Certificate no.:
TAA00003N9

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Pressure Transmitter

with type designation(s)
Cerabar PMP50, Deltabar PMD50

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, C***

Issued at **Hamburg** on **2025-07-01**
This Certificate is valid until **2030-06-30**.
DNV local unit: **Augsburg**

for **DNV**

Approval Engineer: **Dariusz Lesniewski**

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

Cerabar PMP50 Pressure transmitter for pressure and level measurement in liquids or gases

Main device features:

Application	Standard Diaphragm seal
Pressure type	Gauge Absolute
Pressure range	Up to 400 bar
Process connection	Flange Thread (>1/2") Barrel flange
Housing	Dual compartment – Alu, coated *Not for use on open deck Dual compartment – 316L
Display	Blind cover Color display w/o buttons
Electrical connection	Cable gland Thread
Output	2-wire, 4-20mA HART
Power supply	24V DC (nominal)
Firmware	01.00.zz, HART 7, DevRev01
Ex-Approval	Ratings for application in hazardous areas are to be obtained from the applicable Ex Certificates

Deltabar PMP50 Differential transmitter pressure, level and flow measurement in liquids or gases

Main device features:

Pressure type	Differential Gauge
Pressure range	Up to 40 bar
Process connection	NPT1/4-18 IEC61518 UNF7/16-20
Housing	Dual compartment – Alu, coated *Not for use on open deck Dual compartment – 316L
Display	Blind cover Color display w/o buttons
Electrical connection	Cable gland Thread
Output	2-wire, 4-20mA HART
Power supply	24V DC (nominal)
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.

Application/Limitation

Aluminum housing not for use on open deck (Location class enclosure 'B' only)

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 / order code
- serial number

- power supply ratings
- FW, HW version number

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