Marine & Offshore

Certificate number: 49109/B0 BV
File number: AP 1
Product code: 2592I

This certificate is not valid when presented without the full attached schedule composed of 7 sections

www.veristar.com

TYPE APPROVAL CERTIFICATE

This certificate is issued to

Schneider Toshiba Inverter Europe S.A.S

Pacy-sur-Eure - FRANCE

for the type of product

FREQUENCY CONVERTERS (Power 50kW and over)

ATV 6xx Series & ATV 9xxx Series > 50 KW

Requirements:
Bureau Veritas Rules for the Classification of Steel Ships.
Bureau Veritas Rules for the Classification of Offshore Units.
Bureau Veritas Rules for the Classification of Naval Ships.
Bureau Veritas Rules for the Classification of Yachts.

EC Code: 31

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 07 Jun 2027

For Bureau Veritas Marine & Offshore,
At BV LE HAVRE, on 07 Jun 2022,
Mathieu DHINAUT

This certificate was created electronically and is valid without signature

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

- Product model or type designation :
  ATV 6xx Series & ATV 9xxx Series

- Product description:

Two series of variable speed drives in IP21 enclosure: ATV630 & ATV930 from 55 kW to 315 kW
3-phases 200 / 240Vac (M3) and 3-phases 380 / 480Vac (N4)

The two series are using the same hardware basement, only the applicative software part and the control terminals are different and adapted to the dedicated application.

ATV630 for Fluid & gas handling application
ATV930 for Solid & mechanics movement application

Two series of variable speed drives in IP20 enclosure: ATV630 & ATV930 from 55 kW to 90 kW
3-phases 575V/690V (Y6)

The two series are using the same hardware basement, only the applicative software part and the control terminals are different and adapted to the dedicated application.

ATV630 for Fluid & gas handling application
ATV930 for Solid & mechanics movement application

Two series of variable speed drives in IP55 enclosure: ATV930 & ATV950 from 55 kW to 90kW
3-phases 380 / 480Vac (N4)

The two series are using the same enclosure model.
ATV650 is using ATV630 mounted on the IP55 enclosure
ATV950 is using ATV930 mounted on the IP55 enclosure

ATV650 for Fluid & gas handling application
ATV950 for Solid & mechanics movement application

Reference using “E” at the end is equipped by line switch.

1.1 - Approval's range IP21:

Size	Range – 200 - 240V three-phases	Catalog Number*	Range – 380 - 480V three-phases	Catalog Number*
5	**-**	**-**	**55kW**	ATV630D55N4 ATV930D55N4
5	**-**	**-**	**75kW**	ATV630D75N4 ATV930D75N4
5	**-**	**-**	**90kW**	ATV630D90N4 ATV930D90N4
6	**55 kW**	ATV630D55M3 ATV930D55M3	**110 kW**	ATV630C11N4 ATV930C11N4
6	**75 kW**	ATV630D75M3 ATV930D75M3	**132 kW**	ATV630C13N4 ATV930C13N4
6	**-**	-	**160 kW**	ATV630C16N4 ATV930C16N4
7	**-**	-	**220 kW**	ATV630C22N4 ATV930C22N4
7	**-**	-	**225 kW**	ATV630C25N4 ATV930C25N4
7	**-**	-	**315 kW**	ATV630C31N4 ATV930C31N4

1.2 - Approval's range IP20:

Size	Range – 575V - 690V three-phases	Catalog Number*
5	**55 kW**	ATV630D55Y6 ATV930D55Y6
5	**75 kW**	ATV630D75Y6 ATV930D75Y6
5	**90 kW**	ATV630D90Y6 ATV930D90Y6

1.3 - Approval's range IP55:

Size	Range – 380 - 480V three-phases	Catalog Number*	Catalog Number *
C	**55 kW**	ATV650D55N4 ATV950D55N4	ATV650D55N4E ATV950D55N4E
C	**75 kW**	ATV650D75N4 ATV950D75N4	ATV650D75N4E ATV950D75N4E
C	**90 kW**	ATV650D90N4 ATV950D90N4	ATV650D90N4E ATV950D90N4E

* References may be followed by additional characters for options.

2. DOCUMENTS AND DRAWINGS:

- STI letter BV - ATVProcess project, dated Jul 25, 2016
- STI letter BV - ATVProcess project, dated Jul 04, 2018
- Catalogues and technical documentation:
  Altivar Process ATV600_ATV630U07M3
  ATV600_MultiDrives_Standard_LevelControl_EN_QGH36059_01
  DIA2ED2150601EN_V3.0

3. TEST REPORTS:

3.1 - ATV630 / 930 Size 1 to 6:

Internal test ID	Title	Size 1	Size 2	Size 3	Size 4	Size 5	Size 6
1.1.03	IP Level	16037	16038	16039	16040	16041	16042
1.3.03	Inclination	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
1.4.07	Vibration	X	P155544 DE4	28727	P155544 DE3	P155544 DE2	P155544 DE1
		X	16163	16115	16164	16165	16166
2.1.02	a.c or d.c voltage (dielectric)	16044	16046	16048	16053	16055	16059
2.1.04	Insulation resistance	16043	16045	16047	16052	16054	16058
4.1.02	Conducted Low Voltage Immunity	X	X	X	X	X	X
4.2.02A	Damp heat cyclic	X	X	X	X	X	X
4.2.02B	Damp heat static	16098	X	X	16083	X	P152839 -DE14
4.2.04	Salt mist	not applicable	not applicable	not applicable	not applicable	not applicable	not applicable
4.2.06	Dry heat test equipment running	16062	16015	16016	16017	16018	16019
	Cold test	16069	16078 16001	16003	16031	16007	16032
5.1.03	Power supply variation tests	16060	X	X	X	X	16063
5.1.06	Electrical Power supply failure	16061	16079	16064	X	X	X
5.2.02	Electrostic Discharge	16090	16075	16091	16092	16080	16034
5.2.03	Fast transient burst	16070	14747	15364	140164	140136	16028
5.2.04	Surge 1,2/50µs, 8/20µs	16071	14748	15365	140172	140137	16020
5.2.05	Radiated radio frequency common mode	RC-032-PNC-15-107099-3-A	LM150013 LM150014	RC-032-PNC-15-107099-2-A	LM 16 00 20	LM 16 00 21	RC-032-PNC-15-107099-1-A
5.2.06	Conducted radio frequency common mode	16050	15023	LM140026	140165	16072	16012
5.4.01	Conducted emissions	14408	16074	13619	720a	16024	16025
5.4.03	Radiated emissions	14452	15106	14041	13522	14739	16081

3. TEST REPORTS (to be continued):

3.2 - ATV630 / 930 Size 5:

Internal test ID	Title	Size 5
1.1.03	IP Level	17332
1.3.03	Inclination	Not Applicable
1.4.07	Vibration	154293-718020-B
	Inspection After Vibration	18116
2.1.02	a.c or d.c voltage (dielectric)	17325
2.1.04	Insulation resistance	17327
4.1.02	Conducted Low Frequency Immunity	158944 - 731091
4.2.02A	Damp heat cyclic	Not Applicable
4.2.02B	Damp heat static	P179011
4.2.04	Salt mist	Not Applicable
4.2.06	Dry heat test equipment running	17330
4.2.07	Cold test	17231
5.1.03	Power supply variation tests	17226
5.1.06	Electrical Power supply failure	17184
5.2.02	Electrostic Discharge	17200
5.2.03	Fast transient burst	17222
5.2.04	Surge 1,2/50µs, 8/20µs	17228
5.2.05	Radiated radio frequency common mode	LM170008
5.2.06	Conducted radio frequency common mode	17182
5.4.01	Conducted emissions	17149
5.4.03	Radiated emissions	17203

3.3 - ATV650 / 950 Size A, B & C:

Internal test ID	Size A	Size B	Size C
1.1.03	X	X	P152839-DE2 IP
1.3.03	not applicable	not applicable	not applicable
1.4.07	28729	X	P156149 DE1
	16119		16167
2.1.02	16066	16068	16057
2.1.04	16065	16067	16056
4.1.02	X	X	X
4.2.02A	P152839 - DE12	X	P152839 - DE10
4.2.02B	X	X	X
4.2.04	not applicable	not applicable	not applicable
4.2.06	X	X	X
	X	X	X
5.1.03	X	X	X
5.1.06	X	X	X
5.2.02	16094	X	X
5.2.03	14520	X	X
5.2.04	14522	X	X
5.2.05	LM 16 00 25	X	RC-032-PNC-15-107099-4-A
5.2.06	14542	X	16027
	14550		
5.4.01	14494	X	16026
5.4.03	14593	14614	14616

For modification B0 version:

CNNP:

- Test Report No. LM 21 00 21, dated 22-03-2021.

EMITECH:

- Partial EMC Test Report No. RCE-100-21-100669-1-A(00), dated 09-03-2021.

4. APPLICATION / LIMITATION:

4.1 - BUREAU VERITAS Rules and Regulations for the Classification of Steel Ships, Naval Ships, Steel Yachts and Offshore Units.
4.2 - Approval also valid for ships to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**
4.3 - BUREAU VERITAS Environmental Category, **EC Code: 31**
4.4 - The equipment fulfils the EMC requirements for installation in General Power Distribution Zones.
4.5 - In accordance with the manufacturer instructions.
4.6 - Control of 3Ph Electrical motor used on Ship and Offshore units.
4.7 - The equipment, once installed on board ship, is to be tested in accordance with the above referred Regulations under the supervision of a Society's Surveyor.
4.8 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev7

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above products are to be supplied by **Schneider Toshiba Inverter Europe S.A.S** in compliance with the type and the requirements described in this certificate.

5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note NR320.

5.3 - BV product certificate is required.

5.4 - **Schneider Toshiba Inverter Europe S.A.S** has declared to Bureau Veritas the following production site(s):

SWD - SCHNEIDER WUXI DRIVES
INDUSTRIAL DEVELOPMENT ZONE 20 HANJIANG RD
NATIONAL HI-TECH
Wuxi, Jiangsu Province
CHINA

P.T. Schneider Electric Manufacturing Batam
Batamindo Industrial Park, Block 4 & 208
Indonesia

Schneider Electric IT Business India Pvt Ltd
187/3 & 188/3 No.326, SY.No.158/159
Jigani Village, Jigani Hobali
Bangalore, Karnataka - 562106
India

Schneider Electric
2 Rue du pont vert
27109 Le Vaudreuil
France

6. MARKING OF PRODUCT:

6.1 - Maker's name or trade mark,
6.2 - Serial number of the units,
6.3 - Equipment type number or model identification under which it was type-tested,
6.4 - ® or CE conformity marking, as relevant.

7. OTHERS:

7.1- It is **Schneider Toshiba Inverter Europe S.A.S** - FRANCE responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate No. 49109/A1 BV issued on 12 Mar 2019 by the Society.

***** END OF CERTIFICATE *****