

Confirmation of Type Testing

Report No. N 12

Rev. 00

Page 4

Conclusion of Derivation: (continued from page 3)

span mm	max. interval between spacers ³⁾	Busbar cross- section mm	short-circuit withstand strength	
			I_{pk} / kA	I_{cw} / kA 1s
367	275	2 x 60 x10	163 ²⁾	65 ²⁾
1100	570	2 x 100 x10	75 ¹⁾	30 ¹⁾
700	233	2 x 100 x10	163 ²⁾	65 ²⁾
430	233	2 x 100 x10	200 ²⁾	80 ²⁾
700	350	3 x 60 x10	75 ¹⁾	30 ¹⁾
575	300	3 x 60 x10	200 ²⁾	80 ²⁾
700	---	3 x 100 x10	125 ¹⁾	50 ¹⁾
900	300	3 x 100 x10	163 ²⁾	65 ²⁾

¹⁾ Given values of I_{pk} and I_{cw} are based on the short-circuit currents documented in IPH-Test-Report-No.: 1496.339.9.287

²⁾ Given values of I_{pk} and I_{cw} are based on the short-circuit currents documented in IPH-Test-Report-No.: 1496.045.9.020

³⁾ spacers for reinforcement between sub-conductors

Type Test Report

TPB 155

Rev. 00

Contents: 12 sheets

Object under test: Type-tested LV switchgear and controlgear assembly SIVACON,
Type 8PT
Feeder circuit breaker with 3WL11 10 (1000 A) in withdrawable-
unit design

Date of test: 25.07.01, 26.07.01

Test specifications applied:

VDE 0660 part 500: 2000, paragraph 8.2.1
IEC 60439-1: 1999, paragraph 8.2.1

Tests performed:

Type test for the verification of temperature-rise limits.

Test results, only applied to the above-mentioned object under study:

The test determines the following rated currents:

circuit breaker		ventilated cubicle	unventilated cubicle
type	rated current [A]	rated current [A]	rated current [A]
3WL11 10	1000	1000	955

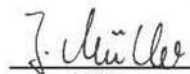
Technical Testing Laboratory
Siemens AG
Südstraße 74
04178 Leipzig

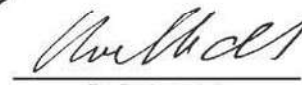
Test engineer

Checked and approved



Leipzig, 04.04.02


Müller


Dr. Drebenstedt

Type Test Report

TPB 157

Rev. 00

Contents: 12 sheets

Object under test: Type-tested LV switchgear and controlgear assembly SIVACON,
Type 8PT
Feeder circuit breaker with 3WL11 16 (1600 A) in withdrawable-
unit design

Date of test: 24.08.01, 29.08.01

Test specifications applied:

VDE 0660 part 500: 2000, paragraph 8.2.1
IEC 60439-1: 1999, paragraph 8.2.1

Tests performed:

Type test for the verification of temperature-rise limits.

Test results, only applied to the above-mentioned object under study:

The test determines the following rated currents:

circuit breaker		ventilated cubicle	unventilated cubicle
type	rated current [A]	rated current [A]	rated current [A]
3WL11 16	1600	1600	1465

Technical Testing Laboratory
Siemens AG
Südstraße 74
04178 Leipzig

Test engineer

Checked and approved



Leipzig, 05.04.02


Müller


Dr. Drebenstedt

Type Test Report

TPB 174

Rev. 00

Contents: 12 sheets

Object under test: Type-tested LV switchgear and controlgear assembly SIVACON,
Type 8PT
Feeder circuit breaker with 3WL12 20 (2000 A) in withdrawable-
unit design

Date of test: 22.11.01

Test specifications applied:

VDE 0660 part 500: 2000, paragraph 8.2.1
IEC 60439-1: 1999, paragraph 8.2.1

Tests performed:

Type test for the verification of temperature-rise limits.

Test results, only applied to the above-mentioned object under study:

The test determines the following rated currents:

circuit breaker		ventilated cubicle	unventilated cubicle
type	rated current [A]	rated current [A]	rated current [A]
3WL12 20	2000	2000	1780

Technical Testing Laboratory
Siemens AG
Südstraße 74
04178 Leipzig

Test engineer

Checked and approved



Leipzig, 03.07.02


Müller


Dr. Drebenstedt

Type Test Confirmation

TPB B340e

Rev. 00

Test object: Type-tested LV switchgear and controlgear assembly SIVACON 8PT with busbar trunking system SIVACON 8PS

Feeder circuit breaker with 3WL12 25 (2500 A) in withdrawable unit design, connected at the top with horizontal busbar trunking systems LDA 6613 (IP34, 3000 A) and LDA 6615 (IP 54, 2000 A) respectively

Client: Siemens AG, A&D CD DM
Südstraße 74 - D-04178 Leipzig

Test specifications applied:

VDE 0660 Teil 500/08.2000, Abschnitt 8.2.1
IEC 60439-1 Ed. 4.1: 2004-04, paragraph 8.2.1

Tests performed:

Type test for the verification of temperature-rise limits

Test result: The test determines the following rated currents:

	cubicle with ventilation, LDA 6613	cubicle with ventilation, LDA 6613	cubicle without ventilation, LDA 6615
rated current	2500 A	2160 A	2080 A

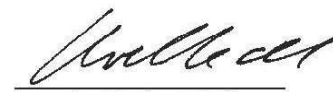
The test is fully documented in Type Test Report TPB 340.

Date of test: 03.-04.10.2004

Leipzig, 08.03.2005


Müller
Test engineer




Dr. Drebenstedt
Head of Test Laboratory

Prüflaboratorium Böhlitz-Ehrenberg, Siemens AG • Südstraße 74 • D-04178 Leipzig

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The test results relate only to the above-mentioned object under study.
The test laboratory is accredited by Deutsche Akkreditierungsstelle Technik (DATech) e.V. in the fields of low voltage switchgear and controlgear assemblies and empty enclosures for low voltage switchgear and controlgear assemblies.



DAT-P-129/02-00

SIEMENS

Type Test Report

Report No. 35e

Rev. 00

Contents: 27 sheets
3 annexes

Object under test: Type-tested LV switchgear and controlgear assembly SIVACON,
type 8PT
horizontal busbar systems

Date of test: 25. - 27.05.99 (1x40x10)
19. - 21.05.99 (2x40x10)
05. - 06.05.99 (2x100x10)

Test specifications applied:

VDE 0660 part 500/04.94, paragraph 8.2.1
IEC 60439-1: 1992 + corrigendum 1993, paragraph 8.2.1

Tests performed:

Type test for the verification of temperature-rise limits.

Test results, only applied to the above-mentioned object under study:

The test determines the following rated currents:

cross- section of busbar	ventilated cubicle			unventilated cubicle		
	$P_V = 0 \text{ W}$	$P_V = 500 \text{ W}$	$P_V = 1000 \text{ W}$	$P_V = 0 \text{ W}$	$P_V = 500 \text{ W}$	$P_V = 1000 \text{ W}$
1 x 40 x 10	1220	1210	1200	1080	1040	980
2 x 40 x 10	1890	1910	1850	1550	1540	1450
2 x 100 x 10	3200	3250	3210	2420	2460	2380

P_V ...additional power loss installed per cubicle

Technical Testing Laboratory
Siemens AG
Switchgear-Construction Leipzig

Böhlitz-Ehrenberg, 30th may, 1999

Test engineer Tested and approved


Wellner


Dr. Drebenstedt



Confirmation of Type Testing

Report No. N 20

Rev. 00

Content: 6 sheets

Equipment under test:

Type-tested LV switchgear and controlgear assembly
SIVACON, type 8PT, horizontal busbar systems 2x60x10 and
2x80x10

Test specifications applied:

VDE 0660 T. 500/04.94 paragraph 8.2.1
IEC 60439-1: 1999 paragraph 8.2.1

Derivation based on the following type test reports:

type test report No. 35

Derivation performed:

Verification of temperature-rise limits by interpolation for horizontal busbar systems with the cross-sections 2x60x10 and 2x80x10.

In the above mentioned type test report rated currents for busbar systems with cross-sections 2x40x10 and 2x100x10 are proved. These test results are the basis for the linear interpolation of the rated currents of the horizontal busbar systems with cross-sections 2x60x10 and 2x80x10.

Conclusion of Derivation:

The derivation determines the following rated currents [A]:

cross-section of busbar	ventilated cubicle			unventilated cubicle		
	$P_V = 0 \text{ W}$	$P_V = 500 \text{ W}$	$P_V = 1000 \text{ W}$	$P_V = 0 \text{ W}$	$P_V = 500 \text{ W}$	$P_V = 1000 \text{ W}$
2 x 60 x 10	2330	2360	2300	1840	1850	1760
2 x 80 x 10	2760	2800	2760	2130	2150	2070

P_V ... additional power loss installed per cubicle

Technical Testing Laboratory
Siemens AG
Switchgear Construction Leipzig

Test engineer Tested and approved

Böhlitz-Ehrenberg, May 29th, 2000


Wellner


Dr. Drebenstedt

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Exception: title-page and its following pages.



Certificate

SIMOPRIME A4 24kV SWITCHGEAR

This is to certify that

Mohammad Javad Dehghan Banadaki

of

Sunlight Energy International

Has successfully participated in product training of SIMOPRIME A4 24kV-
SWITCHGEAR of Siemens IC LMV held on 07 – 11 October 2013
in PT. Siemens Indonesia – Jakarta.

Training Content:

MV SWITCHGEAR SIMOPRIME A4 24kV

- FAMILIARIZE MV SWITCHGEAR SIMOPRIME A4
- INSTALLATION & OPERATION
- MAINTENANCE
- COMPLETE ASSEMBLY PRODUCTION
- ROUTINE TEST PROCEDURE
- NXTOOLS+ PARTNERING consisting of:
 - Configuring panel typical
 - Generating documentations
 - Generating Bill of Materials
 - Getting documentations in PDP

Jakarta, October 11th, 2013

Rudi Santoso
Technical Support
IC LMV MV

Surya Fitri
Head of Business Unit
IC LMV

Confirmation of participation

Mr. Mohammadjavad Dehghanbanadaki

Sunlight Energy International Pte.Ltd

Singapore

has successfully participated

in the training

from 07.04.2014 until 09.04.2014

at Siemens Schaltanlagenwerk Leipzig.

Contents:

- module 4:
- manufacture
 - technique S8
 - IT-Tool
 - management of drawings
 - handling of orders
 - manufacture routine
 - practice

Low voltage switchboard
Franchise system SIVACON S 8

Siemens AG, IC LMV LP PO PC4
Franchise system SIVACON S 8

SIEMENS

Certificate

Assembly and Installation of 8DA10 and 8DB10

Mr. Mohammadjavad Dehghanbanadaki

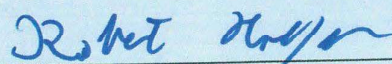
Hereby we confirm the successful participation of **Mr. Mohammadjavad Dehghanbanadaki** in the Assembly and Installation Training on the a.m. medium-voltage switchgear at the Siemens Training Center Frankfurt, Germany, as well as the practical instruction, assembly and installation on site under supervision of a senior supervisor.

Mr. Mohammadjavad Dehghanbanadaki is authorized to install and assemble the a.m. medium-voltage switchgear self-dependently, including mechanical tests on site.

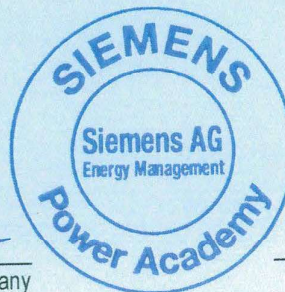
Mr. Mohammadjavad Dehghanbanadaki is **obliged** to send **written assembly and installation reports** about all assembly and installation work executed on the a.m. switchgear to the Siemens Training Center Frankfurt, Germany, as well as to inform himself **under his own responsibility** about the **latest state of technology** of the switchgear.

This certificate is **valid for 3 years** from the date of issue, and can be extended with the consent of the Service Department Frankfurt, Germany.

Power Academy
Frankfurt, May 26th, 2017



Siemens Training Center Frankfurt, Germany
R. Holfeld



Senior Supervisor



ISO/IEC 17025 Accredited
Accreditation No.: IAS/208



Electrical Power Industries
Laboratories Co. (J.S.)



Accreditation No.: T/739

Test report : 1870

18-Sep-2021

Page 1 of 20

TI-1034-I62271-200

LQF-510-02

TEST REPORT

No.1870

Project No.: TI-1034-I62271-200

Test Report for: MV Panel, 24 kV, 1250 A

Manufactured by: Raya Tadbir Cavir

Tested according to: IEC 62271-200

Karaj, 18-Sep-2011

No. of pages

20

Issue date

18-Sep-2011

Prepared: Test & Inspection Engineer

S.M.Mirfallah

Verified: Test & Inspection Manager

S. M. Dezfulian

Approved: Engineering Deputy of Test and Inspection
(Representative of Amirkabir University of Technology)

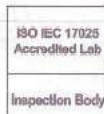
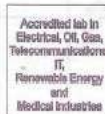
Prof. B. Vahidi

This test report does not include an assessment of the manufacturer's production.
Conformity of the production with tested sample is not the responsibility of EPIL.

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LQF-708-02
Review No.08

Test report : L4-60030

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EPIL TEST REPORT

Project No.: L4-60030

Equipment Under Test: LV PANEL (EMPTY ENCLOSURE)

Model/Type : Wall Mounted / Surface
S / N : RU-1020
IP : 55
Dimension(H.D.W) : SEE ANNEX
Year : 2020

Manufactured by: *Raya Tadbir Cavar*

Applicant: *Raya Tadbir Cavar*

Tested According to: IEC 60529 2013 CORE1:2019 AND IEC 62208 2011

Reception Date of Sample: 27-Jun-2020 Testing Date: 01-Aug-2020

Issue Date: 04-Aug-2020

Test Result: PASSED

No. of pages: 13

Prepared and Test by: Test Engineer

H. Montazeri

H. Montazeri

Verified by: Technical Manager

S. M. Mirfalah

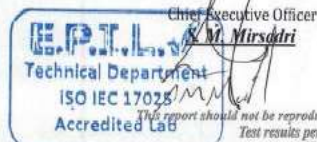
S. M. Mirfalah

Approved by:

Engineering Deputy of Test and
Inspection

Prof. B. Vahidi

Prof. B. Vahidi



Chief Executive Officer
S. M. Mirsadrri

S. M. Mirsadrri

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