



Certificate number: 56686/B0 BV

File number: AP4892

Product code: 3953H

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 CONDUCTA GmbH+Co.KG

Gerlingen - GERMANY

for the type of product

SENSORS / DETECTORS / ANALYSERS

Analysis sensors

CPS11E, CPS12E, CLS21E, CLS50D, CPF81E, CUS50D, CUS52D

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

EC Code: 21

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: 10 Sep 2030

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 10 Sep 2025,

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 electronic version is available at: <https://www.veristarnb.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=cewnwfmnd>

BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

Sensors for liquid analysis.

CLS50D: Inductive conductivity sensor digital Memosens technology

CUS50D: Absorption sensor for turbidity measurements

CUS52D: Inline and immersion sensor for turbidity measurements

CPS11E: pH sensor with digital Memosens technology

CPS12E: ORP sensor with digital Memosens technology

CLS21E: Conductivity sensor with digital Memosens technology

CPF81E: pH sensor with digital Memosens technology

Variants: (acc. to order code rev.05 dated 2025-07-04)

Type: CLS50D-**aa b c d e + ff ...**

aa = Approval: ** (two letters)

b = Process connection: 1, 2

c = Sensor-, Seal-, Adapter material: B, C, D, E, G

d = Cable length: 1, 2, 3

e = Cable connection: 1, 2

ff = Additional approval: LH

... = other additional marks

Type: CUS50D-**aa b c d e f g + hh ...**

aa = Approval: ** (two letters)

b = Measuring range: 2

c = Process connection: A

d = Adaption cable: A, B

e = Cable length: 2, 3, 4, 7, 8

f = Sensor material: A, B

g = Seal material: 1

hh = Additional approval: LH

... = other additional marks

Type: CUS52D-**aa b c d e + ff ...**

aa = Approval: ** (two letters)

b = Measuring method: 1

c = Process connection: A, B, C, D, H

d = Adaption cable: A, B

e = Cable length: 2, 3, 4, 7, 8

ff = Additional approval: LH

... = other additional marks

Type: CPS11E-**aa b c dd e + ff ...**

aa = Approval: ** (two letters)

b = Version : 7

c = Application range: A, B, F

dd = Reference system: AA, AS, TA

e = Shaft length: 2

ff = Additional approval: LH

... = other additional marks

Type: CPS12E-**aa b c dd e + ff ...**

aa = Approval: ** (two letters)

b = Version : 7

c = Application range: G, P

dd = Reference system: AA

e = Shaft length: 2

ff = Additional approval: LH

... = other additional marks

Type: CLS21E-**aa bb cc + dd ...**

aa = Approval: ** (two letters)

bb = Process connection: GA, HA

cc = Material: 11

dd = Additional approval: LH

... = other additional marks

Type: CPF81E-**aa b c dd e + ff ...**

aa = Approval: ** (two letters)

b = Version : 5

c = Application range: L, N

dd = Reference system: AD

e = Insertion length: 1, 2, 3

ff = Additional approval: LH

... = other additional marks

2. DOCUMENTS AND DRAWINGS :

For A1 version:

- TI01494C/07/EN/01.20; TI01528C/07/EN/01.20; TI01594C/07/EN/01.21

- BVS 19 ATEX E 062 X dated 03.02.2021; TÜV 19 ATEX 8377 X Issue:01 dated 2020-09-09

For A2 version:

- 3201826 rev. D dated 21.04.2022; 3201826 rev. F dated 05.10.2022; 3201830 rev. D dated 21.04.2022;

3201830 rev. F dated 05.10.2022

For B0 version:

- TI00182C/07/EN/21.24-00; TI01136C/07/EN/07.23-00; TI01395C/07/EN/05.23-00; TI01493C/07/EN/02.24-00

- BVS 12 ATEX E 048 X Ausgabe: 01 dated 14.04.2025

3. TEST REPORTS :

- Testlab: E182222E1 dated 27.06.2019; U182222E1 dated 11.07.2019; S182222E1 dated 01.03.2019

- Currenta: 19/0390 dated 2019-03-13; 19/0397 dated 2019-03-13; 19/0914 dated 2019-06-17

For A1 version:

- Testlab: E202076E1 dated 20.04.2021; S202076E1 dated 15.03.2021; U202076E1 dated 03.05.2021;

E220601E1 dated 22.06.2022; U220601E1 dated 28.07.2022

For A2 version:

- Testlab: U231610E1 dated 10.11.2023; E23161E1 dated 28.11.2023

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: 21**
4.4 - The installation shall comply with the Manufacturer's recommendation described in the above-referenced documentation.
4.5 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev8.
4.6 - 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 Body.

5. PRODUCTION SURVEY REQUIREMENTS :

- 5.1 - The above mentioned sensors are to be supplied by **Endress + Hauser Conducta GmbH+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 Conducta GmbH+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 Conducta GmbH+Co. KG** has declared to Bureau Veritas the following production sites:

All products except CPF81E
Endress + Hauser Conducta GmbH+Co. KG
Landsberger Str. 28
04736 Waldheim
GERMANY

For CPF81E and CPS11E
Endress+Hauser Conducta Inc.
4123 East La Palma Avenue, Suite 200
Anaheim, CA 92807
USA

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 Conducta GmbH+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° 56686/A2 BV issued on 28 Feb 2024 by the Society.

*** END OF CERTIFICATE ***