



CERTIFICATE NUMBER	24-0043725-PDA
EFFECTIVE DATE	20-Sep-2024
EXPIRY DATE	19-Sep-2029
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

HANS TURCK GMBH & CO. KG.

located at

WITZLEBENSTR. 7, MULHEIM AN DER RUHR, Germany, 45472

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: I/O System
Model: excom I/O System
Endorsements:
Tier: 2 - PDA Issued

This Product Design Assessment (PDA) Certificate remains valid until 19/Sep/2029 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


Dimitrios Nikolakis, 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)

HANS TURCK GMBH & CO. KG.

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Tier: 2 - PDA Issued

Product: I/O System
Model: excom I/O System
Endorsements:

Intended Service:
High speed realtime I/O system for control and monitoring applications on Marine and Offshore facilities.

Description:
excom remote I/O-system for fieldbus systems for the use in explosion hazardous areas.
The system is equipped with bus-compatible, decentralized I/O-modules with protection class IP20 for the connection of binary and analog intrinsically safe field devices.
The system consists of power supply units or power supply modules, gateways, I/O-modules, as well as module racks to accommodate all components.
A module rack can accommodate a maximum of 16 modules, 2 gateways and 2 power supply modules.

Rating:
Power Supply: 24V DC; 115V AC; 230V AC
Degree of Protection: IP20
Operating Temperature: +5 °C to +70°C

Service Restriction:
1. Unit Certification is not required for the original equipment manufacturer. However, unit certification in accordance with 4-9-9/Table 2 is required by the user to customize this equipment where this equipment is used for Category II or III services in 4-9-3/Table 1.
2. 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.

Comments:
1. The manufacturer has provided a declaration about the control of, or the lack of asbestos in this product.
2. Tests and approval are for hardware only. Each particular application/ installation is to be specifically approved in conjunction with the relevant system in which the units are being used.
3. When incorporated in System Category II or III, manufacturer is to keep evidence of quality plan for software, inspection of hardware components from sub-suppliers and quality control in production. Performance integration, fault simulation, final system factory acceptance tests, on-board system and integration tests to be witnessed by the Surveyor.
4. Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified / recognized Certification Body.

Notes/Drawing/Documentation:
Technical Datasheets

Drawing No. 012 GDP-IS, edb_6884275_gbr_en
Drawing No. 032 SC11Ex-3G, datasheet SC11Ex-3G
Drawing No. 027 FOC11-3G, datasheet FOC11-3G_en
Drawing No. 017 AI401Ex, edb_6884204_gbr_en
Drawing No. 022 BM1, edb_6884036_gbr_en
Drawing No. 021 DF20Ex, edb_6884061_gbr_en
Drawing No. 026 FOC11Ex-2G, datasheet FOC11Ex-2G_en
Drawing No. 016 DO401Ex, edb_6884203_gbr_en
Drawing No. 028 FOC12Ex-2G, datasheet FOC12Ex-2G
Drawing No. 023 BM-PS, edb_6884044_gbr_en
Drawing No. 013 MT16-2G MSA, edb_9100688_gbr_en

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Drawing No. 018 AO401Ex, edb_6884205_gbr_en
Drawing No. 033 AIH401EX, datasheet AIH401EX
Drawing No. 019 AI43Ex, edb_6884137_gbr_en
Drawing No. 014 PSD24Ex, edb_6881721_gbr_en
Drawing No. 009 PPSA230EX, edb_6900293_gbr_en
Drawing No. 029 FOC12-3G, datasheet FOC12-3G
Drawing No. 034 AOH401EX, datasheet AOH401EX
Drawing No. 024 GEN-2G, edb_100000127_gbr_en
Drawing No. 036 DI401EX, datasheet DI401EX
Drawing No. 011 MT-PPS, edb_9100516_gbr_en
Drawing No. 031 FOCEN11-3G, edb_100000554_gbr_en
Drawing No. , Hans Turck ABS_Overview_Documents_Rev.00
Drawing No. 035 TI401EX, datasheet TI401EX
Drawing No. 010 PPSA115EX, edb_6900294_gbr_en
Drawing No. 025 GEN-3G, datasheet GEN-3G
Drawing No. 030 FOCEN11Ex-2G, edb_100000555_gbr_en
Drawing No. 020 TI41Ex, edb_6884190_gbr_en
Drawing No. 015 DM80Ex, edb_6884006_gbr_en

Test Reports

Drawing No. ENV Report U231498E2, Phoenix Testlab Gmbh, dated 17-May-2024
Drawing No. ENV Report U231498E1, U231498E1, 2nd version, Phoenix Testlab Gmbh, dated 16-May-2024
Drawing No. EMC Report E231498E1, Phoenix Testlab Gmbh, dated 21-May-2024
Drawing No. EMC Report 22-1-0047201T01, CETECOM TR22_1_0047201T01 (6GHz), Cetecom GmbH, dated 16-May-2022
Drawing No. EMC Report 21-1-0132801T01, CETECOM_TR_21-1-0132801T01, (6GHz), Cetecom GmbH, dated 13-Oct-2021
Drawing No. EMC Report E15DR-D011, ONETECH Corp., 08-Dec-2015
Drawing No. EMC Test Report R15DR-D018, ONETECH Corp., 08-Dec-2015
Drawing No. EMC Report E132656E1,2nd, Phoenix Testlab Gmbh, dated 10-Dec-2013
Drawing No. ENV Report U132656E1, U132656E1, 2nd version, Phoenix Testlab Gmbh, dated 11-Dec-2013
Drawing No. EMC Report E132656E2, Phoenix Testlab Gmbh, dated 10-Dec-2013
Drawing No. EMC Report L-13-039, P09-Z-00101-004_de_final, EMC Test NRW GmbH, 12-Dec-2011
Drawing No. Turck FM 7.3-11, EMV-Prüfplan Prüfprotokoll FM 7.3-11, Turck, 5-Sep-2005 and 16-Sep-2005
Drawing No. Turck Report L-11-025 V0.2, L-11-025 V0.2, Turck, dated 08-Dec-2011
Drawing No. Turck Report L-13-039 V0.0, L-13-039 V0.0, Turck, dated 10-Dec-2013
Drawing No. Safety Report S130227E1, Needle Flame Test, Phoenix Testlab Gmbh, dated 06-Feb-2013

Terms of Validity:

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STANDARDS

ABS Rules:

2024 Marine Vessel Rules: 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-8-3/1.7, 4-8-3/1.11.1, 4-8-3/1.17, 4-9-3/11, 4-9-9/13.1, 4-9-9/Table 1&Table 2

2024 Mobile Offshore Units Rules: 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-3-1/11, 4-3-1/15, 4-3-1/17, 4-3-4/5

National:

NA

International:

IACS UR E10 Rev.8

Government:

NA

EUMED:

NA

OTHERS:

NA

Attached to 24-0043725-PDA covering Hans Turck's excom I/O System

Issuance Date: 20-Sep-2024

Expiry Date: 19-Sep-2029

Mat.-No.	HW Rev.	Firmware Rev.	Designation	Description
6900293	2.xx	-	PPSA230EX	AC/DC Power Converter Rated voltage: 24 VDC / 230 VAC
6900294	2.xx	-	PPSA115EX	AC/DC Power Converter Rated voltage: 24 VDC / 115 VAC
9100516	2.xx	-	MT-PPS	Sub rack for PPSA
6884275	1.xx	2.3.x.x	GDP-IS/FW2.3	Gateway for Profibus-DP communication
9100688	1.xx	-	MT16-2G/MSA	Module rack, zone 1, for 16 Modules, marine ship approved
6881721	1.xx	-	PSD24EX	Power supply module, 24 VDC, zone 1
6884006	2.xx	2.0.x.x	DM80EX	I/O module, digital, 8-channel
6884203	1.xx	2.0.x.x	DO401EX	Output module, digital, 4-channel
6884204	1.xx	2.0.x.x	AI401Ex	Input module, analog, 4-channel
6884205	1.xx	2.0.x.x	AO401Ex	Output module, analog, 4-channel
6884137	1.xx	1.xx	AI43EX	Potentiometer module, Analog, 4-channel
6884190	1.xx	1.0.x.x	TI41EX	Temperature input module, 4-channel
6884061	2.xx	2.0.x.x	DF20EX	Frequency module, 2-channel
6884036	1.xx	-	BM1	Dummy modules for unused slots

6884044	1.xx	-	BM-PS	Power Supply Cover
10000127	V1.xx	FW1.7.x.x	GEN-2G	Multiprotocol Gateway for Ethernet
100004545	V1.xx	FW1.7.x.x	GEN-3G	Multiprotocol Gateway for Ethernet
100000551	V1.xx	FW1.0.x.x	FOC11Ex-2G	RS485-IS - Fiber Optic Media Converter for Zone 1
100000549	V1.xx	FW1.0.x.x	FOC11-3G	RS485 —Fiber Optic Media Converter for Zone 2
100000552	V1.xx	FW1.0.x.x	FOC12Ex-2G	RS485-IS — Fiber Optic Media Converter for Zone 1
100000553	V1.xx	FW1.0.x.x	FOC12-3G	RS485 — Fiber Optic Media Converter for Zone 2
100000555	V1.xx	FW1.1.x.x	FOCEN11Ex-2G	IS-100BASE-TX - Fibre Optic Media Converter for Zone 1
100000554	V1.xx	FW1.1.x.x	FOCEN11-3G	100BASE-TX - Fibre Optic Media Converter for Zone 2
100000550	V1.xx	FW1.0.x.x	SC11Ex-3G	PROFIBUS-DP segment coupler (RS485-IS)
6884266	V1.xx	FW1.4.x.x	AIH401EX	Input Module, analog, 4-channel, HART
6884267	V1.xx	FW1.4.x.x	AOH401EX	Output Module, analog, 4-channel, HART
100028780	V1.xx	FW1.2.x.x	TI401EX	Temperature input module, 4-Channel
6884232	V2.xx	FW2.0.x.x	DI401EX	Input module, digital, 4-channel