Marine & Offshore

Certificate number: 64891/A2 BV
File number: AP4975
Product code: 3891H

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

PRESSURE TRANSMITTERS / TRANSDUCERS

Pressure Transmitter
Cerabar PMC51B, PMP51B, PMC71B, PMP71B

Requirements:
Bureau Veritas Rules for the Classification of Steel Ships
EC Code: 31 or 33 or 41BS (see item 4.3)

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: 14 Mar 2027

For Bureau Veritas Marine & Offshore,
At BV HAMBURG, on 08 Apr 2024,
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.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

Cerabar PMC51B, PMC71B, PMP51B and **PMP71B** series are pressure transmitters for gauge pressure and absolute pressure measurements.

1.1 - Main characteristics:

Sensor:	PMC51B and PMC71B: Ceramic isolating diaphragm PMP51B and PMP71B: Metal isolating diaphragm
Sensor ranges	PMC51B and PMC71B: Up to 40bar (gauge/absolute) PMP51B: Up to 400bar (gauge/absolute) PMP71B: Up to 700bar (gauge/absolute)
Power Supply:	24VDC, 4 to 20mA loop powered
Output:	4 to 20mA with HART protocol; PMC51B and PMP51B also with 4 to 20mA analogue
Operation:	With or without display; Displays with or without Bluetooth
Electrical connection	Cable Gland; Thread; Plug (M12, HAN7D or Valve ISO4400); Cable
Degree of protection:	IP66, IP68
Software version:	01.00.zz, HART 7, DevRev01

1.2 - Cerabar PMC51B

Features	**Variants**
Housing	Single compartment, Alu, coated Note: Not for use on open deck Dual compartment, Alu, coated Note: Not for use on open deck
Process connection	Flange; Thread (except <1/2'')
	Optional Items
Mounted accessories	Prepared for sealing (custody transfer)
Accessories enclosed	Weld-in adapter; Flushing ring

1.3 - Cerabar PMC71B

Features	**Variants**
Housing	Single compartment, Alu, coated Note: Not for use on open deck Dual compartment, Alu, coated Note: Not for use on open deck Dual compartment, 316L
Process connection	Flange; Thread (except <1/2'' if housing single compartment, Alu, coated or <1 1/2'' for all other housing options)
	Optional Items
Application Package	MID parts certificate, custody transfer High temperature version, 150°C/302°F process Heartbeat Verification + Monitoring
Mounted accessories	Overvoltage protection Prepared for sealing (custody transfer)
Accessories enclosed	Weld-in adapter; Flushing ring

1.4 - Cerabar PMP51B

Features	**Variants**
Housing	Single compartment, Alu, coated Note: Not for use on open deck Dual compartment, Alu, coated Note: Not for use on open deck
Application	Standard; Diaphragm seal
Diaphragm Seal Type	Without; Compact; Capillary
Process connection	Flange; Thread (except <1/2''); Oval flange adapter
	Optional Items
Mounted accessories	Prepared for sealing (custody transfer)
Accessories enclosed	Weld-in adapter; Flushing ring

1.5 - Cerabar PMP71B

Features	**Variants**
Housing	Single compartment, Alu, coated Note: Not for use on open deck Dual compartment, Alu, coated Note: Not for use on open deck Dual compartment, 316L
Application	Standard; Diaphragm seal
Diaphragm Seal Type	Without; Compact; Capillary

Process connection	Flange; Thread (except <1/2'' if housing single compartment; Alu, coated or <1 1/2'' for all other housing options); Pancake; Barrel flange
Optional Items	
Application Package	MID parts certificate, custody transfer High temperature version, 150°C/302°F process Heartbeat Verification + Monitoring
Mounted accessories	Overvoltage protection; Prepared for sealing (custody transfer)
Accessories enclosed	Weld-in adapter; Flushing ring

2. DOCUMENTS AND DRAWINGS :

- TI01507P/00/EN/03.21 dated 2021-03-30; TI01509P/00/EN/03.21 dated 2021-03-30
- BA02010P/00/EN/03.21 dated 2021-04-05; BA02012P/00/EN/03.21 dated 2021-03-30;
- SD02525P/00/EN/02.20 dated 2020-11-18; SD02530P/00/EN/06.21 dated 2021-03-15
- 961002809-A dated 23.04.2019; Platform dated 16.07.2018; 15002658 dated 17.02.2021
- IECEx KIWA 20.0011X Issue No: 0 dated 2020-07-08; IECEx SEV 20.0009X Issue No: 1 dated 2020-08-03; KIWA 20ATEX0031 X Issue: 1 dated 8 July 2020; SEV 20 ATEX 0387 X Issue: 0 dated 2020-07-03

For A2 version:

- TI01506P/00/EN/08.24 dated 2024-03-26; TI01508P/00/EN/07.24 dated 2024-03-26
- BA02009P/00/EN/06.24 dated 2024-03-26; BA02011P/00/EN/06.24 dated 2024-03-26; BA02050P/00/EN/05.24 dated 2024-03-26; BA02051P/00/EN/05.24 dated 2024-03-26

3. TEST REPORTS :

- paconsult: DE20-00061 Revision 1 dated Oct. 18, 2021
- MeßTechnikNord: 072994.154.21 V1.0 dated 26.07.2021; 072994.155.21 V1.0 dated 26.07.2021; 072994.157.21 V1.0 dated 26.07.2021; 072994.159.21 V1.0 dated 26.07.2021
- E&C testlab: 20PBI027016-00 dated 5/5/2020; 20PBI033716-00 dated 5/19/2020; 20PBI034516-00 dated 5/20/2020; 20PBI037516-00 dated 5/28/2020; 20PBI038116-00 dated 5/28/2020; 20PBI038716-00 dated 5/28/2020; 20PBI040616-00 dated 5/29/2020; 20PBI041016-00 dated 5/29/2020
- Endress+Hauser: 970008011_MB_01 dated 2020-11-17; 970008335_MB dated 2021-04-14; 970008336_MB dated 2021-04-14; 970008337_MB dated 2021-04-14; 970008338 dated 2021-04-14; 970008339_MB dated 2021-04-14

For A1 version:

- paconsult: 22DE-00734 dated 2022-10-20

4. APPLICATION / LIMITATION :

4.1 - Bureau Veritas Rules 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** or **33** for alu housing or **41BS** for stainless-steel housing

4.4 - The equipment 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 rev.7.

4.6 - The installation shall comply with the Manufacturer's recommendation described in the above-referenced documentation.

4.7 - 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.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The above mentioned sensors 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.

5.4 - For information, **ENDRESS + HAUSER SE+Co. KG** has declared to Bureau Veritas the following production site:

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° 64891/A1 BV issued on 03 Nov 2022 by the Society.

***** END OF CERTIFICATE *****