TEST REPORT

EN 55015
Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 61547
Equipment for general lighting purposes - EMC immunity requirements

Report Reference No. ..... :	169993TRFEMC
Tested by (name + signature)..... :	Fabio Mauri 
Approved by (name + signature)..... :	Alessio Pelizzoni  .....
Date of issue..... :	2011-05-10
Testing Laboratory ..... :	**Nemko Spa**
Address..... :	Via del Carroccio, 4 – 20853 Biassono (MB) – Italy
Testing location	Nemko Spa
Address..... :	Via del Carroccio, 4 – 20853 Biassono (MB) – Italy
Applicant's name ..... :	**C Luce S.r.l.**
Address..... :	Via Marmolada, 5/11 20060 Truccazzano (MI) Italia
Test specification:	
Standard ..... :	EN 55015 (2006) + A1 (2007) + A2 (2009) EN 61547 (2009) EN 61000-3-2 (2006) EN 61000-3-3 (2008)
	Full application of the standards ☒
	Partial application of the standards ☐
Test procedure..... :	Nemko WM L0077, WM L0177 and WM L1002
Test Report Form No. ..... :	55015TRFEMC
TRF Originator ..... :	Nemko Spa
Master TRF..... :	2008-12

Test item description..... :	SUSPENDED LUMINAIRE WITH DISCHARGE LAMP (Metal halide, Sodium)
Trade Mark ..... :	
Manufacturer..... :	**C Luce S.r.l.**
Address of manufacturer ..... :	Via Marmolada, 5/11 20060 Truccazzano (MI) Italia

Model	:	3121340 EASY DECO
Ratings.....	:	230V ; 50Hz ; 400W (Sodium lamp)

Test Report No. :	169994-2TRFEMC	2011-03-28 Date of issue

Short description of the EuT	Copy of marking plate
Transparent polished polycarbonate reflector, prismatized inside, smooth outside for easier cleaning and maintenance, diameter 320 mm	

Number of tested samples:	1
Serial number:	-
Lighting equipment type:	Indoor
Device type:	Ceiling mounting
Accessories and detachable parts included:	The E.U.T. is composed by a single unit
Other options included:	-

Testing	
Date of receipt of test sample:	2011-05-02
Testing commenced on:	2011-05-03
Testing concluded on:	2011-05-15

Possible test case verdicts:	
test case does not apply to the test object:	N (Not applicable)
test object does meet the requirement:	P (Pass)
test object does not meet the requirement:	F (Fail)

Symbols used in this test report

☒ The crossed square indicates that the listed condition, standard or equipment is applicable for this report.

☐ The empty square indicates that the listed condition, standard or equipment is not applicable for this report.

The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.

Verdict according to the standards listed at page 5:	**Pass**

PROJECT HISTORY		
Report number	**Modification to the report / comments**	**Date**
169993TRFEMC	First release	2011-05-10
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REMARKS		

PRODUCT VARIANTS COVERED BY THIS REPORT

315X2Y.1ZZ EASY N (main family on first page): 150/250/400W , 230V, 50Hz, Cl.I, IP65, F- symbol, 1.5m, E40/E27.

313X2Y.1ZZ EASY C : 150/250/400W , 230V, 50Hz, Cl.I, IP65, F- symbol, 1.5m, E40/E27.

314X2Y.1ZZ EASY S : 150/250/400W , 230V, 50Hz, Cl.I, IP23, F- symbol, 1.5m, E40/E27.

312X2Y.1ZZ EASY DECO : 150/250/400W , 230V, 50Hz, Cl.I, IP40, F- symbol, 1.5m, E40/E27

- **X:** Characteristics of lamp and electrification
  - 1: Sodium High Pressure lamp
  - 2: Metal halide lamp (only ZZ=15)
  - 3: Metal halide lamp (Philips)

- **Y:** Colour
  - 2: Black
  - 3: Silver

- **ZZ:** Power of lamps :
  - 15: 150W; Metal halide lamp, Sodium high pressure lamp
  - 25: 250W; Metal halide lamp Philips, Sodium high pressure lamp,
  - 40: 400W; Metal halide lamp Philips, Sodium high pressure lamp,

(EASY N and EASY C Alluminium Reflector with glass cover ; EASY S Alluminium Reflector without glass cover and EASY DECO plastic reflector)

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1 TEST STANDARDS

The tests were performed according to following standards and procedures.

NEMKO WM L0177: General routines for using instruments at Nemko

NEMKO WM L1002: Measurement Uncertainty - Policy and Statement

NEMKO WM L0077: General routines to perform EMC tests

EN 55015 (2006) + A1 (2007) + A2 (2009)
Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment

EN 61547 (2009)
Equipment for general lighting purposes - EMC immunity requirements

EN 61000-3-2 (2006) + A1 (2009) + A2 (2009)
Electromagnetic compatibility (EMC) — Part 3-2: Limits — Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)

EN 61000-3-3 (2008)
Electromagnetic compatibility (EMC) -- Part 3-3: Limits — Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection

The main standard(s) above contain(s) references to other standards, which are listed below.

EN 61000-4-2 (2009)
Electromagnetic compatibility (EMC) -- Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test

EN 61000-4-3 (2006) + A1 (2008)
Electromagnetic compatibility (EMC) -- Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test

EN 61000-4-4 (2004)
Electromagnetic compatibility (EMC) -- Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test

EN 61000-4-5 (2006)
Electromagnetic compatibility (EMC) -- Part 4-5: Testing and measurement techniques - Surge immunity test

EN 61000-4-6 (2009)
Electromagnetic compatibility (EMC) -- Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields

EN 61000-4-8 (1993) + A1 (2001)
Electromagnetic compatibility (EMC) -- Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test

EN 61000-4-11 (2004)
Electromagnetic compatibility (EMC) -- Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests

2 SUMMARY OF TEST RESULTS

Emission		
Requirement – Test	Frequency range	Verdict
Radiated disturbance in the frequency range 9 kHz to 30 MHz	9 kHz to 30 MHz	P
Radiated disturbance in the frequency range 30 MHz to 300 MHz	30 MHz to 300 MHz	P
Terminal disturbance voltages in the frequency range 9 kHz to 30 MHz	9 kHz to 30 MHz	P
Insertion Loss	150 kHz to 1605 kHz	N
Harmonic current emissions	0 kHz – 2 kHz	P
Voltage changes, voltage fluctuations and flicker	-	P (1)
Immunity		
Requirement - Test	Ref standard	Verdict
Electrostatic discharges	EN 61000-4-2	N (2)
Radio-frequency electromagnetic fields	EN 61000-4-3	N (2)
Fast transients – Signal and control lines	EN 61000-4-4	N (2)
Fast transients – I/O DC power ports	EN 61000-4-4	N (2)
Fast transients – I/O AC power ports	EN 61000-4-4	N (2)
Surges – Input AC power ports	EN 61000-4-5	N (2)
Injected currents – Signal and control lines	EN 61000-4-6	N (2)
Injected currents – I/O DC power ports	EN 61000-4-6	N (2)
Injected currents – I/O AC power ports	EN 61000-4-6	N (2)
Power frequency magnetic fields	EN 61000-4-8	N (2)
Voltage dips – Input AC power ports	EN 61000-4-11	N (2)
Voltage interruptions – Input AC power ports	EN 61000-4-11	N (2)

GENERAL REMARKS

(1) The EUT is deemed to comply to the standard requirements without test, as stated in the clause A.2 of the EN61000-3-3.

(2) Lighting equipment, with the exception of emergency lighting luminaires in which the light souce is mains frequency or battery-operated and which does not contain any active electronic component, is deemed to fulfil the immunity requirements without testing as stated in the clause 6.2 of the EN61547.

3 EQUIPMENT UNDER TEST

3.1 Power supply system utilised

Power supply voltage:	☒	230V/50 Hz / 1ϕ	☐	115V/60Hz / 1ϕ
	☐	400V/50 Hz 3PE	☐	400V/50 Hz 3NPE
	☐	12 VDC	☐	24 VDC

3.2 EuT operation modes

Mode	Description
1	Normal working condition, with the light switched on (PHILIPS MasterColour CDM-T 150W/830)
2	

3.3 EuT configuration modes

Emission: the EuT was configured to measure its highest possible radiation level. The test modes selected are according to EuT instruction manual.

Immunity: the EuT was configured to have its highest possible susceptibility against tested phenomena. The test modes selected are according to EuT instruction manual.

Mode	Description
1	The EUT has been tested supplied by 230V 50Hz
2	
3	
4	

3.4 Input/Output Ports

Port	Name	Type*	Cable Max. >3m	Cable Shielded	Description
0	Enclosure	N/E	—	—	—
1	Mains	AC	☐	☐	Three wires cable
2			☐	☐	
3			☐	☐	
4			☐	☐	
5			☐	☐	
6			☐	☐	
7			☐	☐	

*Note:

AC = AC Power Port DC = DC Power Port N/E = Non-Electrical

I/O = Signal/Control Input or Output Port TP = Telecommunication Ports

3.5 Equipment Used During Test

Use*	Product Type	Manufacturer	Model	Comments

Note: * Use

EUT - Equipment Under Test

AE - Auxiliary/Associated Equipment (Not Subjected to Test)

SIM - Simulator (Not Subjected to Test)

3.6 Performance level

Performance criterion A
During the test, no change of the luminous intensity shall be observed and the regulating control, if any, shall operate during the test as intended.

Performance criterion B
During the test, the luminous intensity may change to any value. After the test, the luminous intensity shall be restored to its initial value within 1 min. Regulating controls need not function during the test, but after the test, the mode of the control shall be the same as before the test provided that during the test no mode changing commands were given.

Performance criterion C
During and after the test, any change of the luminous intensity is allowed and the lamp(s) may be extinguished. After the test, within 30 min, all functions shall return to normal, if necessary by temporary interruption of the mains supply and/or operating the regulating control. Additional requirement for lighting equipment incorporating a starting device: After the test, the lighting equipment is switched off. After half an hour, it is switched on again. The lighting equipment shall start and operate as intended.

4 TEST ENVIRONMENT

4.1 Address of the test laboratory

Nemko Spa
Via del Carroccio, 4
20853 Biassono (MB) - Italy

Tests site/benches are in accordance with applicable standard/s, and have been utilized by Nemko Spa testing engineer(s).

4.2 Environmental conditions

During the measurement the environmental conditions were:

Temperature: 18-33 ℃

Humidity: 30-60 %

Atmospheric pressure: 860-1060 hPa

4.3 Test equipment used for the monitoring of the environmental conditions

Equipment	*Manufacturer*	*Model*	*Serial N°*
Thermohygrometer data loggers	Testo	175-H2	20012380/305
Digital barometer	Haemmi	ZED 150/111.121	900301402/0013

4.4 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report according to CISPR 16-4-2 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-2: Uncertainties, statistics and limit modelling – Uncertainty in EMC measurements“ and is documented in the Nemko Spa Technical Procedure WML1002. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device. Hereafter the best measurement capability for Nemko Spa laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	Antenna distance 1m, 3m, 10m (30÷1000) MHz	± 5.0 dB	(1)
	Antenna distance 1m, 3m, 10m (1÷18) GHz	± 5.5 dB	(1)
Conducted Emission	9 kHz ÷ 30 MHz	± 3.0 dB	(1)
Clicks	9 kHz ÷ 30 MHz	± 3.0 dB	(1)
Radiated Power Emission	(30÷300) MHz	± 3.5 dB	(1)
Harmonic Current Emission	50 Hz ÷ 2 kHz	2%	(1)
Voltage Fluctuation Emission	--	2%	(1)
Radiated Immunity	20 MHz ÷ 3 GHz	(0.0 ÷ 6.0) dB	(1)
Conducted RF Immunity	9 kHz ÷ 230 MHz	± 2.0 dB	(1)
ESD Immunity	Amplitude	10%	(1)
Burst Immunity	Amplitude Duration	10% 30%	(1)
Surge Immunity	Amplitude Front Time Half Value	10% 20% or 30% 20% or 30%	(1)
Dips Immunity	Amplitude Duration	5% 5%	(1)
Magnetic Field Immunity	50 Hz	± 2.0dB	(1)
Damped Magnetic Field Immunity	100 kHz, 1 MHz	± 3 dB ampl. ± 10% freq.	(1)
Oscillatory Wave Immunity	Amplitude - 100 kHz, 1 MHz Front Time - 100 kHz, 1 MHz Oscillation frequency - 100 kHz, 1 MHz	10% 20% 10%	(1)
Low Frequency Immunity	15 Hz ÷ 150 kHz	± 2.0 dB	(1)

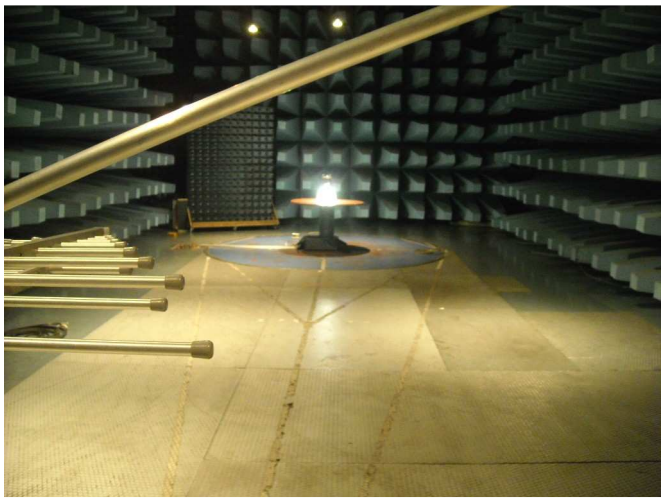
NOTES:

(1) The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2$ which has been derived from the assumed normal probability distribution with infinite degrees of freedom and for a coverage probability of 95 %.

5 TEST CONDITIONS AND RESULTS

5.1 Radiated disturbance in the frequency range 30 MHz to 300 MHz

5.1.1 Photo documentation of the test set-up



5.1.2 Test method

Measurements were made on a semi anechoic chamber. Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 10 meters with the receiving antenna located at a fixed height (from 1 to 4 meter) in both horizontal and vertical polarities. Final measurements (quasi-peak) were then performed by rotating the EUT 360° and adjusting the receiving antenna he ight from 1 to 4 meters. All frequencies were investigated in both horizontal and vertical antenna polarity, where applicable.

5.1.3 Limits

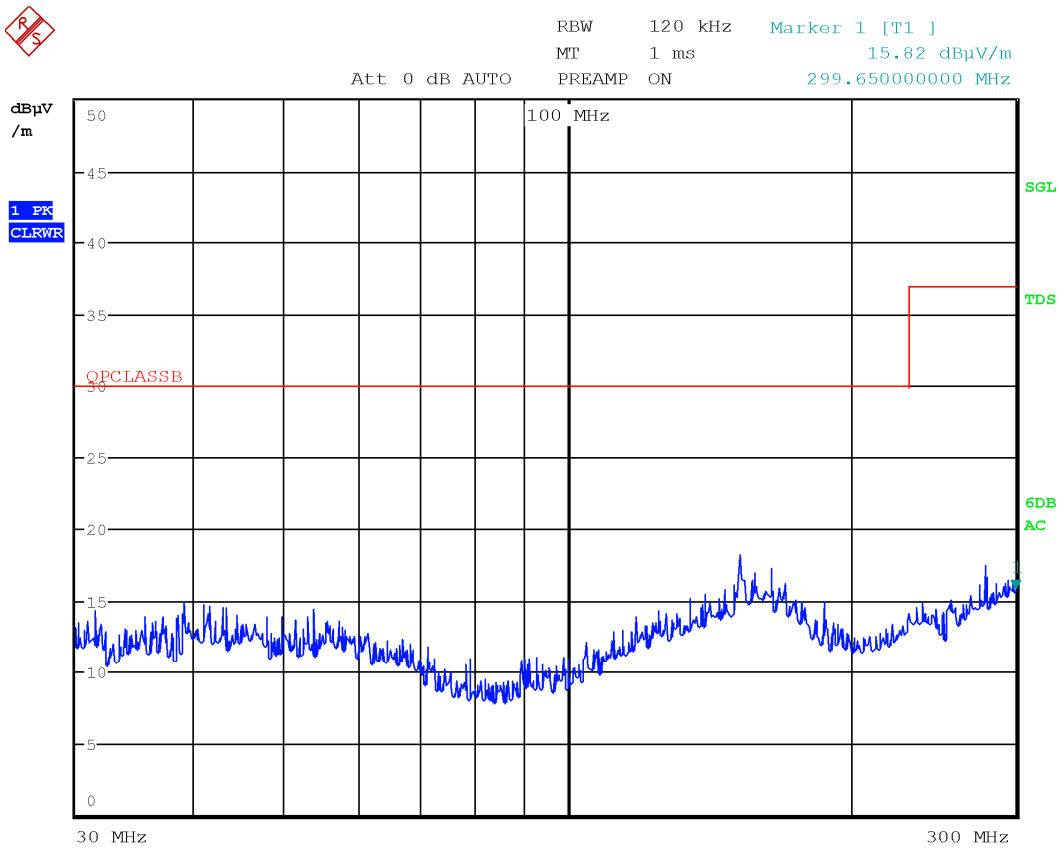
Frequency (MHz)	Limit (dBµV/m) - Quasi-Peak
30 TO 230	30
230 TO 300	37

5.1.4 Test result

Verdict:	☒ P ☐ F ☐ N
Frequency range:	30MHz - 300MHz
Kind of test site:	Semi anechoic chamber
Measurement distance:	10 m
Remarks:	

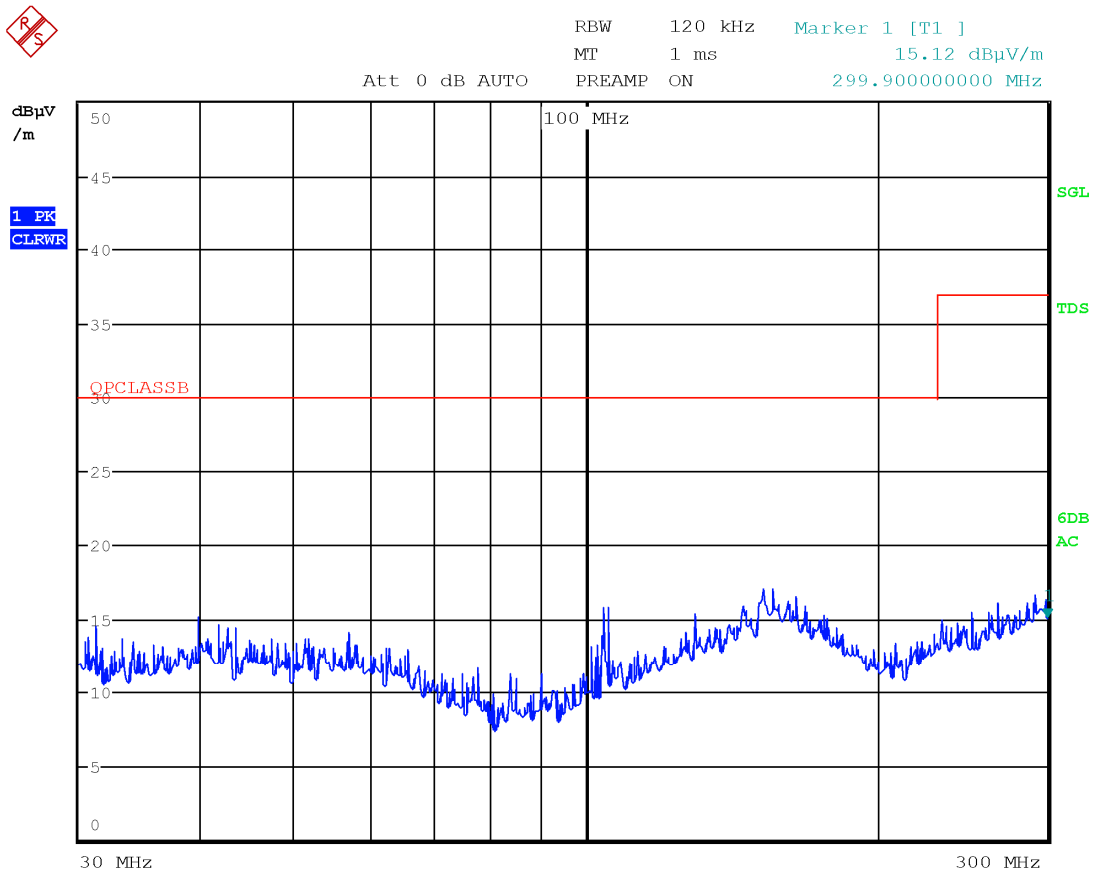
5.1.5 Test protocol

Antenna polarization: Horizontal Verdict: Pass
Operation mode: 1
Configuration mode: 1
Remarks: -



Antenna polarization: Vertical
Operation mode: 1
Configuration mode: 1
Remarks: -

Verdict: Pass



5.1.6 Test equipment used

Equipment	*Manufacturer*	*Model*	*Serial No.*
Trilog Broad Band Antenna 25 MHz÷2 GHz	Schwarzbeck	VULB 9168	VULB 9168-242
EMI receiver 20 Hz ÷ 8 GHz	R&S	ESU8	100202
Turn-table	R&S	HCT	835 803/03
Antenna mast	R&S	HCM	836 529/05
Controller	R&S	HCC	836 620/7
Semi-anechoic chamber	Nemko	10m semi-anechoic chamber	530
Shielded room	Siemens	10m control room	1947

5.2 Radiated disturbance in the frequency range 9 kHz to 30 MHz

5.2.1 Photo documentation of the test set-up

5.2.2 Test method

The quasi-peak limits of the magnetic component of the radiated disturbance field strength in the frequency range 9 kHz to 30 MHz, measured as a current in 2 m, 3 m or 4 m loop antennas around the lighting equipment.

5.2.3 Limits

Frequency (MHz)	Limit (dBµA) - Quasi-Peak		
	2 m	3 m	4 m
0.009 TO 0.07	88	81	75
0.07 TO 0.15	88 TO 58*	81 TO 51*	75 TO 45*
0.15 TO 3.0	58 TO 22*	51 TO 15*	45 TO 9*
3.0 TO 30	22	15 TO 16**	9 TO 12**

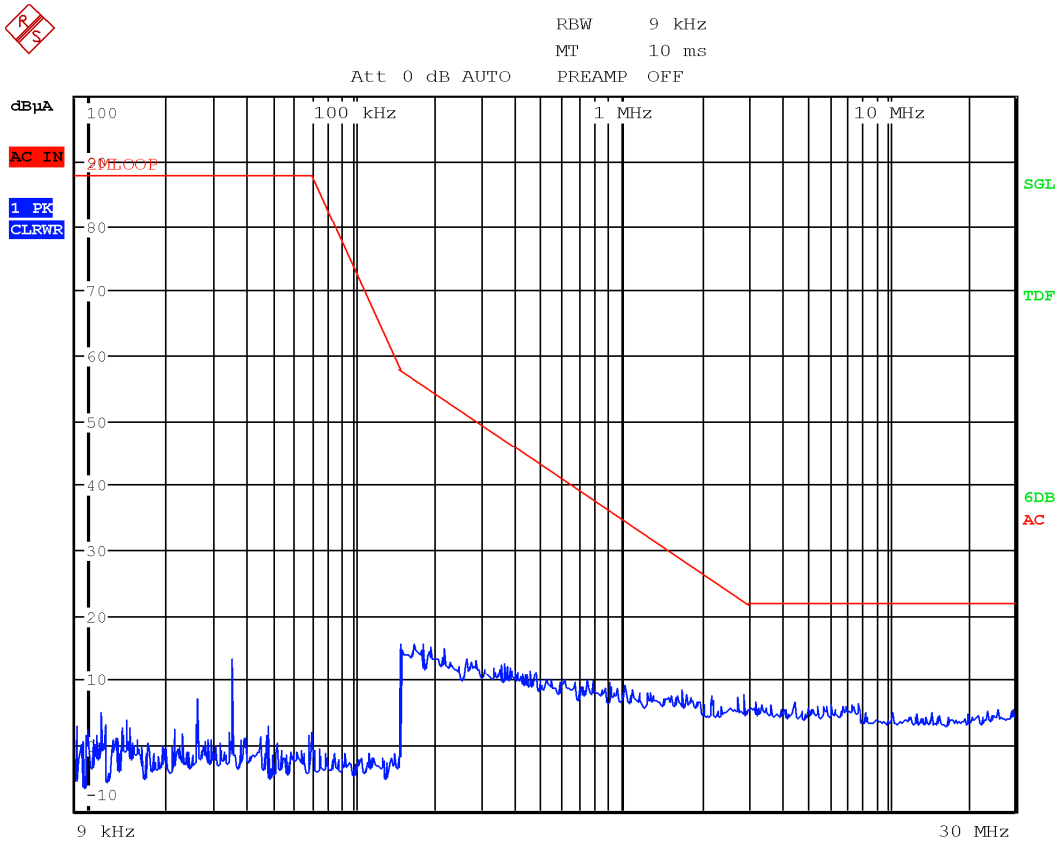
*The limits decrease linearly with the logarithm of the frequency
**The limits increase linearly with the logarithm of the frequency

5.2.4 Test result

Verdict:	☒ P ☐ F ☐ N
Frequency range:	0.009MHz - 30MHz
Kind of test site:	Semi anechoic chamber
Remarks:	

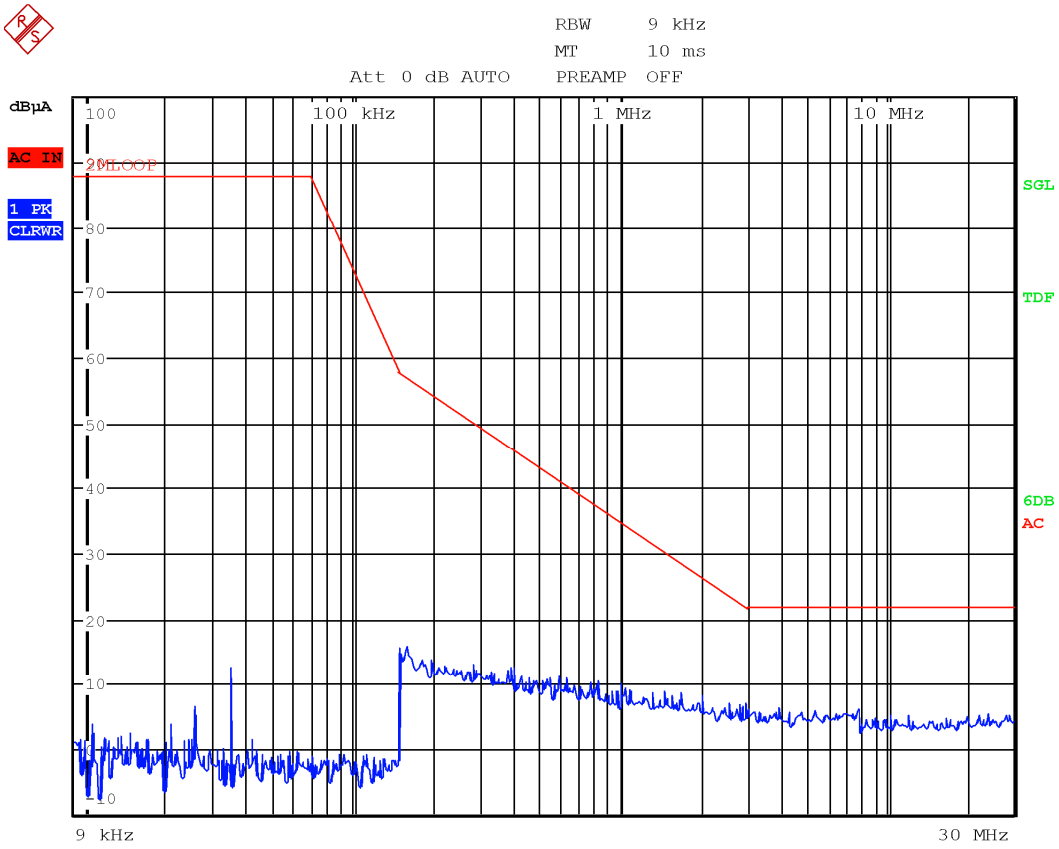
5.2.5 Test protocol

Antenna polarization: X axis Verdict: Pass
Operation mode: 1
Configuration mode: 1
Remarks: -



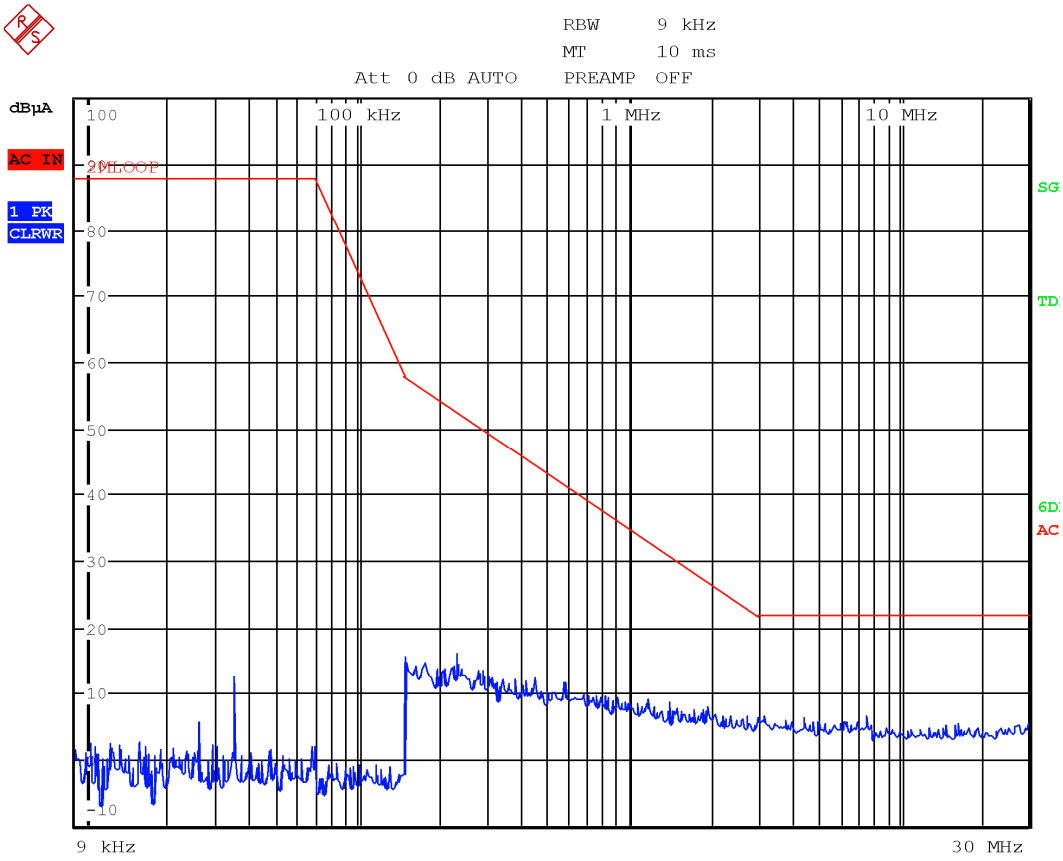
Antenna polarization: Y axis
Operation mode: 1
Configuration mode: 1
Remarks: -

Verdict: Pass



Antenna polarization: Z axis
Operation mode: 1
Configuration mode: 1
Remarks: -

Verdict: Pass



5.2.6 Test equipment used

Equipment	*Manufacturer*	*Model*	*Serial No.*
Triple loop antenna (2m)	R&S	HM020	836 950/006
EMI receiver 9 kHz ÷ 3 GHz	R&S	ESCI	100888
Semi-anechoic chamber	Nemko	10m semi-anechoic chamber	530
Shielded room	Siemens	10m control room	1947

5.3 Terminal disturbance voltages in the frequency range 9 kHz to 30 MHz

5.3.1 Photo documentation of the test set-up

5.3.2 Test method

Measurements were made on a ground plane that extends 1-meter minimum beyond all sides of the system under test. All power was connected to the system through Line Impedance Stabilization Networks (LISN). Conducted voltage measurements on mains lines were made at the output of the LISN. Conducted voltage on load terminals were made by using a 1500 Ω probe. Measurement at control terminals shall be carried out by means of an impedance stabilization network as described in EN 55022. The ISN shall be bounded to ground.

5.3.3 Limits for mains terminal

Frequency (MHz)	Limit (dBµV)	
	Quasi-Peak	Average
0.009 TO 0.05	110	-
0.05 TO 0.15	90 to 80*	-
0.15 TO 0.50	66 to 56*	56 to 46*
0.50 TO 5	56	46
5 TO 30	60	50

*The limits decrease linearly with the logarithm of the frequency

5.3.4 Limits for load terminals

Frequency (MHz)	Limit (dBµV)	
	Quasi-Peak	Average
0.15 TO 0.50	80	70
0.50 TO 30	74	64

5.3.5 Limits for control terminals

Frequency (MHz)	Limit (dBµV)	
	Quasi-Peak	Average
0.15 TO 0.50	84 to 74*	74 to 64*
0.50 TO 30	74	64

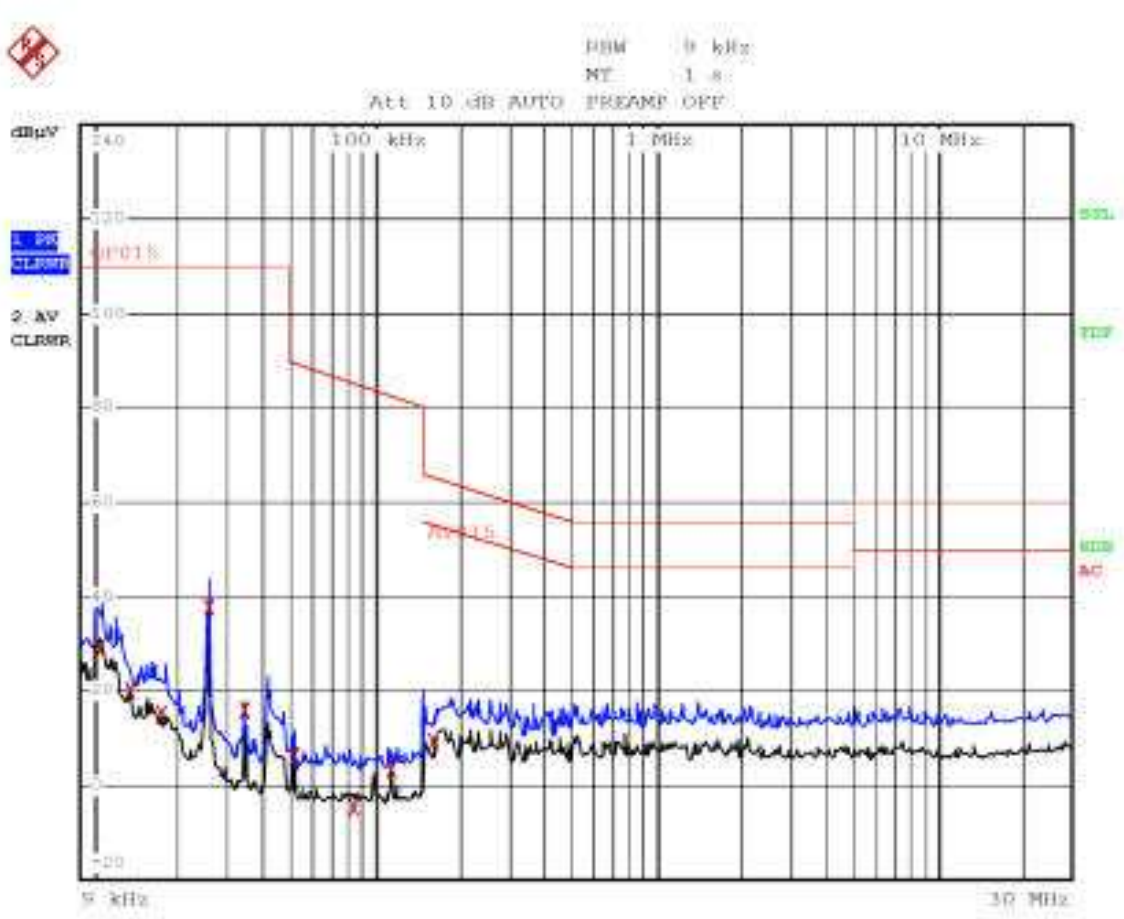
*The limits decrease linearly with the logarithm of the frequency

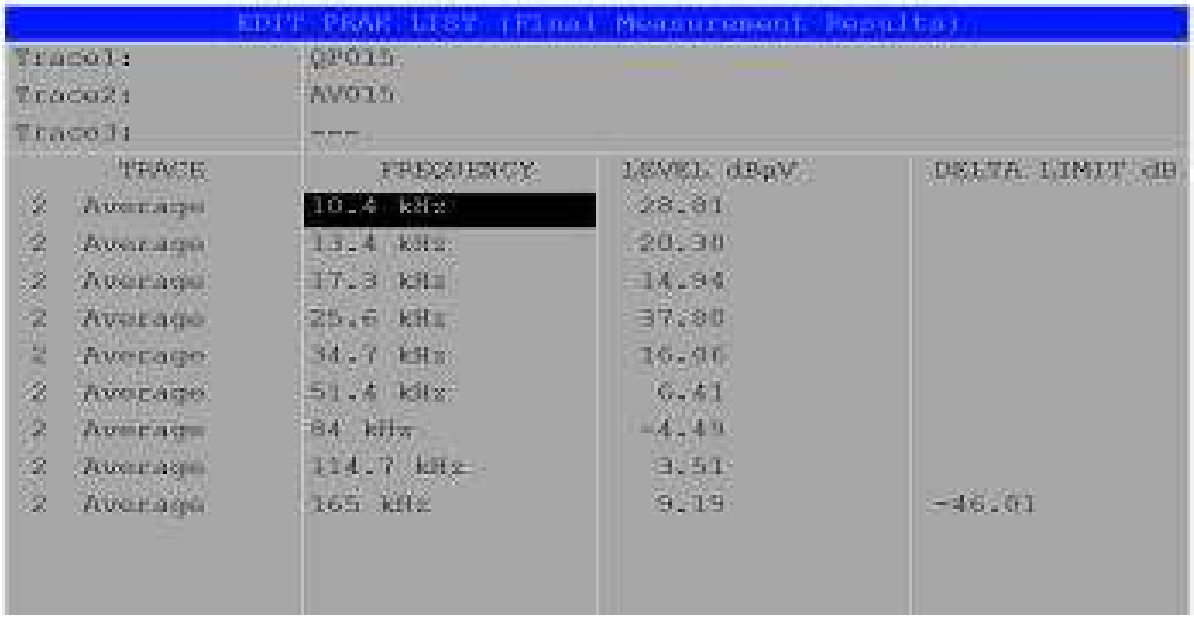
5.3.6 Test result

Verdict for AC power line port:	☒ P ☐ F ☐ N
Verdict for load terminals	☐ P ☐ F ☒ N
Verdict for control terminals	☐ P ☐ F ☒ N
Frequency range:	0.009MHz - 30MHz
Kind of test site:	Shielded room
Remarks:	

5.3.7 Test protocol

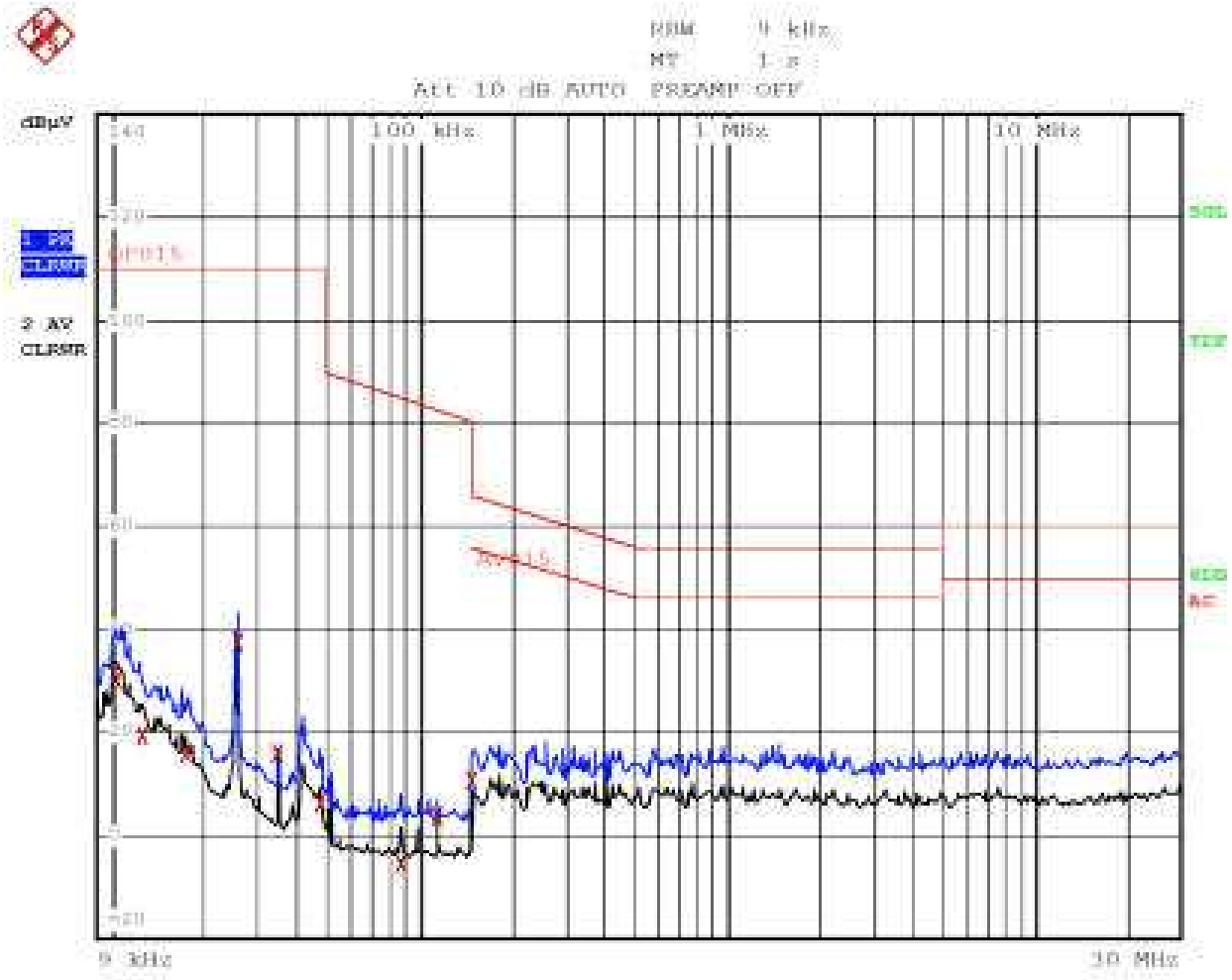
Test point: Phase line Verdict: Pass
Operation mode: 1
Configuration mode: 1
Remarks: -

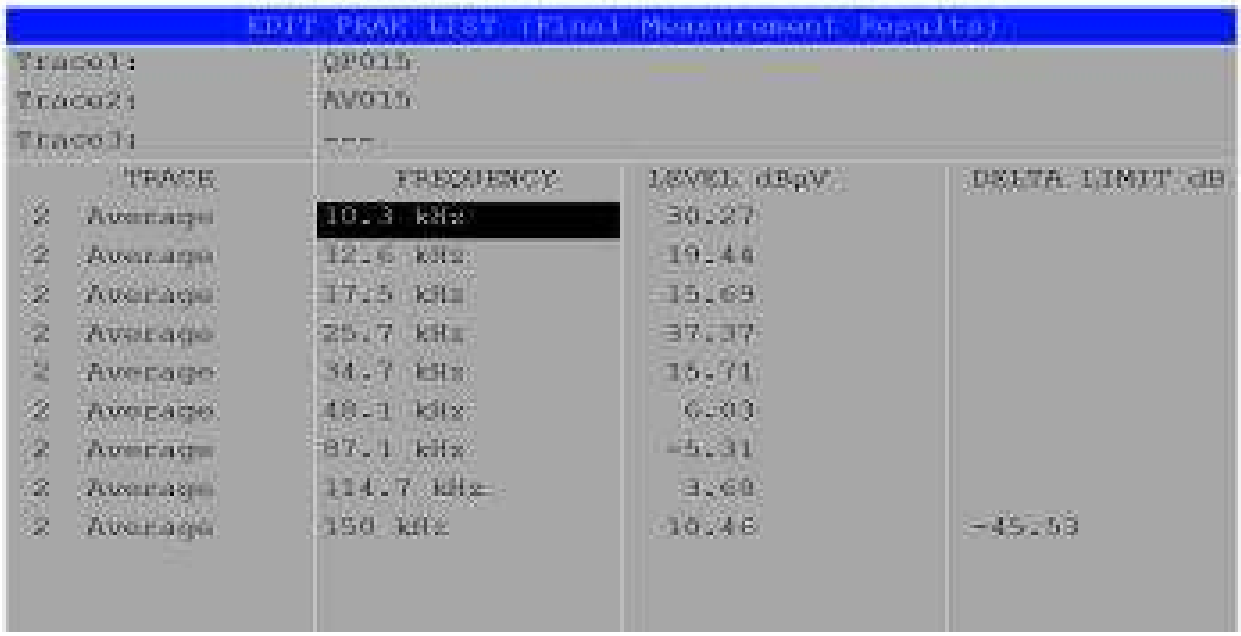




Test point: Neutral line Verdict: Pass

Operation mode: 1
Configuration mode: 1
Remarks: -





5.3.8 Test equipment used

Equipment	*Manufacturer*	*Model*	*Serial N°*
LISN 9 kHz ÷ 30 MHz	R&S	ESH2-Z5	872 460/041
EMI receiver 9 kHz ÷ 3 GHz	R&S	ESCI	100888
Shielded room	Siemens	Conducted emission test room	1862

5.4 Harmonics of current

5.4.1 Photo documentation of the test set-up

5.4.2 Test method according to EN 61000-3-2

This test consists on the measurement of harmonics components of the input current which may be produced by equipment having an input current up to and including 16 A per phase, and intended to be connected to public low-voltage distribution systems. The equipment is tested under specified conditions of operation.

5.4.3 Limits for low voltage AC mains port - Class C equipment

Harmonic order (n)	Maximum permissible harmonic current expressed as a percentage of the input current at the fundamental frequency %
2	2
3	30 λ *
5	10
7	7
9	5
11 ≤ n ≤ 39	3
* λ is the circuit power factor	

5.4.4 Test result

Verdict:	☒ P ☐ F ☐ N
Frequency range:	0 kHz – 2 kHz
Kind of test site:	Laboratory
Class:	C
Remarks:	

5.4.5 Test protocol

Operation mode: 1 Verdict: Pass
Configuration mode: 1
Remarks: - -

Urms = 230.1V Freq = 50.013 Range: 5 A
Irms = 2.241A Ipk = 3.313A cf = 1.478
P = 399.3W S = 515.7VA pf = 0.774
THDi = 14.5 % THDu = 0.10 % Class A

Test - Time : 1min (100 %)

Test completed, Result: PASSED

Order	Freq. [Hz]	Iavg [A]	Irms [A]	Irms% [%]	Irms%L [%]	Imax [A]	Limit [A]	Status	Vrms [V]
1	50	2.2483	2.2165	98.897		2.3233			230.06
2	100	0.0000	0.0061	0.2723	0.5651	0.0073	1.0800		0.1227
3	150	0.3138	0.3119	13.916	13.560	0.3192	2.3000		0.0000
4	200	0.0000	0.0009	0.0408	0.2129	0.0021	0.4300		0.0000
5	250	0.0561	0.0528	2.3557	4.6312	0.0653	1.1400		0.0000
6	300	0.0000	0.0027	0.1225	0.9155	0.0034	0.3000		0.0000
7	350	0.0715	0.0702	3.1318	9.1156	0.0739	0.7700		0.0000
8	400	0.0000	0.0000	0.0000	0.0000	0.0003	0.2300		0.0000
9	450	0.0000	0.0128	0.5719	3.2043	0.0128	0.4000		0.0000
10	500	0.0000	0.0009	0.0408	0.4976	0.0009	0.1840		0.0000
11	550	0.0199	0.0201	0.8987	6.1035	0.0204	0.3300		0.0000
12	600	0.0000	0.0009	0.0408	0.5971	0.0012	0.1533		0.0000
13	650	0.0000	0.0104	0.4630	4.9409	0.0107	0.2100		0.0000
14	700	0.0000	0.0000	0.0000	0.0000	0.0003	0.1314		0.0000
15	750	0.0000	0.0064	0.2859	4.2725	0.0064	0.1500		0.0000
16	800	0.0000	0.0009	0.0408	0.7961	0.0009	0.1150		0.0000
17	850	0.0000	0.0055	0.2451	4.1504	0.0058	0.1324		0.0000
18	900	0.0000	0.0003	0.0136	0.2985	0.0006	0.1022		0.0000
19	950	0.0000	0.0027	0.1225	2.3193	0.0027	0.1184		0.0000
20	1000	0.0000	0.0006	0.0272	0.6634	0.0006	0.0920		0.0000
21	1050	0.0000	0.0027	0.1225	2.5635	0.0031	0.1071		0.0000
22	1100	0.0000	0.0009	0.0408	1.0947	0.0015	0.0836		0.0000
23	1150	0.0000	0.0018	0.0817	1.8717	0.0018	0.0978		0.0000
24	1200	0.0000	0.0009	0.0408	1.1942	0.0009	0.0767		0.0000
25	1250	0.0000	0.0012	0.0545	1.3563	0.0015	0.0900		0.0000
26	1300	0.0000	0.0003	0.0136	0.4312	0.0006	0.0708		0.0000
27	1350	0.0000	0.0006	0.0272	0.7324	0.0009	0.0833		0.0000
28	1400	0.0000	0.0009	0.0408	1.3932	0.0012	0.0657		0.0000
29	1450	0.0000	0.0009	0.0408	1.1800	0.0015	0.0776		0.0000
30	1500	0.0000	0.0006	0.0272	0.9951	0.0009	0.0613		0.0000
31	1550	0.0000	0.0012	0.0545	1.6819	0.0012	0.0726		0.0000
32	1600	0.0000	0.0003	0.0136	0.5307	0.0006	0.0575		0.0000
33	1650	0.0000	0.0009	0.0408	1.3428	0.0018	0.0682		0.0000
34	1700	0.0000	0.0009	0.0408	1.6917	0.0009	0.0541		0.0000
35	1750	0.0000	0.0006	0.0272	0.9494	0.0006	0.0643		0.0000
36	1800	0.0000	0.0009	0.0408	1.7912	0.0012	0.0511		0.0000
37	1850	0.0000	0.0009	0.0408	1.5055	0.0015	0.0608		0.0000
38	1900	0.0000	0.0015	0.0681	3.1513	0.0018	0.0484		0.0000
39	1950	0.0000	0.0012	0.0545	2.1159	0.0015	0.0577		0.0000
40	2000	0.0000	0.0015	0.0681	3.3171	0.0021	0.0460		0.0000

5.5.6 Test equipment used

Equipment	*Manufacturer*	*Model*	*Serial N°*
Mains analyzer	EMC Partner	Harmonics 1000	016

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