



Center for Testing and European Certification

**LABORATORY FOR TESTING OF MACHINERY,
EQUIPMENT AND DEVICES**
CENTER FOR TESTING AND EUROPEAN CERTIFICATION LTD

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Accredited certificate
№ 101 ЛЛ / 10.05.2010
Valid until: 31.05.2014
of EA BAS, according
EN ISO/IEC 17025

TEST REPORT

№ 2emc-e-13-663 / 18.06.2013

OBJECT TO BE TESTED: Group luminaries – Industrial lighting "Bell reflector" fixtures cat. № 98A 19036SCH
Representative sample from Bell reflector fixture group with cat. №: 98A 22021SCH; 98A 22022SCH; 98A 22023SCH;
98A 22024SCH; 98A 22025SCH; 98A 22026SCH; 98A 22027SCH; 98A 22028SCH; 98A 19029SCH; 98A 19030SCH;
98A 19031SCH; 98A 19032SCH; 98A 19033SCH; 98A 19034SCH; 98A 19035SCH; 98A 19036SCH; 98A 19061SCH
98A 19062SCH; 98A 19063SCH; 98A 19064SCH; 98A 19065SCH; 98A 19066SCH; 98A 19067SCH; 98A 19068SCH;
98A 16069SCH; 98A 16071SCH; 98A 16072SCH; 98A 16073SCH; 98A 16075SCH
*(name of object to be tested, type, model, quantity,
type – portable, fixed, for walling in and other)*

APPLICANT FOR TEST: "ELMARK INDUSTRIES" SC. 2 Dobrudja Blvd. Dobrich, Bulgaria,
Tel.: 058 500 055, e-mail: denkov@elmark.bg
Application № 663 / 08.05.2013
(name of the firm – applicant, address, telephone, number and date of the test application)

STANDART: EN 55015:2006+A1:2007+A2:2009 Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment.
(number and name of the standards)

DATE OF ACCEPTANCE IN THE TEST LABORATORY: 08.05.2013

YEAR OF PRODUCTION : 2013
(identification number)

MANUFACTURER: "ELMARK INDUSTRIES" SC. 2 Dobrudja Blvd. Dobrich, Bulgaria,
Tel.: 058 500 055, e-mail: denkov@elmark.bg
(firm, trade mark, address)

DECLARED TECHNICAL DATA: Rated voltage – 230 V AC
Rated frequency – 50 Hz
Rated power – 400 W
Class I
Dimensions - 750xø570 mm
Degree of protection – IP 65

DATE OF TEST PERFORMANCE: 28.05.2013

LABORATORY CHIEF:
/ T. Hristov /





Emission of Radio disturbance characteristics of electrical lighting and similar equipment

Mains terminal disturbance voltage – 9kHz + 30MHz

EN 55015, cl. 4.3 – Disturbance voltage limits at mains terminals – Table 2a

EN 55015, cl. 5.2.4 – Application of the limits for other luminaires

EN 55015, cl. 6 – Operating conditions for lighting equipment

EN 55015, cl. 6.4 – Ambient temperature: 25 °C; Relative Humidity: 42 %.

EN 55015, cl.8.1 – Measuring arrangement and procedure

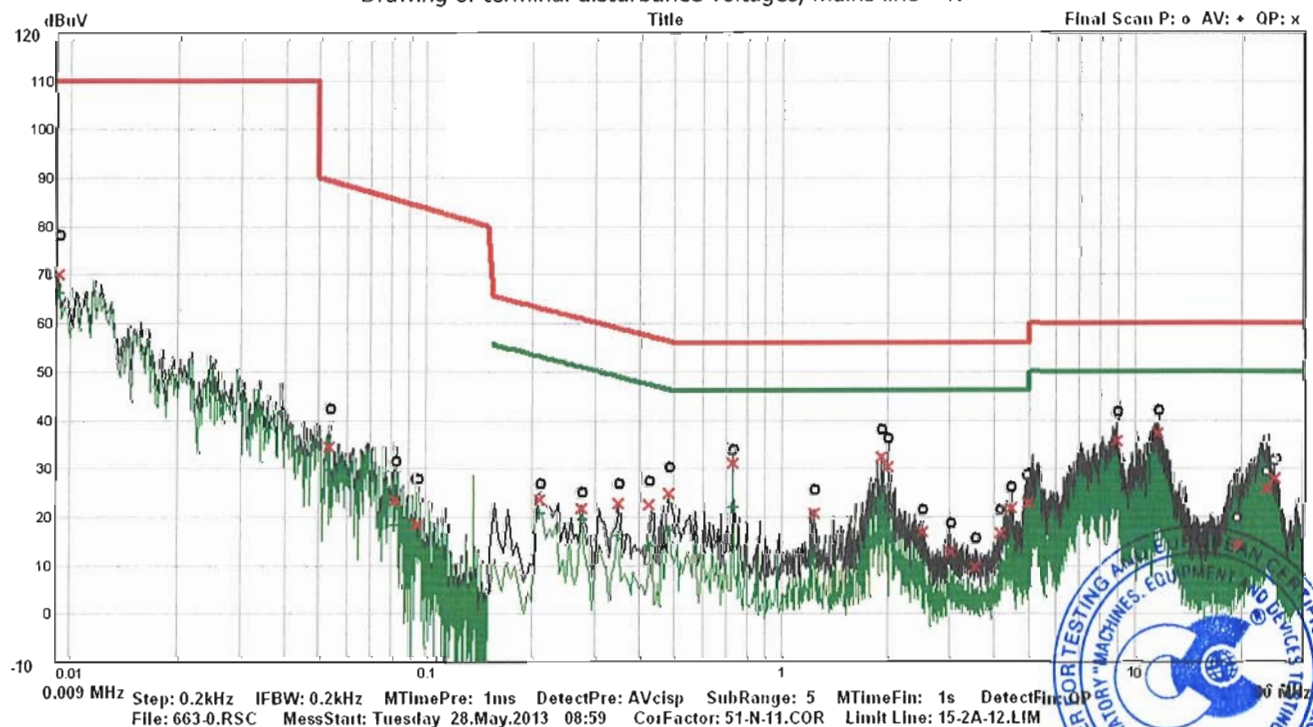
EN 55015, cl.8.2 – Measurement of disturbance voltages, at the mains terminals of indoor and outdoor luminaires – Figure 6a.

The test is performed with MHL and supply voltage: 230 V

RESULTS OF MEASUREMENT :

Frequency	Terminal disturbance voltages, mains line – N					
	Quasi peak - QP			Average - AV		
	Measuring	Margin	Limit	Measuring	Margin	Limit
MHz	dB(μV)	dB(μV)	dB(μV)	dB(μV)	dB(μV)	dB(μV)
0,009	70,14	39,86	110,00	66,15	-	-
0,275	21,90	39,06	60,96	19,40	31,56	50,96
0,350	22,80	36,16	58,96	16,21	32,75	48,96
0,425	22,63	34,72	57,35	13,91	33,44	47,35
0,480	24,97	31,36	56,33	17,10	29,23	46,33
0,730	31,03	24,97	56,00	22,05	23,95	46,00
1,235	20,75	35,25	56,00	11,57	34,43	46,00
1,920	32,46	23,54	56,00	22,68	23,32	46,00
2,010	30,37	25,63	56,00	20,19	25,81	46,00
2,520	17,00	39,00	56,00	10,01	35,99	46,00
4,480	21,68	34,32	56,00	14,23	31,77	46,00
4,960	22,83	33,17	56,00	11,89	34,11	46,00
8,900	35,76	24,24	60,00	27,31	22,69	50,00
11,540	37,42	22,58	60,00	28,81	21,19	50,00
23,630	25,86	34,14	60,00	20,32	29,68	50,00
25,005	28,03	31,97	60,00	21,66	28,34	50,00

Drawing of terminal disturbance voltages, mains line – N



The results showed in present test report concern tested sample only

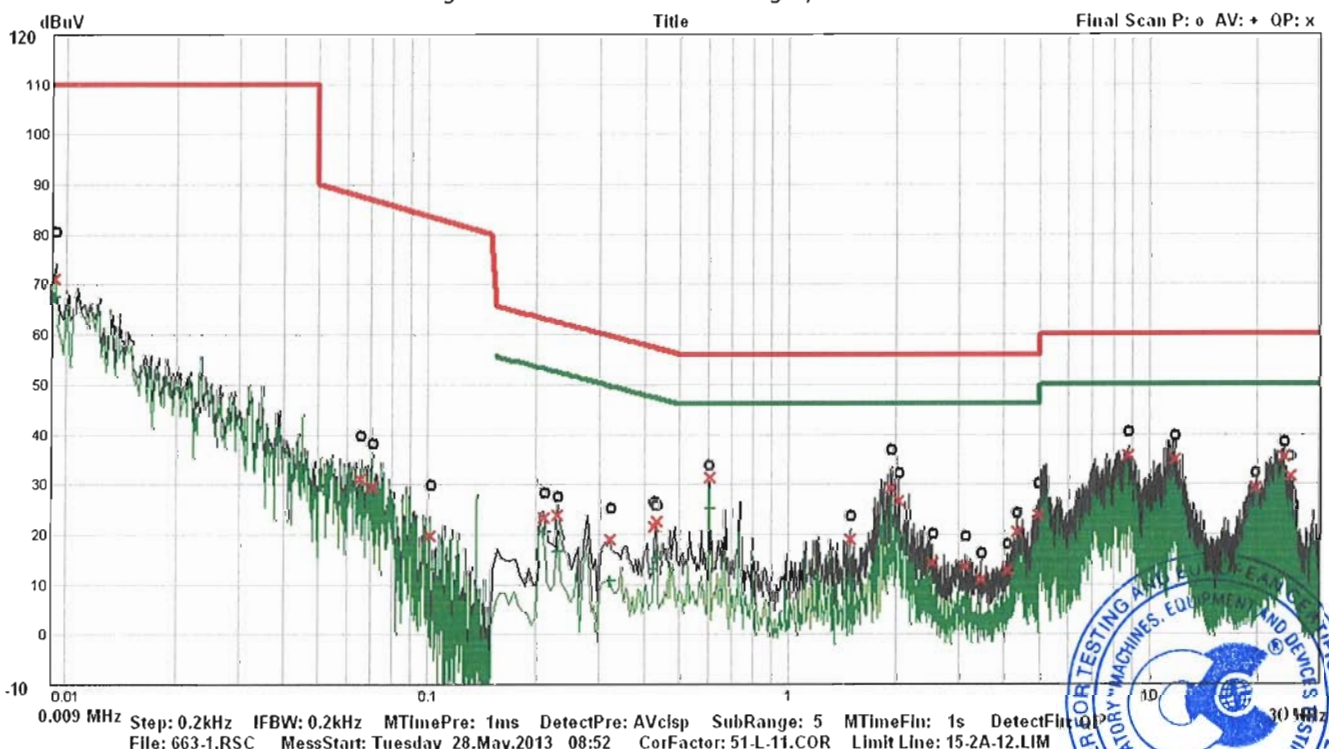
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Frequency	Terminal disturbance voltages, mains line - L					
	Quasi peak - QP			Average - AV		
	Measuring	Margin	Limit	Measuring	Margin	Limit
MHz	dB(μV)	dB(μV)	dB(μV)	dB(μV)	dB(μV)	dB(μV)
0,009	71,10	38,90	110,00	67,63	-	-
0,210	23,36	39,84	63,20	20,59	32,61	53,20
0,230	23,90	38,55	62,45	16,55	35,90	52,45
0,320	18,84	40,86	59,70	10,79	38,91	49,70
0,425	21,46	35,89	57,35	12,95	34,40	47,35
0,430	22,55	34,70	57,25	15,28	31,97	47,25
0,605	31,25	24,75	56,00	25,04	20,96	46,00
1,490	18,83	37,17	56,00	11,04	34,96	46,00
1,930	29,38	26,62	56,00	15,11	30,89	46,00
2,045	26,59	29,41	56,00	19,40	26,60	46,00
2,545	14,36	41,64	56,00	7,13	38,87	46,00
3,140	13,58	42,42	56,00	6,56	39,44	46,00
4,340	20,39	35,61	56,00	13,98	32,02	46,00
4,980	23,91	32,09	56,00	12,49	33,51	46,00
8,725	35,79	24,21	60,00	28,98	21,02	50,00
11,745	35,02	24,98	60,00	26,20	23,80	50,00
19,920	29,20	30,80	60,00	24,26	25,74	50,00
23,905	35,60	24,40	60,00	30,61	19,39	50,00
25,005	31,72	28,28	60,00	25,58	24,42	50,00

Drawing of terminal disturbance voltages, mains line – L



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M.K.



Used technical equipments:

	Appliance	Type	Manufacturer	Identity №	Last calibration date
1.	EMI – receiver 9 kHz ÷ 1000 MHz	SCR 3501	Schaffner Electrotest GmbH, Germany	522	07.07.2011
2.	Line impedance stabilisation networks	NNB 51	TESEQ Switzerland	26458	15.11.2011
3.	Digital multimeter	UNIGOR 390	LEM-Austria	PI 3288	08.07.2011
4.	Termometer-higrometer	177-H1	TESTO Germany	01320300/902	19.04.2012

TEST PERFORMER:

1.

/ T. Hristov /

2.

/ D. Chavalina /

CHIEF LABORATORY :

/ T. Hristov /

