



2360

## EMC Test Report

Pestwest Electronics Limited  
Chameleon Sirius Trap

**EFT28**

EN 61000-3-2 2006, A1, A2

EN 61000-3-3 2008

**Test Date:** 17th-18th February 2015

**Report No:** 02-7925-2-15 Issue 01

***R.N. Electronics Ltd.***

Arnolds Court  
Arnolds Farm Lane  
Mountnessing  
ESSEX  
CM13 1UT

Telephone 01277 352219  
Facsimile 01277 352968

[www.RNelectronics.com](http://www.RNelectronics.com)

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Arnolds Court, Arnolds Farm Lane, Mountnessing, Brentwood Essex, CM13 1UT

## Certificate of Test 7925-2

European Directive 2004/108/EC regulating electromagnetic compatibility of equipment. The unit noted below has been tested against the EMC limits of the harmonised standards listed in accordance with the conformity assessment procedure for apparatus described in Annex II. This is a certificate of test only and should not be confused with a notified body opinion. Other standards may also apply.

Equipment:	Chameleon Sirius Trap
Model Number:	EFT28
Unique Serial Number:	0325690001
Manufacturer:	Pestwest Electronics Limited 113-115 Wakefield Road Ossett West Yorkshire WF5 9AR
Full measurement results are detailed in Report Number:	02-7925-2-15 Issue 01
Test Standards:	EN 61000-3-2:2006, A1, A2

### DEVIATIONS:

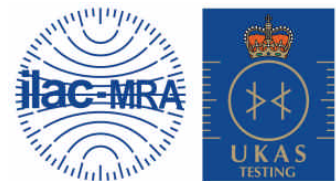
No deviations were applied to the standards listed in section 4.1.

This certificate relates only to the unit tested as identified by a unique serial number and in the condition at the time it was tested. It does not relate to any other similar equipment and performance of the product before or after the test cannot be guaranteed. Whilst every effort is made to assure quality of testing, type tests are not exhaustive and although no non-conformances may be found, this doesn't exclude the possibility of unit not meeting the intentions of the standard or the requirements of the Directive, particularly under different conditions to those during testing. Any compliance statements are made reliant on the modes of operation as instructed to us by the manufacturer based on their specific knowledge of the application and functionality of the unit tested. Statements of compliance, where measurements were made, do not include the measurement uncertainty. The measurement uncertainty, where stated, is the expanded uncertainty based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95%.

Date of Test: 17th-18th February 2015

Test Engineer:

Approved By:  
Technical Director



2360

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## 2 Equipment Under Test (EUT)

### 2.1 Equipment specification

Manufacturer	Pestwest Electronics Limited 113-115 Wakefield Road Ossett West Yorkshire WF5 9AR	
Full Name	Chameleon Sirius Trap	
Model Number	EFT28	
Serial Number	0325690001	
Date Received by RN Electronics Limited	17th February 2015	
Date of Test	17th-18th February 2015	
Purpose of Test	To demonstrate compliance to the harmonised standards of the EMC Directive.	
Date Report Printed	16 March 2015	
Visual Description	The EUT is a ceiling mounted fly killer. The EUT is a metallic square enclosure housing a rocker switch and 2 x 14 Watt UVA Fluorescent tubes.	
Main Function	Electronic Fly Trap.	
Information Specification	Height	190 mm
	Width	582 mm
	Depth	120 mm
	Weight	2.7 kg
	Voltage	220-240 V AC 50/60Hz
	Current	150 mA

### 2.2 Functional Description

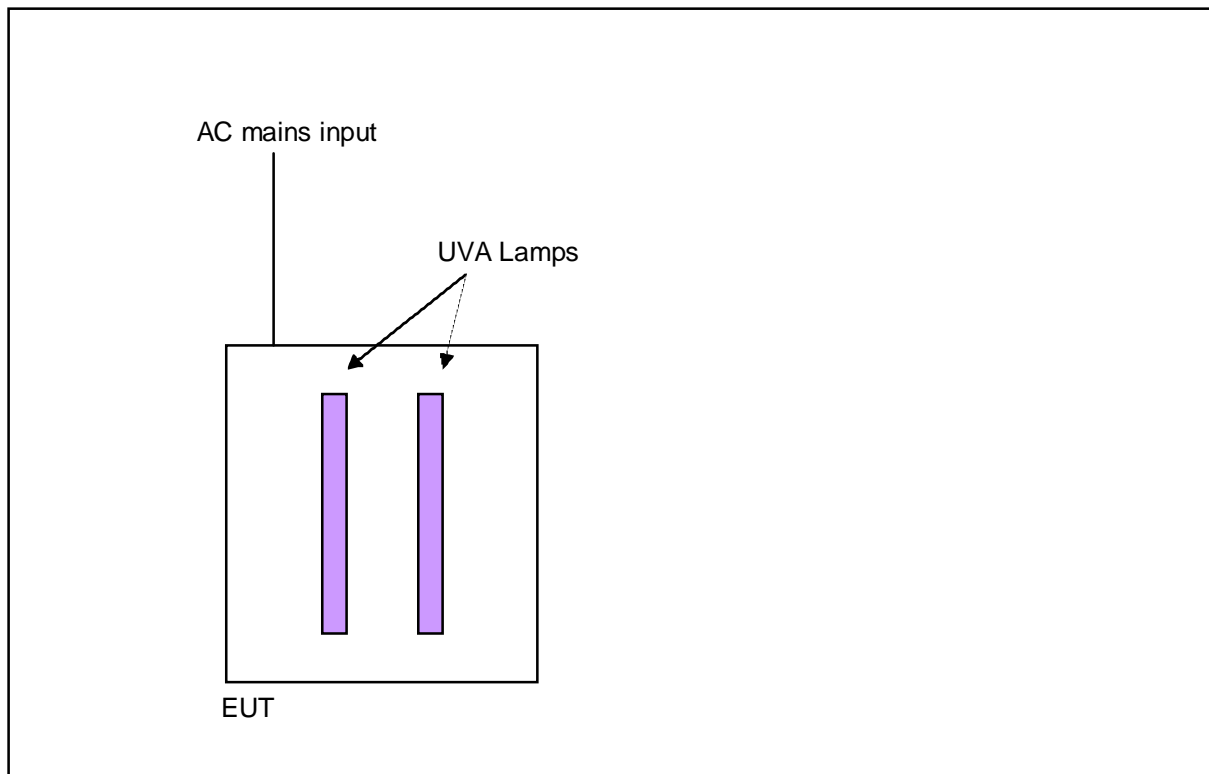
Electronic fly killer incorporating 2X 14W fluorescent UVA (368NM) tubes to attract flying insects.

### 2.3 Modes of operation

Mode Reference	Description
On	The EUT is powered. The electronic ballast has fired and the 2 x UVA tubes are illuminated.

## 2.4 Emissions configuration

Test area



The equipment under test was supplied by 230V AC mains. The electronic ballast was active. The EUTs 2 x14 W Fluorescent UVA tubes were illuminated.

### 2.4.1 Harmonic Current Emissions Voltage changes, Voltage fluctuations and flicker

Port Name	Cable Type	Connected
Mains	3 Core	Yes

### 3 Summary of test results

The EUT was tested to the following standards:

**EN 61000-3-2: 2006, A1, A2**  
**EN 61000-3-3: 2008**

Any compliance statements are made reliant on the modes of operation and the failure criteria as instructed to us by the Manufacturer based on their specific knowledge of the application and functionality of the equipment tested. Whilst every effort is made to assure quality of testing, type tests are not exhaustive and although no non-conformances may be found, this doesn't exclude the possibility of equipment not meeting the intentions of the standard or the essential requirements of the directive, particularly under different conditions to those during testing. Statements of compliance, where measurements were made, do not include the measurement uncertainty.

Title	Reference Emissions	Results
1. Harmonic Current Emissions	EN 61000-3-2	Class A CONFORMS <sup>1</sup>
2. Voltage changes, Voltage fluctuations and flicker	EN 61000-3-3	NOT APPLICABLE <sup>2</sup>

1. Equipment with a rated power of 75W or less conforms to EN 61000-3-2 without need to test.
2. Tests need not be made on equipment which is unlikely to produce significant voltage fluctuations or flicker.

## 4 Specifications

The tests were performed and operated in accordance with the RN Electronics procedures and the basic standards listed below.

### 4.1 Relevant standards

Reference	Standard Number	Year	Description
4.1.1	EN 61000-3-2 AMD 1 AMD 2	2006 2009 2009	Electromagnetic compatibility (EMC) Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)
4.1.2	RESERVED	-	-
4.1.3	EN 61000-4-7 AMD 1	2002 2009	Electromagnetic compatibility (EMC) - Part 4-7: Testing and measurement techniques - General guide on harmonics and interharmonics measurements and instrumentation, for power supply systems and equipment connected thereto

### 4.2 Deviations

No deviations were applied to the standards listed in section 4.1.

## 5 Tests, methods and results

### 5.1 Harmonic Current Emissions

#### 5.1.1 Test Methods

Test Requirements : EN 61000-3-2, Reference 4.1.1

Test Method : EN 61000-3-2, Reference 4.1.1

Calibration Method : EN 61000-4-7, Reference 4.1.3

#### 5.1.2 Configuration of EUT

The EUT was placed on a wooden bench. The manufacturers presented AC mains lead was connected to a low distortion source at 230V 50Hz.

The EUT was operated in **On** mode, which was the only operational mode available.

The manufacturer rated the equipment power at 35 Watts.

Details of the peripheral and ancillary equipment connected for this test is listed in section 8.

#### 5.1.3 Test Procedure

The EUT's power was measured.

No further tests were deemed to be necessary.

Tests were performed in Test Site F.

#### 5.1.4 Test Equipment Used

TMS937, TMS938

See Section 7 for more details

#### 5.1.5 Test Results

Temperature of test environment: 20°C

Relative humidity of test environment: 34%

The EUT's measured power is 32 Watts and therefore **CONFORMS** to this test.

The uncertainty gives a 95% confidence interval in which the emissions from the EUT fall.

Expanded uncertainty (K=2) is as follows:

0kHz to 2kHz  $\pm 3.5\%$ .

This excludes repeatability of the EUT itself which was checked under the same test conditions to be less than 5%.



## 5.2 Voltage changes, Voltage fluctuations and flicker

### 5.2.1 Test Methods

Test Requirements : EN 61000-3-3, Reference 4.1.2

Test Method : EN 61000-3-3, Reference 4.1.2

### 5.2.2 Configuration of EUT

The EUT was placed on a wooden bench. The manufacturer's presented AC mains lead was connected to the test equipment.

The Supply voltage was set to 230V. The EUT was tested in **On** mode.

Details of the peripheral and ancillary equipment connected for this test is listed in section 8.

### 5.2.3 Test Procedure

The maximum r.m.s. input current (including inrush current) and the steady state variations in supply current were evaluated.

No further tests were deemed to be necessary.

Tests were performed in Test Site F.

### 5.2.4 Test Equipment Used

TMS937, TMS938

See Section 7 for more details

### 5.2.5 Test Results

Temperature of test environment: 20°C  
Relative humidity of test environment: 43%  
Pressure of test environment: 100 kPa

Test	Dmax	Pst	Plt	Inrush
Result	0.20%	N/A	N/A	2.251A
Limit	4.00%	1.00	0.65	>20A

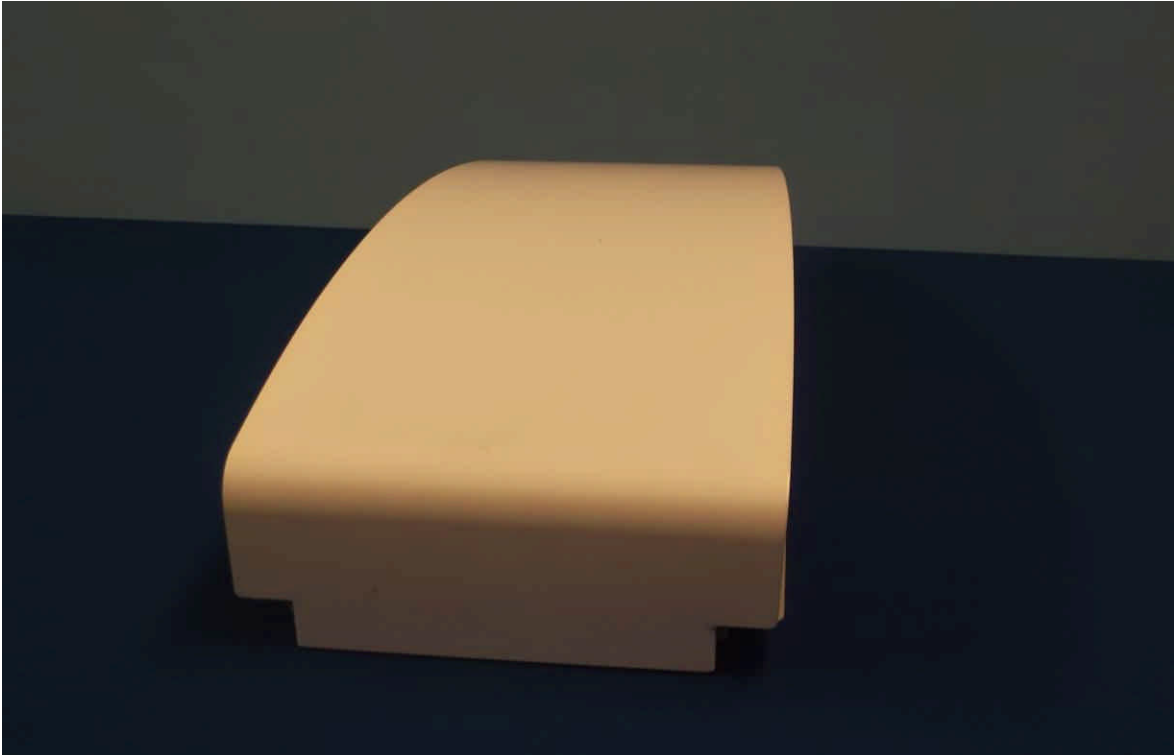
The EUT is **NOT APPLICABLE** to this test as its Illuminating Current is 145mA and therefore it does not change by greater than 1.5A. The EUT's Inrush current is less than 20 Amps therefore it is unlikely to cause any significant voltage fluctuations or flicker.

The uncertainty gives a 95% confidence interval in which the emissions from the EUT fall. Expanded uncertainty (K=2) is as follows:

0kHz to 2kHz  $\pm$  4.13%

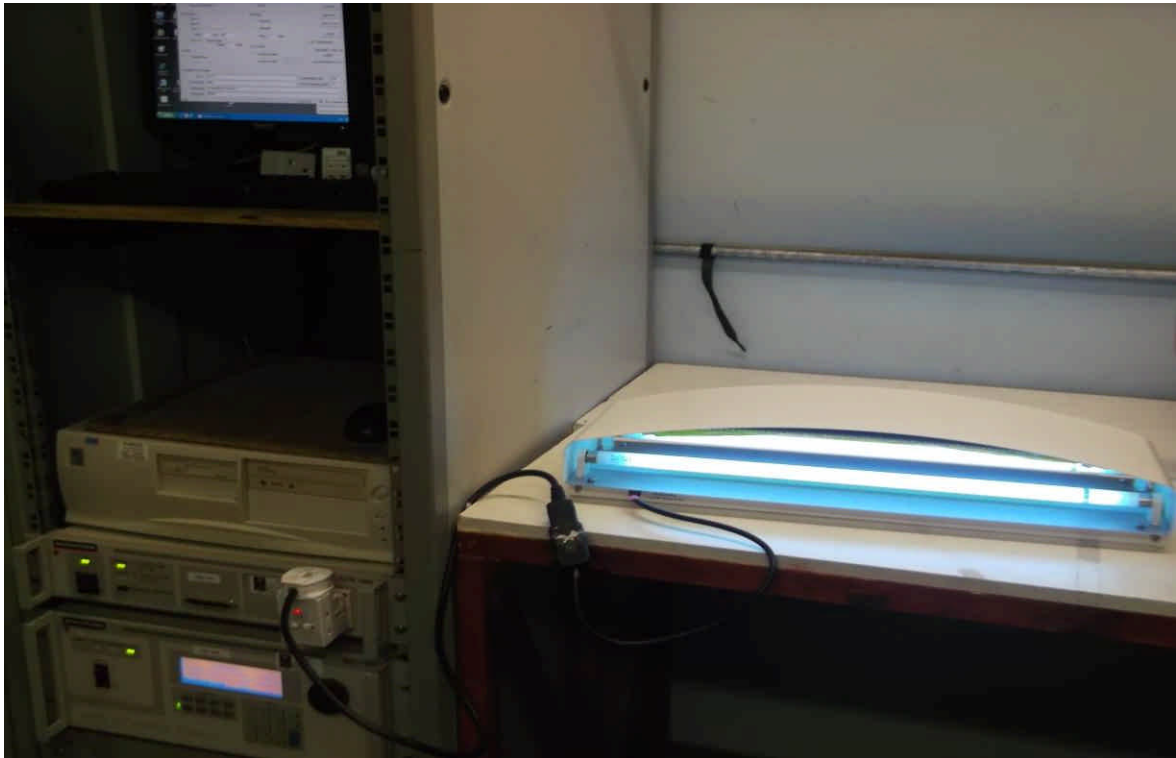
## 6 Photographs

### 6.1 Identifying photograph of the EUT



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## 6.2 Harmonic Current Emissions and Voltage changes, Voltage fluctuations and flicker



## 7 Test equipment calibration list

The following is a list of the test equipment used by **R.N. Electronics Ltd.** to test the unit detailed within this report. In line with our procedures, the equipment was within calibration for the period during which testing was carried out.

RN No.	Model	Description	Manufacturer
TMS937	CCN1000	Mains Flicker	Schaffner
TMS938	NSG1007	3kV AC Power Source	Schaffner

## **8 Auxiliary and peripheral equipment**

### **8.1 Customer supplied equipment**

No customer supplied equipment was used

### **8.2 RN Electronics supplied equipment**

<b>RN No.</b>	<b>Model No.</b>	<b>Description</b>	<b>Manufacturer</b>	<b>Serial No</b>
N470	LUX	Auto-photometer	Everett-Edgcumbe	633482

## 9 Condition of the equipment tested.

### 9.1 Modifications before test



The White bar signifies the **original** location of the output cables from the ballast that were cable tied to the input cables.

The picture shows the location of where the cables need to be to pass Conducted Emissions.

### 9.2 Modifications during test

There were no modifications made by R.N. Electronics Ltd during testing.

## 10 Description of Test Sites

Site A	Radio / Calibration Laboratory and anechoic chamber
Site B	Semi-anechoic chamber
Site B1	Control Room for Site B
Site C	Transient Laboratory
Site D	Screened Room (Conducted Immunity)
Site E	Screened Room (Control Room for Site D)
Site F	Screened Room (Conducted Emissions) VCCI Registration No. C-2823
Site K	Screened Room (Control Room for Site M)
Site M	3m Semi-anechoic chamber (indoor OATS) FCC Registration No. 293246
Site Q	Fully-anechoic chamber
Site OATS	3m and 10m Open Area Test Site FCC Registration No. 293246 IC Registration No. 5612A-1 VCCI Registration No. R-2580
Site R	Screened Room (Conducted Immunity)
Site S	Safety Laboratory
Site T	Transient Laboratory