

Prüfurfkunde - Test Certificate**CI-8530 SICAM I/O Remote 24-60VDC el.****6MF28530AA00 BB****CI-8530 SICAM I/O Remote 24-60VDC el.****6MF28530AA00 BB****Elektrische Sicherheit / Isolation - Electrical safety / Isolation**

Prüfung - Test: Isol. Wechselfspg. - Dielectric test

Datum - Date: 07/11/16

Norm - Standard: IEC 61010-1:2010

Protokoll - Protocol: CI-853xBB TÜV_16-209

Prüfung - Test: Isol. Stoßspg. - Impulse voltage test

Datum - Date: 07/11/16

Norm - Standard: IEC 60255-27:2013

Protokoll - Protocol: CI-853xBB TÜV_16-209

Elektromagnetische Verträglichkeit - Electromagnetic compatibility

Prüfung - Test: Starting Current DC -

Datum - Date: 07/11/16

Norm - Standard: IEC 60870-4:1990

Protokoll - Protocol: CI-853xBB TÜV_16-209

Prüfung - Test: Imm. ged.Sinus Schw. - Imm. Ring waves

Datum - Date: 07/11/16

Norm - Standard: IEC 61000-4-12:2006

Protokoll - Protocol: CI-853xBB TÜV_16-209

Prüfung - Test: Voltage var. on DC - Voltage var. on DC

Datum - Date: 08/06/16

Norm - Standard: IEC 61000-4-29:2000

Protokoll - Protocol: CI-853xBB TÜV_16-209

Prüfung - Test: Imm. Ripple on DC - Imm. Ripple on DC

Datum - Date: 08/06/16

Norm - Standard: IEC 61000-4-17:1999

Protokoll - Protocol: CI-853xBB TÜV_16-209

Prüfung - Test: Voltage var. on DC - Voltage var. on DC

Datum - Date: 08/06/16

Norm - Standard: IEC 60870-2-1:1995

Protokoll - Protocol: CI-853xBB TÜV_16-209

Prüfung - Test: Störfeldstärke - Emission

Datum - Date: 07/11/16

Norm - Standard: CISPR 22:2008

Protokoll - Protocol: CI-853xBB TÜV_16-209

Prüfung - Test: Imm. ESD - ESD immunity

Datum - Date: 07/11/16

Norm - Standard: IEC 61000-4-2:2008

Protokoll - Protocol: CI-853xBB TÜV_16-209

Prüfung - Test: Imm. HF-Feld - EM field immunity

Datum - Date: 07/11/16

Norm - Standard: IEC 61000-4-3:2006

Protokoll - Protocol: CI-853xBB TÜV_16-209

Prüfung - Test: Imm. Burst - Burst immunity

Datum - Date: 07/11/16

Norm - Standard: IEC 61000-4-4:2012

Protokoll - Protocol: CI-853xBB TÜV_16-209

Prüfung - Test: Imm. Burst - Burst immunity

Datum - Date: 07/11/16

Norm - Standard: IEEE C 37.90.1:2012

Protokoll - Protocol: CI-853xBB TÜV_16-209

Prüfung - Test: Imm. Surge 1,2/50 - Surge imm. 1,2/50µs

Datum - Date: 07/11/16

Norm - Standard: IEC 61000-4-5:2005

Protokoll - Protocol: CI-853xBB TÜV_16-209

Prüfung - Test: Imm. HF induziert - Cond. dist. immunity

Datum - Date: 07/11/16

Norm - Standard: IEC 61000-4-6:2013

Protokoll - Protocol: CI-853xBB TÜV_16-209

Prüfung - Test: Imm. Magnetfeld 50Hz - HF 50Hz immunity

Datum - Date: 07/11/16

Norm - Standard: IEC 61000-4-8:2009

Protokoll - Protocol: CI-853xBB TÜV_16-209

Prüfung - Test: Imm. Magnetfeld Puls - Magn. pulse immunity

Datum - Date: 07/11/16

Norm - Standard: IEC 61000-4-9:1993

Protokoll - Protocol: CI-853xBB TÜV_16-209

Prüfung - Test: Imm. H-Feld gedämpft - Damped oscill. MF

Datum - Date: 07/11/16

Norm - Standard: IEC 61000-4-10:1993

Protokoll - Protocol: CI-853xBB TÜV_16-209

Prüfurfkunde - Test Certificate**CI-8530 SICAM I/O Remote 24-60VDC el.****6MF28530AA00 BB****CI-8530 SICAM I/O Remote 24-60VDC el.****6MF28530AA00 BB**

Prüfung - Test: Imm. 1MHz gedämpft - Oscillatory waves

Datum - Date: 07/11/16

Norm - Standard: IEC 61000-4-18:2006

Protokoll - Protocol: CI-853xBB_TÜV_16-209

Prüfung - Test: Imm. comm mode dist - Imm. comm mode dist

Datum - Date: 07/11/16

Norm - Standard: IEC 61000-4-16:1998

Protokoll - Protocol: CI-853xBB_TÜV_16-209

Umweltprüfungen - Environmental testing

Prüfung - Test: Klima - Climatic test

Datum - Date: 19/01/17

Norm - Standard: IEC 60068-2-x:

Protokoll - Protocol: CP8050BBAIT23400911C

Prüfung - Test: Fc: Schwingen - Vibrations

Datum - Date: 03/11/16

Norm - Standard: IEC 60068-3-3:1991

Protokoll - Protocol: CP8050BB_AIT23400911

Prüfung - Test: Fc: Schwingen - Vibrations

Datum - Date: 03/11/16

Norm - Standard: IEC 60068-2-6:2007

Protokoll - Protocol: CP8050BB_AIT23400911

Prüfung - Test: Ea: Schock - Shock

Datum - Date: 03/11/16

Norm - Standard: IEC 60068-2-27:2008

Protokoll - Protocol: CP8050BB_AIT23400911

Prüfung - Test: Eb: Dauerschock - Bump

Datum - Date: 03/11/16

Norm - Standard: IEC 60068-2-27:2008

Protokoll - Protocol: CP8050BB_AIT23400911

Der Prüfgegenstand hat die Prüfungen bestanden. Nach Abschluss der Prüfungen waren die Eigenschaften unverändert und der Prüfgegenstand voll funktionsfähig.

The equipment has successfully passed the type test. The equipment did not show any changes and was fully in order subsequent to these tests.

Siemens AG Österreich

Wien - Vienna, 08/03/2017

RC-AT EM Digital Grid Products
Development

Page 2 of 2

Prüfer - Tested by:

Schachinger Michael

Digitally signed by Schachinger Michael
DN: serialNumber=2001V63N, givenName=Michael,
sn=Schachinger, o=Siemens, cn=Schachinger Michael
Date: 2017.03.08 16:31:28 +0100'

Name / Unterschrift - Signature

Geprüft - Reviewed by:

i.A. Stern Peter

Digitally signed by Stern Peter
DN: serialNumber=2001MUXE, givenName=Peter,
sn=Stern, o=Siemens, cn=Stern Peter
Date: 2017.03.08 16:49:11 +0100'

Name / Unterschrift - Signature

TEST REPORT
of the accredited test laboratory

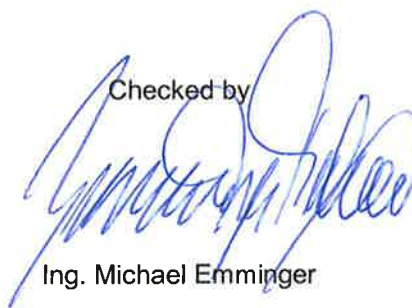
TÜV Nr.:M/EMV-16/209

about
the following EMC - test/- research**Applicant:** Siemens AG Österreich
Siemensstraße 90
A-1210 Vienna**Product:** CI-8530
CI-8532
CP-8050**Serial Numbers:** ---
CI-853xBB_TÜV_16-209.pdf**Standard:** Manufacturer Specifications:
TTS_A8000_CP8050_CI-853x.doc**TÜV AUSTRIA SERVICES GMBH**
Test laboratory for EMCDeputy
Supervisor of EMC-laboratory
Ing. Andreas Malek

07.11.2016

Copy Nbr.: 01

Checked by


Ing. Michael EmmingerTÜV AUSTRIA
SERVICES GMBH**Office:**
Deutschstrasse 10
1230 Vienna/Austria
Tel.:
+43 1 61091-0
Fax:
+43 1 61091-6505
emv@tuv.at**Division:**
Industry & Energy**Department:**
Testing Body for
Communication
Technology/ EMC

TÜV®

**Accredited as:**
Testing Laboratory,
Inspection Body,
Certification Body,
Calibration Laboratory,
First and Boiler test
laboratory**Notified Body 0408****Non-executive
Board of Directors:**
KR Dipl.-Ing. Johann
MARIHART**Management:**
Dipl.-Ing. Dr. Stefan
HAAS
Mag. Christoph
WENNINGER**Registered Office:**
Krugerstrasse 16
1015 Vienna/Austria**Branch Offices:**
Dornbirn, Graz,
Innsbruck, Klagenfurt,
Linz, Salzburg, St. Pölten,
Wels, Vienna, Brixen (I)
and Filderstadt (D)**Company Register
Court / - Number:**
Vienna / FN 288476 f**Bank Details:**
UC BA 52949 001 066
IBAN
AT131200052949001066
BIC BKAUATWW
RZB 001-04.093.282
IBAN
AT153100000104093282
BIC RZBAATWWVAT ATU63240488
DVR 3002476

A publication of this test report is only permitted literally.
Copying or reproduction of partial sections needs a written permission of
TÜV AUSTRIA SERVICES GMBH.

The results of this test report only refer to the provided equipment.

Summary

Clause	Test	Severities	Result
4.1	Radiated Emissions	CISPR 11: 30 MHz – 2 GHz; Class A	OK
4.2	Electrostatic discharge requirements (ESD)	IEC 61000-4-2: 6kV contact, 8 kV air – 10 discharges pos/neg	OK
4.3	Radiated electromagnetic field requirements	IEC 61000-4-3: 80MHz – 6GHz; 10V/m; 80% AM	OK
4.4	Induced RF-field requirements	IEC 61000-4-6: 150kHz – 80MHz; 10Vrms; 80% AM	OK
4.5	Electrical fast transients/burst requirements	IEC 61000-4-4: 4 kV Test level – 5/50 ns t_r/t_n 5kHz Burst frequency; 15 ms Burst time 3 Hz Repetition frequency; Polarity: positive/negative	OK
4.6	Surge requirements	IEC 61000-4-5: 4 kV Test level – 1,2/50 μ s t_r/t_n Polarity: positive/negative	OK
4.7	Oscillatory wave requirements	IEC 61000-4-18: 2,5 kV Test level Frequency: 1 MHz; Repetition: 400/s Burst duration: 2 seconds; Polarity: positive/negative	OK
4.8	Ring wave requirements	IEC 61000-4-12: 2 kV Test level common and normal Frequency: 100 kHz; Repetition: 1/s Polarity: 5 positive / 5 negative	OK
4.9	Magnetic field strength at power frequency	IEC 61000-4-8: 100 A/m; 16,7/50/60 Hz for 60 seconds 1000 A/m; 16,7/50/60 Hz; for 3 second	OK
4.10	Magnetic field strength – pulsed	IEC 61000-4-9: 1000 A/m; 8/20 μ s	OK
4.11	Induced common mode requirements	IEC 61000-4-16: 15Hz – 150kHz; 30Vrms DC/16,67/50/60/150/180Hz; 30Vrms for 1 minute / 300Vrms for 1 second	OK
4.12	Surge withstand capability (SWC) Fast Transient	IEEE C37.90.1 4 kV) Burst filter direct (>100 μ H, 33nF)) line bal. Transformer coupling filter (>100 μ H, 66nF)	OK
4.13	Surge withstand capability (SWC) Oscillatory test 1 MHz damped oscill. wave	IEEE C37.90.1 2,5 kV) coup. Dev. (1,5 mH, 0,5 μ F)	OK
4.14	Starting current DC	IEC 60870-4: Class S1	OK
4.15	Insulation Test	IEC 61010-1: Steady State Test: 3,8kV, 1,5kV (1,8kV) 50Hz sinus for 1 minute Impulse Test: 5kV, 2,5kV; 1,2 μ s/ 50 μ s; 500 Ω output impedance; 5 impulses pos/neg	OK
OK EUT passed NOK EUT failed			

EUT: CI-8530
CI-8532
CP-8050

Serial Number: ---

Manufacturer: Siemens AG Österreich
Siemensstraße 90
A-1210 Vienna

Operating mode: The measurements were carried out at the following running states:
continuous observation for checking the proper functioning of the EUT

Auxiliary equipment:

Module	Serial Number	MLFB number	Description
PS-8620	---	---	Power supply 24 – 60 VDC
DI-8110	---	---	DI-8110

Technical data EUT: ---

Climatic conditions in the emc laboratory: Relative humidity: 44 %
Temperature: 23 °C

Applicant: Siemens AG Österreich

Department: EM DG PRO D

Address: A-1210 Vienna, Siemensstraße 90

Contact person: Mr. Michael Schachinger

EUT received on: 08.09.2016

Tests were performed on: 08.09. until 04.11.2016

Report

Project Designation

Vibration- and Shocktests on SICAM A8000

Client

Siemens AG Österreich
RC-AT EM DG PRO D 3 3
zH. Herrn Ing. Michael Schachinger
Siemensstrasse 90
1210 Wien

Order from / No

8. 6. 2016 / Schachinger

Project number

2.34.00911.1.0

Test Engineer

Wolfgang Schinhan

File: CP8050BB_AIT23400911.pdf

Date of issue	3. 11. 2016
Total number of issues / No	PDF
Number of pages	18
Annex: number of pages	-

The results relate exclusively to the terms tested.

This report may only be reproduced or published in full, without omissions, alterations or additions.

The reproduction or publishing of extracts from this report require the written approval of the research center.

Applicant

Siemens AG Österreich
Siemensstrasse 90, A-1210 Vienna

Project description

Environmental testing Vibration and shock on SICAM A8000

Test objects (EUT)

Productname	Material number	Version
CI-8521	6MF28521AA00	SIMEA Prototyping 2818-2015/2016 HW1A #1
CI-8520	6MF28520AA00	SIMEA Prototyping 2823-2015/2016 HW1A #4
CP-8050	6MF28050AA00	BF1606047719 HW2A
PS-8640	6MF28640AA00	GC8-640--.00/666-002
PS-8642	6MF28642AA00	GC8-642--.00/668-002
CI-8530	6MF28530AA00	BF1604062390 GC8-530--.152
CI-8532	6MF28532AA00	BF1604062377 GC8-532--.152
PS-8620	6MF28620AA00BB	BF16060482
PS-8622	6MF28622AA00BB	Vibration EUT #39
DO-8212	6MF28212AA00BB	GF1602501315
DO-8212	6MF28212AA00BB	GF1512507617
DO-8212	6MF28212AA00BB	GF1602501298
DO-8212	6MF28212AA00BB	GF1602501339
DI-8110	6MF28110AA00BB	GF1602505851
DI-8110	6MF28110AA00BB	GF1602505874
DI-8110	6MF28110AA00BB	GF1602507233
DI-8110	6MF28110AA00BB	GF1512506711
DI-8110	6MF28110AA00BB	GF1602507231

Test equipment

Electrodynamic Vibration Exciter System LDS V864 HT-440

Date of delivery: 1. 9. 2016

Date of tests: 1. 9. – 2. 9. 2016

Test Result

The sample has passed the environmental tests vibration and shock as listed in the Summary.

Project manager

Head of Business Unit



Wolfgang Schinhan



DI Manfred Haider

Clause	Test	Severities	Result
7.1	Environmental testing – Part 2-6: Tests -Test Fc: Vibration (sinusoidal)	IEC 60068-2-6 10 – 150 Hz, 1g 10 Cycles	OK
7.1	Telecontrol equipment and systems - Part 2: Operating conditions - Section 2: Environmental conditions (climatic, mechanical and other non electrical influences)	IEC 60870-2-2 9 - 200Hz, 1,0g, 200 - 500Hz, 1,5g 1 Cycle	OK
7.1	Environmental testing – Part 2- 27: Tests -Test Ea and guidance: Shock	IEC 60068-2-27 15g , 11ms 18 Shocks	OK
7.1	Environmental testing – Part 2- 27: Tests -Test Ea and guidance: Shock	IEC 60068-2-27 10g, 16ms 6000 Shocks	OK
7.1	Seismic harmonic sinus	IEC60068-3-3 Class 2	OK
OK NOK	EUT passed EUT failed		

Applicant

Siemens AG Österreich

Department

EM DG PRO D

Address

Siemensstrasse 90, A-1210 Vienna

Contact person

Mr. Michael Schachinger



Prüfbericht / Test Report

Projektbezeichnung
Project Designation

Climate Test

Produktbezeichnung
Product name

Siemens SICAM A8000 System

Auftraggeber
Client

Siemens AG Österreich
RC-AT EM DG PRO D
Siemensstraße 90
1210 Wien

Auftrag vom / Nummer
Order from / No.

13.07.2016 / 9503929636

Projekt Nummer
Project number

2.34.00911.1.0

Sachbearbeiter
Test engineer

Ing. Robert Meier

Ausstellungsdatum
Date of issue

19.01.2017

Ausfertigungen: Nr. / Anzahl
No. / Total number of issues

1 / 1

Anzahl der Seiten
Number of pages

7

Beilagen: Anzahl der Seiten
Annex: Number of pages

0

File: CP8050BBAIT23400911C.pdf

Die Prüfergebnisse beziehen sich ausschließlich auf die geprüften Gegenstände.
The results relate exclusively to the items tested.

Im Falle einer Vervielfältigung oder Veröffentlichung dieser Ausfertigung darf der Inhalt nur wort- und formgetreu und ohne Auslassung oder Zusatz wiedergegeben werden.
This report may only be reproduced or published in full, without omissions, alterations or additions.

Die auszugsweise Vervielfältigung oder Veröffentlichung bedarf der schriftlichen Zustimmung der Prüfstelle.
The reproduction or publishing of extracts from this report require the written approval of the testing laboratory.

1. Description of the Project

The aim of this project was to perform climate tests according to IEC 60068-2-2, IEC 60068-2-1 and IEC 60068-2-30.

2. Description of the test objects (EUT)

The tested objects of the SICAM A8000 System are provided by Siemens and were delivered at 21st of November 2016.

Product Name	Material Number	Version
CI-8521	6MF28521AA00	SIMEA Prototyping 2818-2015/2016 HW1A #1
CI-8520	6MF28520AA00	SIMEA Prototyping 2823-2015/2016 HW1A #4
CP-8050	6MF28050AA00	BF1609033616 HW3A
PS-8640	6MF28640AA00	GC8-640--.00/666-002
PS-8642	6MF28642AA00	GC8-642--.00/668-002
CI-8530	6MF28530AA00	BF1604062390 GC8-530--.152
CI-8532	6MF28532AA00	BF1604062377 GC8-532--.152
PS-8620	6MF28620AA00BB	BF16060482
PS-8622	6MF28622AA00BB	Schwingungsmuster #39
DI-8110	6MF28110AA00BB	GF1602505851
DI-8110	6MF28110AA00BB	GF1602505874

3. Description of the Test

Description	Duration	Value	Standard	Result
Dry Heat	96h / 4d	70°C / 10%	IEC 60068-2-2	OK
Damp Heat, Periodic	120h / 5d	40°C / 95%	IEC 60068-2-30	OK
Cold	72h / 3d	-25°C	IEC 60068-2-1	OK

5. Test Equipment

Equipment	Manufacturer	Type	Serial Number
Climate Chamber M2	Vötsch	HC 7057	44331
Software for chamber control and data logging	Vötsch	Simpati V4	11194

6. Place and Date of the Tests, Signatures

The test was performed at Austrian Institute of Technology (AIT) GmbH, Giefinggasse 2, A-1210 Vienna between 21st of November 2016 and 18th of December 2016.

Rundstempel

Sachbearbeiter / Sachbearbeiterin
Test engineer

Für den Inhalt verantwortlich
Responsible for the content

i.A. Robert Meier

i.A. Robert Meier

Ing. Robert Meier

Ing. Robert Meier