



Marine & Offshore

Certificate number: 36153/B2 BV

File number: AP4444

Product code: 4501H

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

Hans Turck GmbH & Co. KG
Mülheim - GERMANY

for the type of product

PROGRAMMABLE LOGIC CONTROL UNITS
excom - Remote I/O-system

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

EC Code: 31

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: 25 Mar 2025

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 20 Aug 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.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 4 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

The **excom system** is a remote I/O system with decentralized I/O modules for the connection of intrinsically safe field devices and with bus-compatible modules. The built-in modules are to be mounted on a rack inside of metal cabinet.

The system comprising the following modules:

Reference/ Order Nr	Module	Module description	HW	FW
Rack mounting				
6881721	PSD24EX	Power supply; 24V DC; galvanic isolated; IP50	V1.xx	-
6884000	TI40EX	4 Temperature inputs; Pt; RTD; TC; 16Bit	V2.xx	1exx
6884001	AIH40EX	4 Analog inputs; 0/4...20mA; 14Bit; HART®;	V2.xx	1.xx
6884003	AOH40EX	4 Analog outputs; 0/4...20mA; 13Bit; HART®	V2.xx	1.xx
6884004	DI40EX	4 Digital inputs; up to 8V DC/ 4mA	12241001xx	1.xx
6884005	AIH41EX	4 Analog inputs; 0/4...20mA; 14Bit; HART®	V2.xx	1.xx
6884006	DM80EX	8 Digital input/output; up to 8V DC/ 4mA	V2.xx	2.0.x.x
6884036	BM1	Dummy module for unused slots	-	-
6884044	BM-PS	Cover for unused power supply slots	-	-
6884061	DF20EX	2 Frequency inputs; up to 4kHz; up to 8V DC/ 4mA	V2.xx	2.0.x.x
6884137	AI43EX	4 Analog inputs; 400...12kOhm; 14Bit	V1.xx	1.xx
6884190	TI41EX	4 Temperature inputs; PT100; Ni100; Cu100; 16Bit	V1.xx	1.0.x.x
6884203	DO40EX	4 Digital outputs; up to 25V DC/ 80mA	V1.xx	2.0.x.x
6884204	AI40EX	4 Analog inputs; 0/4...20mA; 14Bit	V1.xx	2.0.x.x
6884205	AO40EX	4 Analog outputs; 0/4...20mA; 13Bit	V1.xx	2.0.x.x
6884275	GDP-IS/FW2.3	Gateway for Profibus-DP communication	V1.xx	2.3.x.x
9100688	MT16-2G/MSA	Module rack for up to 16 I/O modules, 24V DC	-	-
6900293	PPSA230EX	AC/DC converter	-	-
6900294	PPSA115EX	AC/DC converter	-	-
9100516	MT-PPS	Upstream Subrack for PPSA	-	-
100000127	GEN-2G	Multiprotocol Gateway for Ethernet	V1.xx	1.7.x.x
100004545	GEN-3G	Multiprotocol Gateway for Ethernet	V1.xx	1.7.x.x
100000551	FOC11Ex-2G	Fiber-Optic Ethernet Media Converter or Zone 1	V1.xx	1.0.x.x
100000549	FOC11-3G	Fiber-Optic Ethernet Media Converter for Zone 2	V1.xx	1.0.x.x
100000555	FOCEN11Ex-2G	Fiber-Optic Ethernet Media Converter for Zone 1	V1.xx	1.1.x.x
100000552	FOC12Ex-2G	Fiber Optic Media Converter for Zone 1	V1.xx	1.0.x.x
100000553	FOC12-3G	Fiber Optic Media Converter for Zone 2	V1.xx	1.0.x.x
100000554	FOCEN11-3G	Fiber-Optic Ethernet Media Converter for Zone 2	V1.xx	1.1.x.x
6884266	AIH40EX	Input Module, Analog, HART, 4-channel	V1.xx	1.4.x.x
6884267	AOH40EX	Output Module, Analog, HART, 4-channel	V1.xx	1.4.x.x
100028780	TI40EX	4-Channel Temperature Input Module	V1.xx	1.2.x.x
6884232	DI40EX	Input Module, Digital, 4-channel	V2.xx	2.0.x.x
DIN-Rail mounting				
100000551	FOC11Ex-2G	Fiber-Optic Ethernet Media Converter or Zone 1	V1.xx	1.0.x.x
100000549	FOC11-3G	Fiber-Optic Ethernet Media Converter for Zone 2	V1.xx	1.0.x.x
100000555	FOCEN11Ex-2G	Fiber-Optic Ethernet Media Converter for Zone 1	V1.xx	1.1.x.x
100000552	FOC12Ex-2G	Fiber Optic Media Converter for Zone 1	V1.xx	1.0.x.x
100000553	FOC12-3G	Fiber Optic Media Converter for Zone 2	V1.xx	1.0.x.x
100000554	FOCEN11-3G	Fiber-Optic Ethernet Media Converter for Zone 2	V1.xx	1.1.x.x
100000550	SC11Ex-3G	Segment Coupler	V1.xx	1.0.x.x
6884047	SC12EX	Profibus-DP segment coupler (RS485-IS)	12325101xx	1.x
6890427	OC11Ex/2G.2	Profibus-DP fibre-optic coupler (RS485-IS)	V1.xx	2.x
6890428	OC11Ex/3G.2	Profibus-DP fibre-optic coupler (RS485)	V1.xx	2.x

Main characteristics:

Power supply: 24V DC

Degree of protection: IP20; IP50 (for power supply modules only)

2. DOCUMENTS AND DRAWINGS:

- D301266 dated 01.13; DOK-50016598-BS-V1.0a dated 15.10.13; DOK-6881721-BS-V1.0a dated 24.05.13
- DOK-6884000-BS-V2.0b dated 17.12.12; DOK-6884001-BS-V2.0b dated 31.08.12
- DOK-6884003-BS-V2.1a dated 29.04.13; DOK-6884004-BS-12241001E dated 28.05.13
- DOK-6884005-BS-V2.0b dated 31.08.12; DOK-6884006-BS-V2.0f dated 09.08.13
- DOK-6884036-BS-V1.0a dated 08.01.08; DOK-6884044-BS-V1.0a dated 18.07.13
- DOK-6884047-BS-12325101M dated 23.05.13; DOK-6884061-BS-V2.0a dated 23.10.13
- DOK-6884137-BS-V1.0b dated 08.03.11; DOK-6884190-BS-V1.0a dated 01.10.13
- DOK-6884203-BS-V1.0b dated 10.12.12; DOK-6884204-BS-V1.1a dated 09.07.13
- DOK-6884205-BS-V1.0a dated 12.01.12; DOK-6884210-BS-V1.2a dated 06.09.13
- DOK-6890427-BS-V1.0a dated 21.11.11; DOK-6890428-BS-V1.0a dated 21.11.11

For B0 version:

- DOK-6884275-BS-V1.0a dated 24.08.15; N_000376_2015_09_EN_GDP-IS dated Oct.2015

For B1 version:

- Datapackage "Artikeldaten"

- Datasheets:

- PPSA230EX_edb_6900293; PPSA115EX_edb_6900294; MT-PPS_edb_9100516; FOC11Ex-2G_edb_100000555;
- FOC11-3G_edb_100000554; TI401EX_100028780; SC11Ex-3G_100000550; GEN-3G_100004545;
- FOC12Ex-2G_100000552; FOC12-3G_100000553; DI401EX_6884232; AOH401EX_6884267;
- AIH401EX_6884266 all dated 2023-07-20
- GEN-2G_edb_100000127; FOC11Ex-2G_100000551; FOC11-3G_100000549 all dated 2024-05-27

3. TEST REPORTS:

- Phoenix Testlab GmbH: E132656E1 2nd version dated 10.12.2013; U132656E1 2nd version dated 11 December 2013; S130227E1 dated 29 January 2013
- Hans Turck GmbH & Co. KG: FM 7.3-11 dated 05.09.05; L/11/025 Rev. 0.2 dated 08.12.11; L/13/039 Rev. 0.0 dated 10.12.2013;
- EMC Test NRW GmbH: P09-Z-00101-004 dated 12. December 2011

For B0 version:

- PB 2700-2500-9800_V9.0 dated 07.04.2015

For B1 version:

- Phoenix Testlab GmbH: E231498E1 dated 21.05.2024; U231498E1, 2nd Version dated 16.05.2024; U231498E2 dated 17.05.2024
- Onetech: E15DR-D011 dated December 08, 2015; R15DR-D018 dated December 08, 2015
- CETECOM GmbH: 21-1-0132801T01 dated 2021-Oct-13; 22-1-0047201T01 dated 2022-May-16

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**

4.4 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev8.

4.5 - In accordance with IACS UR E22 and as applicable to programmable devices for computer based systems of Category II or III, for each ship application:

- Ship specific documentation is to be submitted including software documentation and categorization of the computer based system.

- Inspection and testing before installation onboard is to be performed under the surveillance of the Society

4.6 - Only Hardware and Firmware / Software successfully tested together in compliance with the Rules as referred to in page one, according to the declaration of the manufacturer is covered by this certificate.

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 Body.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above mentioned products are to be supplied by **Hans Turck 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 - **Hans Turck 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, **Hans Turck GmbH & Co. KG** has declared to Bureau Veritas the following production sites:

TURCK mechatec GmbH
Witzlebenstraße 11
45472 Mülheim an der Ruhr
GERMANY

Werner Turck GmbH & Co. KG
Goethestr. 7
58553 Halver
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
- The title and version of each software element included in the installed software system shall be either marked on equipment or indicated on command on a connected display.

7. OTHERS:

7.1 - It is the responsibility of **Hans Turck 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° 36153/B1 BV issued on 01 Jul 2024 by the Society.

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