

CTL DECISION SHEET

Standard: CISPR 14-1 edition 5 (2005-11)	Sub clause: 5.2	Decision Sheet: DSH-645 Page: 1 / 2
Subject: Test set-up for measurement of disturbances on lighting chains	Key words: <ul style="list-style-type: none"> - Lighting chain - clicks - bundle - coil 	Approved by the 45th CTL Plenary meeting in Prague
<p>Question:</p> <p>Standard CISPR 14-1 is applicable for the measurement of clicks produced by a lighting chain equipped with an electronic control box that changes the cadence of the light.</p> <p>The standard does not give any information concerning the test set-up for this kind of equipment. It does not give the layout of the lighting parts such as winding up, folded back and forth parallel to the lead so as to form a horizontal bundle for a power supply cable exceeding a length of 1m or fully uncoiled. As a result the tests can be conducted with different results.</p> <p>To put in place the lighting chain fully uncoiled is not realistic due to the length of the lighting chain (from 3 m until 30 m)</p> <p>Decision:</p> <p>The correct test set-up for measurement of voltage disturbances on mains port of lighting chains” (continuous or discontinuous disturbances) is as follows:</p> <ol style="list-style-type: none"> 1) Distance between AMN and electronic control box according to the rules of CISPR 15 (0,8 m +/- 20%). If the power supply cord is longer than 0,8 m, the cord is folded back and forth in the shape of a meander, as far as possible so as to form a bundle not exceeding 30 – 40 cm in length. 2) The lighting chain itself should be extended behind the electronic control box up to a length of 1m and bundled in order not to exceed this additional 1m. The total length of the test arrangement will be about 1,8 m. <p>Explanatory notes:</p> <p>The standard CISPR 14-1 deals with household equipment, electric tools and similar equipment. A lighting chain should be classified as lighting equipment and assigned to CISPR 15 (see also CTL-decision sheet DSH 617).</p> <p>CISPR 15 doesn't deal with procedures for measuring clicks, nevertheless the topic addressed in the enquiry (correct set-up for lighting chains), affects the measurement of voltage disturbances for lighting chains in general, namely measurement of clicks (discontinuous) and continuous voltage</p>		

disturbances.

It is well known in the EMC-field that the emission differs in dependence on different cable length, that's true for any kind of equipment.

CISPR 15 defines the distance between AMN (Artificial mains network) and the connecting terminals of DUT (= 0,8m +/- 20%). The standard doesn't define any arrangement concerning DUT itself, because in general it is defined by the fixed construction of a luminaire and cannot be changed.

The reference to CISPR 16-1 doesn't offer more information regarding this specific enquiry.

It is important for reproducibility, that the electronic control doesn't touch any segment of the following chain, so it must be placed with a sufficient distance to the following bundle of the lighting chain.

It's mandatory, that the test set-up must be clearly documented and shown in test report.