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:	KAP 04
Ratings:	I_{nc} 40 A at 50 Hz, U_i 690 V, U_{imp} 6 kV, I_{cw} 3,4 kA - 0,1 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 and Annex BB, CC, and DD
Remarks:	Busbar trunking system consists of feeder box, 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. 2172380.03-INC, dated 4 May 2015.

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, 4 May 2015

Number: 2172380.102

DEKRA Certification B.V.

F.S. Strikwerda
Certification Manager

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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	Mechanical impact	**IK 07**	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 > 5,5 mm, based on Uimp = 6 kV; Creepage distances > 10,0 mm, based on Ui = 690 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	Icw 3,4 kA - 0,1 s with 7,5 kA peak	Pass
10.9	Dielectric properties		
10.9.2	Power-frequency withstand voltage	Ui 690 V	Pass
10.9.3	Impulse withstand voltage	Uimp 6 kV	Pass
10.10	Verification of temperature rise		
10.10.2.3.5	Test of a BT run	40 A	Pass
10.11	Short-circuit withstand strength	Icw 3,4 kA - 0,1 s with 7,5 kA peak (3-phase and neutral)	Pass
10.101	Resistance to flame-propagation	Flame application time 40 min	Pass

IEC 61439-6 Clause	Clause description	Tested ratings	Results
Annex BB	Phase conductor characteristics	[mΩ/m] X : 0,23 R_{20} : 2,96 R : 3,52 Z_{20} : 2,97 $Z = Z_{(1)} = Z_{(2)}$: 3,53	Pass
Annex CC	Fault-loop zero-sequence impedances	Phase to Neutral [mΩ/m] / Phase to Earth [mΩ/m] $X_{(0)bx}$: 0,56 / 1,13 $R_{(0)b20x}$: 12,12 / 7,00 $R_{(0)bx}$: 14,39 / 8,31 $Z_{(0)b20x}$: 12,13 / 7,09 $Z_{(0)bx}$: 14,40 / 8,39	Pass
Annex DD	Fault-loop resistances and reactances	Phase to Phase [mΩ/m] / Phase to Neutral [mΩ/m] / Phase to PE [mΩ/m] X_{bxx} : 0,25 / 0,10 / 0,17 R_{b20xx} : 5,89 / 5,92 / 4,21 R_{bxx} : 7,00 / 7,03 / 4,99	Pass

Product details:

Busbars	3-phase	Tin plated Copper wire 2,8 mm diameter
	Neutral	Tin plated Copper wire 2,8 mm diameter
	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).