



Marine & Offshore

Certificate number: 53630/A1 BV

File number: AP4939

Product code: 3720H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

ENDRESS + HAUSER SE + Co. KG

Maulburg - GERMANY

for the type of product

LEVEL GAUGE - ELECTRONIC TYPE

Radar Sensor

Micropilot FMR60, FMR62 and FMR67

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

EC Code: 31

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 12 Jan 2026

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 15 Aug 2022,

Dirk Hoepfner

This certificate was created electronically and is valid without signature



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

The **Micropilot FMR60, FMR62** and **FMR67** series are free space radar transmitter for level measurement in liquids (FMR60, FMR62) and solids (FMR67).

1.1 - Main characteristics:

Type of probe: Drip-off antenna; (FMR60)
Integrated or flush-mounted antenna; (FMR62)
Drip-off or flush-mounted antenna (FMR67)
Measuring range: FMR60: 50m, FMR62: 80m, FMR67: 125m
Power supply: 24V DC, 2-wire, loop powered
Output: 4 to 20mA HART, 4 to 20mA or open collector switch output
Process connection: Flange or thread
Cable entry: Thread or plug
Housing: Aluminium or plastic
Degree of protection: IP66 / IP68
Software version: V01.00.xx

1.2 - Variants:

Type (acc. to order code dated 11.06.2019)

FMR60 aa b c d e ff gg hhh

aa = Approval: Ex-approval, as relevant

b = Power Supply; Output: A; B; C

c = Display: A; C; E; L; M

d = Housing: A; C

e = Electrical Connection: A; B; C; D; I; M

ff = Antenna: GA

gg = Seal: A3; A4

hhh = Process Connection: GGJ; RGJ; XJG; XJJ;

XKG; XKJ; XLG; XLJ

Type (acc. to order code dated 11.06.2019)

FMR62 aa b c d e ff gg hhh

aa = Approval: Ex-approval, as relevant

b = Power Supply; Output: A; B; C

c = Display: A; C; E; L; M

d = Housing: A; C

e = Electrical Connection: A; B; C; D; I; M

ff = Antenna: GE; GF; GM; GN; GP

gg = Seal: A5; C1; F5

hhh = Process Connection: AFK; AGK; AHK; AJK;

ATK; CFK; CGK; CHK; CJK; GDJ; GGJ; KFK;

KGK; KHK; KJK; RDJ; RGJ

Type (acc. to order code dated 11.06.2019)

FMR67 aa b c d e ff gg hhh i

aa = Approval: Ex-approval, as relevant

b = Power Supply; Output: A; B; C

c = Display: A; C; E; L; M

d = Housing: A; C

e = Electrical Connection: A; B; C; D; I; M

ff = Antenna: GA; GP

gg = Seal: A3; A5

hhh = Process Connection: AGJ; AHJ; CGJ; CHJ;

GGJ; KGJ; KHJ; RGJ; XJG; XJJ; XKG; XKJ; XLG;

XLJ; X3J; X5J

i = Flushing air connection: A; 1; 2; 3; 4

2. DOCUMENTS AND DRAWINGS:

- BA01618F/00/EN/02.18; BA01619F/00/EN/02.18; BA01620F/00/EN/02.18 all dated 2018-04-12
- KA01251F/00/EN/03.18; KA01252F/00/EN/03.18; KA01253F/00/EN/03.18 all dated 2018-04-12
- IBExU16ATEX1194 X Issue 2 dated 2018-09-06; IECEx IBE 16.0035X Issue No: 1 dated 2018-03-02
- 960018584 - - dated 12.08.16; 960018593 - - dated 20.09.2016; 960018607 - - dated 20.09.2016
- 960018608 - - dated 20.09.2016; 960018611 - - dated 20.09.2016; 960018612 - - dated 20.09.2016

For A1 version:

- TI01302F/00/EN/07.20; TI01303F/00/EN/07.20; TI01304F/00/EN/07.20 all dated 2020-09-25

3. TEST REPORTS:

- MeßTechnikNord: 072225.038.19 V2.0 dated 09.05.2019

- paconsult: 18-10721 dated Dec 03, 2018

For A1 version:

- Endress+Hauser: 970008316_AK_1 dated 2022-07-22

4. APPLICATION/LIMITATION:

- 4.1 - Bureau Veritas Rules and Regulations for the Classification of Steel Ships
- 4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**
- 4.3 - Bureau Veritas Environmental Category, **EC Code: 31**
- 4.4 - The equipment with DC power supply fulfils the EMC requirements for installation on the Bridge and Deck Zone.
- 4.5 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev7.
- 4.6 - Ex-certification is not covered by this certificate. Applications in hazardous areas are to be approved in each case according to the Rules and Conditions for Safe Use specified in a valid Ex-Certificate issued by a Notified or Recognised Certification Body.
- 4.7 - The installation shall comply with the Manufacturer's recommendation described in the above-referenced documentation.

5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 - The above mentioned products are to be supplied by **Endress+Hauser SE + Co. KG** in compliance with the type described in this certificate.
- 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.
- 5.3 - **Endress+Hauser SE + Co. KG** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

Endress+Hauser SE + Co. KG
Hauptstraße 1
79689 Maulburg
GERMANY

6. MARKING OF PRODUCT:

- Maker's name or trademark
- Equipment type or model identification
- Date of manufacture and/or serial number
- Ex marking, as relevant

7. OTHERS:

- 7.1 - It is the responsibility of **Endress+Hauser SE + Co. KG** to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.
- 7.2 - This certificate supersedes the Type Approval Certificate N° 53630/A0 BV issued on 12 Jan 2021 by the Society.

*** END OF CERTIFICATE ***