

SUMMARY AND NEW REQUIREMENTS FOR EN62115 – THE UPCOMING ELECTRIC TOY SAFETY TESTING

1) In EN62115, most of the reference requirements are redirected to IEC (International Electrotechnical Commission) requirement instead of EN requirement.

Example : IEC 61558 & EN 61558 are the requirements for transformer. Basically, they are the same things.

2) Clause 5.12 EN50088 says the tests are carried out under the unfavourable voltage. IEC62115 says tests are carried out under both unfavourable voltage & frequency for ac supply toys.
(Note: The frequency for those EU countries is 50Hz. If, however, the transformer is able to run at both 50Hz & 60Hz, 60Hz would be more unfavourable in some occasions

(Example : If the transformer is labelled with “ 110-230V 50-60Hz input”, we will conduct the test based on 230V 60 Hz)

3) Tension test – : EN50088 is 90N tensile force for the areas having diameter great than 6mm.

EN62115:

-It says the tension force being 70N independent of the dimensions and applicable independent of age group.

-Non-detached parts that prevent contact with moving parts or hot surfaces area are stilled subjected to the 90N tensile force (for the areas having diameter great than 6mm)

4) If replaceable button cell is being used in the toy, torque test on battery cover screw is always applicable in EN62115. (remark: The minium diameter of screw required for torgue test is 2.8mm)

5) Marking -- Wording "a.c" & "d.c" are no longer listed in EN62115 and only graphical symbol is accepted for the nature of supply.

(e.g.  & )

6) Marking -- Wording " Only batteries of the same or equivalent type as recommended are to be used " has been deleted

7) Power input - EN50088 says the rated power is NOT required for those items having power below 25W.

- For EN62115, rated power input is always required for transformer toy.

8) Steel pin -- 0.5mm steel wire test remained the same. However, in EN62115, a new 1 mm rod has also been used to insert through holes in the enclosure up to a depth of 100mm. (Some extract from standard FYR " and only inserted through holes where one pole can be seen from the outside")

9) Heating -- A new temperature limit --- "glass or porcelain" specified for other accessible parts has been added in EN62115 -- 50 °C temp. rise

10) Insulation test -- High pot test is carried out at 250V 50Hz according to EN50088.

For EN62115 , High pot test is carried out at 250V 50Hz ****OR**** 60Hz

11) Accessibility of battery -- For toys intended for ages under 3 years, a new test procedure has been added in EN62115 to evaluate the accessibility of battery. A cylindrical metallic mass of 1 kg having a diameter of 80mm, is dropped from a height of 100mm. (It is same as the equipment being used in impact test of EN71 test)

12) Clearances and creepage distance - For EN50088, the clearances and creepage distance are shown as following:

- 0.2mm for P.C.B.
- 1mm for positive & negative terminals.

For EN62115:

The requirement is rather simple and the table in EN50088 is no longer exist. It contains only one sentence in this clause " Clearances and creepage distances of functional insulation shall not be less than 0.5mm."

Thus, the distance between different polarity on the PCB is 0.5mm.

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