



CERTIFICATE NUMBER
EFFECTIVE DATE
EXPIRY DATE
ABS TECHNICAL OFFICE

25-0335665-PDA-DUP
16-Sep-2025
15-Sep-2030
London Engineering Department

CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

ABB XINHUI LOW VOLTAGE SWITCHGEAR COMPANY LTD

located at

**NO. 9, NORTH SANHE ROAD, XINHUI DISTRICT, , JIANGMEN
CITY, China, 529100**

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: **Contactor, Electrical**
Model: **AF116-30/40; AF140-30/40; AF146-30/40; AF190-30/40; AF-205-30/40; AF265-30/40; AF305-30/40;
AF370-30/40.**
Endorsements:
Tier: **3 - Type Approved, unit certification not required**

This Product Design Assessment (PDA) Certificate remains valid until 15/Sep/2030 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

Peter Edward (Peter Deegan) Lewis
Deegan,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)

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Web: http://www.abb.com.cn

Tier: 3 - Type Approved, unit certification not required

Product: Contactor, Electrical

Model: AF116-30/40; AF140-30/40; AF146-30/40; AF190-30/40; AF-205-30/40; AF265-30/40; AF305-30/40; AF370-30/40.

Endorsements:

Intended Service:

Fixed mounted magnetic contactors for installation in electrical switchboards and panels on ABS Classed Vessels and Offshore Facilities.

Description:

3-pole & 4-Pole contactors intended for control and protection of electrical equipment.

Rating:

3-Pole contactors:

-AF116-30: AC-1 160A @ 690VAC; AC-3 65A @ 500-690VAC; 116A @ 220-440VAC.

-AF140-30: AC-1 200A @ 690VAC; AC-3 80A @ 500-690VAC; 140A @ 220-440VAC.

-AF146-30: AC-1 225A @ 1000VAC; AC-3: 60A @ 1000VAC; 93A @ 500-690VAC; 146A @ 220-440VAC.

-AF190-30: AC-1 250A @ 1000V; 275A @ 690V; AC-3: 85A @ 1000V; 135A @ 500-690V; 190A @ 220-440V.

-AF205-30: AC-1 275A @ 1000V; 350A @ 690V; AC-3 100A @ 1000V; 165A @ 500-69V; 205A @ 220-440V.

-AF265-30: AC-1 350A @ 1000V; AC-3 113A @ 1000V; 250A 500-690V; 265A @ 220-440V.

-AF305-30: AC-1 375A @ 1000V; AC-3 131A @ 1000V; 290A @ 500-690V; 305A @ 220-440V.

-AF370-30: AC-1 400A @ 1000V; AC-3 141A @ 1000V; 315A @ 500-690V; 370A @ 220-440V.

4-Pole contactors:

-AF116-40 AC-1 160A @ 690VAC; AC-3 116 A @220-440 VAC;

-AF140-40 AC-1 200A @ 690VAC; AC-3: 140A @ 220-440VAC.

-AF190-40 AC-1 275A @ 690VAC; AC-3: 190A @ 220-440VAC; 250 A @ 690-1000 VAC.

-AF205-40 AC-1: 350A @ 690VAC; AC-3: 205 A @ 220-440VAC; 275A @ 690-1000VAC.

-AF265-40 AC-1: 400A @ 690VAC; AC-3: 265 A @ 220-440VAC; 350 A @ 690-1000VAC.

-AF305-40 AC-1: 500 A @ 690VAC; AC-3: 305 A @220-440VAC; 375 A @ 690-1000VAC.

-AF370-40 AC-1: 525 A @690VAC; AC-3: 370 A @ 220-440VAC; 400 A @ 690-1000VAC.

Control power supply ratings:

Code 11: 20-60V AC/DC

Code 12: 48-130V AC/DC

Code 13: 100-250V AC/DC

Code 14: 250-500V AC/DC

Code 31: 20-60VAC/DC : 3-pole contactor can be controlled by PLC (PLC not in scope of certificate)

Code 32: 48-130VAC/DC : 3-pole contactor can be controlled by PLC (PLC not in scope of certificate)

Code 33: 100-250V AC/DC: 3-pole contactor can be controlled by PLC (PLC not in scope of certificate)

Code 34: 250-500V AC/DC: 3-pole contactor can be controlled by PLC (PLC not in scope of certificate)

Degree of protection: IP 00

More Details in the attachment

Service Restriction:

1. Unit Certification is not required for this product.

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.

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Comments:

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

Notes/Drawing/Documentation:

Drawing No. 1712331STO-001, Environmental test report, Intertek Test Lab, Revision: 1, Dated:29-Sep-2025, Pages: 44

Drawing No. 2102998STO-001, CB test report size 4, 3-pole, Intertek Test Lab, Dated 17-Jun-2024, Pages: 149

Drawing No. 2110107STO-101, EMC-test report, Intertek Test Lab Revision: 1, Dated 31- Oct-2022 Pages: 82

Drawing No. 2110107STO-104, EMC-test report, Intertek Test Lab, Revision: 1, Dated 14-Apr-2023 Pages: 36

Drawing No. 2203148STO-001, CB test report size 4, 4-pole, Intertek Test Lab, Dated 16-Sep-2024, Pages: 79

Drawing No. 2203151STO-001, CB test report size 5, 3-pole, Intertek Test Lab, Dated 28-Jun-2024, Pages: 128

Drawing No. 2203152STO-001, CB test report size 5, 4-pole, Intertek Test Lab, Dated 17-Sep-2024, Pages: 82

Drawing No. 2203154STO-001, CB test report size 6, 3-pole, Intertek Test Lab, Dated 13 September 2024, Pages: 128

Drawing No. 2203155STO-001, CB test report size 6, 4-pole, Intertek Test Lab, Dated 20-Sep-2024 Revision: -, Pages: 83

Drawing No. 2309014STO-101, EMC-test report, Intertek Test Lab, Revision: 1, Dated 22-Mar-24 , Pages: 55

Drawing No. 2309014STO-102, EMC-test report, Intertek Test Lab, Revision: 1, Dated 22 Mar 24, Pages: 56

Drawing No. 2309014STO-103, EMC-test report, Intertek Test Lab, Revision: 1, Dated 22 Mar 24 Pages: 39

Drawing No. 2309014STO-104, EMC-test report, Intertek Test Lab, Revision: 1, Dated 28 Mar 24 Pages: 42

Drawing No. 620-20237-10-R0, IACS E10 rev.7 test report, Delta Test Lab, Revision: 1, Dated 20-Oct-2020 Pages: 22

Datasheets:

Drawing No. 1SBC100214C0202, Motor_protection_and_control_02_2024_extract, Revision: 2024-02, Pages: 21

Drawing No. 1SFB535001G1042, Assembly drawing size 4, Revision: A, Pages: 1

Drawing No. 1SFB535001G1046, Assembly drawing size 5, Revision: C, Pages: 1

Drawing No. 1SFB535001G1048, Assembly drawing size 6, Revision: B, Pages: 1

Drawing No. 1SFC100003M0201, Instruction sheet size 4, Revision: AC, Pages: 4

Drawing No. 1SFC100008M0201, Instruction sheet size 5-6, Revision: W, Pages: 4

Drawing No. 2CMT2015-005439, CE declaration, Revision: H, Pages: 1

Drawing No. 2CMT2020-006129, Statement IACS E10 rev.7, Revision: 1, Pages: 1

Drawing No. 2CMT2021-006257, Technical data - AF-contactor, Revision: B, Pages: 7

Drawing No. SE009784-2, ISO9001 ABB Electrification Sweden, Revision: -, Pages: 3

Drawing No. SE-114641, IEC CB certificate size 4, 3-pole, Pages: 3

Drawing No. SE-114861, IEC CB certificate size 5, 3-pole, Pages: 3

Drawing No. SE-114934, IEC CB certificate size 6, 3-pole, Pages: 3

Drawing No. SE-114963, IEC CB certificate size 4, 4-pole, Pages: 3

Drawing No. SE-114964, IEC CB certificate size 5, 4-pole, Pages: 3

Drawing No. SE-114965, IEC CB certificate size 6, 4-pole, Pages: 3

Terms of Validity:

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STANDARDS

ABS Rules:

2025 ABS Rules for Conditions of Classification: 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:
2025 Marine Vessel Rules: 4-8-3/1.3, 4-8-3/1.7, 4-8-3/1.17

2025 ABS Rules for Conditions of Classification - Offshore Units and Structures: 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

2025 Offshore Units Rules: 4-3-1/11, 4-3-1/17

National:

UL 60947-4-1- 2022

UL 60947-1- 2022

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA