

# TEST CERTIFICATE

Issued to: EAE Elektrik Asansör End.  
Insaat San. ve Tic. A.S.  
Akçaburgaz Mahallesi 119, Sokak No: 10  
34510 Esenyurt / Istanbul  
Turkey

For the product: Low-voltage busbar trunking system

Trade name: EAE

Type/Model: KXA51

Ratings: Ui 1000 V, Uimp 12 kV, Inc 5000 A at 50 Hz, IP55  
Icw 120 kA - 1 s  
for more details see annex

Manufactured by: EAE Elektrik Asansör End.  
Insaat San. ve Tic. A.S.  
Akçaburgaz Mahallesi 119, Sokak No: 10  
34510 Esenyurt / Istanbul  
Turkey

Subject: Design verification

Requirements: IEC 61439-6: 2012  
Clauses: 10.2, 10.3, 10.4, 10.5, 10.9, 10.10, 10.11, 10.101, 10.102 and Annex BB,  
CC, and DD

Remarks: Busbar trunking system consists of flange, joint and straight lengths

This Test Certificate is granted on account of an examination by DEKRA, the results of which are laid down in report no. 2163009.18-INC, 12 November 2013.

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

Arnhem, 12 November 2013

Number: 2163009.117

DEKRA Certification B.V.

F.S. Strikwerda  
Certification Manager

© Integral publication of this certificate and adjoining reports is allowed

**Overview of product evaluation according to IEC 61439-6:**

IEC 61439-6 Clause	Clause description	Tested ratings	Results
10.2	Strength of material and parts		
10.2.2	Resistance to corrosion	Severity test A: indoor	Pass
10.2.3	Properties of insulating materials		
10.2.3.1	Verification of thermal stability of enclosures	Cover of tap-off facility	Pass
10.2.3.2	Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects	Insulating materials retaining current-carrying parts in position: 960 °C Other insulating materials: 650 °C	Pass
10.2.6	<b>Mechanical impact</b>	50J for busbar trunking system without tap-off facility IK08 for busbar trunking system with tap-off facility	Pass
10.2.7	Marking		Pass
10.2.101	Ability to withstand mechanical loads		
10.2.101.1	Test procedure for a straight busbar trunking unit	Heavy loads	Pass
10.2.101.2	Test procedure for a joint	Heavy loads	Pass
10.2.101.3	Resistance of the enclosure to crushing	Heavy loads	Pass
10.3	Degree of protection of assembly	IP55	Pass
10.4	Clearances and creepage distances	Clearances > 14 mm, based on U <sub>imp</sub> = 12 kV; Creepage distances > 16 mm, based on U <sub>i</sub> = 1000 V, pollution degree 3, material group IIIa.	Pass
10.5	Protection against electric shock and integrity of protective circuits		
10.5.2	Effective earth continuity between the exposed conductive parts of the assembly and the protective circuit	Earth resistance < 0,1 Ω	Pass
10.5.3	Short-circuit withstand strength of the protective circuit	72 kA - 1 s	Pass
10.9	Dielectric properties		
10.9.2	Power-frequency withstand voltage	U <sub>i</sub> 1000 V	Pass
10.9.3	Impulse withstand voltage	U <sub>imp</sub> 12 kV	Pass
10.10	Verification of temperature rise		
10.10.2.3.5	Test of a BT run	5000 A	Pass
10.11	Short-circuit withstand strength	I <sub>cw</sub> 120 kA - 1 s (3-phase) I <sub>cw</sub> 72 kA - 1 s (neutral)	Pass
10.101	Resistance to flame-propagation	Flame application time 40 min	Pass
10.102	Fire resistance in building penetrations	Fire resistance time 120 min	Pass

IEC 61439-6 Clause	Clause description	Tested ratings	Results																		
Annex BB	Phase conductor characteristics	$(\mu\Omega/m)$ X : 3 R <sub>20</sub> : 10 R : 13 Z <sub>20</sub> : 10 Z = Z <sub>(1)</sub> = Z <sub>(2)</sub> : 14	Pass																		
Annex CC	Fault-loop zero-sequence impedances	<table border="1"> <thead> <tr> <th></th> <th>Phase to Neutral [<math>\mu\Omega/m</math>]</th> <th>Phase to Earth [<math>\mu\Omega/m</math>]</th> </tr> </thead> <tbody> <tr> <td>X<sub>(0)bx</sub> :</td> <td>19</td> <td>31</td> </tr> <tr> <td>R<sub>(0)h20x</sub> :</td> <td>45</td> <td>71</td> </tr> <tr> <td>R<sub>(0)bx</sub> :</td> <td>61</td> <td>97</td> </tr> <tr> <td>Z<sub>(0)h20x</sub> :</td> <td>48</td> <td>78</td> </tr> <tr> <td>Z<sub>(0)bx</sub> :</td> <td>64</td> <td>102</td> </tr> </tbody> </table>		Phase to Neutral [ $\mu\Omega/m$ ]	Phase to Earth [ $\mu\Omega/m$ ]	X <sub>(0)bx</sub> :	19	31	R <sub>(0)h20x</sub> :	45	71	R <sub>(0)bx</sub> :	61	97	Z <sub>(0)h20x</sub> :	48	78	Z <sub>(0)bx</sub> :	64	102	Pass
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**Product details:**

Busbars	3-phase	6 x 250 mm x 2 Aluminium conductor
	Neutral	6 x 250 mm x 2 Aluminium conductor
	PE	trunking enclosure

Note: The operational current ratings above are given at 50 Hz, operational currents current at 50 Hz are applicable to 60 Hz for rated currents up to and including 800 A. For currents above 800 A, the rated current at 60 Hz shall be reduced to 95 % of that at 50 Hz (IEC 61439-1 clause 10.10.2.3.1).