

## Prüfurkunde - Test Certificate

PE-6412 Peripheriekoppl. Ax-Bus 2x opt.

GC6-412-E

PE-6412 Periph. Controller Ax-Bus 2x FO

6MF11130GE120AF0

### Funktionsprüfungen - Functional testing

Prüfung - Test: Funktion - Functional test

Datum - Date: 05-11-2007

Norm - Norm: ---

Protokoll - Protocol: 6221-S00\_00

### Elektromagnetische Verträglichkeit - Electromagnetic compatibility

Prüfung - Test: Störfeldstärke - Emission

Datum - Date: 30-10-2007

Norm - Norm: CISPR 22:2005

Protokoll - Protocol: 6221-S22\_00

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

Datum - Date: 19-06-2008

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

Protokoll - Protocol: 6221-S03\_00

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

Datum - Date: 31-10-2007

Norm - Norm: IEC 61000-4-8:1993

Protokoll - Protocol: 6221-S08\_00

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

Datum - Date: 31-10-2007

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

Protokoll - Protocol: 6221-S09\_00

### Umweltprüfungen - Environmental testing

Prüfung - Test: Klima - Climatic test

Datum - Date: 05-11-2007

Norm - Norm: IEC 60068-2-x:

Protokoll - Protocol: 6221-S00\_00

Prüfung - Test: Fc: Schwingen - Vibrations

Datum - Date: 18-06-2008

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

Protokoll - Protocol: 6221\_S68\_00

Prüfung - Test: Ea: Schock - Shock

Datum - Date: 18-06-2008

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

Protokoll - Protocol: 6221\_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**

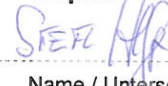
Wien - Vienna, 12-02-2009

Energy Automation Development  
E A D TC2


Page 1 of 1

**Prüfer - Tested by:**

Name / Unterschrift - Signature

**Geprüft - Reviewed by:**

Name / Unterschrift - Signature

Department: PTD EA D TC2-3	<b>TEST REPORT</b>		
Tested by / on: F. Reitgruber 05.11.2007	<b>Re:</b>  <b>TYPE TESTING</b>  <b>Functional and Temperature test</b>  <b>Product: PE-6410, PE-6412, DO-6221, DO-6230</b>	Report no.: <b>6221-S00_00</b>	
Released by / on: H. Stefl /2008-09-02		Account / Request no.: <b>S.71605.01.50.09.50</b>	
File: 6221-S00_00.doc		Issued in / on.: Vienna, <b>19.11.2007</b>	
		Sheet: 1	Sheets: 3

## 1. Requirements and Standards Applied

Test requirement acc. to:

**GC6-xxx--.xx/42-5.06**      TM1703 general functional specification for terminal modules


## 2. Summary of Test Result

The modules:

**PE-6410**  
**PE-6412**  
**DO-6221**  
**DO-6230**

**passed** the functional and temperature test's according to the test requirement.

according to: PE-6411

Department: PTD EA D TC2-3	<b>TEST REPORT</b>		
Tested by / on: H. Stefl / 2008-06-19	<b>Re:</b>  <b>EMC TYPE TESTING</b>  <b>Electromagnetic field immunity test</b>	Report no.: <b>6221-S03_00</b>	
Released by / on: Lichtnekert J./ 2008-09-02		Account / Request no.: <b>S.71605.01.50.09.50</b>	
File: 6221-S03_00.doc		Issued in / on: Vienna, <b>20.06.2008</b>	
		Sheet: 1	Sheets: 6
<b>Product: PE-6410, DO-6221, DO-6230</b>			

## 1. Requirements and Standards Applied

Test requirement acc. to:

**GC6-xxx--.xx/42-5.06**                      TM1703 general functional specification for terminal modules


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

**EN 61000-4-3 (2006-05)**                      Electromagnetic compatibility (EMC)  
Part 4-3: Testing and measurement techniques -  
Radiated, radio-frequency, electromagnetic field  
immunity test  
(= IEC 61000-4-3/2006-02)

## 2. Summary of Test Result

The module **PE-6410, DO-6221** and **DO-6230** has **passed** the radio interference immunity test according to the test requirement when subjected to an interference-field strength of .10V/m.

according to: PE-6411, PE-6412

Department: PTD EA D TC23	<b>TEST REPORT</b>		
Tested by / on: F. Reitgruber 31.10.2007	<b>Re:</b>  <b>EMC TYPE TESTING</b>  <b>Power frequency magnetic field immunity test</b>	Report no.: <b>6221-S08_00</b>	
Released by / on: H. Stefl /2008-09-02		Account / Request no.: <b>S.71605.01.50.09.50</b>	
File: 6221-S08_00.doc		Issued in / on.: Vienna, <b>13.11.2007</b>	
		<b>Product: PE-6410, DO-6221, DO-6230</b>	Sheet: 1

## 1. Requirements and Standards Applied

Test requirement acc. to:

**GC6-xxx--.xx/42-5.06**                      TM1703 general functional specification for terminal modules

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


**IEC 61000-4-8 (1993-06)**                      Electromagnetic compatibility (EMC)  
**+ A1 (2000-11)**                                      Part 4-8: Testing and measurement techniques -  
Power frequency magnetic field immunity test -  
Basic EMC publication  
(= EN 61000-4-8/1993 + A1/2001)

## 2. Summary of Test Result

The modules:

**PE-6410**  
**DO-6221**  
**DO-6230**

**passed** the Power frequency magnetic field immunity test according to the test requirement when subjected to a field strength of 100 A/m permanently and 1000 A/m temporary.  
according to: PE-6411, PE-6412

Department: PTD EA D TC23	<b>TEST REPORT</b>		
Tested by / on: F. Reitgruber 31.10.2007	<b>Re:</b>  <b>EMC TYPE TESTING</b>  <b>Pulse magnetic field immunity test</b>	Report no.: <b>6221-S09_00</b>	
Released by / on: H. Stefl /2008-09-02		Account / Request no. <b>S.71605.01.50.09.50</b>	
File: 6221-S09_00.doc		Issued in / on.: Vienna, <b>12.11.2007</b>	
		<b>Product: PE-6410, DO-6221, DO-6230</b>	Sheet: 1

## 1. 1Requirements and Standards Applied

Test requirement acc. to:

**GC6-xxx--.xx/42-5.06**                      TM1703 general functional specification for terminal modules

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


**IEC 61000-4-9 (1993-06)**                      Electromagnetic compatibility (EMC)  
**+ A1 (2000-11)**                                  Part 4-9: Testing and measurement techniques -  
Pulse magnetic field immunity test  
(= EN 61000-4-9/1993 + A1/2001)

## 2. Summary of Test Result

The modules:

**PE-6410**  
**DO-6221**  
**DO-6230**

**passed** the Power frequency pulse magnetic field immunity test according to the test requirement when subjected to a field strength of 1000 A/m.  
according to: PE-6411, PE-6412

Department: PTD EA D TC2-3	<b>TEST REPORT</b>		
Tested by / on: F. Reitgruber 30.10.2007	<b>Re:</b>  <b>EMC TYPE TESTING</b>  <b>Radio-Interference-Field Strength</b>  <b>Product: PE-6410, PE-6412, DO-6221, DO-6230</b>	Report no.: <b>6221-S22_00</b>	
Released by / on: H. Stefl /2008-09-02		Account / Request no.: <b>S.71605.01.50.09.50</b>	
File: 6221-S22_00.doc		Issued in / on.: Vienna, <b>13.11.2007</b>	
		Sheet: 1	Sheets: 15

## 1. Requirements and Standards Applied

Test requirement acc. to:

**GC6-xxx--.xx/42-5.06**                      TM1703 general functional specification for terminal modules

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

**CISPR 22 (2005-04) mod.**                      Information technology equipment -  
**+ AMD 1 (2005-07)**                              Radio disturbance characteristics –  
**+ AMD 2 (2006-01)**                              Limits and methods of measurement  
(= EN 55022/2006-09)


## 2. Summary of Test Result

The modules:

**PE-6410**  
**PE-6412**  
**DO-6221**  
**DO-6230**

**passed** the radio-interference-field strength test (class A) according to the test requirement.

according to: PE-6411

Department: PTD EA D TC23	<b>TEST REPORT</b>		
Tested by / on: H. Stefl / 2008-06-18	<b>Re:</b>  <b>Environmental Testing Vibration (sinusoidal), Shock</b>	Report no.: <b>6221_S68_00</b>	
Released by / on: J. Lichtnekert / 2008-09-02		Account / Request no.: <b>S.71605.01.50.09.50</b>	
File: 6221-S68_00.doc		Issued in / on.: Vienna, <b>20.06.2008</b>	
		<b>Product: MX-6410, DO-6221, DO-6230</b>	Sheet: 1

## 1. Requirements and Standards Applied

Test requirement acc. to:

**GC6-xxx--.xx/42-5.06**                      TM1703 general functional specification for terminal modules

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

<b>IEC 60068-2-6 (1995-03) + Corrig. (1995)</b>	Environmental testing Part 2: Tests - Test Fc: Vibration (sinusoidal) (= EN 60068-2-6/1995-04)
<b>IEC 60068-2-27 (1987)</b>	Environmental testing Part 2: Tests. Test Ea and guidance: Shock (= EN 60068-2-27/1993-03)
<b>IEC 60068-2-29 (1987)</b>	Basic environmental testing procedures Part 2 : Tests. Test Eb and guidance: Bump (= EN 60068-2-29/1993-04)

## 2. Summary of Test Result

The modules **MX-6410, DO-6221** and **DO-6230** **passed** the Environmental test "Vibration (sinusoidal) and Shock" according to the test requirement with 1g/1,5g by the Vibration testing and 10g/15g by the Shock testing.  
according to: PE-6410, PE-6411, PE-6412