

Test Report Lightning Strike Protection

STS 001

Report part I: 08-EL-0096.10**High current surge test of Weighing cell
Type: POWERCELL PDX SLC820**

Test	Result	Standard
Immunity:	Pass	EN 61000-4-5:06 IEC 61000-4-5:05 (ed.2)
Basic standards: *	Pass	EN 62305-1:05 IEC 62305-1:06 (ed.1) IEEE Std 4:95 IEEE Std 4a:01
Overall Result:	Pass	

Tested by: Ch. Hauser, Product-Qualification EMC



Signature

2009-05-19

Date

Checked by: K. Gerbens, Product-Qualification EMC



Signature

2009-05-19

Date

Applicant:	Mettler-Toledo AG CH-8606 Nänikon	Issue Date:	2009-05-19
		Date of Test:	2008-08-19

Total page number: 6

*) Standard not in scope of Electrosuisse

This report consists of 2 parts and has to be read in conjunction with the test report Mettler-Toledo PDX Lightning Strike Protection, dated 2009-01-07.

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Remark:

This test has been carried out as a joint testing of Electrosuisse and Mettler-Toledo. Electrosuisse has been responsible for the setup and operating of the pulse generator and Mettler-Toledo has been responsible for the tracking of the pulse measurements and the performance checks of the EUT's.

The verdicts of PASS or FAIL have been done together.

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Part 2:	PDX Lightning Strike Protection High current surge test on MTX and PDX	Mettler-Toledo
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SECTION 1: **CLIENT INFORMATION**

Company:	Mettler-Toledo AG
Address:	Heuwinkelstrasse, CH-8606 Nänikon
Contact person:	Mr. C. Bucher

SECTION 2: **EQUIPMENT UNDER TEST (EUT)****2.1 Identification of EUT**

	<u>Load cell:</u>	<u>Terminal 1:</u>	<u>Terminal 2:</u>
Type:	PDXP0030T6	INDX780	INDX780
Serial no.:	7277210052	1650	1685

For more details of the EUT's and the different variations of option cards see part 2.

2.2 Description of EUT

Load cell for weighing trucks as an outdoor application. Several load cells are combined to a weighing system, controlled by a terminal.

2.3 Photo of EUT

SECTION 3: **TEST SPECIFICATIONS, METHODS & PROCEDURES****3.1 Immunity Test Specifications**

Test Specification: **EN 61000-4-5 : 2006**
IEC 61000-4-5 : 2005 (ed.2)

Title: Electromagnetic compatibility (EMC) -
Part 4-5: Testing and measurement techniques - Surge immunity test

Purpose of test: Performance at test levels

3.2 Basic standards

Test Specification: **EN 62305-1 : 2005**
IEC 62305-1 : 2006 (ed. 1)

Title: Protection against lightning
Part 1: General principles

Test Specification: **IEEE Std 4 : 1995**

Title: IEEE Standard Techniques for High-Voltage Testing

Test Specification: **IEEE Std 4a : 2001**

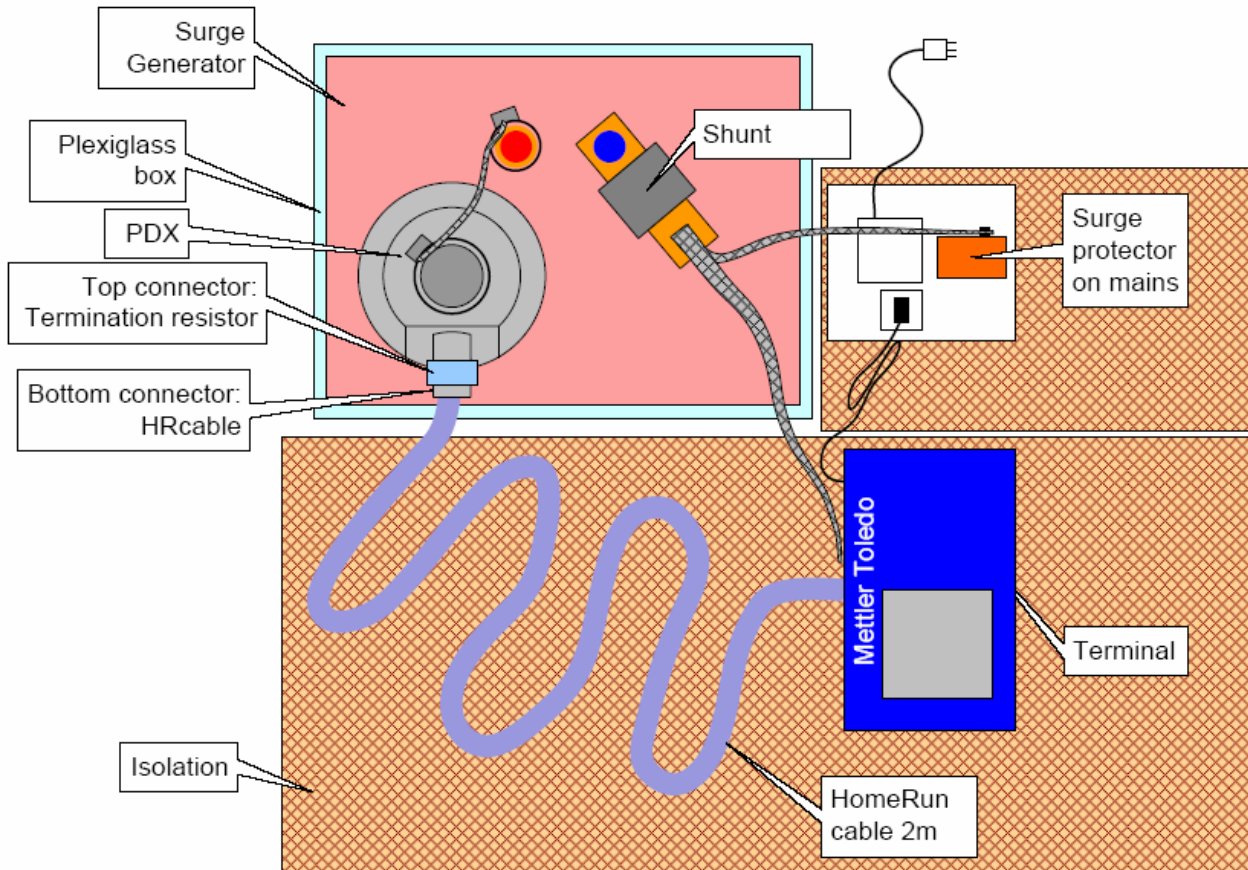
Title: Amendment to IEEE Standard Techniques for High-Voltage Testing

3.3 Measurement uncertainty**Immunity:**

The measurement uncertainties are within the limits required by the test standards applied.

SECTION 4: TEST SETUP

4.1 Test setup



4.2 Test equipment used:

Used	Ser./Inv. No.	Instrument	Manufacturer	Model/Type
<input checked="" type="checkbox"/>	40.277.700	Surge generator	HILO Test	HPVG 15/6600
<input checked="" type="checkbox"/>	50.202.300.4	Shunt 60μΩ / 1000A	HILO Test	WSM 1000 60μΩ

4.3 Test facility:

Used	Testing Rooms	Test Site
<input checked="" type="checkbox"/>	EMC Laboratory room	Electrosuisse, E.3.5

4.4 Photos of test sites:



Immunity:
Setup

EN / IEC 61000-4-5
Surge



Immunity:
Setup

EN / IEC 61000-4-5
Surge

SECTION 5:

OVERALL RESULT

The PDX system is protected against lightning strike currents up to 44 kA!

See test report Mettler-Toledo PDX Lightning Strike Protection for details.