



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 : SGP-07532/SL2/CB
Date of issue : 06.11.2017
Total number of pages : 104

Name of Testing Laboratory
preparing the Report : AIT Austrian Institute of Technology GmbH

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

Test specification:

Standard : IEC 60947-3:2008, AMD1:2012, AMD2:2015
in conjunction with IEC 60947-1:2007, AMD1:2010, AMD2:2014
Test procedure : CB-Scheme
Non-standard test method : N/A

Test Report Form No. : IEC60947_3E
Test Report Form(s) Originator : OVE
Master TRF : Dated 2017-07

Copyright © 2017 Worldwide System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE System). All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the IECEE is acknowledged as copyright owner and source of the material. IECEE takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

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.

General disclaimer:

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 CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description :	Low-voltage fuse-switch-disconnectors, single pole or three pole operated	
Trade Mark :	ETI	
Manufacturer	Jean Müller GmbH	
Model/Type reference	SL2 1P/... (single pole operated) SL2 3P/... (three pole operated)	
Ratings	400V a.c. up to 690V a.c. // 400A // 50-60Hz // 3-pole	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
<input checked="" type="checkbox"/> CB Testing Laboratory	AIT Austrian Institute of Technology GmbH	
Testing location/ address	1210 Vienna, Giefinggasse 2, AUSTRIA	
Tested by (name, function, signature) :	Hanna Raheb, MSc	
Approved by (name, function, signature) ... :	Ing. Johann Ainetter	
<input type="checkbox"/> Testing procedure: CTF Stage 1	-	
Testing location/ address	-	
Tested by (name, function, signature) :	-
Approved by (name, function, signature) ... :	-
<input type="checkbox"/> Testing procedure: CTF Stage 2	-	
Testing location/ address	-	
Tested by (name + signature)	-
Witnessed by (name, function, signature) . :	-
Approved by (name, function, signature) ... :	-
<input type="checkbox"/> Testing procedure: CTF Stage 3	-	
<input type="checkbox"/> Testing procedure: CTF Stage 4	-	
Testing location/ address	-	
Tested by (name, function, signature) :	-
Witnessed by (name, function, signature) . :	-
Approved by (name, function, signature) ... :	-
Supervised by (name, function, signature) :	-

List of Attachments (including a total number of pages in each attachment):

-

Summary of testing:**Tests performed (name of test and test clause):****A type test has been performed according to**

- IEC 60947-1:2007 (5th Edition) + A1:2010 + A2:2014
- IEC 60947-3:2008 (3rd Edition) + A1:2012 + A2:2015.

Clause:	Test:	Sample No.	
7	Constr. requirements	SL21P/1	SL23P/1
8.3.3	Test sequence I		
	- temperature-rise	SL21P/2...7	SL23P/2...7
	- dielectric properties	SL21P/8	SL23P/8
	- making and breaking capacity	SL21P/9...14	SL23P/9...14
8.3.4	Test sequence II	SL21P/15...20	SL23P/15...20
8.3.5	Test sequence III	SL21P/21...22	SL23P/21...22
8.3.6	Test sequence IV	SL21P/23...26	SL23P/23...26
8.3.7	Test sequence V	SL21P/27...28	SL23P/27...28
Annex D.8.3.8	Critical Load current (test sequence VI)	Not applicable	
Annex D.8.3.9	Thermal cycling test	Not applicable	
Annex D.8.3.10	Climatic test	Not applicable	
Annex D.8.3.11	Temperature-rise with solar effects	Not applicable	

The low-voltage fuse-switch-disconnectors, single pole or three pole operated

- SL2 1P
- SL2 3P

passed the type test successfully.

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 Testing Laboratory under the responsibility of OVE as the National Certification Body.

Summary of compliance with National Differences (List of countries addressed):

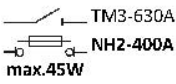
-

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.



ETI ETI d.d., Obrezija 5, SI-1411 Izlake
<http://www.etigroup.eu/products-services>

SL2 1P M12
001692210
 IEC/DIN EN60947-3
 690V - 400A - AC-21B
 500V - 400A - AC-22B
 400V - 400A - AC-23B



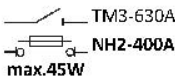
TM3-630A
 NH2-400A
 max.45W
 50/60 Hz

08.11.2017 / 300



ETI ETI d.d., Obrezija 5, SI-1411 Izlake
<http://www.etigroup.eu/products-services>

SL2 3P M12
001692230
 IEC/DIN EN60947-3
 690V - 400A - AC-21B
 500V - 400A - AC-22B
 400V - 400A - AC-23B



TM3-630A
 NH2-400A
 max.45W
 50/60 Hz

08.11.2017 / 300


ETI ETI d.d., Obrezija 5, SI-1411 Izlake
<http://www.etigroup.eu/products-services>

SL2 1P SP.240
001692212
 IEC/DIN EN60947-3
 690V - 400A - AC-21B
 500V - 400A - AC-22B
 400V - 400A - AC-23B



TM3-630A
 NH2-400A
 max.45W
 50/60 Hz

08.11.2017 / 300




ETI ETI d.d., Obrezija 5, SI-1411 Izlake
<http://www.etigroup.eu/products-services>

SL2 3P SP.240
001692231
 IEC/DIN EN60947-3
 690V - 400A - AC-21B
 500V - 400A - AC-22B
 400V - 400A - AC-23B



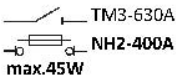
TM3-630A
 NH2-400A
 max.45W
 50/60 Hz

08.11.2017 / 300






ETI ETI d.d., Obrezija 5, SI-1411 Izlake
<http://www.etigroup.eu/products-services>

SL2 1P SP.300
001692211
 IEC/DIN EN60947-3
 690V - 400A - AC-21B
 500V - 400A - AC-22B
 400V - 400A - AC-23B



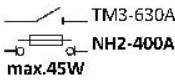
TM3-630A
 NH2-400A
 max.45W
 50/60 Hz

08.11.2017 / 300



ETI ETI d.d., Obrezija 5, SI-1411 Izlake
<http://www.etigroup.eu/products-services>

SL2 3P SP.300
001692000
 IEC/DIN EN60947-3
 690V - 400A - AC-21B
 500V - 400A - AC-22B
 400V - 400A - AC-23B



TM3-630A
 NH2-400A
 max.45W
 50/60 Hz

08.11.2017 / 300

Picture of test item:



Test item particulars:

- method of operation	: Dependent manual operation
- suitability for isolation	: Suitable
- degree of protection	: Device from front side, closed, with covers: IP30 Device in closed position: IP20 Device in open position: IP10
- number of poles.....	: 3
- kind of current.....	: AC
-in the case of a.c., number of phases and rated frequency.....	: 3, 50-60Hz
- number of positions of the main contacts (if more than two).....	: 2
- breaking arrangement for fused devices	: Single break
Rated and limiting values, main circuit:	
- rated operational voltage U_e (V).....	: 400V up to 690V
- rated insulation voltage U_i (V).....	: 1000
- rated impulse withstand voltage U_{imp} (kV)	: 12
- conventional free air thermal current with fuse-links I_{th} (A).....	: 400
- conventional free air thermal current with solid-links I_{th} (A)	: 630
- rated operational current I_e (A).....	: 400
- rated uninterrupted current I_u (A)	: 400 (maximum power dissipation = 45W)
- rated frequency (Hz).....	: 50-60
- utilization category.....	: AC-23B at 400V/400A AC-22B at 500V/400A AC-21B at 690V/400A
Short-circuit characteristic:	
- rated short-time withstand current I_{cw} (kA)	: 10kA/1s (SL2 1P) 15kA/1s (SL2 3P)
- rated short-time making capacity I_{cm} (kA).....	: -
- rated conditional short-circuit current.....	: 120kA at 500V/400A 80kA at 690V/400A
Control circuits:	
Auxiliary circuits	: -
Relays and releases	: -
Co-ordination with short-circuit protective devices:	
- kind of protective device.....	: Fuse-links NH2, up to 400A