



CERTIFICATE NUMBER 25-0278823-PDA
EFFECTIVE DATE 09-Jul-2025
EXPIRY DATE 08-Jul-2030
ABS TECHNICAL OFFICE Yokohama Engineering Services

CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

ENDRESS & HAUSER SE & CO. KG

located at

HAUPTSTR. 1, , D-79689 MAULBURG, Germany

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: Pressure Transmitter

Model: Cerabar PMP50, Deltabar PMD50

Endorsements:

Tier: 2 - PDA Issued

This Product Design Assessment (PDA) Certificate remains valid until 08/Jul/2030 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

Motohiro Tamura,Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

Tier: 2 - PDA Issued

Product: **Pressure Transmitter**

Model: **Cerabar PMP50, Deltabar PMD50**

Endorsements:

Intended Service:

Absolute, gauge, and differential pressure measurement.

Description:

Digital pressure transmitters for measurement in gases, steam or liquids continuous level, flow, and differential pressure measurement.

Rating:

Environmental Temperature Range: -40°C to +85°C

Supply Voltage: 10.5 to 35 VDC (Ex d, Ex e, non-EX)

10.5 to 30 VDC (Ex i)

Output: 4 to 20 mA HART, 2-wire

Degree of Protection: IP 66/68

PMP50

Absolute Pressure Range: 0 to 400 bar

Gauge Pressure Range: -1 to 400 bar

Process Temperature Range: -40°C to +125°C

-70°C to +400°C (with diaphragm seal)

PMD50

Pressure Range: 0.1 to 40 bar

Process Temperature Range: -40°C to +110°C

Service Restriction:

Unit Certification is not required for this product.

Comments:

(1) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

(2) Unless specially directed by Administration, this approval is not to be construed as a substitute for flag Administration's approval.

Notes/Drawing/Documentation:

This PDA Certification is based on the following document:

Dwg No. 961006858, Enclosure drawing 316L Ex d, Pages 1, Rev.0;

Dwg No. 961006864, Enclosure drawing Alu Ex d, Pages 1, Rev.0;

Dwg No. 961006890, Enclosure drawing Alu Ex d with electronic, Pages 1, Rev.0;

Dwg No. 961006891, Enclosure drawing 316L Ex d with electronic, Pages 1, Rev.0;

Dwg No. 961006892, Assembly drawing Alu housing Ex i and non-Ex, Pages 1, Rev.0;

Dwg No. 961006895, Assembly drawing Alu housing Ex d, Ex e and Ex t, Pages 1, Rev.0;

Dwg No. 961006898, Assembly drawing Alu housing Ed, Pages 1, Rev.0;

Dwg No. 961007542A, Drawing main Electronic, Pages 1, Rev.0;

Dwg No. 961007543A, Drawing terminal block, Pages 1, Rev.0;

Dwg No. TS0147, Pressure test incl. final Function test UUT04 and UUT05, Pages 15, Rev.0, dated 17 April 2025, issued by Endress + Hauser;

Dwg No. TS0147, Pressure test incl. final Function test UUT01 and UUT03, Pages 15, Rev.0, dated 17 April 2025, issued by Endress + Hauser;

Dwg No. TS0147, Pressure test incl. final Function test UUT8, Pages 13, Rev.0, dated 17 April 2025, issued by Endress + Hauser;

Dwg No. UUT01, Final Inspection report incl. function test for UUT01, Pages 2, Rev.0, dated 26 September 2024,

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Tier: 2 - PDA Issued

issued by Endress + Hauser;

Dwg No. UUT02, Final Inspection report incl. function test for UUT02, Pages 2, Rev.0, dated 26 September 2024, issued by Endress + Hauser;

Dwg No. UUT03, Final Inspection report incl. function test for UUT03, Pages 2, Rev.0, dated 26 September 2024, issued by Endress + Hauser;

Dwg No. UUT04, Final Inspection report incl. function test for UUT04, Pages 2, Rev.0, dated 30 September 2024, issued by Endress + Hauser;

Dwg No. UUT05, Final Inspection report incl. function test for UUT05, Pages 2, Rev.0, dated 1 October 2024, issued by Endress + Hauser;

Dwg No. UUT06, Final Inspection report incl. function test for UUT06, Pages 2, Rev.0, dated 26 September 2024, issued by Endress + Hauser;

Dwg No. UUT07, Final Inspection report incl. function test for UUT07, Pages 2, Rev.0, dated 30 September 2024, issued by Endress + Hauser;

Dwg No. 24DE-00794-BE, Salt Mist Test, Pages 20, Rev.0, dated 11 March 2025, issued by PAConsult GmbH;

Dwg No. 970009651, IPx6_Housings, Pages 9, Rev.0, dated 27 March 2024, issued by Endress + Hauser;

Dwg No. 970009656, TYPE4_Housings, Pages 9, Rev.0, dated 28 March 2024, issued by Endress + Hauser;

Dwg No. 970009658, IP6x_Housings, Pages 11, Rev.0, dated 11 April 2024, issued by Endress + Hauser;

Dwg No. 970009659, IPx8_Housings, Pages 9, Rev.0, dated 28 March 2024, issued by Endress + Hauser;

Dwg No. 970009660, TYPE 6P_Housings, Pages 9, Rev.0, dated 28 March 2024, issued by Endress + Hauser;

Dwg No. PMD50 (EUT 1)_V1.0, Test Report_PMP50, Pages 34, Rev.0, dated 19 March 2025, issued by MESSTECHNIKNORD GMBH;

Dwg No. PMD50 (EUT 2)_V1.0, Test Report_PMP50, Pages 34, Rev.0, dated 19 March 2025, issued by MESSTECHNIKNORD GMBH;

Dwg No. 970009665_AK, Test Report, Pages 85, Rev.0, dated 17 June 2024, issued by Endress + Hauser;

Dwg No. 970009667_AK, Test Report, Pages 63, Rev.0, dated 21 June 2024, issued by Endress + Hauser;

Dwg No. 970009669_AK, Test Report, Pages 87, Rev.0, dated 21 June 2024, issued by Endress + Hauser;

Dwg No. 970009672_AK, Test Report, Pages 69, Rev.0, dated 21 June 2024, issued by Endress + Hauser;

Dwg No. 24DE-00802-BE, PMP 50 and PMD 50, Pages 46, Rev.0, dated 5 November 2024, issued by PAConsult GmbH;

Dwg No. TI01773, Technical Information Cerabar PMP50, Pages 52, Rev.0;

Dwg No. TI01774, Technical Information Deltabar PMD50, Pages 44, Rev.0;

Dwg No. BA02332, Operating Instructions Cerabar PMP50, Pages 76, Rev.0;

Dwg No. BA02333, Operating Instructions Deltabar PMD50, Pages 76, Rev.0;

Dwg No. FM24ATEX0010X, EU-TYPE EXAMINATION CERTIFICATE, Pages 31, Rev.0, dated 13 March 2025, issued by FM Approval Europe Ltd;

Dwg No. FM24CA0015X, Certificate of Conformity, Pages 27, Rev.0, dated 12 March 2025, issued by FM Approval LLC;

Dwg No. FM24US0028X, Certificate of Conformity, Pages 27, Rev.0, dated 12 March 2025, issued by FM Approval LLC;

Dwg No. IECEx FMG 24.0008X, IECEx Certificate of Conformity, Pages 10, Rev.0, dated 12 March 2025, issued by FM Approval LLC;

Dwg No. EU_01180, EU Declaration of Conformity, Pages 3, Rev.0, dated 21 May 2024, issued by Endress + Hauser;

Dwg No. EU_01181, EU Declaration of Conformity, Pages 3, Rev.0, dated 21 May 2024, issued by Endress + Hauser;

Dwg No. EU_01182, EU Declaration of Conformity, Pages 4, Rev.0, dated 21 May 2024, issued by Endress + Hauser;

Dwg No. EU_01183, EU Declaration of Conformity, Pages 4, Rev.0, dated 21 May 2024, issued by Endress + Hauser;

Dwg No. EU_01185, EU Declaration of Conformity, Pages 4, Rev.0, dated 27 May 2024, issued by Endress + Hauser;

Dwg No. EU_01195, EU Declaration of Conformity, Pages 4, Rev.0, dated 27 June 2024, issued by Endress + Hauser;

Dwg No. EU_01196, EU Declaration of Conformity, Pages 4, Rev.0, dated 27 June 2024, issued by Endress + Hauser;

Dwg No. UK_00605, UK Declaration of Conformity, Pages 1, Rev.0, dated 3 February 2025, issued by Endress + Hauser;

Dwg No. UK_00606, UK Declaration of Conformity, Pages 1, Rev.0, dated 3 February 2025, issued by Endress + Hauser;

Dwg No. UK_00609, UK Declaration of Conformity, Pages 1, Rev.0, dated 7 February 2025, issued by Endress + Hauser;

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Dwg No. UK_00610, UK Declaration of Conformity, Pages 1, Rev.0, dated 7 February 2025, issued by Endress + Hauser;

Dwg No. --, Product description Cerabar PMP50, Pages 1, Rev.0:

Dwg No. --, Product description Deltabar PMD50, Pages 1, Rev.0:

Dwg No. --, Testmatrix - PMP50&PMD50, Pages 5, Rev.0

Terms of Validity:

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STANDARDS

ABS Rules:

ABS Rules for Conditions of Classification (2025) – 1A-1-4/7.7, 1A-1-A3, 1A-1-A4, which covers the following:
Rules for Building and Classing Marine Vessels Rules: 4-6-2/9.11.2, 4-8-3/1.7, 4-8-3/1.11.1, 4-8-3/1.17,

ABS Rules for Conditions of Classification (2025) – Offshore Units 1B-1-4/9.7, 1B-1-A2, 1B-1-A3, which covers the following:
4-2-1/11.27.2, 4-3-1/11, 4-3-1/15, 4-3-1/17.1,

ABS Rules for Conditions of Classification (2025) – High Speed Craft 1C-1-4/11.9, 1C-1-A2, 1C-1-A3, which cover the following:
4-4-1/9.17.2, 4-6-1/11, 4-6-1/15, 4-6-1/17

National:

NA

International:

IACS UR E10 (Rev.9 Aug. 2023)

Government:

NA

EUMED:

NA

OTHERS:

NA