

DO-5203 Bin. Ausg. (Rel.,16x1,24-220VDC)

BC5-203-A

DO-5203 Dig.Output (Rel.,16x1,24-220VDC)

6MF10130FC030AAO

**Elektrische Sicherheit / Isolation - Electrical safety / Isolation**

Prüfung - Test: Isol. Wechselfspg. - Dielectric test	Datum - Date: 22-03-2013
Norm - Standard: IEC 60255-5:2000	Protokoll - Protocol: 5203AS_TUV13-126

Prüfung - Test: Isol. Stoßspg. - Impulse voltage test	Datum - Date: 22-03-2013
Norm - Standard: IEC 60255-5:2000	Protokoll - Protocol: 5203AS_TUV13-126

**Elektromagnetische Verträglichkeit - Electromagnetic compatibility**

Prüfung - Test: Störfeldstärke - Emission	Datum - Date: 22-03-2013
Norm - Standard: CISPR 22:2008	Protokoll - Protocol: 5203AS_TUV13-126

Prüfung - Test: Imm. ESD - ESD immunity	Datum - Date: 22-03-2013
Norm - Standard: IEC 61000-4-2:2008	Protokoll - Protocol: 5203AS_TUV13-126

Prüfung - Test: Imm. HF-Feld - EM field immunity	Datum - Date: 22-03-2013
Norm - Standard: IEC 61000-4-3:2006	Protokoll - Protocol: 5203AS_TUV13-126

Prüfung - Test: Imm. Burst - Burst immunity	Datum - Date: 22-03-2013
Norm - Standard: IEC 61000-4-4:2012	Protokoll - Protocol: 5203AS_TUV13-126

Prüfung - Test: Imm. Surge 1,2/50 - Surge imm. 1,2/50µs	Datum - Date: 22-03-2013
Norm - Standard: IEC 61000-4-5:2005	Protokoll - Protocol: 5203AS_TUV13-126

Prüfung - Test: Imm. HF induziert - Cond. dist. immunity	Datum - Date: 22-03-2013
Norm - Standard: IEC 61000-4-6:2008	Protokoll - Protocol: 5203AS_TUV13-126

Prüfung - Test: Imm. Magnetfeld 50Hz - HF 50Hz immunity	Datum - Date: 22-03-2013
Norm - Standard: IEC 61000-4-8:2009	Protokoll - Protocol: 5203AS_TUV13-126

Prüfung - Test: Imm. Magnetfeld Puls - Magn. pulse immunity	Datum - Date: 22-03-2013
Norm - Standard: IEC 61000-4-9:1993	Protokoll - Protocol: 5203AS_TUV13-126

Prüfung - Test: Imm. 1MHz gedämpft - Oscillatory waves	Datum - Date: 22-03-2013
Norm - Standard: IEC 61000-4-18:2006	Protokoll - Protocol: 5203AS_TUV13-126

Prüfung - Test: Imm. comm mode dist - Imm. comm mode dist	Datum - Date: 22-03-2013
Norm - Standard: IEC 61000-4-16:1998	Protokoll - Protocol: 5203AS_TUV13-126

**Umweltprüfungen - Environmental testing**

Prüfung - Test: Environm. conditions - Environm. conditions	Datum - Date: 22-05-2013
Norm - Standard: IEC 60870-2-2:1996	Protokoll - Protocol: 5111GS-68_AIT13-05

Prüfung - Test: Erdbebenprüfung - Seismic test	Datum - Date: 22-05-2013
Norm - Standard: IEC 60255-21-3:1993	Protokoll - Protocol: 5111GS-68_AIT13-05

Prüfung - Test: Klima - Climatic test	Datum - Date: 08-05-2013
Norm - Standard: IEC 60068-2-x:	Protokoll - Protocol: 5sysA-S30_00

Prüfung - Test: Fc: Schwingen - Vibrations	Datum - Date: 22-05-2013
Norm - Standard: IEC 60068-2-6:2007	Protokoll - Protocol: 5111GS-68_AIT13-05

# Prüfurfkunde - Test Certificate

**DO-5203 Bin. Ausg. (Rel.,16x1,24-220VDC)**

**BC5-203-A**

**DO-5203 Dig.Output (Rel.,16x1,24-220VDC)**

**6MF10130FC030AAO**

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

Datum - Date: 22-05-2013  
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, 19-06-2013

Page 2 of 2

**Prüfer - Tested by:**  
**Stefl Herbert**

Digitally signed by Stefl Herbert  
DN: serialNumber=2001MUWX, givenName=Herbert,  
sn=Stefl, o=Siemens, cn=Stefl Herbert  
Date: 2013.06.19 16:08:57 +0200

Name / Unterschrift - Signature

**Geprüft - Reviewed by:**  
**Kapoun Helmut**

Digitally signed by Kapoun Helmut  
DN: serialNumber=2001MUJX,  
givenName=Helmut, sn=Kapoun,  
o=Siemens, cn=Kapoun Helmut  
Date: 2013.06.20 16:02:01 +0200

Name / Unterschrift - Signature

**TEST REPORT**  
of the accredited test laboratory

**TÜV Nr.:M/EMV-13/126**

about  
the following EMC - test/- research

**Applicant:** Siemens AG Österreich  
Ruthnergasse 3  
A-1210 Vienna

**Product:** C53207A5203B452 1 DO-5203

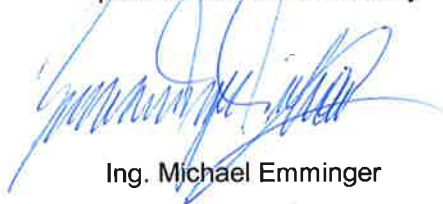
**Serial Number:** DO-5203: BC5-203-A.01/BF1302539633

**Standard:** Manufacturer Specifications: TTS\_Successor80251\_V1\_03

File: 5203AS\_TUV13-126.pdf

**TÜV AUSTRIA SERVICES GMBH**  
Test laboratory for EMC

Deputy  
Supervisor of EMC-laboratory

  
Ing. Michael Emminger



22.03.2013

Copy Nbr.: 01

Checked by

  
Ing. Andreas Malek

**TÜV AUSTRIA  
SERVICES GMBH**

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Medical Technology/  
Communication  
Technology/ EMC

**Department:**  
Testing Body for  
Communication  
Technology/ EMC

TÜV®



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:**  
Krugerstrasse 16  
1015 Vienna/Austria

**Branch Office:**  
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Innsbruck, Klagenfurt,  
Linz, Salzburg, St. Pölten,  
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Filderstadt (D)

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

**Banking Connections:**  
BA CA 52949 001 066  
IBAN  
AT131200052949001066  
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DVR 3002476

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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 – 1GHz; 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 1,4GHz – 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 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 $\mu$ 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 $\mu$ 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: 3,0kV 50Hz sinus for 1 minute Impulse Test: 5,0kV; 1,2 $\mu$ s/ 50 $\mu$ s; 500 $\Omega$ output impedance; 3 impulses pos/neg	OK
<p>OK EUT passed NOK EUT failed</p>			

## Summary (Page 2)

**EUT:** C53207A5203B452 1 DO-5203

**Serial Number:** DO-5203: BC5-203-A.01/BF1302539633

**Manufacturer:** Siemens AG Österreich  
Ruthnergasse 3  
A-1210 Wien

**Description:** Siemens AG Österreich provided the following two configurations for the measurements:

Test setup consisting of:

BC 1703 ACP/M (TNS: P2A7030)

With DO-5203 and DO-5212 installed and a PC connected via fiberlink cable

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

continuous observation via the connected PC for checking the proper functioning of the EUT

**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: 34 %  
Temperature: 23 °C

**Applicant:** Siemens AG Österreich


**Department:** Energy Automation Development

**Address:** A-1210 WIEN, Ruthnergasse 3

**Contact person:** Mr. Herbert STEFL

**EUT received on:** 11.03.2013

**Tests were performed on:** 11. till 15.03.2013

Department: IC-SG EA PRO D	<b>TEST REPORT</b>		
Tested by / on: H.Stefl /2013-05-08	<b>Re:</b>  <b>Environmental Testing Cold / Dry Heat / Damp Heat</b>	Report no.: <b>5sysA-S30_00</b>	
Released by / on: Kapoun H. / 2013-06-18		Account / Request no.: <b>S.61652.04.50.05.75</b>	
File: 5sysA-S30_00.doc		Issued in / on.: Vienna, <b>2013-05-13</b>	
		<b>Product: DI-5110/11, DO-5203, DO-5212</b>	Sheet: 1

## 1. Requirements and Standards Applied

Test requirement acc. to:

Type test specification TTS\_Successor80251\_V1\_03.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 60068-2-78 (2001-08)**      Environmental testing -  
Part 2-78: Tests; Test Cab: Damp heat, steady state  
(= EN 60068-78:2001-10)

## 2. Summary of Test Result

The modules **DI-5110/11, DO-5203, DO-5212** have **passed** the environmental test according to the test requirement when subjected to cold (-25°C), damp heat (40°C/98%) and dry heat (70°C/ 10%).

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 72h (=3d)	Okay
4.1.3	Environmental testing – Part 2-1: Tests -Test A: Cold	IEC 60068-2-1 -25°C for 48h (=2d)	Okay
4.1.4	Environmental testing – Part 2-78: Tests -Test Cab: Damp heat, steady state	IEC 60068-2-78 40 °C/93% for 48h (=2d)	Okay

### 3. Test Details

#### 3.1. Identification of Modules Tested

##### Equipment under Test:

DI - 5110	BF1302 516331	A.02
DO-5203	BF1302 539633	A.01
DO-5212	BC5-212-A.02/251-001	A.02

##### Auxiliary Equipment:

CP-5014:	BF1112 087661	-.16
PS-5622:	BF1112 109455	E.05
CM-5884:	BF1201 064643	

Power supply 24VDC

2 accus 12VDC

test panel DI-5110/11, DO-5212, CP-5002 (for DO-5203), panel with 16 lamps

PC with TBII

#### 3.2. Equipment Used

Conditioning cabinet	WEISS WK3-340/70	PM-Nr.: MP 106 (cabinet 2)
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# 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

File: 5111GS-68\_AIT13-05

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