ASTA TYPE CERTIFICATE

VERIFICATION OF TEST

Project No: SHA336241 **Certificate No:** ASTA-TYPE-0002695

Vendor: Schneider Electric Industries SAS
Rua Joseph Monier, 92500 Rueil Malmaison, France

Apparatus: Two 400 A, 1000 V / 1000 V / 8 kV (U_n=U_e, / U_i / U_{imp}), 50/60 Hz, single stack Busbar Trunking Systems, each comprising of three joints, one flanged end unit, two straight BTU without tap-off facilities with three-phase and neutral, copper busbars, and integrated earthing bar for 3P4W type or an internal earth copper busbar for 3P5W type in a painted aluminium alloy enclosure.

Manufactured By: Schneider Busway (Guangzhou) Limited
No. 85 Junye Road, Eastern Section of Economic & Technological Development Zone, Guangzhou 510530, China

Test Report No: 200910001GZA/B and YGY20-001723/B

Designation: I-LINE Track 400 A 4P and I-LINE Track 400 A 5P

The apparatus which is representative of the designation, supplied drawings and photographs has been evaluated in accordance with:

IEC 61439-6: 2012

Verifications with reference to the tests listed in Annex D, Table D1 of IEC 61439-6: 2012, and Annexes BB, CC and EE:

1:	Strength of material and parts	6/7/8:	No verification by testing required
2:	Degree of protection of enclosures	9:	Dielectric properties
3:	Clearances	10:	Temperature-rise limits
4:	Creepage distances	11:	Short circuit withstand strength
5:	Protection against electric shock and integrity of protective circuits	12:	Electromagnetic compatibility (EMC)
		13:	Mechanical operation

The results are shown in the record of tests attached hereto. The values obtained and the general performance is considered to comply with the above Standard(s) and to justify the ratings assigned by the manufacturer as stated on the ratings page(s) of this Certificate. This Certificate applies only to the apparatus tested. Responsibility for conformity of any apparatus having the same or other designations rests with the Manufacturer.

UKAS PRODUCT CERTIFICATION
0010

..... Certification Engineer

..... Certification Officer

8th October 2023
..... Date

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Intertek Testing & Certification Ltd., Centre Court, Meridian Business Park, Leicester, LE19 1WD, United Kingdom.
Email: asta@intertek.com

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Verification of: BUSBAR TRUNKING SYSTEM

No[1)]	Characteristic Verified	Clause/ Subclause	Verified Tests and Ratings
1	**Strength of material and parts**	**10.2**	
	Resistance to corrosion	10.2.2	Verified for Severity test A
	Properties of insulating materials	10.2.3	–
	Thermal stability	10.2.3.1	Verified
	Resistance to abnormal heat and fire due to internal electric effects	10.2.3.2	Verified
	Resistance to ultra-violet (UV) radiation	10.2.4	Not applicable to indoor enclosures
	Lifting	10.2.5[2)]	Verified
	Mechanical impact	10.2.6	Verified for IK08
	Marking	10.2.7	Verified
	Ability to withstand mechanical loads	10.2.101[2)]	Verified for normal mechanical loads
	Thermal cycling test	10.2.102	Not applicable as no plug-in tap-off units has been included
2	**Degree of protection of enclosures**	**10.3**[2)]	
	External enclosure		IP42/IP20
3	**Clearances**	**10.4**	Verified for U_{imp} = 8 kV
4	**Creepage distances**	**10.4**	Verified for U_i = 1000 V Material Group: IIIa Pollution degree: 3
5	**Protection against electric shock and integrity of protective circuits:**	**10.5**	-
	Effective continuity between the exposed conductive parts of the assembly and the protective circuit	10.5.2	Verified
	Short circuit withstand strength of the protective circuit	10.5.3	Verified
	Short circuit withstand strength of the protective circuit	10.5.3.5 and 10.11.5.6	Verified

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No[1)]	Characteristic Verified	Clause/ Subclause	Verified Tests and Ratings
5	**Protection against electric shock and integrity of protective circuits: (Continued)**	**10.5**	-
	Earth busbar size: 400 A 3W4P earth bar integrated 400 A 3W5P earth bar separated 1 – 54.3 mm x 1.2 mm U-type copper bar	10.5.3.5 and 10.11.5.6	 I_{cw} =10.2 kA rms for 1 sec I_{pk} =20.4 kA peak I_{cw} =10.2 kA rms for 1 sec I_{pk} =29.4 kA peak
9	**Dielectric Properties**	**10.9[2)]**	Verified
	The BTS-Assembly:		-
	Rated voltage Rated operational voltage Rated insulation voltage Rated impulse withstand voltage	 10.9.2 10.9.3	U_n = 1000 V U_e = 1000 V U_i = 1000 V U_{imp} = 8 kV
	Testing enclosures made of insulating material	10.9.4	Verified
	External operation handles of insulating materials	10.9.5	Not applicable
10	**Temperature rise**	**10.10[2)]**	
	The rated current of the assemblies is based upon a mean/maximum ambient temperature of:		35/40°C
	Verification by testing Orientation: Horizontal	10.10.2	
	Main busbar size: 400 A 4P (PE Integrated) 1 – 52.8 mm x 2 mm U-type copper bar per phase	10.10.2.3.5	 I_{nA} =400 A
	400 A 5P (PE Separated) 1 – 52.8 mm x 2 mm U-type copper bar	10.10.3	I_{nA} =400 A
11	**Short-circuit withstand strength**	**10.11[2)]**	
	Three-phase		
	Main busbar size:		
	400 A 4P (PE Integrated) 1 – 52.8 mm x 2 mm U-type copper bar per phase 400 A 5P (PE Separated) 1 – 52.8 mm x 2 mm U-type copper bar per phase	10.11.5.3.3 10.11.3	I_{cw} = 17 kA rms for 1 sec I_{pk} = 49 kA peak I_{cw} = 17 kA rms for 1 sec I_{pk} = 49 kA peak

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No[1)]	Characteristic Verified	Clause/ Subclause	Verified Tests and Ratings
11	**Short-circuit withstand strength (Continued)**	**10.11**[2)]	
	Neutral conductor Neutral busbar size:		
	400 A 4P (PE Integrated) 1 – 52.8 mm x 2 mm U-type copper bar	10.11.5.3.5	I_{cw} = 10.2 kA rms for 1 sec I_{pk} = 29.4 kA peak
	400 A 5P (PE Separated) 1 – 52.8 mm x 2 mm U-type copper bar	10.11.3	I_{cw} = 10.2 kA rms for 1 sec I_{pk} = 29.4 kA peak
12	**Electromagnetic compatibility (EMC)**	**10.12**	Conditions for no testing (J.9.4.3.1 and 9.4.4.14) verified
13	**Mechanical operation**	**10.13**	Not applicable. no plug-in tap-off units.

Note:
[1)] Design verification tests required by IEC 61439-1, Annex D, Table D1. No Verification by testing was required for items 6, 7 and 8 clauses 10.6. 10.7 and 10.8.
[2)] The tests for clauses 10.2.5, 10.2.101, 10.3, 10.9, 10.10 and 10.11 were performed on I-LINE Track 400A 4P considering to be representative of the I-LINE Track 400A 5P.

Note: The apparatus tested was manufactured by Schneider Busway (Guangzhou) Limited, No. 85 Junye Road, Eastern Section of Economic & Technological Development Zone, Guangzhou 510530, China, for which ASTA Certificate of Verification no. ASTA-TYPE-000924R1, dated 27th January 2022 has been issued.

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Certificate Contents:

The following documents are attached to and form part of this certificate:

Documents:	Number of pages
Test report no: 200910001GZA/B and YGY20-001723/B dated 19 January 2022	62
Drawings	18

Certificate Revision Amendment Table

Certificate Number	Issue Date	Amendment
ASTA-TYPE-0002695	8th October 2023	Initial issue