

Prüfurkunde - Test Certificate**AI-5313 Ana. Eing. (Dir.Wandler,4xU,3xI)****BC5-313--****AI-5313 Analog Inp. (Dir.Transf,4xV,3xC)****6MF10130FD130AA0BB****Elektrische Sicherheit / Isolation - Electrical safety / Isolation**Prüfung - Test: Isol. Wechselspg. - Dielectric test
Norm - Standard: IEC 60255-5:2008Datum - Date: 14.08.13
Protokoll - Protocol: BC5313-TÜV_13-183Prüfung - Test: Isol. Stoßspg. - Impulse voltage test
Norm - Standard: IEC 60255-5:2008Datum - Date: 14.08.13
Protokoll - Protocol: BC5313-TÜV_13-183**Elektromagnetische Verträglichkeit - Electromagnetic compatibility**Prüfung - Test: Störfeldstärke - Emission
Norm - Standard: CISPR 22:2008Datum - Date: 14.08.13
Protokoll - Protocol: BC5313-TÜV_13-183Prüfung - Test: Imm. ESD - ESD immunity
Norm - Standard: IEC 61000-4-2:2008Datum - Date: 14.08.13
Protokoll - Protocol: BC5313-TÜV_13-183Prüfung - Test: Imm. HF-Feld - EM field immunity
Norm - Standard: IEC 61000-4-3:2006Datum - Date: 14.08.13
Protokoll - Protocol: BC5313-TÜV_13-183Prüfung - Test: Imm. Burst - Burst immunity
Norm - Standard: IEC 61000-4-4:2012Datum - Date: 14.08.13
Protokoll - Protocol: BC5313-TÜV_13-183Prüfung - Test: Imm. Surge 1,2/50 - Surge imm. 1,2/50µs
Norm - Standard: IEC 61000-4-5:2005Datum - Date: 14.08.13
Protokoll - Protocol: BC5313-TÜV_13-183Prüfung - Test: Imm. HF induziert - Cond. dist. immunity
Norm - Standard: IEC 61000-4-6:2008Datum - Date: 14.08.13
Protokoll - Protocol: BC5313-TÜV_13-183Prüfung - Test: Imm. Magnetfeld 50Hz - HF 50Hz immunity
Norm - Standard: IEC 61000-4-8:2009Datum - Date: 14.08.13
Protokoll - Protocol: BC5313-TÜV_13-183Prüfung - Test: Imm. Magnetfeld Puls - Magn. pulse immunity
Norm - Standard: IEC 61000-4-9:1993Datum - Date: 14.08.13
Protokoll - Protocol: BC5313-TÜV_13-183Prüfung - Test: Imm. 1MHz gedämpft - Oscillatory waves
Norm - Standard: IEC 61000-4-18:2006Datum - Date: 14.08.13
Protokoll - Protocol: BC5313-TÜV_13-183Prüfung - Test: Imm. comm mode dist - Imm. comm mode dist
Norm - Standard: IEC 61000-4-16:1998Datum - Date: 14.08.13
Protokoll - Protocol: BC5313-TÜV_13-183**Umweltprüfungen - Environmental testing**Prüfung - Test: Erdbebenprüfung - Seismic test
Norm - Standard: IEC 60255-21-3:1993Datum - Date: 22.05.13
Protokoll - Protocol: 5111GS-68_AIT13-05Prüfung - Test: Environm. conditions - Environm. conditions
Norm - Standard: IEC 60870-2-2:1996Datum - Date: 22.05.13
Protokoll - Protocol: 5111GS-68_AIT13-05Prüfung - Test: Klima - Climatic test
Norm - Standard: IEC 60068-2-x:Datum - Date: 11.12.13
Protokoll - Protocol: 5313-S30_00Prüfung - Test: Fc: Schwingen - Vibrations
Norm - Standard: IEC 60068-2-6:2007Datum - Date: 22.05.13
Protokoll - Protocol: 5111GS-68_AIT13-05

Prüfurkunde - Test Certificate

AI-5313 Ana. Eing. (Dir.Wandler,4xU,3xI)

BC5-313--

AI-5313 Analog Inp. (Dir.Transf,4xV,3xC)

6MF10130FD130AA0BB

Prüfung - Test: Ea: Schock - Shock
Norm - Standard: IEC 60068-2-27:2008

Datum - Date: 22.05.13
Protokoll - Protocol: 5111GS-68_AIT13-05

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

IC-SG Energy Automation Products
Development

Wien - Vienna, 11.09.2014

Page 2 of 2

Prüfer - Tested by:

Steff Herbert
Digitally signed by Steff Herbert
DN: serialNumber=Z001MUWX, givenName=Herbert,
sn=Steff, o=Siemens, cn=Steff Herbert
Date: 2014.09.11 14:39:14 +02'00'

Name / Unterschrift - Signature

Geprüft - Reviewed by:

i.A. Kapoun Helmut
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Date: 2014.09.12 11:37:50 +02'00'

Name / Unterschrift - Signature

TEST REPORT
of the accredited test laboratory

TÜV Nr.:M/EMV-13/183

about
the following EMC - test/- research

**TÜV AUSTRIA
SERVICES GMBH**

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Deutschstraße 10
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Division:
Medical Technology/
Communication
Technology/ EMC

Department:
Testing Body for
Communication
Technology/ EMC

TÜV®

Applicant: Siemens AG Österreich
Ruthnergasse 3
A-1210 Vienna

Product: 6MF10130FD130AA0BB (BC5-313-- AI-5313)

Serial Number: BF1303 583319
BF1303 583320

Standard: Manufacturer Specifications: TTS_Successor80251_V1_05



Testing Laboratory,
Inspection Body,
Certification Body,
Calibration Laboratory

Notified Body 0408

**Chairman of the
Supervisory Board:**
KR Dipl.-Ing. Johann
MARIHART

Management:
Dipl.-Ing. Dr. Stefan
HAAS
Mag. Christoph
WENNINGER

Registered Office:
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1015 Vienna/Austria

Branch Office:
Dornbirn, Graz,
Innsbruck, Klagenfurt,
Linz, Salzburg, St. Pölten,
Wels, Wien 1, Wien 20,
Wien 23, Brixen (I) und
Filderstadt (D)

**Company Register
Court / - Number:**
Vienna / FN 288476 f

Banking Connections:
BA CA 52949 001 066
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
TÜV AUSTRIA SERVICES GMBH
Test laboratory for EMC

Deputy
Supervisor of EMC-laboratory


Ing. Michael Emminger



14.08.2013

Copy Nbr.: 

Checked by


Ing. Andreas Malek

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TÜV AUSTRIA SERVICES GMBH.

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

Summary (Page 1)

Clause	Test	Severities	Result
4.1	Radiated Emissions	CISPR 11: 30MHz – 2GHz; 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 – 1GHz; 10V/m 1,0GHz – 2,0GHz; 10V/m 2,0GHz – 2,7GHz; 10V/m 80% AM	OK
4.4	Induced RF-field requirements	IEC 61000-4-6 : 150kHz – 80MHz; 10 Vrms 80% AM	OK
4.5	Electrical fast transients/burst requirements	IEC 61000-4-4 : 4 kV Test level (clamp) 2,5 kV Test level (direct) 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	Magnetic field strength at power frequency	IEC 61000-4-8 : 100 A/m; 50 Hz	OK
4.9	Magnetic field strength – pulsed	IEC 61000-4-9 : 1000 A/m; 8/20 μ s	OK
4.10	Induced common mode requirements	IEC 61000-4-16: 15Hz – 150kHz; 30Vrms 50 / 60 / 150 / 180 Hz; 300Vrms DC ; 300V	OK
4.11	Isolation Test	IEC 60255-5: Steady State Test: 3kV 50Hz sinus for 1 minute Impulse Test: 5kV; 1,2 μ s/ 50 μ s; 500 Ω output impedance; 3 impulses pos/neg	OK
<p>OK EUT passed NOK EUT failed</p>			

Summary (Page 2)

EUT: 6MF10130FD130AA0BB (BC5-313-- AI-5313)

Serial Number: BF1303 583319 (test sample for EMC test),
BF1303 583320 (test sample for isolation test)

Manufacturer: Siemens AG Österreich
Ruthnergasse 3
A-1210 Wien

Description: Siemens AG Österreich provided the following configuration for the measurements:

Test setup consisting of:

BC 1703 ACP/M

With AI-5313 and power supply installed

Operating mode: The measurements were carried out at the following running states:

continuous observation for checking the proper functioning of the EUT by means of software running on a PC connected to the EUT via fiberoptical cable

Technical data EUT: Rated voltage: 110-220VDC or 115-230VAC
Rated current: 1A
Rated frequency: DC or 50/60Hz

Mains voltage during the tests: 230 V 50 Hz for the whole test setup

Climatic conditions in the emc laboratory: Relative humidity: 42 %
Temperature: 26 °C

Applicant: Siemens AG Österreich

Department: Energy Automation Development

Address: A-1210 WIEN, Ruthnergasse 3

Contact person: Mr. Herbert STEFL

EUT received on: 12.08.2013

Tests were performed on: 12. and 13.08.2013

Report

Project Designation

Vibration- and Shocktests on SICAM 1703 BC

Client

Siemens AG Österreich
Sector Energy
Division Power Distribution
zH. Herrn Herbert Stefl
Ruthnergasse 3
1210 Wien, Österreich

Order from / No

15. 2. 2013 / Stefl

Project number

2.05.00929.1.0-1813

Test Engineer

Wolfgang Schinhan

Date of issue	22 Mai 2013
Total number of issues / No	PDF
Number of pages	20
Annex: number of pages	-

The results relate exclusively to the terms tested.

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Applicant

Siemens AG Österreich
Ruthnergasse 3, A-1210 Vienna

Project description

Environmental testing Vibration and shock on
SICAM 1703
Project "successor 80251" and
Project "successor Netarm"

Inspection request

TTS_Successor_Netarm_V1_02.pdf for SM-2558,
TTS_Successor80251_V1_03.pdf for Modules DI-5110/11, DO-5203, DO-5212, AI-5313

Test object (EUT)

Serial numbers of modules – vibration and shock tests SICAM 1703 BC
Project "successor 80251" 2013-05-15 until 2013-05-16

* Test specimen:	Module	serial number	Revision	PBA
	SM-2558	BF1303 585660	-.01	vert (z)
	SM-2558	BF1301 546075	-.01	hor (long, trans =x,y)
	DI-5110	BF1302 516331	A.02	4
	DO-5203	BF1302 539633	A.01	5
	DO-5212	BC5-212-A.02/251-001	A.02	6
	AI-5313	BF1204 150111	-.00	9

* Auxiliary equipment:	Module	serial number	Revision
	CP-5014:	BF1112 087661	-.16
	SM-0551	BF1210 054386	-.11
	PS-5622:	BF1112 109455	E.05
	CM-5884:	BF1201 064643	

* Identification of loaded Application (1703 Toolbox II) on CP-5014 under test:

Database: VIEQ
Customer-ID: QWT-0005
Customer: BC1703 ACP Prüfanlag
Plant-ID: QWT-00050000
Plant short des.:BC1703ACP
Region #: 0
Region name.: BC1703ACP Typ
Loaded AU (Automation Unit):
Comp. #: 241
AU short des.:BC Arsenal mit CP5014

Function test after vibration:

Database: VIEQ
Customer-ID: QWT-0005
Customer: BC1703 ACP Prüfanlag
Plant-ID: QWT-00050000
Plant short des.:BC1703ACP
Region #: 0
Region name.: BC1703ACP Typ
Loaded AU (Automation Unit):
Comp. #: 20
AU short des.: Succ5203/12,5313

Test equipment

Electrodynamic Vibration Exciter System LDS V864 HT-440

Date of delivery: 15. Mai 2013
Date of tests: 15. Mai – 16. Mai 2013

Test Result

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

Test performed by



.....

Head of Business Unit



Peter Maurer
HBV - Transportation Infrastructure Technologies

.....

Summary

Clause		Test	Severities	Result
Succ 80251	Succ Netarm			
4.2.1	4.5.1	Environmental testing – Part 2-6: Tests -Test Fc: Vibration (sinusoidal)	IEC 60068-2-6 10 – 150 Hz, 1g 10 Cycles	OK
4.2.1	4.5.1	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
4.2.1	4.5.1	Environmental testing – Part 2-27: Tests -Test Ea and guidance: Shock	IEC 60068-2-27 15g , 11ms 18 Shocks	OK
4.2.1	4.5.1	Environmental testing – Part 2-27: Tests -Test Ea and guidance: Shock	IEC 60068-2-27 10g, 16ms 6000 Shocks	OK
4.2.1	4.5.1	Seismic harmonic sinus	IEC60068-3-3 Class 1	OK
OK NOK	EUT passed EUT failed			

Applicant

Siemens AG Österreich

Department

Energy Automation Development

Address

Ruthnergasse 3, A-1210 Vienna

Contact person

Mr. Herbert Stefl

Department: IC-SG EA PRO D	TEST REPORT	SIEMENS	
Tested by / on: H.Steifl /2013-12-11	Re: Environmental Testing Cold / Dry Heat / Damp Heat	Report no.: 5313-S30_00	
<small>Digitally signed by Kapoun H. Steifl, DN: cn=Kapoun H. Steifl, o=Siemens, ou=Kapoun Helmut, email=Kapoun.Helmut.Steifl@siemens.com, c=DE, serial=2014.10.13 11:03:52 +0200</small> Kapoun H. Steifl		Account / Request no.: S.61652.04.50.05.78	
File: 5313-S30_00.doc		Issued in / on.: Vienna, 2013-12-11	
Product: AI-5313		Sheet: 1	Sheets: 8

1. Requirements and Standards Applied

Test requirement acc. to:

Type test specification TTS_Successor80251_V1_08.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)

- IEC 60068-2-30 (2005-08)** Environmental testing -
Part 2-30: Tests; Test Cab: Damp heat, cyclic (12h)
(= EN 60068-30:2005-08)

2. Summary of Test Result

The modules **AI-5313** has **passed** the environmental test according to the test requirement when subjected to

cold (-25°C),
damp heat (40°C/ 93 rH) and
dry heat (75°C/ 10%rH).

Clause of TTS	Test	Severities	Result
4.1.2	Environmental testing – Part 2-2: Tests -Test B: Dry heat	IEC 60068-2-2 70°C/10% for 96h	Okay
4.1.3	Environmental testing – Part 2-1: Tests -Test A: Cold	IEC 60068-2-1 -25°C for 48h	Okay
4.1.4	Environmental testing – Part 2-78: Tests -Test Cab: Damp heat, steady state	IEC 60068-2-30 40 °C / 93% for 48h	Okay