



CERTIFICATE NUMBER 19-HG1826200-PDA
EFFECTIVE DATE 14-February-2019
EXPIRATION DATE 13-February-2024
ABS TECHNICAL OFFICE
Hamburg Engineering Department

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 S - PMC 71, PMP 71, PMP 75

This Product Design Assessment (PDA) Certificate remains valid until expiration date 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

Ulf Numirski
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)

ENDRESS & HAUSER SE & CO. KG

HAUPTSTR. 1

D-79689 MAULBURG

Germany

Telephone: 49-7622-281388

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Web: www.pcm.endress.com

Tier: 2 - PDA Issued

Product: Pressure Transmitter

Model: Cerabar S - PMC 71, PMP 71, PMP 75

Intended Service:

Liquids, gases, vapours pressure control, alarm and monitoring functions for marine applications.

Description:

Housing made of material AISI 316L/1.4435, stainless steel "T17" or of aluminum. Ceramic (PMC 71) or metallic (PMP 71/75) pressure sensor diaphragms. Threaded or flanged process connections.

Rating:

Pressure ranges:

-0.1/0...0.1 bar to -1/0...40 bar (PMC 71)

-0.1/0...0.1bar to -1/0...400 bar (PMP 71)

-0.1/0...0.4 bar to -1/0...400 bar (PMP 75)

Temperature of medium:

-20°C to 125/150°C (PMC 71)

-40°C to 125°C (PMP 71)

up to 350°C (PMP 75)

Power supply: 10.5...45V DC, 4...20mA loop powered.

Output: 4...20mA HART, 2-wire, PROFIBUS PA, Foundation Fieldbus.

Degree of Protection: IP 65/66/67.

Certified safe type:

FM IS, Class I, II, III Div. 1, Groups A-G (FM 3017778)

FM XP, Class I Div. 1, Groups A-D (FM 3017836)

CSA Type 4X/6P, Class I, II, III, Div. 2, Groups A-G (CSA1509834)

ATEX II 1/2 G/D EEx ia IIC T6 (KEMA 03ATEX1561)

ATEX II 2 G EEx d IIC T6 (KEMA 04ATEX2018)

ATEX II 1/2 G EEx ia IIC T6 or ATEX II 2 G EEx d IIC T6 (KEMA 05ATEX1009)

Service Restriction:

- Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

- The sensing devices are to be fitted with valves or arranged such that they may be isolated and removed without emptying tanks or without impairing the integrity of pressurized systems.

Comments:

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

- Each particular application and installation is to be specifically approved in conjunction with the relevant system, locations and environmental conditions.

Notes/Drawing/Documentation:

Drawing No. 070823_07-1567-BE-salt mist, test report, salt mist, Paconsult, 23/08/2007, Revision: 1, Pages: 1

Drawing No. CSA1509834_70137833_CoC, CSA certificate, Revision: 1, Pages: 1

Drawing No. E102258E2, test report, EMC, Phoenix Testlab, 08/09/2010, Revision: 1, Pages: 1

Drawing No. FM3017778-16US0360XSupp09, FM certificates, Revision: 1, Pages: 1

Drawing No. FM3017836-16US0361XSupp07, FM certificates, Revision: 1, Pages: 1

Drawing No. KEMA 03ATEX1561-iss5, ATEX certificate, Revision: 1, Pages: 1

Drawing No. KEMA 04ATEX2018 Iss 3, ATEX certificate, Revision: 1, Pages: 1

Drawing No. KEMA 05ATEX1009 Iss3, ATEX certificate, Revision: 1, Pages: 1

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Drawing No. Ordercode PMC71, Ordercode information PMC71, Revision: 1, Pages: 1

Drawing No. Ordercode PMP71, Ordercode information PMP71, Revision: 1, Pages: 1

Drawing No. PTC_E_05_031_GL, test report, EMC, Endress + Hauser, 30/05/2005, Revision: 1, Pages: 1

Drawing No. PTC_E_05_032_GL, test report, EMC, Endress + Hauser, 30/05/2005, Revision: 1, Pages: 1

Drawing No. S102258E1, test report, High voltage, Phoenix Testlab, 15/09/2010, Revision: 1, Pages: 1

Drawing No. TI00383PEN, Technical Information PMC71, PMP 71, Revision: 1, Pages: 1

Drawing No. TI00451PEN, Technical Information PMP71 with MID Parts Certificate, Revision: 1, Pages: 1

Drawing No. paconsult-07-1567_Rev1, test report, salt mist, Paconsult, 28/09/2007, Revision: 1, Pages: 1

Terms of Validity:

This Product Design Assessment (PDA) Certificate 19-HG1826200-PDA, dated 14/Feb/2019 remains valid until 13/Feb/2024 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

STANDARDS

ABS Rules:

2019 Marine Vessel Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-6-2/9.11.2, 4-6-2/9.11.3, 4-8-3/1.7, 4-8-3/1.11.1, 4-8-3/1.17, 4-8-3/13.1, 4-9-9/13

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA