



Test Report issued under the responsibility of:




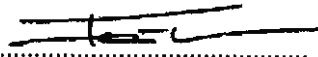
TEST REPORT IEC 60947-3	
Low-voltage switchgear and controlgear Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units	
Report Number	2.03.02769.1.0/EFD14/CB
Date of issue	14.04.2014
Total number of pages	75
CB Testing Laboratory	AIT Austrian Institute of Technology GmbH
Address	1210 Vienna, Giefinggasse 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
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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	Fuse-switch-disconnectors for cylindrical fuse-links 14x51
Trade Mark	ETI
Manufacturer	ETI Elektroelement d.d.
Model/Type reference	EFD 14
Ratings	400V up to 690V / up to 50A (with gG) / 50/60Hz / 1p up to 3p+N 400V up to 690V / up to 50A (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.Farhofer 



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 14x51

- EFD 14

have passed the type test successfully.

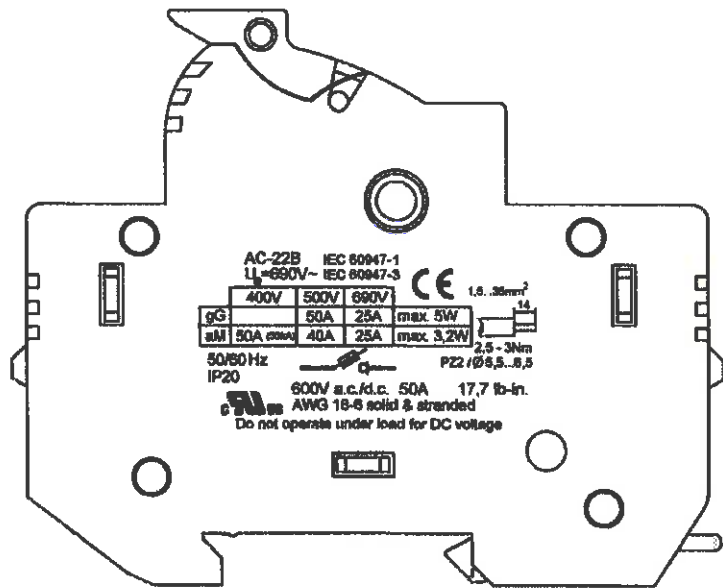
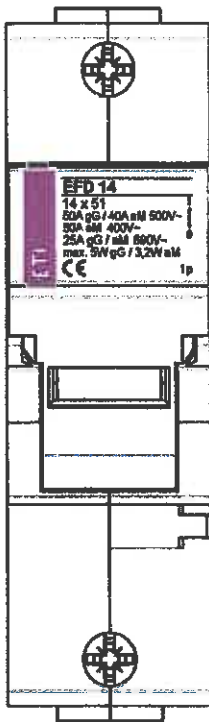
Testing location:

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): 50 (5W max. with gG fuse-links)
50 (3,2W max. with aM fuse-links)
- conventional enclosed thermal current I_{the} (A).....: -
- rated operational current I_e (A).....: 50 at 400V (gG) | 50 at 500V (gG) | 25 at 690V (gG)
50 at 400V (aM) | 40 at 500V (aM) | 25 at 690V (aM)
- rated uninterrupted current I_u (A): 50 (5W max. with gG fuse-links)
50 (3,2W max. with aM fuse-links)
- rated frequency (Hz).....: 50/60
- utilization category.....: AC-22B at 690V/50A

Short-circuit characteristic:

- rated short-time withstand current I_{cw} (kA).....: 600A / 1s
- rated short-time making capacity I_{cm} (kA).....: -
- rated conditional short-circuit current.....: 120kA at 500V (with 50A gG fuse-links)
100kA at 500V (with 40A aM fuse-links)
50kA at 400V (with 50A aM fuse-links)

Control circuits: -

Auxiliary circuits: -

Relays and releases: -

Co-ordination with short-circuit protective devices:

- kind of protective device.....: Cylindrical fuse-links 14x51, up to 50A

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 IEC60947-2:

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 14x51

type

EFD 14