control system (HCS)

with type designation(s)
SEM300 (other trade names: FAP-3000, SeaQ)

Issued to
EMRI A/S
Herlev, Denmark

is found to comply with the requirements in the following Regulations/Standards:
Regulation (EU) 2021/1158,
**item No. MED/4.16. SOLAS 74 as amended, Regulations V/18 & V/19, IMO Res. A.342(IX), IMO Res. A.694(17),
IMO Res. MSC.191(79), IMO Res. MSC.64(67) Annex 3, IMO Res. MSC.302(87)**

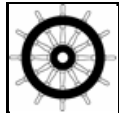
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2023-04-12**.

Issued at **Hamburg** on **2021-11-23**

DNV local station:
Denmark CMC

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 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 following units comprise the heading and drift corrected course control system.

| Mandatory parts | Type | Software version |
|--------------------------------------|--|-------------------|
| Control and Operator Unit | MIP211 or MIP251 for SEM300 or MIP241 for FAP-3000 | 0.2.x (x ≥ 27) |
| Electronic Unit | AEU611 | - |
| Including Main Electronic Unit board | AME11 | 0.02.xx (xx ≥ 02) |

| Optional parts | Type |
|-----------------------------|----------------------------|
| Rudder Angle Feed-back unit | RFU32 or RFU33 |
| Additional control panel | MIP211 or MIP251 or MIP241 |
| Arm Rest Panel | ARP11 |

Instruction manuals:
 8488-2 for SEM 300
 8487-2 for FAP-3000
 8488-12 for SeaQ

Application/Limitation

The system is to be installed according to manufacturer's instructions.

Type Examination documentation

| Test Standard | Report | Revision |
|---------------------------------|------------------------|------------|
| ISO 11674 (2019) | EMRI, Test of ISO11674 | 2021-11-12 |
| ISO 11674, IEC 62288, IEC 61162 | GL SEM300_102012 | 2012-10-25 |
| IEC 60945 | DANAK 198094, | 2005-09-30 |
| IEC 60945 | DANAK-19/11899 | 2021-02-28 |
| IEC 62923-1/-2 (2018) | EMRI, BAM-FAT | 2021-11-12 |
| IEC60945 for ARP11 | EKTOS P19-0081-2 | 2019-08-15 |

Tests carried out

- Environmental and EMC testing: IEC 60945 (2002) incl. Corrigendum 1 (2008)
- Interface testing: IEC 61162-1 (2016)
- Presentation testing: IEC 62288 (2014)
- Bridge alert management testing: IEC 62923-1 (2018) and IEC 62923-2 (2018)
- Performance testing: ISO 11674 (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

QS - CERTIFICATE OF ASSESSMENT - EC (MODULE D)

Certificate No:
MEDD00001EJ
Revision No:
3

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 Quality System for the products

with type designation(s) as specified in the Appendix to this Certificate

Issued to

EMRI A/S
Herlev, Denmark

is found to comply with the applicable requirements.

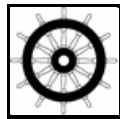
The quality system has been assessed with respect to the procedure of conformity assessment described in Annex II, Module D in the directive 2014/90/EU and regulation (EU) 2021/1158.

This Certificate is valid until **2026-03-13**.

Issued at **Hamburg** on **2021-11-23**

DNV local station:
Denmark CMC

Approval Engineer:
Jörg Rebel

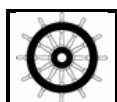


Notified Body
No.: **0098**

for **DNV SE**

Christine Mydlak-Roeder
Head of Notified Body

The manufacturer is allowed to affix the U.S. Coast Guard approval number(s) as stated in the appendix attached hereto and 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 1/2018 dated February 18th, 2019.



0098/yyyy

0098: Notified Body number undertaking quality surveillance
yyyy: The year in which the mark is affixed

The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate authorizes the manufacturer in conjunction with the valid EC Type Examination (Module B) Certificate(s) of the equipment listed before to affix the Mark of Conformity (wheelmark) to the product described herein.

This certificate loses its validity if the manufacturer makes any changes to the approved quality system, which have not been notified to, and agreed with the notified body named on this certificate. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

The Manufacturer has to apply for periodical audits to verify the maintenance and application of the quality system every 12 months.

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.



APPENDIX

Item no. MED/4.16 Heading control system (HCS)

| Type designation | EC Type-Examination Certificate No. | Expiry date | Notified Body No. | USCG approval number |
|---|-------------------------------------|-------------|-------------------|-----------------------------------|
| SEM300 (other trade names: FAP-3000, SeaQ) ¹ | MEDB00003SJ Rev.4 | 2023-04-12 | 0098 | 165.110/EC0098 /MEDB00003SJ Rev.4 |

Item no. MED/4.20 Rudder angle indicator

| Type designation | EC Type-Examination Certificate No. | Expiry date | Notified Body No. | USCG approval number |
|---|-------------------------------------|-------------|-------------------|----------------------|
| Rudder Angle Indication System ¹ | MEDB00002EN | 2022-06-20 | 0098 | N/A |

Places of production

- 1.EMRI A/S, Marielundvej 37 A, Herlev, Denmark