



Certificate no.:
TAA00003NW

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Level Transmitter

with type designation(s)
Micropilot FMR20B, FMR30B

issued to

Endress+Hauser SE+Co. KG
Maulburg, Germany

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft

Application:

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Location classes:

Temperature	D
Humidity	B
Vibration	B
EMC	B
Enclosure	B, D

Issued at **Hamburg** on **2025-09-03**

This Certificate is valid until **2030-09-02**.

for **DNV**

DNV local unit: **Augsburg**

Approval Engineer: **Dariusz Lesniewski**

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This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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

Free-space radar for continuous, non-contact level measurement of liquids and bulk solids

Main specification:

Micropilot FMR20B

Antenna	PVDF encapsulated, 40mm/1-1/2" PVDF encapsulated, 80mm/3"
Process Connection (cable end)	Thread (except < 1"), w/o cable entry side
Process Connection (antenna end)	Thread (except < 1 1/2")
Electrical connection	Pre-installed cable (up to 300m) – Marine type approved
Output	2-wire 4-20mA HART
Display	LED (with or without Bluetooth)
Firmware	01.00.zz, HART 7, DevRev01

Micropilot FMR30B

Antenna	PVDF encapsulated, 40mm/1-1/2"
Process Connection (cable end)	w/o, cable entry side
Process Connection (antenna end)	Thread (except < 1 1/2")
Electrical connection	Cable gland, Thread
Output	2-wire 4-20mA HART
Display	Color display with touch control (with or without Bluetooth)
Firmware	01.00.zz, HART 7, DevRev01

Ex-Approval Ratings for application in hazardous areas are to be obtained from the applicable Ex Certificates.

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Type Approval documentation

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021.

Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.



END OF CERTIFICATE

Job ID: **262.1-042326-1**
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