Test Report issued under the responsibility of:

TEST REPORT
IEC 60947-3
Low-voltage switchgear and controlgear Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units

Report Number ..... :	2.03.02769.1.0/EFD22/CB
Date of issue ..... :	15.04.2014
Total number of pages ..... :	75
CB Testing Laboratory ..... :	AIT Austrian Institute of Technology GmbH
Address ..... :	1210 Vienna, Giefinggase 2, AUSTRIA
Applicant's name ..... :	ETI Elektroelement d.d.
Address ..... :	1411 Izlake, Obrezija 5, SLOVENIA
Test specification:	
Standard ..... :	IEC 60947-3:2008 (Third Edition) + A1:2012 in conjunction with IEC 60947-1:2007 (Fifth Edition) + A1:2010
Test procedure ..... :	CB-Scheme
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC60947_3C
Test Report Form(s) Originator .... :	OVE
Master TRF ..... :	Dated 2013-05

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

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 ..... :	Fuse-switch-disconnectors for cylindrical fuse-links 22x58
Trade Mark ..... :	ETI
Manufacturer ..... :	ETI Elektroelement d.d.
Model/Type reference ..... :	EFD 22
Ratings ..... :	400V up to 690V / up to 100A (with gG) / 50/60Hz / 1p up to 3p+N 400V up to 690V / up to 100A (with aM) / 50/60Hz / 1p up to 3p+N

Testing procedure and testing location:

☒ **CB/CCA Testing Laboratory:**

Testing location/ address.....: AIT Austrian Institute of Technology GmbH
1210, Vienna, Giefinggasse 2, AUSTRIA

☐ **Associated CB Laboratory:**

Testing location/ address.....: ---

Tested by (name + signature) ..: Ing.J.Ainetter .....

Approved by (+ signature).....: Ing.K.Farthofer .....

☐ **Testing procedure: TMP**

Tested by (name + signature) ..: --- .....

Approved by (+ signature).....: --- .....

Testing location/ address.....: ---

☐ **Testing procedure: WMT**

Tested by (name + signature) ..: --- .....

Witnessed by (+ signature) .....: --- .....

Approved by (+ signature).....: --- .....

Testing location/ address.....: ---

☐ **Testing procedure: SMT**

Tested by (name + signature) ..: --- .....

Approved by (+ signature).....: --- .....

Supervised by (+ signature).....: --- .....

Testing location/ address.....: ---

☐ **Testing procedure: RMT**

Tested by (name + signature) ..: --- .....

Approved by (+ signature).....: --- .....

Supervised by (+ signature).....: --- .....

Testing location/ address.....: ---

List of Attachments:

Summary of testing:

Tests performed:

A type test was performed according to

- IEC 60947-1:2011 (Edition 5.1)
- IEC 60947-3:2012 (Edition 3.1)

The fuse-switch-disconnectors for cylindrical fuse-links 22x58

- EFD 22

have passed the type test successfully.

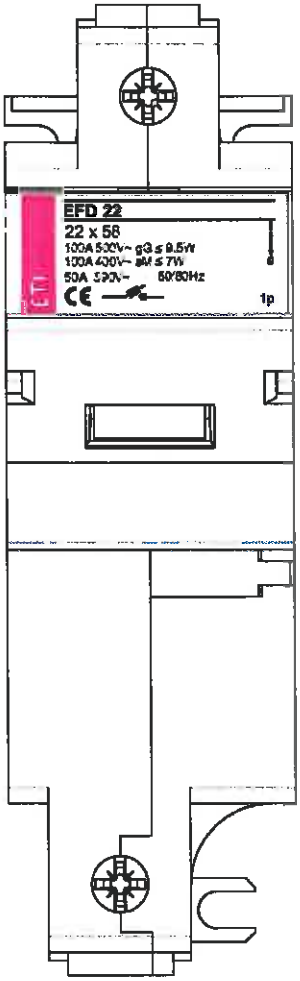
Testing location:

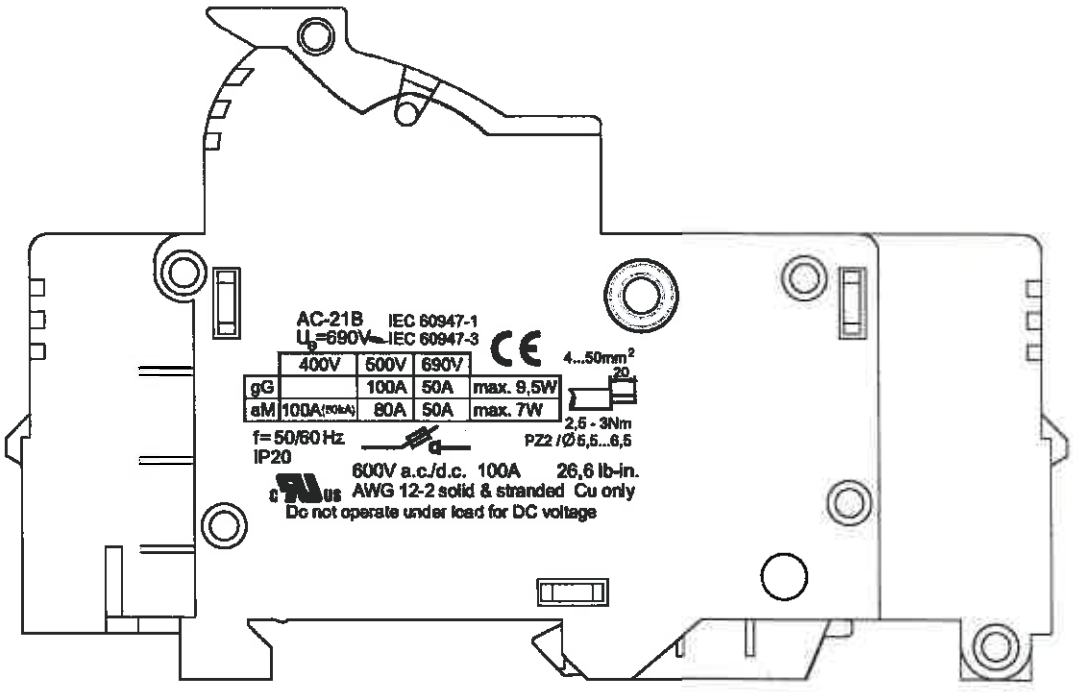
AIT Austrian Institute of Technology GmbH
Business Unit Electric Energy Systems
Power Service Center
Giefinggasse 2
1210 Vienna
AUSTRIA

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:

Copy of marking plate:





Test item particulars:			
- method of operation	Dependent manual operation		
- suitability for isolation	Suitable for isolation		
- degree of protection	IP20		
- number of poles	1p, 1p+N, 2p, 3p, 3p+N		
- kind of current	AC		
- in the case of a.c., number of phases and rated frequency	1 up to 3 / 50/60Hz		
- number of positions of the main contacts	2 (O / I)		
- breaking arrangement for fused devices	Double break		
Rated and limiting values, main circuit:			
- rated operational voltage U_e (V)	400 up to 690		
- rated insulation voltage U_i (V)	690		
- rated impulse withstand voltage U_{imp} (kV)	8		
- conventional free air thermal current I_{th} (A)	100 (9,5W max. with gG fuse-links) 100 (7W max. with aM fuse-links)		
- conventional enclosed thermal current I_{the} (A)	-		
- rated operational current I_e (A)	100 at 400V (gG) 100 at 400V (aM)	100 at 500V (gG) 80 at 500V (aM)	50 at 690V (gG) 50 at 690V (aM)
- rated uninterrupted current I_u (A)	100 (9,5W max. with gG fuse-links) 100 (7W max. with aM fuse-links)		
- rated frequency (Hz)	50/60		
- utilization category	AC-21B at 690V/100A		
Short-circuit characteristic:			
- rated short-time withstand current I_{cw} (kA)	1200A / 1s		
- rated short-time making capacity I_{cm} (kA)	-		
- rated conditional short-circuit current	120kA at 500V (with 100A gG fuse-links) 120kA at 500V (with 80A aM fuse-links) 50kA at 400V (with 100A aM fuse-links)		
Control circuits	-		
Auxiliary circuits	-		
Relays and releases	-		
Co-ordination with short-circuit protective devices:			
- kind of protective device	Cylindrical fuse-links 22x58, up to 100A		
Possible test case verdicts:			
- test case does not apply to the test object	N/A		
- test object does meet the requirement	P (Pass)		
- test object does not meet the requirement	F (Fail)		
Testing:			
Date of receipt of test item	09/2012, 08/2013 and 02/2014		
Date (s) of performance of tests	09/2012 to 12/2012, 08/2013 and 02/2014		

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided .....: ☐ **Yes** ☒ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies)..... : ETI Elektroelement d.d.
Obrezija 5
1411 Izlake
SLOVENIA

General product information:

Low voltage
fuse-switch-disconnectors
for cylindrical fuse-links 22x58

type

EFD 22