



CERTIFICATE NUMBER  
EFFECTIVE DATE  
EXPIRY DATE  
ABS TECHNICAL OFFICE

20-SG1939761-PDA  
25-Feb-2020  
24-Feb-2025  
Singapore Engineering Services

## CERTIFICATE OF Product Design Assessment

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

# SCHNEIDER TOSHIBA INVERTER EUROPE SAS

located at

**33 RUE BLANCHET, PACY SUR EURE, France, 27120**

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 24/Feb/2025 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

Manoraaju Krishnasamy,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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**Tier: 5 - Unit Certification Required**

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**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 (Mobile Offshore Units 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 Mobile Offshore Units Rules.

2. The following requirement is applicable to computer-based frequency drive control system in accordance with 4-9-3 of the Marine Vessels Rules:

- a) The assigned system Category II
- b) The required evidence to be kept by the manufacturer in accordance with 4-9-3/Table 2
- c) The tests required to be witness by ABS surveyor in accordance with 4-9-3/Table 2

**Comments:**

- 1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- 2. The approval is only for hardware (power module, control unit and braking module) only.
- 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.
- 4. Each installation onboard is to be specifically approved and drawings/schematics will need to be submitted.

**Notes/Drawing/Documentation:**

See attachment

**Terms of Validity:**

This Product Design Assessment (PDA) Certificate remains valid until 24/Feb/2025 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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**Tier: 5 - Unit Certification Required**

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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.

**STANDARDS**

**ABS Rules:**

Rules for Conditions of Classification (2020) – 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:  
2020 Rules for Building and Classing Marine Vessels: 4-8-3/8, 4-9-9/13;

Rules for Conditions of Classification (2020) – Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

2020 Rules for Building and Classing Mobile Offshore Units: 6-1-7/12;

**National:**

NA

**International:**

IEC 61800-5-1:2007

**Government:**

NA

**EUMED:**

NA

**OTHERS:**

IACS UR E10 Rev.7