



TYPE APPROVAL CERTIFICATE

Certificate No:
TAE0001AY
Revision No:
2

This is to certify:

That the Frequency Converter

with type designation(s)
Altivar 61

Issued to

Schneider Toshiba Inverter Europe S.A.S.
Pacy Sur Eure, Eure, France

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft

Application :

Frequency Converter for Asynchronous Motors Altivar 61 series.

Range:

0.37 kW to 45 kW 200 - 240 V AC supply,

0.75 kW to 630 kW 380 - 480 V AC supply,

2.2 kW to 800 kW 500 - 690 V AC supply

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Issued at **Høvik** on **2021-11-23**

for **DNV**

This Certificate is valid until **2023-08-11**.

DNV local station: **France CMC**

Approval Engineer: **Nicolay Horn**

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Trond Sjøvåg
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Name and place of manufacturer

Company Name	Address
Schneider (Wuxi) Drives Co., Ltd.	No.20 Hanjiang Road, Wuxi City, Jiangsu Province, Chian, 214028 - P.R.China
PT SCHNEIDER ELECTRIC MFG BATAM (SEMB)	BATAM INDUSTRIAL PARK BLK 4 MUKAKUNING, BATAM RIAU, 29433 INDONESIA
Schneider – Electric IT Buisness India	Jiagani Village, Jiagani Hobili Bangalore INDIA

Product description

Altivar 61. Variable speed controller for asynchronous motor. Constant / variable torque applications.

Technical data for 200 - 240 V supply IP20:

Type designation (On heatsink)	Mains supply (V)	Number of phases	Motor power output (kW) ¹⁾
ATV 61H075M2	200 – 240	1	0,37
ATV 61HU15M2	200 – 240	1	0,75
ATV 61HU22M2	200 – 240	1	1,5
ATV 61HU30M2	200 – 240	1	2,2
ATV 61HU40M2	200 – 240	1	3,0
ATV 61HU55M2	200 – 240	1	4,0
ATV 61HU75M2	200 – 240	1	5,5
ATV 61H037M3	200 – 240	3	0,37
ATV 61H075M3	200 – 240	3	0,75
ATV 61HU15M3	200 – 240	3	1,5
ATV 61HU22M3	200 – 240	3	2,2
ATV 61HU30M3	200 – 240	3	3,0
ATV 61HU40M3	200 – 240	3	4,0
ATV 61HU55M3	200 – 240	3	5,5
ATV 61HU75M3	200 – 240	3	7,5
ATV 61HD11M3X	200 – 240	3	11
ATV 61HD15M3X	200 – 240	3	15
ATV 61HD18M3X	200 – 240	3	18,5
ATV 61HD22M3X	200 – 240	3	22
ATV 61HD30M3X	200 – 240	3	30
ATV 61HD37M3X	200 – 240	3	37
ATV 61HD45M3X	200 – 240	3	45

Technical data for 380 - 480 V supply:

Type designation (On heatsink), IP20	Type designation (On heatsink), IP54	Mains supply (V)	Number of phases	Motor power output (kW) ¹⁾
ATV 61H075N4	ATV 61W075N4	380 – 480	3	0,75
ATV 61HU15N4	ATV 61WU15N4	380 – 480	3	1,5
ATV 61HU22N4	ATV 61WU22N4	380 – 480	3	2,2
ATV 61HU30N4	ATV 61WU30N4	380 – 480	3	3,0
ATV 61HU40N4	ATV 61WU40N4	380 – 480	3	4,0
ATV 61HU55N4	ATV 61WU55N4	380 – 480	3	5,5
ATV 61HU75N4	ATV 61WU75N4	380 – 480	3	7,5
ATV 61HD11N4	ATV 61WD11N4	380 – 480	3	11

Type designation (On heatsink), IP20	Type designation (On heatsink), IP54	Mains supply (V)	Number of phases	Motor power output (kW) ¹⁾
ATV 61HD15N4	ATV 61WD15N4	380 – 480	3	15
ATV 61HD18N4	ATV 61WD18N4	380 – 480	3	18,5
ATV 61HD22N4	ATV 61WD22N4	380 – 480	3	22
ATV 61HD30N4	ATV 61WD30N4	380 – 480	3	30
ATV 61HD37N4	ATV 61WD37N4	380 – 480	3	37
ATV 61HD45N4	ATV 61WD45N4	380 – 480	3	45
ATV 61HD55N4	ATV 61WD55N4	380 – 480	3	55
ATV 61HD75N4	ATV 61WD75N4	380 – 480	3	75
ATV 61HD90N4	ATV 61WD90N4	380 – 480	3	90
ATV 61HC11N4	-	380 – 480	3	110 ²⁾
ATV 61HC13N4	-	380 – 480	3	132 ²⁾
ATV 61HC16N4	-	380 – 480	3	160 ²⁾
ATV 61HC20N4	-	380 – 480	3	200 ²⁾
ATV 61HC22N4	-	380 – 480	3	220 ²⁾
ATV 61HC25N4	-	380 – 480	3	250 ²⁾
ATV 61HC28N4	-	380 – 480	3	280 ²⁾
ATV 61HC31N4	-	380 – 480	3	315 ²⁾
ATV 61HC40N4	-	380 – 480	3	400 ²⁾
ATV 61HC50N4	-	380 – 480	3	500 ²⁾
ATV 61HC63N4	-	380 – 480	3	630 ²⁾

1) Motor power at standard torque application (120% T_n for 60 sec.). Values applicable for up to 50 °C ambient.

2) Values applicable upto 45 °C ambient.

Technical data for 500 - 690 V supply:

Type designation (On heatsink)	Mains supply (V)	Number of phases	Motor power output (kW) ³⁾
ATV 61HU30Y	500 – 690	3	3,0
ATV 61HU40Y	500 – 690	3	4,0
ATV 61HU55Y	500 – 690	3	5,5
ATV 61HU75Y	500 – 690	3	7,5
ATV 61HD11Y	500 – 690	3	11
ATV 61HD15Y	500 – 690	3	15
ATV 61HD18Y	500 – 690	3	18,5
ATV 61HD22Y	500 – 690	3	22
ATV 61HD30Y	500 – 690	3	30
ATV 61HD37Y	500 – 690	3	37
ATV 61HD45Y	500 – 690	3	45
ATV 61HD55Y	500 – 690	3	55
ATV 61HD75Y	500 – 690	3	75
ATV 61HD90Y	500 – 690	3	90
ATV 61HC11Y	500 – 690	3	110
ATV 61HC13Y	500 – 690	3	132
ATV 61HC16Y	500 – 690	3	160
ATV 61HC20Y	500 – 690	3	200
ATV 61HC25Y	500 – 690	3	250
ATV 61HC31Y	500 – 690	3	315
ATV 61HC40Y	500 – 690	3	400
ATV 61HC50Y	500 – 690	3	500
ATV 61HC63Y	500 – 690	3	630
ATV 61HC80Y	500 – 690	3	800

- 1) Motor power at standard torque application (120% T_n for 60 sec.). Values applicable for up to 50 °C ambient.
- 2) Values applicable up to 45 °C ambient.
- 3) Values applicable for 690 V motors

Application/Limitation

Supply voltage range:	200 - 240 / 380 - 480 / 500 - 690 V, 50/60 Hz
Voltage variation:	± 10 %
Frequency variation:	± 10 %
Output frequency:	0 - 599 Hz up to 37 kW ranges, 0 – 500 Hz for the others.
Temperature range in operation:	- 10 to +50 °C
Protection degree:	IP20 & IP54
Temperature class:	A
Vibration class:	A
Humidity class:	A
EMC class:	IEC 61800-3. To be used on EMC class A locations (see below).

The Altivar 61 must be regarded as a component. The actual installation to be designed according to Schneider Users Manual and according to the applicable DNV Rules for the actual application.

Frequency converters rated equal or larger than 100kW serving essential or important functions as defined in DNV rules Pt.4 Ch.8 shall have a product certificate according to DNV Pt.4 Ch.8 Sec.1 Table 3 for each delivery to DNV classed vessels.

For product certification, the following documents should be submitted for approval, Ref. to DNV Pt.4 Ch.8 Sec.1 Table 2:

- Reference to this Type Approval Certificate
- (E180) A drawing showing external location of instruments and devices for operation (panel layout)
- (E240) Functional description for the intended use, configuration and interface (e.g. alarms, monitoring and auxiliary power supplies)
- (Z252) Test program at manufacturer for routine tests and functional tests as per DNV Pt.4 Ch.8 Sec.7, 2.1.1
- Single line diagram (only applicable for multi drive configuration)
- If additional components to the type approved frequency converter are delivered, documentation according to DNV rules Pt.4 Ch.8 Sec.1 table 2 shall be submitted for review.

To be installed in an enclosure with an IP degree in accordance with DNV Rules w.r.t. location.

Converters with conducted and radiated emission according to IEC 61800-3 can be installed in "special distribution zone" and "general power distribution zone" in accordance with IEC 60533 provided precautions are taken to attenuate these effects on the distribution system, so the safe operation is assured.

Use of mechanical adaptation required to reduce the Vibration level.

Type Approval documentation

Technical info:

Part of catalogue, page 21 "Variable speed drives Altivar 61.
Schneider booklet "ATV61 / ATV71 690 V manufacturer STIE" item1 (parts) issued 2007-10-23. Telemecanique
"Variable speed drives Altivar 61"Schneider catalogue, issued September 2005 (applicable parts). Schneider booklet
"ATV71- ATV61 400 V" items 1 - 3 issued 2007-05-19.

Test reports:

Technical Construction File Part A, rev. 01 dated 2007-08-03. V&V Pacy Labs "Damp Heat for DNV" dated 2014-02-25. LCIE test report no. 600039806-539682 dated 2006-02-17. UL test reports nos. ATV61WD15N4c.doc, ATV61WD22N4c.doc, ATV61WD30N4c.doc, ATV61WD45N4c.doc, ATV61WD90N4c.doc, Schneider booklet "ATV61 / ATV71 690 V manufacturer STIE" items 12 – 22 issued 2007-10-23. Schneider booklet "ATV71- ATV61 400 V" items 3-3 to 3-16 issued 2007-05-19. Schneider Electric test reports nos. Plan 320 – test nos. 19-01 dated 2004-09-14, 45-17 dated 2005-01-31, 03-26 dated 2004-12-09, 34-32 dated 2005-03-03, DNV-01 dated 2005-11-03, DNV-02 dated 2005-11-24, Plan ATV71– test nos. QTR166& QTR167dated 2006-03-06, 2.1.2 dated 2006-10-16, file ATV71_ - test no. QTR163 dated 2006-03-06, file ATV71 - test no. QTR165 dated 2006-03-23, file no. RQ-RSX-4040-19-00 – test no. 19 dated 2004-04-13, CNPP test report nos. LM 04 00 36 dated 2004-09-13 & LM 04 00 48 dated 2004-09-30, Sopema test reports EDL0788/1 dated 2006-04-04, EKL07881 dated 2006-05-05 & EHL08953 dated 2006-10-18. UL test reports nos. RSXs F8 75kW.doc & RQ320-4185.



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Tests carried out

Visual inspection, Performance, Power supply failure, Power supply variations, Voltage/frequency variation, Vibration, Dry heat, Damp heat, Insulation resistance, High voltage.

EMC: The following tests are in accordance with the DNV CN 2.4/ IEC 61800-3: Electrical fast transient (Burst), electrical slow transient (Surge), RF-common mode Voltage, radiated RF-electromagnetic fields, electric discharge (ESD), radiated and conducted emission.

Marking of product

Altivar 61 – Type designation – Power – Voltage

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE