



Test Report

Project designation **Type test according to IEC/EN 60269-1 and IEC/EN 60269-2**

Product description **Low-voltage fuse-links for use by authorized persons:
Fuse-links with blade contacts type NH1 (NV1) / 690V / aM**

Client **ETI Elektroelement d.d.
Obrezija 5
1411 Izlake
SLOVENIA**

Order from / No. **02/2015 / ---**

Project number **2.03.02913.1.0/NH1/690V/aM**

Date of issue **21.08.2015** Test engineer **H. Raheb, MSc**

Total number of issues / No. **1 / 1**

Number of pages **4**

Annex: Number of pages **CB - Test Report No. 2.03.02913.1.0/NH1/690V/aM/CB/1 (41 pages)
CB - Test Report No. 2.03.02913.1.0/NH1/690V/aM/CB/2 (20 pages)
CCA - Test Report No. 2.03.02913.1.0/NH1/690V/aM/CCA (2 pages)**

The results relate exclusively to the items tested.

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Test item

Identification:

Low-voltage fuse-links for use by authorized persons:

Fuse-links with blade contacts type NH1 (NV1) / 690V / aM

Manufacturer: ETI Elektroelement d.d.
Factory location: Gabersko 12, 1420 Trbovlje, SLOVENIA
Trademark: ETI
Size: 1
Rated voltage(s): ~690V
Rated current(s): 63A, 80A, 100A, 125A, 160A, 200A, 224A, 250A
Rated frequency: 45Hz to 62Hz
Utilization category: aM

Technical data and description:

See page 4

Testing location, Period of testing

Testing location:

AIT Austrian Institute of Technology GmbH
Business Unit Electric Energy Systems
Giefinggasse 2
1210 Vienna
AUSTRIA

Period of testing:

02 to 07/2015

Test(s)

Test(s) performed:

Type test

Test standard(s):

IEC 60269-1:2009 (Ed. 4.1)+A2:2014 and EN 60269-1:2007+A1:2009+A2:2014
IEC 60269-2:2013 (Ed. 5.0) and HD 60269-2:2013

Test procedure(s):

CB-Scheme and CCA-Scheme

Result


The Low-voltage fuse-links for use by authorized persons:

Fuse-links with blade contacts type NH1 (NV1) / 690V / aM have passed the type test successfully.




Seal

Test engineer



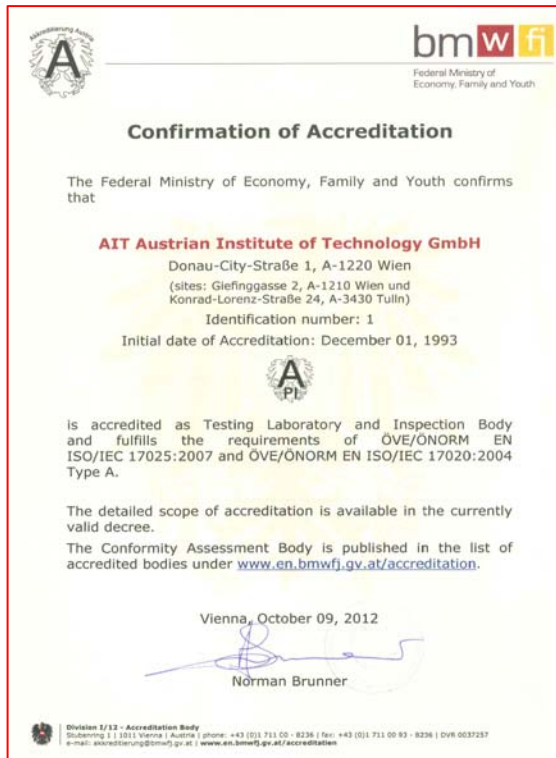
.....
H. Raheb, MSc

Responsible for the content



.....
Ing. J. Ainetter

Testing laboratory



ACCREDITED
 according to
EN ISO/IEC 17025
 confirmed by
BMWFI
 with GZ 92714/237-IV/9/00



CERTIFIED
 according to
ISO 9001
 confirmed by
Quality Austria
 with Reg. No. 00229/1



RECOGNIZED CB TESTING LABORATORY
 confirmed by
International Electrotechnical Commission
 under the responsibility of
OVE
 as the National Certification Body

Technical data and description

Test item	Low-voltage fuse-links for use by authorized persons: Fuse-links with blade contacts
Model/Type reference	NH1 (NV1)
Manufacturer	ETI Elektroelement d.d.
Factory location	Gabersko 12, 1420 Trbovlje, SLOVENIA
Size	1
Nature of supply	AC
Utilization category	aM
Rated voltage	~690V
Rated current	63A, 80A, 100A, 125A, 160A, 200A, 224A, 250A
Rated frequency	45Hz to 62Hz
Rated breaking capacity	100kA
Homogeneous series	63A 80A ... 224A 250A
Indicating device	In the middle of ceramic body and on cover plate
Type of gripping-lugs	Energized
Material of fuse-link contacts	CuZn gal. Ag
Material of fuse-link body	Steatit C221
Material of cover plates	Al
Extinguishing means	Quartzsand



Test Report issued under the responsibility of:



TEST REPORT
IEC 60269-1
Low-voltage fuses
Part 1: General requirements

Report Number..... : 2.03.02913.1.0/NH1/690V/aM/CB/1
Date of issue..... : 21.08.2015
Total number of pages : 41

Applicant's name : ETI Elektroelement d.d.
Address..... : Obrezija 5, 1411 Izlake, SLOVENIA

Test specification:

Standard : IEC 60269-1:2006 (Fourth edition)+ A1:2009
Test procedure : CB Scheme
Non-standard test method : N/A

Test Report Form No. : IEC60269_1B
Test Report Form(s) Originator : EZU
Master TRF : Dated 2010-08



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This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description..... : Low-voltage fuse-links for use by authorized persons - fuse-links with blade contacts (NH fuse system)
Trade Mark..... : ETI
Manufacturer : ETI Elektroelement d.d., Obrezija 5, SI-1411 Izlake, Slovenia
Model/Type reference..... : NH1 (NV1)
Ratings..... : 63 A, 80 A, 100 A, 125 A, 160 A, 200 A, 224 A, 250 A / aM / ~690 V / 100 kA

Testing procedure and testing location:		
<input checked="" type="checkbox"/>	CB Testing Laboratory:	
Testing location/ address :		AIT Austrian Institute of Technology GmbH, Giefinggasse 2, 1210 Vienna, AUSTRIA
<input type="checkbox"/>	Associated CB Laboratory:	
Testing location/ address :		-
	Tested by (name + signature).....:	H.Raheb, MSc 
	Approved by (name + signature)....:	Ing.J.Ainetter 
<input type="checkbox"/>	Testing procedure: TMP	
Testing location/ address :		-
	Tested by (name + signature).....:	-
	Approved by (name + signature)....:	-
<input type="checkbox"/>	Testing procedure: WMT	
Testing location/ address :		-
	Tested by (name + signature).....:	-
	Witnessed by (name + signature) ..:	-
	Approved by (name + signature)....:	-
<input type="checkbox"/>	Testing procedure: SMT	
Testing location/ address :		
	Tested by (name + signature).....:	-
	Approved by (name + signature)....:	-
	Supervised by (name + signature):	-
<input type="checkbox"/>	Testing procedure: RMT	
Testing location/ address :		-
	Tested by (name + signature).....:	-
	Approved by (name + signature)....:	-
	Supervised by (name + signature):	-



List of Attachments (including a total number of pages in each attachment): ---								
Summary of testing:								
Tests performed (name of test and test clause) acc. to IEC 60269-1 and IEC 60269-2:								
Test	Sample No.							
	63A	80A	100A	125A	160A	200A	224A	250A
8.1.4 Dimensions	10-12	4-6	1-3	1-3	1-3	1-3	10-12	10-12
8.1.5.1 Resistance	1-19	1-13	1-7	1-7	1-7	1-7	1-19	1-19
8.3 Power dissipation / Temperature rise	19	-	-	-	-	-	19	19
8.4.3.3 Time-current characteristics, Gates	10-15	4-10	1-7	1-7	1-7	1-7	10-15	10-15
8.4.3.4 Overload	16-18	11-13	-	-	-	-	16-18	16-18
8.4.3.6 Indicating device	1-9	1-3	-	-	-	-	1-9	1-9
8.5 No.1 Breaking capacity	1-3	1-3	-	-	-	-	1-3	1-3
8.5 No.2 Breaking capacity	4-6	-	-	-	-	-	4-6	4-6
8.5 No.3 Breaking capacity	7	-	-	-	-	-	7	7
8.5 No.4 Breaking capacity	8	-	-	-	-	-	8	8
8.5 No.5 Breaking capacity	9	-	-	-	-	-	9	9
Remark: The Amendment 2:2014 of IEC 60269-1:2009 (Ed. 4.1) has been taken into consideration. No additional tests are necessary to perform at aM fuse-links.								
Testing location: AIT Austrian Institute of Technology GmbH Business Unit Electric Energy Systems Giefinggasse 2 1210 Vienna AUSTRIA					The AIT Austrian Institute of Technology GmbH is a recognized CB/CCA Testing Laboratory under the responsibility of OVE as the National Certification Body.			
Summary of compliance with National Differences:								
List of countries addressed: ---								
<input checked="" type="checkbox"/> The product fulfils the requirements of IEC 60269-1:2009 (Ed. 4.1) + A2:2014, IEC 60269-2:2013 and EN 60269-1:2007 + A1:2009 + A2:2014, HD 60269-2:2013								

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



NH1
NV1

250A aM

~690V

100 kA

IEC / EN 60269

4184419

Made in Slovenia

