CERTIFICATE NUMBER	25-0318167-PDA
EFFECTIVE DATE	17-Nov-2025
EXPIRY DATE	16-Nov-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 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:	**Motor Controller**
Model:	**Altivar Soft Starter ATS480**
Endorsements:	
Tier:	**5 - Unit Certification Required**

This Product Design Assessment (PDA) Certificate remains valid until 16/Nov/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

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Tier: 5 - Unit Certification Required

Product: **Motor Controller**
Model: **Altivar Soft Starter ATS480**
Endorsements:

Intended Service:
For ABS classed Marine Vessel and Offshore Installations - Soft Starter for Asynchronous Motors.

Description:
The Altivar Soft Starter ATS480 is a controller with six thyristors using the TCS (Torque Control System) algorithm to control acceleration, deceleration, and stopping of induction motors(three-phase squirrel cage) up to 900 kW/1,200 HP with motor thermal protection.

Rating:
ATS480:

1.Power Mains:
Input/ output Voltage: 208VAC-690VAC (-15% to +10%),
Operational current range: 17 to 1200 A
Frequency: 50Hz -20%, and 60Hz +20%

2.Control Supply:
Input/ output Voltage: 110VAC-230VAC (-15% to +10%),
Frequency: 50Hz/60Hz ±5%

3. Degree of Protection
-IP20 for ATS480D17Y to C11Y
- IP00 for ATS480C14Y to M12Y

4.Operating ambient temperature:
-10°C to 40 °C (Without derating)
-Up to 60 °C (derating current by 2% for each °C above 40 °C)

For more details see attachments

Service Restriction:
1.Unit Certification is required for this product when used as:
a. Motor controllers of 100 kW (135 hp) and over that are intended for essential services as per ABS MVR 2025 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 ABS Marine Vessel Rules.
b. Motor controllers of 100 kW (135 hp) and over that are intended for essential services (Offshore Unit Rules 4-1-1/ Table 3 & 4) or for services related to additional optional notations requested for the Offshore Unit Rules as per 6-1-7/9.1.1(b) and 6-1-7/19.7 of the Offshore Unit Rules.
2. If the manufacturer or purchaser requests an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
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 & FMEA (4-9-3/5.3) 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. 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 sections 4-9-13, and 4-9-14 is still required, to verify project-specific elements such as cyber resilience requirements.

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Tier: 5 - Unit Certification Required

Comments:
1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. The type of enclosure for motor controllers is to be selected according to the 4-8-3/1.11 and 4-8-3/Table 2 of the MVR and 4-3-3/Table 1 of the Offshore Unit Rules as applicable.
3. If the disconnecting device is not within sight of both motor and controller, or if it is more than 15.25 m (50 ft) from either, it is to be arranged for locking in the open position as per 4-8-4/9.3.2 of the MVR and 4-3-3/3.13.2(c) of the Offshore Unit Rules.
4. This PDA is only for power module & control unit. Each installation onboard is to be specifically approved and drawings/schematics are to be submitted.

Notes/Drawing/Documentation:
See attachment for more details

Terms of Validity:
This Product Design Assessment (PDA) Certificate remains valid until 16/Nov/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.

STANDARDS

ABS Rules:
2025 Rules for Conditions of Classification, Part 1 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:
2025 Marine Vessel Rules : 4-8-2/9.17.2, 4-8-2/9.17.3, 4-8-3/1.7, 4-8-3/1.11.1, 4-8-3/1.17, 5.1, 5.3.1, 5.7, 4-9-3/5.1, 4-9-3/8.3.4,4-9-3/13.1.1

2025 Rules for Conditions of Classification, Part 1 - Offshore Units and Structures: 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:
2025 Offshore Unit Rules : 4-3-1/11, 4-3-1/15, 4-3-1/17, 4-3-2/ 9.13.5, 4-3-3/3.13, 6-1-1/13, 6-1-7/9.15

National:
NA

International:
IACS UR E10 rev.9 (2023)

Government:
NA

EUMED:
NA

OTHERS:
NA

Manufacturer: SCHNEIDER TOSHIBA INVERTER EUROPE SAS (776487),
Model: Altivar Soft Starter ATS480
PDA No.: 25-0318167-PDA
Issue date: 17-Nov-2025
Expiration date: 16-Nov-2030

Ratings:

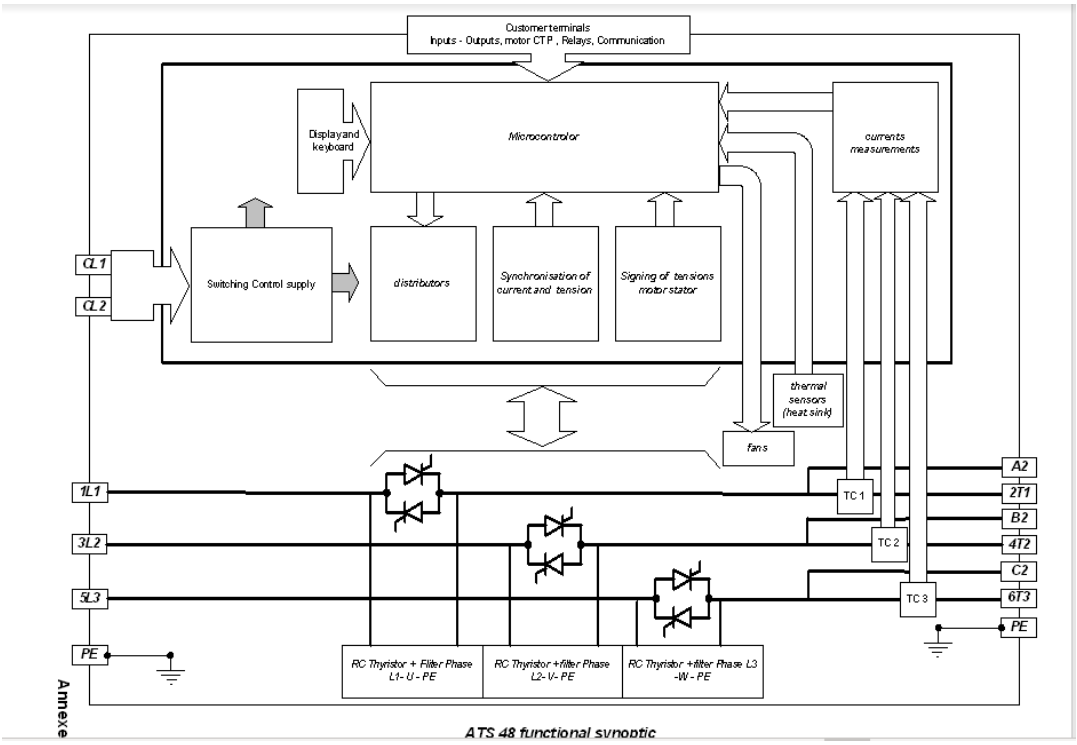
References	Frame Size	Current rating (A)
ATS480D17Y	A	17
ATS480D22Y	A	22
ATS480D32Y	A	32
ATS480D38Y	A	38
ATS480D47Y	A	47
ATS480D62Y	B	62
ATS480D75Y	B	75
ATS480D88Y	B	88
ATS480C11Y	B	110
ATS480C14Y	C	140
ATS480C17Y	C	170
ATS480C21Y	D	210
ATS480C25Y	D	250
ATS480C32Y	D	320
ATS480C41Y	E	410
ATS480C48Y	E	480
ATS480C59Y	E	590
ATS480C66Y	E	660
ATS480C79Y	F	790
ATS480M10Y	F	1000
ATS480M12Y	F	1200

For marine applications the ATS480 must be considered like a component in a system, not like a final product.

Soft Starter Overview

ATS480D17Y...ATS480D47Y 3–phase 208...690 V, 17...47 A, 2.2...45 kW, 3...50 HP	**ATS480D62Y...ATS480C11Y** 3–phase 208...690 V, 62...110 A, 11...90 kW, 15...125 HP
	
Frame size A	Frame size B
ATS480C14Y...ATS480C17Y 3–phase 208...690 V, 140...170 A, 30...160 kW, 40...200 HP	**ATS480C21Y...ATS480C32Y** 3–phase 208...690 V, 210...320 A, 45...315 kW, 60... 400 HP
	
Frame size C	Frame size D

ATS480C41Y...ATS480C66Y 3–phase 208...690 V, 410...660 A, 90...630 kW, 125...850 HP	ATS480C79Y...ATS480M12Y 3–phase 208...690 V, 790...1200 A, 220...900 kW, 250...1200 HP
	
Frame size E	Frame size F



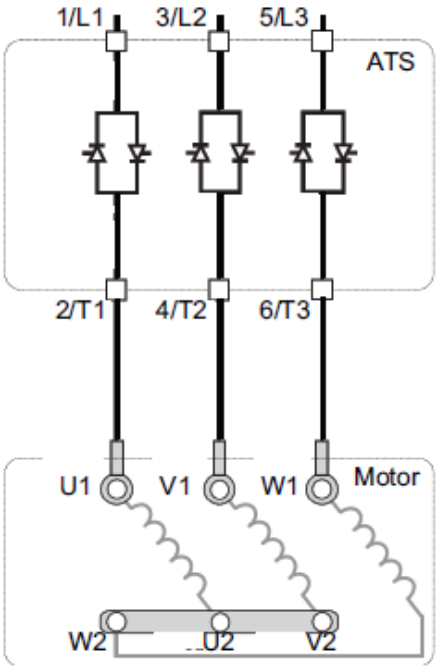
ATS 48 functional synoptic

Annexe

Typical Wiring Diagrams

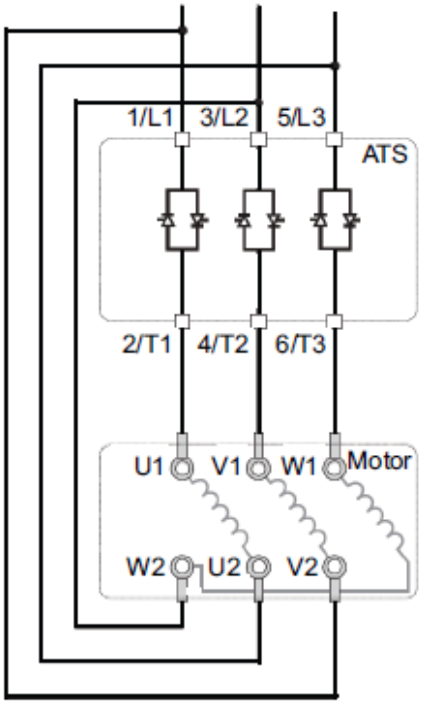
Connection Of The Supply Mains

Connection In-Line



The soft starter can be connected in–line to the motor supply. The motor connection type (star/delta) depends on the supply mains, refer to the motor nameplate.

Connection In The Motor Delta Winding



For delta connection, soft starters can be connected in series with motor windings. This connection allows a current rating increase of 1.7 (√3) of the soft starter power, allowing the use a soft starter with a lower current rating for the same motor.

Example:

Using a 400V 110kW 4 pole motor with a mains supply current of 195A (nominal current for the delta connection).

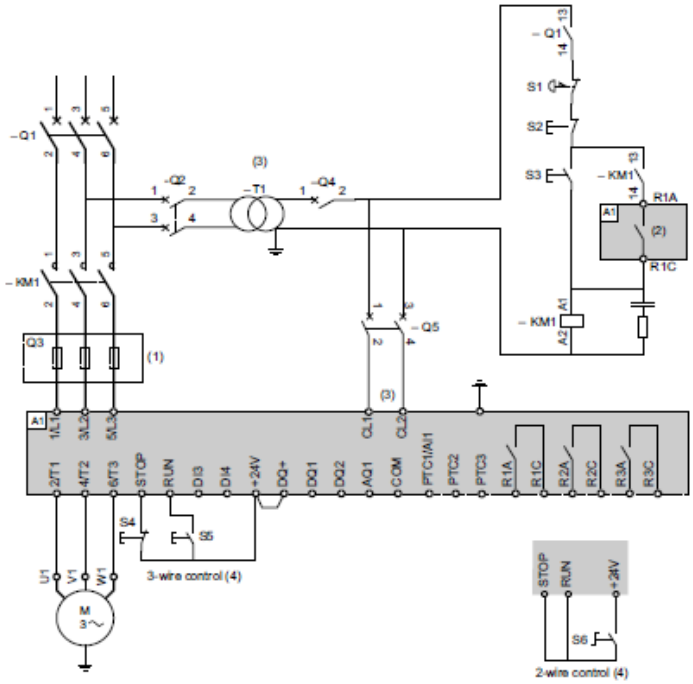
- In-line connection: a soft starter is selected with a current rating just above 195A, i.e. ATS480C21Y (210A) for a normal duty application.
- Inside delta connection: each winding of the motor is equal to 195/√3 = 114A, ATS480C14Y is sufficient for this normal duty application.

Application Diagrams

Connection In Line, With Line Contactor, No Bypass, Type 1 or 2 Coordination, Non - reversing, 2-wire or 3-wire control

Line contactor controlled by Power ON and Power OFF push-buttons or on detected error

Relay output R1 set to **[Operating State Fault]** `FLT` (factory setting) to turn Off the soft starter when an error is detected.



- (1) Installation of additional fast-acting fuses to upgrade to type 2 coordination according to IEC 60947–4–2.
- (2) Take into account the electrical characteristics of the relays, refer to Control Terminal Characteristics, page 49.
- (3) The transformer must supply 110...230 Vac +10% - 15%, 50/60Hz.
- (4) Refer to RUN and STOP Management, page 34.

For more detail, see the user manual NNZ85515_01

Production plant

Name	**SEMB** P.T. Schneider Electric Manufacturing Batam
Road	Batamindo Industrial Park, Block 4 & 208
Town	Batam Island
Country	Indonesia
Tel.	(62) 770 611 133
UL	E184727
ABS MA	21-4808897
Contact for audit	Bambang Riyadi bambang.riyadi@se.com

Name	**WuXi Pro-face Co., Ltd**
Road	No.20, Hanjiang Road, National Hi-Tech Industrial Development Zone, Wuxi,Jiangsu
Town	Wuxi
Country	China
Tel.	+86 18519616199
UL	E184727
ABS MA	21-4632375 recorded for Schneider Wuxi Drives Co.,Ltd (same plant, same address)
Contact for audit	Sunny Wang .yahong-sunny.wang@se.com

Manufacturer: SCHNEIDER TOSHIBA INVERTER EUROPE SAS (776487),
Model: Altivar Soft Starter ATS480
PDA No.: 25-0318167-PDA
Issue date: 17-Nov-2025
Expiration date: 16-Nov-2030

Drawings List:

Drawing no.74, LE 21 00 44, Lab: GROUPE CNPP LPMES/LEE LABORATOIRE ENVIRONNEMENT & ELECTROMAGNETISME, Dated:16/07/2021, Revision:1, Pages:23

Drawing no.77, LM 21 00 25, Lab: GROUPE CNPP LPMES/LEE LABORATOIRE ENVIRONNEMENT & ELECTROMAGNETISME, Dated:09/04/2021, Revision:1, Pages: 17

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Drawing no.57, ATS480_QTR_21234, Lab: Schneider Toshiba Inverter Europe, Dated:03/06/2021, Revision: 1, Pages:10

Drawing no.14, ATS480_QTR_21023, Lab: S.T.I.E. Schneider Toshiba Inverter Europe , Dated: 29/01/2021, Revision: 1, Pages:5

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Drawing no.8 , 5.2.03_C4301-V1_ATS480C66Y, Lab:Schneider Electric Power Drives GmbH , Dated:09/05/2020, Revision:1, Pages:13

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Drawing no.24, ATS480_QTR_21063, Lab: S.T.I.E. Schneider Toshiba Inverter Europe , Dated: 04/03/2021, Revision:1, Pages6

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Drawing no.102, P213622_SchneiderToshiba_DEC3, Lab: Laboratoire national de metrologie et d'essais , Dated:28/07/2021, Revision:1, Pages:15

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Drawing no.52, ATS480_QTR_21225, Lab:S.T.I.E Schneider Toshiba Inverter Europe, Dated: 21/05/2021, Revision: 1, Pages:7

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