

Prüfurfkunde - Test Certificate

PS-8622 Stromversorgung 110-220VDC 12W
6MF28622AA00BB
PS-8622 Power Supply 110-220VDC 12W
6MF28622AA00BB
Elektrische Sicherheit / Isolation - Electrical safety / Isolation

 Prüfung - Test: Isol. Wechselfspg. - Dielectric test
 Norm - Standard: IEC 61010-1:2010

 Datum - Date: 04.10.16
 Protokoll - Protocol: PS-8622-S55_00

 Prüfung - Test: Isol. Stoßspg. - Impulse voltage test
 Norm - Standard: IEC 60255-27:2013

 Datum - Date: 04.10.16
 Protokoll - Protocol: PS-8622-S55_00

Elektromagnetische Verträglichkeit - Electromagnetic compatibility

 Prüfung - Test: Voltage var. on DC - Voltage var. on DC
 Norm - Standard: IEC 61000-4-29:2000

 Datum - Date: 29.09.16
 Protokoll - Protocol: PS8622BB_TÜV16-155

 Prüfung - Test: Imm. Ripple on DC - Imm. Ripple on DC
 Norm - Standard: IEC 61000-4-17:1999

 Datum - Date: 29.09.16
 Protokoll - Protocol: PS8622BB_TÜV16-155

 Prüfung - Test: Imm. ged.Sinus Schw. - Imm. Ring waves
 Norm - Standard: IEC 61000-4-12:2006

 Datum - Date: 29.09.16
 Protokoll - Protocol: PS8622BB_TÜV16-155

 Prüfung - Test: Starting Current DC -
 Norm - Standard: IEC 60870-4:1990

 Datum - Date: 29.09.16
 Protokoll - Protocol: PS8622BB_TÜV16-155

 Prüfung - Test: Voltage var. on DC - Voltage var. on DC
 Norm - Standard: IEC 60870-2-1:1995

 Datum - Date: 29.09.16
 Protokoll - Protocol: PS8622BB_TÜV16-155

 Prüfung - Test: Störfeldstärke - Emission
 Norm - Standard: CISPR 22:2008

 Datum - Date: 29.09.16
 Protokoll - Protocol: PS8622BB_TÜV16-155

 Prüfung - Test: Imm. ESD - ESD immunity
 Norm - Standard: IEC 61000-4-2:2008

 Datum - Date: 29.09.16
 Protokoll - Protocol: PS8622BB_TÜV16-155

 Prüfung - Test: Imm. HF-Feld - EM field immunity
 Norm - Standard: IEC 61000-4-3:2006

 Datum - Date: 29.09.16
 Protokoll - Protocol: PS8622BB_TÜV16-155

 Prüfung - Test: Imm. Burst - Burst immunity
 Norm - Standard: IEEE C 37.90.1:2012

 Datum - Date: 29.09.16
 Protokoll - Protocol: PS8622BB_TÜV16-155

 Prüfung - Test: Imm. Burst - Burst immunity
 Norm - Standard: IEC 61000-4-4:2012

 Datum - Date: 29.09.16
 Protokoll - Protocol: PS8622BB_TÜV16-155

 Prüfung - Test: Imm. Surge 1,2/50 - Surge imm. 1,2/50µs
 Norm - Standard: IEC 61000-4-5:2005

 Datum - Date: 29.09.16
 Protokoll - Protocol: PS8622BB_TÜV16-155

 Prüfung - Test: Imm. HF induziert - Cond. dist. immunity
 Norm - Standard: IEC 61000-4-6:2013

 Datum - Date: 29.09.16
 Protokoll - Protocol: PS8622BB_TÜV16-155

 Prüfung - Test: Imm. Magnetfeld 50Hz - HF 50Hz immunity
 Norm - Standard: IEC 61000-4-8:2009

 Datum - Date: 29.09.16
 Protokoll - Protocol: PS8622BB_TÜV16-155

 Prüfung - Test: Imm. Magnetfeld Puls - Magn. pulse immunity
 Norm - Standard: IEC 61000-4-9:1993

 Datum - Date: 29.09.16
 Protokoll - Protocol: PS8622BB_TÜV16-155

 Prüfung - Test: Imm. H-Feld gedämpft - Damped oscill. MF
 Norm - Standard: IEC 61000-4-10:1993

 Datum - Date: 29.09.16
 Protokoll - Protocol: PS8622BB_TÜV16-155

Prüfurfunde - Test Certificate

PS-8622 Stromversorgung 110-220VDC 12W**6MF28622AA00BB****PS-8622 Power Supply 110-220VDC 12W****6MF28622AA00BB**

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

Datum - Date: 29.09.16

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

Protokoll - Protocol: PS8622BB_TÜV16-155

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

Datum - Date: 29.09.16

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

Protokoll - Protocol: PS8622BB_TÜV16-155

Umweltprüfungen - Environmental testing

Prüfung - Test: Klima - Climatic test

Datum - Date: 13.10.16

Norm - Standard: IEC 60068-2-x:

Protokoll - Protocol: PS-8622-S30_00

Prüfung - Test: Fc: Schwingen - Vibrations

Datum - Date: 12.10.16

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

Protokoll - Protocol: PS-8620_22-S68_00

Prüfung - Test: Fc: Schwingen - Vibrations

Datum - Date: 12.10.16

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

Protokoll - Protocol: PS-8620_22-S68_00

Prüfung - Test: Ea: Schock - Shock

Datum - Date: 12.10.16

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

Protokoll - Protocol: PS-8620_22-S68_00

Prüfung - Test: Eb: Dauerschock - Bump

Datum - Date: 12.10.16

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

Protokoll - Protocol: PS-8620_22-S68_00

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, 21.10.2016

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: 2016.10.24 11:03:15 +0200

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: 2016.10.21 15:17:17 +0200

Name / Unterschrift - Signature

Department: DG EM PRO D	TEST REPORT	SIEMENS	
Tested by / on: H. Stefl / 2016-06-13	Re: EMC TYPE TESTING Insulation Tests	Report no.: 8622-S55_00	
Released by / on: M. Schachinger / 2016-10-04 Schachinger Michael <small>Digitally signed by Schachinger Michael DN: serialNumber=2001W63N, givenName=Michael, o=Schachinger, ou=Siemens, cn=Schachinger Michael Date: 2016.10.04 15:46:44 +02'00'</small>		Account / Request no.: 361742	
File: 8622-S55_00.doc		Issued in / on.: Vienna, 2016-06-13	
		Products: PS-8622	Sheet: 1

1. Requirements and Standards Applied

Test requirement acc. to: TTS_A8000_PS862x.doc

Test setup and execution were to comply with the following test standard:

- | | |
|-------------------------------|--|
| IEC 60255-27 (2013-10) | Measuring relays and protection equipment
Part 27: Product safety requirements-
(= prEN 60255-27/2013-07) |
| IEC 61010-1 (2010-06) | Safety requirements for electrical equipment for
measurement, control, and laboratory use
Part 1: General requirements
(= EN 61010-1/2010-10) |

2. Summary of Test Result

The module **PS-8622** **passed** the insulation tests according to the test requirement

- a) dielectric voltage test using a test voltage of $.3,8kV_{eff}$
- b) impulse voltage test using a test voltage of $..± 5kV_p$



TEST REPORT
of the accredited test laboratory

TÜV Nr.:M/EMV-16/155

about
the following EMC - test/- research

Applicant: Siemens AG Österreich
Siemensstraße 90
A-1210 Vienna

Product: PS-8622 6MF28622AA00

Serial Numbers: PS-8622 → #39 (EMC)

Standard: Manufacturer Specifications: TTS_A8000_PS862x.doc

File: PS8622BB_TÜV16-155.pdf

TÜV AUSTRIA SERVICES GMBH
Test laboratory for EMC

Deputy
Supervisor of EMC-laboratory

Ing. Michael Emminger



29.09.2016

Copy Nbr.: 01

Checked by

Ing. Andreas Malek

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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 B	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_f 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_f 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	Voltage dips, voltage interruption, voltage variation	IEC 61000-4-29 : 70% of U_{nom} for 100 ms ; 40% of U_{nom} for 100 ms ; Delta U_{nom} =100% for 10 and 50 ms	OK
4.15	Ripple on DC input power ports	IEC 61000-4-17: 10% ripple of U_{nom} for 10 minutes	OK
4.16	Starting current DC	IEC 60870-4: Class S1	OK
4.17	Supply voltage variation	IEC 60870-2-1: -25% / +30% of U_{nom}	OK
<p>OK EUT passed NOK EUT failed</p>			

EUT: PS-8622 6MF28622AA00

Serial Number: PS-8622 → #39 (EMC)

Manufacturer: Siemens AG Österreich
Siemensstraße 90
A-1210 Wien

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
CP-8050	BF1602018316	6MF28050AA00	SICAM-A8000 CPU module CP-8050
DO-8212	GF1602501332	6MF28212AA00	DO-8212 BIN OUTPUT REL 8X24-220VDC/230VAC
load-module			Active power load (switchable from 1-16W)

Technical data EUT: Power supply: 230VAC to 220VDC power supply, 30VA

Climatic conditions in the emc laboratory: Relative humidity: 38 %
Temperature: 22 °C

Applicant: Siemens AG Österreich

Department: EM DG PRO D

Address: A-1210 WIEN, Siemensstraße 90

Contact person: Mr. Michael SCHACHINGER

EUT received on: 17.05.2016

Tests were performed on: 17. until 19.05.2016 and 08.09.2016

Department: RC-AT EM DG PRO D	TEST REPORT	SIEMENS	
Tested by / on: M. Striz 2016-10-07 to 13	Re: Environmental Testing Cold / Dry Heat	Report no.: PS-8622-S30_00	
Released by / on: M. Schachinger 2016-10-13		Account / Request no.: 361742	
File: PS-8622-S30_00.doc	Product: PS-8622	Issued in / on.: Vienna, 2016-10-13	
		Sheet: 1	Sheets: 5

1. Requirements and Standards Applied

Test requirement acc. to: **TTS_A8000_PS862x.doc**

Test setup and execution were to comply with the following test standard:

- | | |
|--------------------------------|--|
| IEC 60068-2-1 (2007-03) | Environmental testing -
Part 2: Tests; Tests A: Cold
(EN 60068-2-1:2007-04) |
| IEC 60068-2-2 (2007-07) | Basic environmental testing procedures -
Part 2: Tests; Tests B: Dry heat
(= EN 60068-2-2:2007-09) |

2. Summary of Test Result

The module **PS-8622** has **passed** the environmental test according to the test requirement when subjected to dry heat (70°C/10%rh) and cold (-40°C).

Department: EM DG PRO D	TEST REPORT		SIEMENS	
Tested by / on: A. Kainz / 2016-09-02	Re: <div style="text-align: center;"> Environmental Testing Vibration (sinusoidal), Shock </div>		Report no.: PS-8620_22-S68_00	
Released by / on: M. Schachinger / 2016-10-12			Account / Request no.: S.61742	
File: PS-8620_22- S68_00.docx			Issued in / on.: Vienna, 2016-10-13	
			Product: SICAM A-8000 PS-8620/22	

1. Requirements and Standards Applied

Test requirement acc. to: Product requirements SICAM A-8000

Test setup and execution were to comply with the following test standard:

- | | |
|---------------------------------|--|
| IEC 60068-2-6 (2007-12) | Environmental testing
Part 2: Tests - Test Fc: Vibration (sinusoidal)
(= EN 60068-2-6:2008-02) |
| IEC 60068-2-27 (2008-02) | Environmental testing
Part 2: Tests. Test Ea and guidance: Shock
(= EN 60068-2-27:2009-05) |
| IEC 60068-3-3 (1991-02) | Environmental testing
Part 3: Guidance. Seismic Test Methods for equipments
(= EN 60068-3-3:1993-04) |

2. Summary of Test Result

The modules **SICAM A-8000 PS-8620/22**

have **passed** the Environmental test "Vibration (sinusoidal), Shock and Seismic" according to the test requirements with

1g/1,5g by the **Vibration** testing,
10g/15g by the **Shock** testing,
2g hor/1g ver by the **Seismic** testing.