CERTIFICATE NUMBER	25-0296490-PDA-DUP
EFFECTIVE DATE	19-Sep-2025
EXPIRY DATE	18-Sep-2030
ABS TECHNICAL OFFICE	London Engineering Department

CERTIFICATE OF

Product Design Assessment

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

SCHNEIDER (WUXI) DRIVES CO., LTD.

located at

NO.20 HANJIANG ROAD, WUXI XINWU DISTRICT, , WUXI, JIANGSU, China

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:	**Frequency Converter**
Model:	**ATV6A0xxxx4, ATV6A0xxxx6, ATV9A0xxxx4, ATV9A0xxxx6, ATV6B0xxxx4, ATV6B0xxxx6, ATV9B0xxxx4, ATV9B0xxxx6, MODBUOxxxx4APM, MODBUOxxxx6APM where 'x' represents different power ratings**
Endorsements:	
Tier:	**5 - Unit Certification Required**

This Product Design Assessment (PDA) Certificate remains valid until 18/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

Siddharth Barua,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)

Sensitivity: Internal & Restricted

SCHNEIDER (WUXI) DRIVES CO., LTD.
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Fax: +86 0512-62582802-7250
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Tier: 5 - Unit Certification Required

Product: **Frequency Converter**
Model: **ATV6A0xxxx4, ATV6A0xxxx6, ATV9A0xxxx4, ATV9A0xxxx6, ATV6B0xxxx4, ATV6B0xxxx6, ATV9B0xxxx4, ATV9B0xxxx6, MODBUOxxxx4APM, MODBUOxxxx6APM where 'x' represents different power ratings**
Endorsements:

Intended Service:
Motor Controller for use in propulsion, thrusters, pumps, cranes etc. for use on ABS classed vessels and offshore installations in accordance with the listed ABS Rules and International Standards.

Description:
The APM (Altivar Process Modular) is a modular, scalable single drives assembly, for cabinet integration by Schneider Electric qualified panel builder.
The APM-series covers a voltage range of 400V up to 690V and a power range of 75 kW up to 1200kW.
It consists of the following main components:
a) Standard Diode-Front-End (DFE) variable speed drives with ATV600 or ATV900 control unit
b) Active-Front-End (AFE), low-harmonic variable speed drives with ATV600 or ATV900 control unit
c) Optional braking unit for 400V up 690V DFE and AFE variable speed drive converters.

Rating:
See attachment

Service Restriction:
1. Unit Certification is required for this product when used as:
a) Motor controller of 100 kW (135 hp) and over motor intended for essential services (Marine Vessels Rules 4-8-1/ Table 1 & 2) or for services indicated in 4-8-3/Table 7 as per 4-8-3/1.5 and 4-8-3/5.11 of the Marine Vessels Rules.
b) Motor controller of 100 kW (135 hp) and over motor intended for essential services (Offshore Rules 4-1-1/ Table 3 & 4) or for services related to additional optional notations requested for the drilling unit as per 6-1-7/9.1.1(b) and 6-1-7/19.7 of the Offshore Rules.
2.Inspection and testing of equipment should comply with ABS Marine Vessel Rules 4-8-3/8.7.
3.When it is incorporated in /with a Category II or III system in accordance 4-9-3/Table 1 of the ABS Marine Vessels Rules the documentation detailed in 4-9-3/Table 3 & table 4 are to be submitted to ABS or to be available for review by ABS Engineering as applicable. The tests FAT(as per ABS MVR 4-9-3/8.3.6 & 8.3.7) & SAT(as per ABS MVR 4-9-3/8.5.6 & 8.5.7) required to be witness by ABS surveyor in accordance with ABS MVR 4-9-3/Table 5.
4. A nameplate made of corrosion resistant material is to be provided on the semiconductor assembly and is to indicate at least the information listed in 4-8-3/8.5.3 of ABS MVR.
5.The current PDA does not cover any MVR 4-9-14 requirements, however when the system is proposed for use on board a vessel with construction contract date after 1 July 2024, a vessel-specific review for compliance with applicable requirements of ABS Marine Vessels Rules (2025) sections 4-9-13, and 4-9-14 is still required, to verify project-specific elements such as cyber resilience requirements.

Comments:
1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. This PDA is only for power module, control unit and braking module. Each installation onboard is to be specifically approved and drawings/schematics are to be submitted.
3. Motor Controller enclosure IP/UL/NEMA rating to be based on Marine Vessel Rules 4-8-3/Table 2, based on their installation location.

Notes/Drawing/Documentation:
Drawing No. 1, 2.2.08_APM_2a_400V_C3635, Lab: Schneider Electric Power Drives GmbH, Dated: 25-02-2019, Revision: 1, Pages: 18

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Tier: 5 - Unit Certification Required

Drawing No. 4, 08 Ground short circuit while running_C1851,Lab: Schneider Electric Power Drives GmbH, Dated: 06-05-2025, Revision: 1, Pages: 20
Drawing No. 2, 2.2.08_APM_2a_690V_C3649, Lab: Schneider Electric Power Drives GmbH, Dated: 26-03-2019, Revision: 1, Pages: 13
Drawing No. 5, C4709-V1_2.2.08-2_3-Ground_SC_MCE-BU, Lab: Schneider Electric Power Drives GmbH, Dated: 20-07-2023, Revision: 1, Pages: 21
Drawing No. 7, 5.x_C3998-V02_VAEE-38499, Lab: tgm - Die Schule der Technik, Dated:06-10-2025, Revision: 1, Pages: 28
Drawing No. 3, 2.2.08_Test-Results-Ground-Fault-while-running_C1851, Revision: 1, Pages: 1
Drawing No. 8, ISO 9001 SEPD Vienna, Revision: 1, Pages: 1

Terms of Validity:
This Product Design Assessment (PDA) Certificate remains valid until 18/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).

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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.

STANDARDS

ABS Rules:
Rules for Conditions of Classification, Part 1 - Marine Vessel Rules(2025) 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:
Rules for Building and Classing Marine Vessels(2025): 4-8-3/8, 4-9-9/13;

Rules for Conditions of Classification, Part 1 - 2025 Offshore Unit Rules 1-1-4/9.7, 1-1-A2, 1-1-A3, which cover the following:
Rules for Building and Classing Offshore Units(2025): 6-1-1/9, 6-1-1/13, 6-1-7/12

National:
NA

International:
IACS UR E10 Rev.9 (2023)

Government:
NA

EUMED:
NA

OTHERS:
NA