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Auftraggeber:		Schneider Electric India Pvt. Ltd.			
Client:		Beary's Global Research Triangle sy.No 63/3B, Gorvigere Village, Whitefield Ashram Road Bidarahalli Hobli, Bangalore 560067, India.			
Gegenstand der Prüfung:		Uninterruptible Power Supply		Zustand der Anlagen am Eingang: Good	
Test item:				Condition of Equipment on receipt:	
Bezeichnung:		2G online UPS - SRT1500RMXLA-NC		Serien-Nr.: AS1632190456	
Identification:				Serial No.:	
Wareneingangs-Nr.:		1803173634		Eingangsdatum: 27-Oct-2016	
Receipt No.:				Date of receipt:	
Prüfört:		TÜV Rheinland (India) Pvt. Ltd.,			
Testing location:		Plot No.: 108, West Wing, Electronics City Phase 1, Bangalore - 560100			
Prüfgrundlage:		[Immunity]			
Test specification:		IEC 61000-4-2:2008 (contact: level 2 (± 4 kV), air: level 3 (± 8 kV)) IEC 61000-4-3:2010 (80-6000MHz, level 3 (10V/m)) IEC 61000-4-4:2012 (AC power ports: level 3 (± 2 kV), signal ports: level 4 (± 2 kV)) IEC 61000-4-5:2014 (AC power ports: level 3 (± 2 kV) signal ports: level 2 (± 1 kV)) IEC 61000-4-6:2013 (AC power ports: level 3 (10V), signal ports: level 3 (10V)) IEC 61000-4-8:2009 (level 4 (30A/m), continuous field) IEC 61000-4-11:2004			
Prüfergebnis:		Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n).			
Test Result:		The test item passed the test specification(s).			
Prüflaboratorium:		TÜV Rheinland (India) Pvt. Ltd.			
Testing Laboratory:		Plot No.: 108, West Wing, Electronics City Phase 1, Bangalore - 560100			
geprüft/ tested by:			kontrolliert/ reviewed by:		
02-Dec-2016	Raghnath MN Engineer		02-Dec-2016	M Abdul Rahman Manager	
Datum	Name/Stellung	Unterschrift	Datum	Name/Stellung	Unterschrift
Date	Name/Position	Signature	Date	Name/Position	Signature
Sonstiges/ Other Aspects: Not Applicable					
Abkürzungen:		P(ass) = entspricht Prüfgrundlage		Abbreviations: P(ass) = passed	
F(ail) = entspricht nicht Prüfgrundlage		N/A = nicht anwendbar		F(ail) = failed	
N/T = nicht getestet				N/A = not applicable	
				N/T = not tested	
This laboratory is accredited by the National Accreditation Board for Testing and Calibration Laboratories, INDIA. The tests reported herein have been performed in accordance with its scope of accreditation.					
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This test report relates to the a. m. test sample. Without permission of the test centre this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.					

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TEST SUMMARY

5.1.1 RADIATED RADIO-FREQUENCY ELECTROMAGNETIC FIELDS (RADIATED SUSCEPTIBILITY)

RESULT: PASS

5.1.2 CONDUCTED DISTURBANCES INDUCED BY RADIO-FREQUENCY FIELDS (CONDUCTED SUSCEPTIBILITY)

RESULT: PASS

5.1.3 CONDUCTED IMMUNITY TO LOW FREQUENCY FIELDS

RESULT: PASS

5.1.4 POWER FREQUENCY MAGNETIC FIELDS

RESULT: PASS

5.2.1 ELECTRICAL FAST TRANSIENTS AND BURSTS

RESULT: PASS

5.2.2 SURGES

RESULT: PASS

5.2.3 ELECTROSTATIC DISCHARGES

RESULT: PASS

5.3.1 VOLTAGE DIPS

RESULT: PASS

5.3.2 VOLTAGE INTERRUPTIONS

RESULT: PASS

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1. General Remarks

According to the product specification testing levels & performance criteria were considered according to 62040-2.

Interface cable in EUT

Interfaces	Max. cable length	Cable Type (Shielded/Un shielded)
Serial Cable	4.5m	Unshielded
USB 1(On Unit)	5m	Shielded
USB 2(On NMC)	5m	Shielded
USB 3(On NMC)	5m	Shielded
Universal I/O 1(On NMC)	4m	Unshielded
Universal I/O 2(On NMC)	4m	Unshielded
Network 1(On Unit)	15m	Unshielded
Network 2(On NMC)	15m	Unshielded
EPO(On Unit)	5m	Unshielded

EUT does not support any other cable apart from the cables mentioned in the above table.

UPS models listed below are identical to each other mechanically and electrically. The only differences between these models are the installation practices and the addition of network management card. Please find below the differences between the models. External battery packs SRT48RMBP and SRT48BP are accessories to the UPS and are identical to each other

Product SKU	Product Description
SRT1500XLA	APC Smart-UPS SRT 1500VA 120V
SRT1500RMXLA	APC Smart-UPS SRT 1500VA RM 120V
SRT1500RMXLA-NC	APC Smart-UPS SRT 1500VA RM 120V Network Card
SRT1000XLA	APC Smart-UPS SRT 1000VA 120V
SRT1000RMXLA	APC Smart-UPS SRT 1000VA RM 120V
SRT1000RMXLA-NC	APC Smart-UPS SRT 1000VA RM 120V Network Card
SRT48RMBP	APC Smart-UPS SRT 48V 1.5 kVA and 1 kVA RM Battery Pack
SRT48BP	APC Smart-UPS SRT 48V 1.5 kVA and 1 kVA Battery Pack

1.1 Complementary Materials

No attachments along this test report.

2. Test Sites

2.1 Test Facilities

- 1) TÜV Rheinland (India) Pvt. Ltd.
 Plot No. 108, West Wing,
 Electronic City Phase 1
 Hosur Road
 Bangalore – 560 100.
 Website: www.tuv.com

This test site is in accordance with CISPR 16 for measurement of radio interference.

The used test equipment is in accordance with CISPR 16 for measurement of radio interference. The tests have been conducted by a TÜV Rheinland testing engineer.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Kind of Equipment	Manufacturer	Model Name	Serial Number	Calibrated until
For Radiated Susceptibility (RS)				
Signal Generator	Agilent	E8257D-ATO-1895	MY51110514	10-Jan-2018
RF Power Amplifier	MILMEGA	80RF1000-500	1045085	NA
RF Power Amplifier	MILMEGA	AS0102-200	1045089	NA
RF Power Amplifier	MILMEGA	AS1860-100	1045088	NA
Stacked Double Logged Periodic Antenna	Schwarzbeck	STLP9128D	9128D037	NA
Power Meter	Agilent	N1914A	MY50001234	02-Feb-2018
For Conducted Susceptibility (CS)				
Conducted Immunity Test System	EM Test	CWS 500D	V0732102786	29-Feb-2017
Attenuator	EM Test	ATT6/75	1009-19	26-Feb-2017
EM Clamp	EM Test	EM 101	35861	26-Feb-2017
CDN	EM Test	M5	0310-01	25-Feb-2017
Signal Line CDN	EM Test	CDN-T8-RJ45	1007-67	29-Feb-2017
For Low Frequency Conducted Disturbance				
Arbitrary Waveform Generator	Agilent	33220A	MY44053559	07-Nov-2017
Audio Isolation transformer	Solar Electronics	6220-1A	-	NA

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Kind of Equipment	Manufacturer	Model Name	Serial Number	Calibrated until
For Electrical Fast Transients (EFT) & Surge				
EMC Immunity Test System	EMC Partner	TRA3000	1515	13-Jul-2017
Capacitive Coupling Clamp	EMC Partner	CN-EFT1000	679	22-Jul-2017
Telecom Line CDN	ThermoElectron	CM-TELCD	0603297	NA
For Electrostatic Discharges (ESD)				
ESD Simulator	Noiseken	ESS 2002 EX	ESS0999547	20-Sep-2017
For Power Frequency Magnetic Field				
Magnetic Field immunity Loop	FCC	F-1000-4-8/9/10-L-1M	05013	05-Nov-2017
Earth Bond Tester	Lumetronics	EC-12	150903	21-Nov-2016
For Voltage Dips & Interruptions				
EMC Tester	EMC Partner	TRA3000	1515	13-Jul-2017

3. General Product Information

3.1 Product Function and Intended Use

The EUT is a Uninterruptible Power Supply which provides reliable power to connected load and when there is power failure.

3.2 Ratings and System Details

System Input Voltage: AC 120V
Frequency: 60Hz
Input Current: Max 16A
Protection Class: I

3.3 Noise Generating and Noise Suppressing Parts

Noise generating & suppressing parts are integral part of the design

3.4 Submitted Documents

1. User Manual

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Immunity: The equipment under test (EUT) was configured to have its highest possible susceptibility against the tested phenomena. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Operation Modes

The operation modes used for testing are:

- A. EUT to be operated in Normal Operation @ 120V 60Hz Online Mode

4.3 Physical Configuration for Testing

For more details, refer to section: Photographs of the Test Set-Up.

4.4 Test Operation & Test Software

During testing in Online mode, EUT was powered with an input voltage of 120 VAC/60Hz. EUT was loaded with a bulb and resistive load of 1350W.

Application software: Microlink simulator

Software version: ulSim 4.0.0.6

Firmware version: UPSa5.1

4.5 Special Accessories and Auxiliary Equipment

Item	Manufacturer	Type
PC	DELL	-
Power Supply	Chroma	-
Load	Avtron	-

4.6 Countermeasures to achieve EMC Compliance

No additional measures were employed to achieve compliance.

5. Test Results IMMUNITY

5.1 Continuous Disturbances

5.1.1 Radiated Radio-frequency Electromagnetic Fields (Radiated Susceptibility)

RESULT:**PASS**

Date of testing: 27-Oct-2016

Ambient temperature: 25°C

Relative humidity: 59%

Atmospheric pressure: 91kPa

Test procedure: IEC 61000-4-3:2010

Frequency range: 80-6000MHz

Test level: 3 (10V/m) (unmodulated, rms.)

Modulation: 80% AM, 1kHz

Step size: 1%

Dwell time: 2.85s

Supply voltage during testing: AC 120V

Test mode applied: A

Performance criterion: A

Met criterion: A

Note:

The EUT was placed on a non-conductive table 80cm above the floor in an anechoic chamber. Each face of the EUT and the attached cables were exposed in sequence to the electromagnetic field produced by a transmitting antenna. For each EUT orientation, the frequency was swept from 80MHz to 6GHz. The EUT operation was monitored during the test. It was verified that its response to the external disturbance remains within the performance specifications.

Table 2: Immunity against Radiated Radio-frequency Electromagnetic Fields

Field Polarization	Side of EUT	Frequency	Result	Remark
Vertical	Front	80-6000 MHz	Pass	EUT operated as intended, no degradation of function.
Vertical	Rear	80-6000 MHz	Pass	EUT operated as intended, no degradation of function.
Vertical	Left	80-6000 MHz	Pass	EUT operated as intended, no degradation of function.
Vertical	Right	80-6000 MHz	Pass	EUT operated as intended, no degradation of function.
Horizontal	Front	80-6000 MHz	Pass	EUT operated as intended, no degradation of function.
Horizontal	Rear	80-6000 MHz	Pass	EUT operated as intended, no degradation of function.
Horizontal	Left	80-6000 MHz	Pass	EUT operated as intended, no degradation of function.
Horizontal	Right	80-6000 MHz	Pass	EUT operated as intended, no degradation of function.

**5.1.2 Conducted Disturbances induced by Radio-frequency Fields
(Conducted Susceptibility)****RESULT:****PASS**

Date of testing:	07-Nov-2016
Ambient temperature:	24°C
Relative humidity:	56%
Atmospheric pressure:	91kPa
Test procedure:	IEC 61000-4-6:2013
Severity level:	3 (10V) for AC power ports (unmodulated, rms.) 3 (10V) for signal ports (unmodulated, rms.)
Source impedance:	150Ω
Frequency range:	150kHz - 80MHz
Modulation:	80% AM, 1kHz
Sweep mode:	Automatic
Step size:	1%
Dwell time:	2.85s
Supply voltage during testing:	AC 120V
Test mode applied:	A
Performance criterion:	A
Met criterion:	A

Note:

The EUT and its associated accessories were placed on a non-conductive support 10cm above a reference ground plane. Radio-frequency conducted disturbances were injected into the EUT cables via a CDN or a coupling clamp. For each cable selected for testing, the frequency was swept from 150kHz to 80MHz. The EUT operation was monitored during the test. It was verified that its response to the external disturbance remains within the performance specifications.

Table 3: Immunity against Conducted Disturbances induced by Radio-frequency Fields

Coupling Port	Coupling Method:	Result	Remark
AC Input: Line (L), Neutral(N),PE	CDN M-5	PASS	EUT operated as intended, no degradation of function.
Output Power: Line (L), Neutral(N),PE	CDN M-5	PASS	EUT operated as intended, no degradation of function.
EPO Cable	EM Clamp	PASS	EUT operated as intended, no degradation of function.
Serial Cable	EM Clamp	PASS	EUT operated as intended, no degradation of function.
USB Cable	EM Clamp	PASS	EUT operated as intended, no degradation of function.
Universal I/O 1	EM Clamp	PASS	EUT operated as intended, no degradation of function.
Universal I/O 2	EM Clamp	PASS	EUT operated as intended, no degradation of function.
Ethernet (NMC) Cable	CDN-T8-RJ45	PASS	EUT operated as intended, no degradation of function.
Ethernet (Unit) Cable	CDN-T8-RJ45	PASS	EUT operated as intended, no degradation of function.

5.1.3 Conducted Immunity to low frequency Fields

RESULT:**PASS**

Date of testing: 21-Nov-2016

Ambient temperature: 25°C
Relative humidity: 57%
Atmospheric pressure: 91kPa

Test procedure: IEC 61000-2-2:2002

Severity level: 3 (10V) for AC power ports (unmodulated, rms.)
Frequency range: 140Hz - 360Hz
Sweep mode: Automatic
Step size: 1%
Dwell time: 3.00s
Supply voltage during testing: AC 120V
Test mode applied: A

Performance criterion: A

Met criterion: A

Note:

The EUT and its associated accessories were placed on a non-conductive support 10cm above a reference ground plane. Low-frequency conducted disturbances were injected into the EUT cables. For each cable selected for testing, the frequency was swept from 140Hz to 360Hz. The EUT operation was monitored during the test. It was verified that its response to the external disturbance remains within the performance specifications.

Table 4: Immunity against Conducted Disturbances induced by Low-frequency Fields

Coupling Port	Coupling Method:	Result	Remark
AC Input: Line (L), (N), PE	Series Injection	PASS	EUT operated as intended, no degradation of function.

5.1.4 Power Frequency Magnetic Fields**RESULT:****PASS**

Date of testing: 10-Nov-2016

Ambient temperature: 24°C
Relative humidity: 54%
Atmospheric pressure: 91kPa

Test procedure: IEC 61000-4-8:2009

Severity level: 4 (30A/m)
Frequency: 60Hz
Supply voltage during testing: AC 120V
Test mode applied: A

Compliance criteria: B

Met criterion: A

Table 5: Immunity against Power Frequency Magnetic Field:

Field Polarization	Coil Orientation	Result	Remark
Horizontal	Parallel to front side.	Pass	EUT operated as intended, no degradation of function.
Horizontal	Perpendicular to front side.	Pass	EUT operated as intended, no degradation of function.
Vertical	Horizontal to front side.	Pass	EUT operated as intended, no degradation of function.

5.2 Transient Disturbances

5.2.1 Electrical Fast Transients and Bursts

RESULT:**PASS**

Date of testing:	08-Nov-2016
Ambient temperature:	26°C
Relative humidity:	55%
Atmospheric pressure:	91kPa
Test procedure:	IEC 61000-4-4:2012
Severity level:	3 (± 2 kV) AC power ports 4 (± 2 kV) signal ports
Repetition rate:	5kHz
Test duration:	≥ 60 s
Supply voltage during testing:	AC 120V
Test mode applied:	A
Performance criterion:	B
Met criterion:	A

Note:

The EUT and its attached cables were placed on a non-conductive support 10cm above a reference ground plane. Electrical fast transients and bursts were injected into each cable selected for testing via a CDN. The EUT operation was monitored during the test.

Table 6: Immunity against Electrical Fast Transients and Bursts:

Coupling Method: CDN Injection			
Coupling Port	Test Voltage / Result		Remark
AC Input: L1 (L), L2 (N) PE (or reference ground)	±500V ±1000V ±2000V	PASS PASS PASS	EUT operated as intended, no degradation of function.
AC Output: L1 (L), L2 (N) PE (or reference ground)	±500V ±1000V ±2000V	PASS PASS PASS	EUT operated as intended, no degradation of function.

Table 7: Immunity against Electrical Fast Transients (EFT), on Signal Ports

Coupling Method: Capacitive Clamp			
Coupling Port	Test Voltage / Result		Remark
EPO Cable	±500V ±1000V ±2000V	PASS PASS PASS	EUT operated as intended, no degradation of function.
Serial Cable	±500V ±1000V ±2000V	PASS PASS PASS	EUT operated as intended, no degradation of function.
USB Cable	±500V ±1000V ±2000V	PASS PASS PASS	EUT operated as intended, no degradation of function.
Universal I/O 1	±500V ±1000V ±2000V	PASS PASS PASS	EUT operated as intended, no degradation of function.
Universal I/O 2	±500V ±1000V ±2000V	PASS PASS PASS	EUT operated as intended, no degradation of function.
Ethernet (NMC) Cable	±500V ±1000V ±2000V	PASS PASS PASS	EUT operated as intended, no degradation of function.
Ethernet (Unit) Cable	±500V ±1000V ±2000V	PASS PASS PASS	EUT operated as intended, no degradation of function.

5.2.2 Surges

RESULT:**PASS**

Date of testing:	08-Nov-2016
Ambient temperature:	25°C
Relative humidity:	57%
Atmospheric pressure:	91kPa
Test procedure:	IEC 61000-4-5:2014
Severity level:	3 (± 2 kV) for AC power ports 2 (± 1 kV) for Signal Ports
Source impedance:	2 Ω , 12 Ω
Test voltages:	± 500 V, ± 1000 V, ± 2000 V
Coupling phases:	$\pi/2$, π , $3\pi/2$ (90°, 180°, 270°)
Number of surges:	5 (for each parameter combination)
Time between pulses:	≤ 60 s
Supply voltage during testing:	AC 120V
Test mode applied:	A
Performance criterion:	B
Met criterion:	A

Note:

The EUT and its attached cables were placed on a non-conductive support 80cm above a reference ground plane. Surges were injected into each cable selected for testing via a CDN. The EUT operation was monitored during the test.

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Table 8: Surge Immunity Tests, on AC Power port

Coupling Port	Test Voltage	Coupling Phase	Result	Remark
Input port				
Input Port: L1 (L) - L2 (N) Differential (Line to Neutral)	±500V ±1000V	$\pi/2$ π $3\pi/2$	Pass	EUT operated as intended, no degradation of function.
Input Port: L1 (L) – PE Common (Line to Ground)	±500V ±1000V ±2000V	$\pi/2$ π $3\pi/2$	Pass	EUT operated as intended, no degradation of function.
Input Port: L2 (N) - PE Common (Neutral to Ground)	±500V ±1000V ±2000V	$\pi/2$ π $3\pi/2$	Pass	EUT operated as intended, no degradation of function.
Output port				
Output Port: L1 (L) - L2 (N) Differential (Line to Neutral)	±500V ±1000V	$\pi/2$ π $3\pi/2$	Pass	EUT operated as intended, no degradation of function.
Output Port: L1 (L) – PE Common (Line to Ground)	±500V ±1000V ±2000V	$\pi/2$ π $3\pi/2$	Pass	EUT operated as intended, no degradation of function.
Output Port: L2 (N) - PE Common (Neutral to Ground)	±500V ±1000V ±2000V	$\pi/2$ π $3\pi/2$	Pass	EUT operated as intended, no degradation of function.

Table 9: Surge Immunity Tests, on Signal Port

Coupling Port	Coupling Mode	Test Voltage	Result	Remark
Ethernet (NMC) Cable	CM-TELCD	±500V ±1000V	Pass	EUT operated as intended, no degradation of function.
Ethernet (Unit) Cable	CM-TELCD	±500V ±1000V	Pass	EUT operated as intended, no degradation of function.

5.2.3 Electrostatic Discharges

RESULT:**PASS**

Date of testing:	10-Nov-2016
Ambient temperature:	25°C
Relative humidity:	46%
Atmospheric pressure:	91kPa
Test procedure:	IEC 61000-4-2:2008
Severity level:	2 (±4kV) (contact discharge) 3 (±8kV) (air discharge)
Number of discharges per test point:	≥ 10 for each test voltage and polarity
Supply voltage during testing:	AC 120V
Test mode applied:	A
Performance criterion:	B
Met criterion:	B

Note: The EUT was placed on a non-conductive support 80cm above a ground reference plane (GRP). The EUT and its attached cables were isolated from the GRP by a thin insulating support of 0.5mm thickness. Electrostatic discharges were applied using an ESD gun directly (via contact or air discharges). The EUT operation was monitored during the test.

Table 10: Immunity against Electrostatic Discharges, both Polarities

Discharge Points	Type of Discharge	Test Voltages	Result	Remark
Front Enclosure:				
	Contact	$\pm 2, \pm 4\text{kV}$	Pass	EUT operated as intended, no degradation of function.
	VCP	$\pm 2, \pm 4\text{kV}$	Pass	EUT operated as intended, no degradation of function.
	HCP	$\pm 2, \pm 4\text{kV}$	Pass	During test at $\pm 2\text{kV}$ display went to sleep mode & recovered back after the test.
	Air	$\pm 2, \pm 4, \pm 8\text{kV}$	Pass	EUT operated as intended, no degradation of function.
Left Enclosure:				
	Contact	$\pm 2, \pm 4\text{kV}$	Pass	EUT operated as intended, no degradation of function.
	VCP, HCP	$\pm 2, \pm 4\text{kV}$	Pass	EUT operated as intended, no degradation of function.
Right Enclosure:				
	Contact	$\pm 2, \pm 4\text{kV}$	Pass	EUT operated as intended, no degradation of function.
	VCP, HCP	$\pm 2, \pm 4\text{kV}$	Pass	EUT operated as intended, no degradation of function.
Rear Enclosure:				
	Contact	$\pm 2, \pm 4\text{kV}$	Pass	EUT operated as intended, no degradation of function.
	VCP, HCP	$\pm 2, \pm 4\text{kV}$	Pass	EUT operated as intended, no degradation of function.
Top Enclosure:				
	Contact	$\pm 2, \pm 4\text{kV}$	Pass	EUT operated as intended, no degradation of function.
Cables:				
	Air	$\pm 2, \pm 4, \pm 8\text{kV}$	Pass	EUT operated as intended, no degradation of function.
Display:				
	Air	$\pm 2, \pm 4, \pm 8\text{kV}$	Pass	During test at $-4\text{kV}, \pm 8\text{kV}$ display went to sleep mode & recovered back after the test.

5.3 Power Supply Alterations

5.3.1 Voltage Dips

RESULT:**PASS**

Date of testing:	08-Nov-2016
Ambient temperature:	26°C
Relative humidity:	55%
Atmospheric pressure:	91kPa
Test procedure:	IEC 61000-4-11:2004
Test parameters:	>-95%, 0.5 periods, 8.3ms @ 60Hz Performance criterion: B Met criterion:A -100%, 1 cycle, 16.7ms @ 60Hz Performance criterion: B Met criterion:A -60%, 12 cycles, 200ms @ 60Hz Performance criterion: B Met criterion:B -30%, 30 cycles, 500ms @ 60Hz Performance criterion: B Met criterion:B -20%, 300cycles, 5000ms @ 60Hz Performance criterion: B Met criterion:B
Starting phases:	0°
Number of voltage dips:	3 (for each parameter combination)
Time between voltage dips:	60s
Supply voltage during testing:	120V AC
Test mode applied:	A

Note:

The EUT was connected to a test generator. The specified series of voltage dips were applied in sequence at the AC mains input port of the EUT. The EUT operation was monitored during the test.

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Table 11: Immunity against Voltage Dips, AC 120V, 60Hz Input Voltage

Voltage Reduction	Applied Voltage	Duration	Starting Phase [rad]	Result	Remark
100%	0V	8.3ms	0	Pass	EUT operated as intended, no degradation of function.
100%	0V	16.7ms	0	Pass	EUT operated as intended, no degradation of function.
60%	48V	200ms	0	Pass	EUT changed to Battery mode & recovered back.
30%	84V	500ms	0	Pass	EUT changed to Battery mode & recovered back
20%	96V	5000ms	0	Pass	EUT changed to Battery mode & recovered back

5.3.2 Voltage Interruptions

RESULT:
PASS

Date of testing: 08-Nov-2016
 Ambient temperature: 26°C
 Relative humidity: 55%
 Atmospheric pressure: 91kPa
 Test procedure: IEC 61000-4-11:2004
 Test parameters: -100%, 300 cycles, 5000ms @ 60Hz
 Starting phases: 0°
 Number of voltage interruptions: 3 (for each parameter combination)
 Time between voltage interruptions: 60s
 Supply voltage during testing: 120V AC
 Test mode applied: A
 Performance criterion: B
 Met criterion: B

Note:

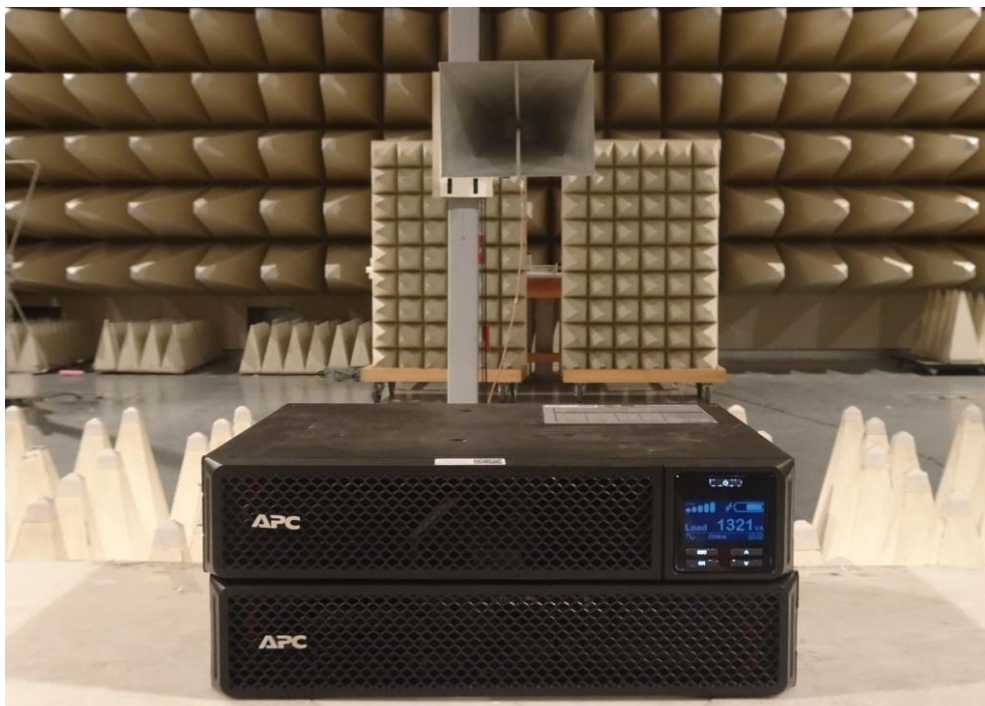
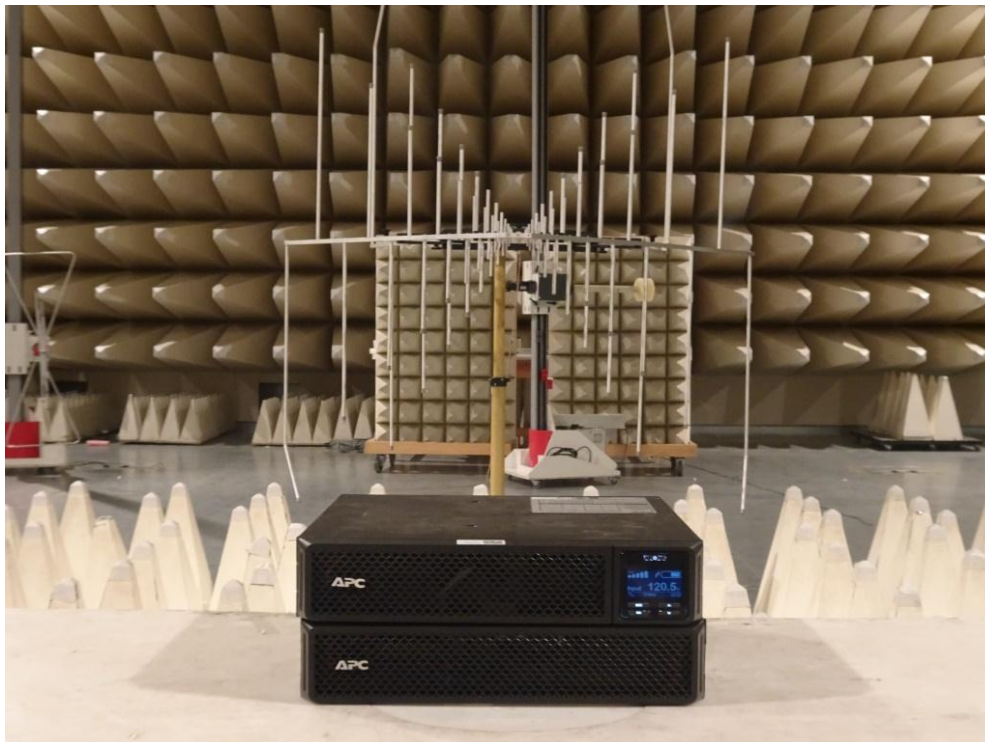
The EUT was connected to a test generator. The specified series of voltage interruptions was applied at the AC mains input port of the EUT. The EUT operation was monitored during the test.

Table 12: Immunity against Voltage Interruptions, AC 120V, 60Hz Input Voltage

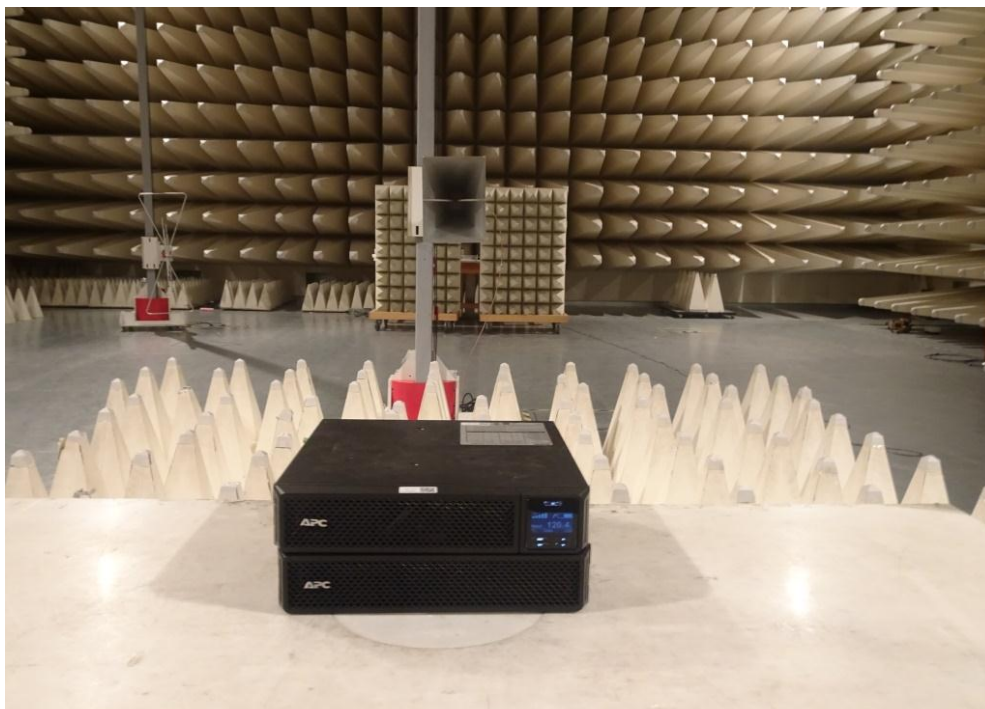
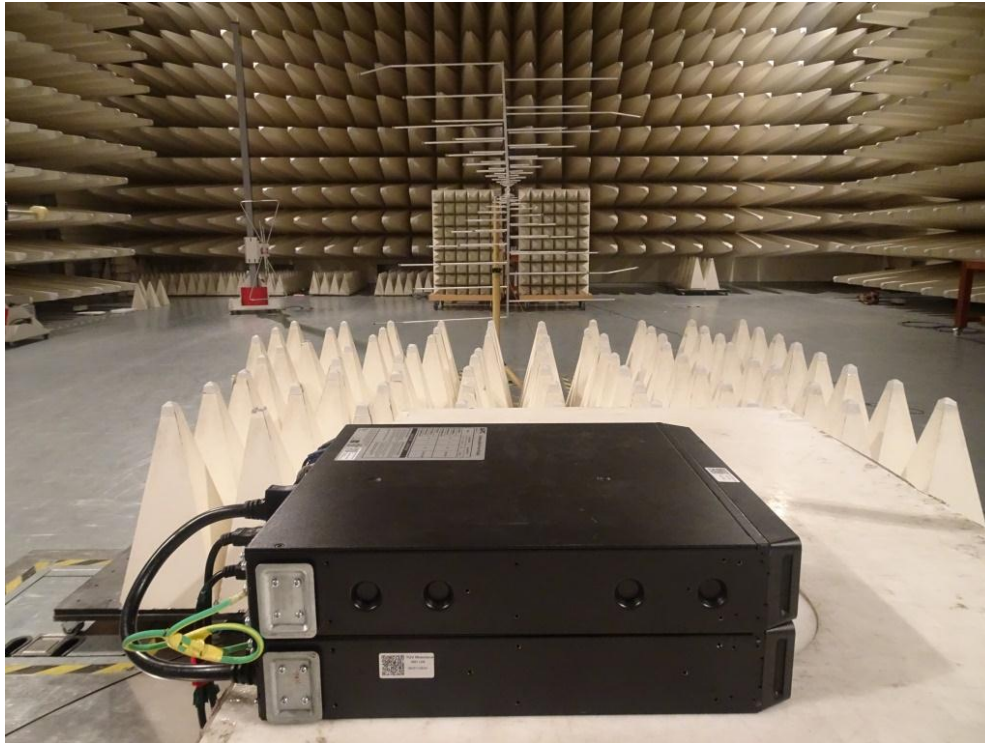
Voltage Reduction	Applied Voltage	Duration	Starting Phase [rad]	Result	Remark
100%	0V	5s	0	Pass	EUT changed to Battery mode & recovered back

6. Photographs of the Test Set-Up

Photograph 1: Set-up for Radiated Susceptibility, Vertical Polarization



Photograph 2: Set-up for Radiated Susceptibility, Horizontal Polarization



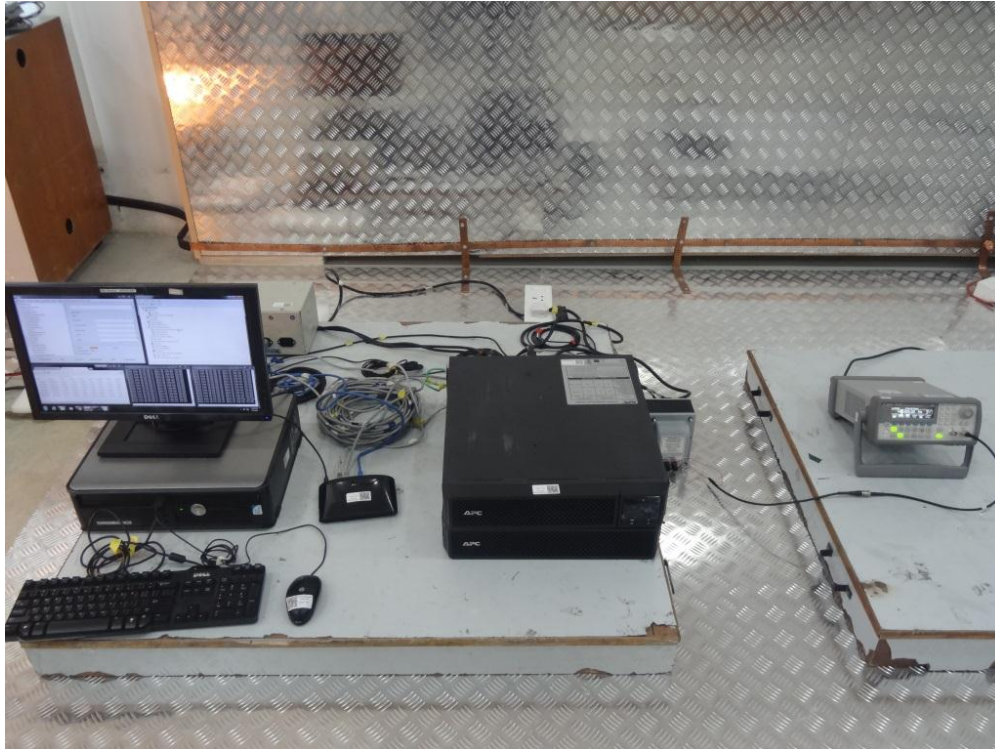
Photograph 3: Set-up for Conducted Susceptibility, CDN Injection Method, AC Input and Output Power Port



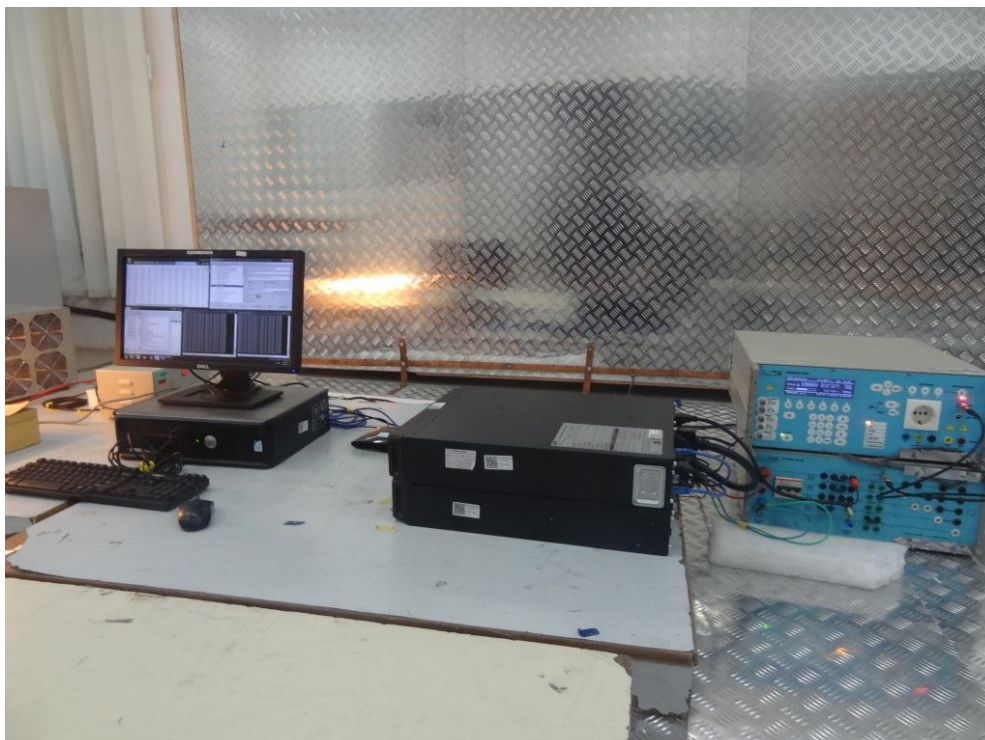
Photograph 4: Set-up for Conducted Susceptibility, EM clamp Method, Signal Port



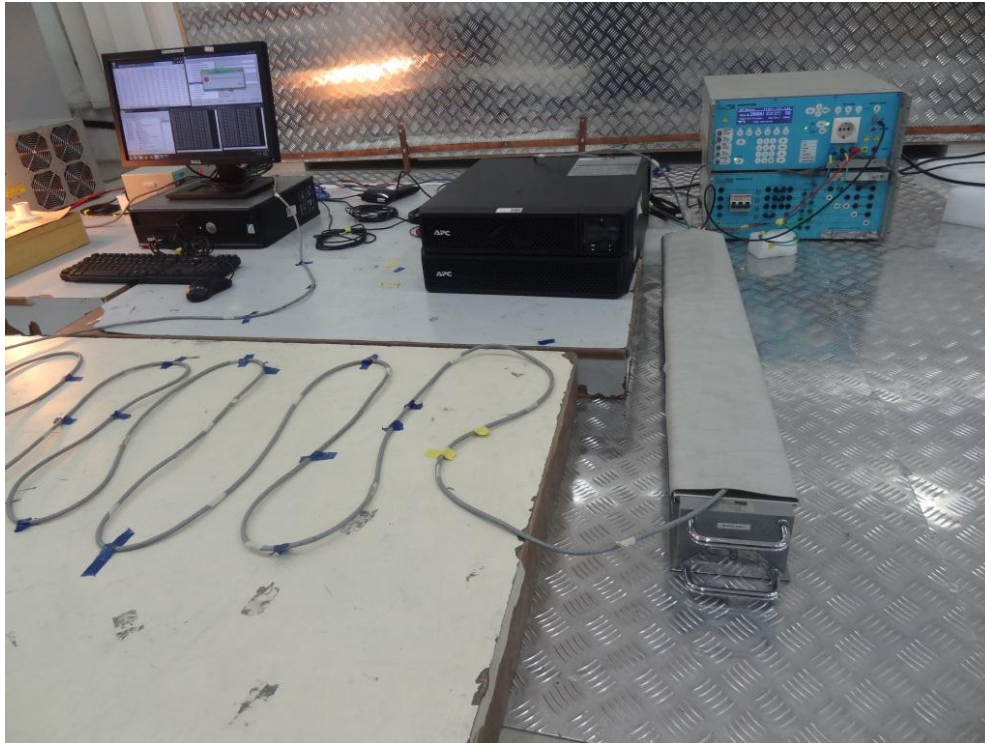
Photograph 5: Set-up for Low Frequency Conducted Immunity



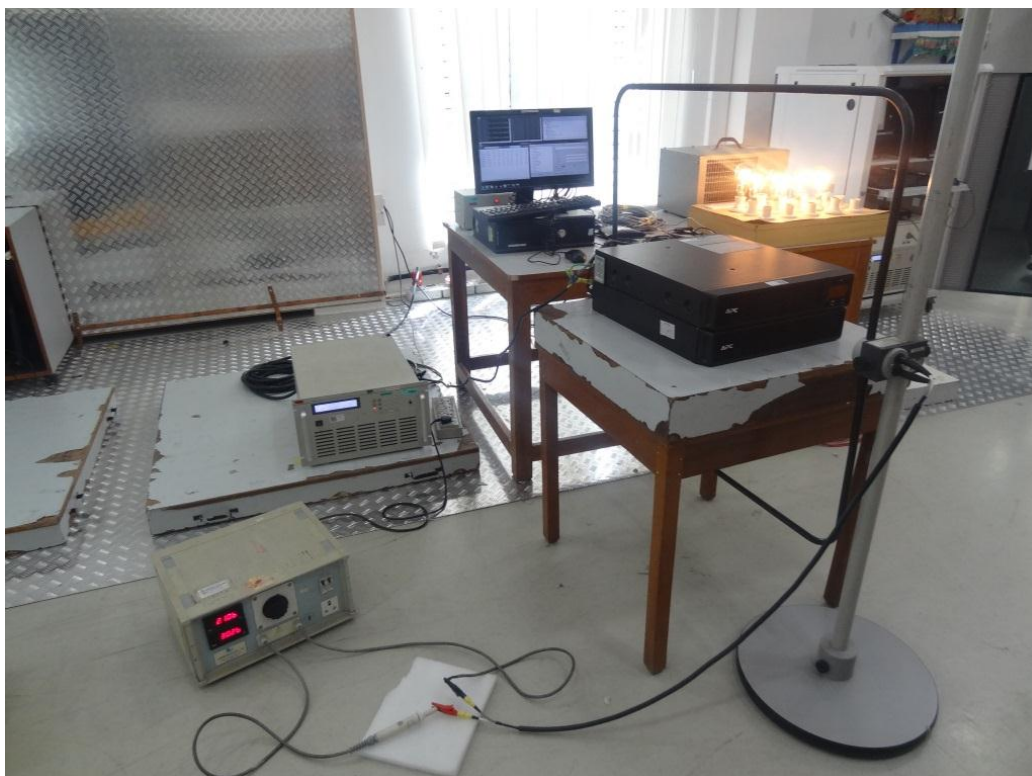
Photograph 6: Set-up for Electrical Fast Transients and Bursts, on AC Input and Output Power Ports

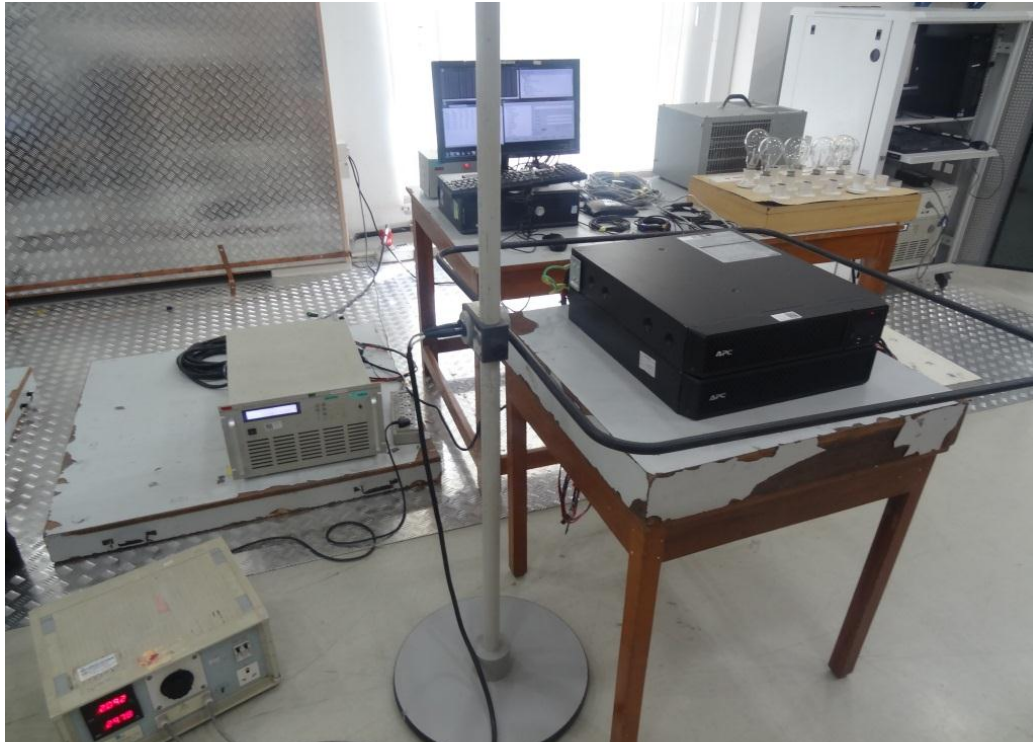


Photograph 7: Set-up for Electrical Fast Transients and Bursts, on Signal Ports



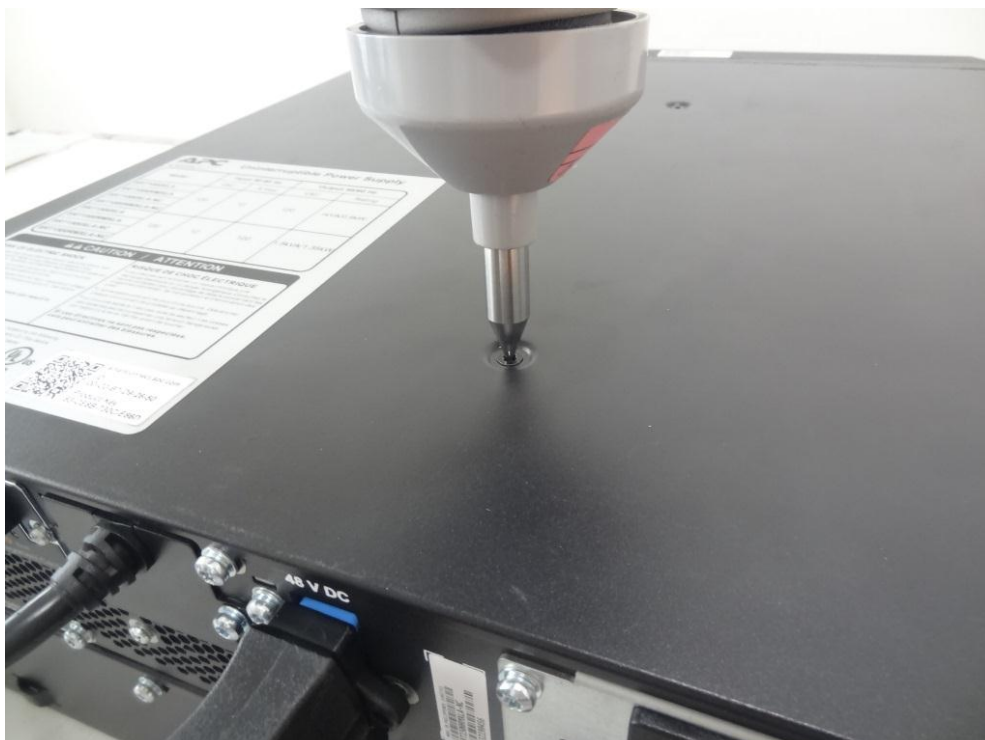
Photograph 8: Set-up for Power Frequency Magnetic Field





Photograph 9: Set-up for Surges, on AC Input and Output Power Ports



Photograph 10: Set-up for Surges, on Signal Ports**Photograph 11: Set-up for Electrostatic Discharges, Contact Discharges**

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Photograph 12: Set-up for Electrostatic Discharges, Air Discharges



Photograph 13: Set-up for Electrostatic Discharges, VCP



Photograph 14: Set-up for Electrostatic Discharges, HCP



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