



CERTIFICATE NUMBER 23-2449604-PDA
EFFECTIVE DATE 5-September-2023
EXPIRATION DATE 4-September-2028
ABS TECHNICAL OFFICE Yokohama Engineering Services

CERTIFICATE OF
Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of
PHOENIX CONTACT GMBH & CO. KG
located at
FLACHSMARKTSTR. 8, ,BLOMBERG, Germany, D-32825

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 AXIOLINE AXL Series, S20-AI-8, S20-AO-8, S20-CNT/INC 2/2, S20-DI-16/4, S20-DO16/3, S-20-INC-2, S20-RS-UNI, S20-AI-8-RTD, S20-S3-BK+
Endorsement Other

This Product Design Assessment (PDA) Certificate remains valid until 4/September/2028 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

Motohiro Tamura
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)

PHOENIX CONTACT GMBH & CO. KG

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Tier: 2 - PDA Issued

Product: I/O System

Model: AXIOLINE

AXL Series, S20-AI-8, S20-AO-8, S20-CNT/INC 2/2, S20-DI-16/4, S20-DO16/3, S-20-INC-2,
S20-RS-UNI, S20-AI-8-RTD, S20-S3-BK+

Endorsements:

Intended Service:

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

Description:

I/O Modules that communicate the status/ signals of several inputs and outputs to a host device over an Ethernet network (PROFINET, sercos III):

AXC - AXIO-Controller

BK - Bus coupler

ETH - Ethernet coupler

EIP - EtherNet/IP coupler

SAS - F bus coupler

PB - Profibus coupler

PN - Profinet coupler

EC - EtherCAT

S3 - Bus coupler for Sercos

PWR - Power module

RS UNI - communication module for serial data

DI - Digital Input (xx Channels, followed by any code)

DO - Digital Output (xx Channels, followed by any code)

DI DO - Digital Input (xx Channels, followed by any code) AND Digital Output (xx Channels, followed by any code)

AI - Analog Input (xx Channels, followed by any code)

AO - Analog Output (xx Channels, followed by any code)

AI AO - Analog Input (xx Channels, followed by any code) AND Analog Output (xx Channels, followed by any code)

RTD - Analog Input for resistance temperature detectors (xx Channels, followed by any code)

UTH - temperature module xx Channels, followed by any code)

CNT - Counter (xx Channels, followed by any code)

INC - Incremental encoder input (xx Channels, followed by any code)

XC - Coated Variant

Rating:

Power Supply: 24V DC.

Degree of Protection: IP20.

Operating Temperature: -25 °C to 60 °C.

Service Restriction:

Unit certification is not required for this product.

If you or your purchaser requests an ABS Certificate for compliance with a specification of standard; the specification or standard, including inspection standards and tolerances, you must clearly define the conformity criteria.

Comments:

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

2. Each particular application of the modules is to be specifically approved in conjunction with the relevant system in which they are used.

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Notes/Drawing/Documentation:

Drawing No. 1, 1 General documents ABS, Revision: 1, Pages: -
Drawing No. 2, 2 Docs of Article ABS, Revision: 1, Pages: -
Drawing No. 3, Test Report, AXC 1050, Phoenix Contact, 22/05/2017, Revision: 1, Pages: -
Drawing No. 4, Test Report, E180501E1sec, Phoenix Testlab, 04/07/2018, Revision: 1, Pages: -
Drawing No. 5, Test Report, U180501E1, Phoenix Testlab, 30/05/2018, Revision: 1, Pages: -
Drawing No. 1, Declaration 6GHz test, Revision: 1, Pages: -
Drawing No. 2, Declaration 6GHz variant, Revision: 1, Pages: -
Drawing No. 3, Declaration 2GHz, Revision: 1, Pages: -
Drawing No. 4, Declaration S20 INC, Revision: 1, Pages: -
Drawing No. 83184695, Article Overview, Revision: 1, Pages: -
Drawing No. Cross-Reference PxC-BR, Cross-Reference PxC-BR, Revision: -, Pages: -
Drawing No. E210871E1, Phoenix Testlab 6GHz test report dated 22-06-2021, Revision: 1, Pages: -
Drawing No. 7989_en_09, Datasheet AXL F AI8 1F, Revision: 9, Pages: 23
Drawing No. 106218_en_04, Datasheet AXL F AI8 XC 1F, Revision: 4, Pages: 23
Drawing No. 7990_en_08, Data sheet AXL F AO8 1F, Revision: 8, Pages: 26
Drawing No. 106220_en_06, Data sheet AXL F AO8 XC 1F, Revision: 6, Pages: 26
Drawing No. 7991_en_07, Data sheet AXL F RTD8 1F, Revision: 7, Pages: 39
Drawing No. 106219_en_02, Data sheet AXL F RTD8 XC 1F, Revision: 2, Pages: 40
Drawing No. E221799E1, EMC Test Report dated 23-03-2023, Revision: 0, Pages: 40
Drawing No. PNR 8480_07, Data sheet, Revision: 7, Pages: 4
Drawing No. PNR 8481_07, Data sheet, Revision: 7, Pages: 4
Drawing No. S221799E1, Flame Test Report dated 20-12-2022, Revision: 0, Pages: 13
Drawing No. U221799E1, 2nd version, Climatic Test Report dated 15-05-2023, Revision: 1, Pages: 76
Drawing No. -, manufacturer's assessment, Revision: 0, Pages: 2
Drawing No. PB_111256_ia_00, PLC next Control AXC F 2152 XC, Revision: 0, Pages: 4

Terms of Validity:

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STANDARDS

ABS Rules:

2023 Rules for Conditions of Classification 1-1-4/7.7, 1-1-A3 and A4, which covers the following:
2023 Rules for Building and Classing Marine Vessel Rules: 4-8-3/1.7, 4-8-3/1.11.1, 4-8-3/1.17, 4-9-9/7, 4-9-9/13.1, 4-9-9/13.5, 4-9-9/ Table 1

2023 Rules for Conditions of Classification - Offshore Units and Structures 1-1-4/9.7, 1-1-A2 and A3, which covers the following:

2023 Rules for Building and Classing Mobile Offshore Units: 4-3-1/11, 4-3-1/15, 4-3-1/17.1, 4-3-4/5

2023 Rules for Conditions of Classification - Light and High-Speed Craft 1-1-4/11.9, 1-1-A2 and A3, which covers

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the following:

2023 Rules for Building and Classing High Speed Crafts: 4-6-1/11, 4-6-1/15, 4-6-1/17.1, 4-7-9/15.1, 4-7-9/15.5, 4-7-9/Table 9

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA