

## CTL DECISION SHEET

<b><u>Standard(s):</u></b> IEC 60065 Ed 7 (2001) + Am 1 (2005)	<b><u>Sub clause(s):</u></b> 2.6.3, 13 & 4.3.1	<b>DSH:</b> <b>620</b>
<b>Subject:</b> Short circuit of clearances and creepages in basic insulation when they are below the values of the corresponding tables.	<b>Key words:</b> Clearances & Creepage distances Basic insulation Short circuit of distances	<b>Approved by the</b> <b>45<sup>th</sup> CTL Plenary</b> <b>meeting 2008</b>
<p><b>Question &amp; Rationale:</b></p> <p>The definition of basic insulation in clause 2.6.3 quotes “insulation applied to HAZARDOUS LIVE parts to provide basic protection against electric shock”. There is a note under this definition that is not totally clear, in which it is said that this kind of insulation does not “necessarily” include functional insulation. This can lead to confusion. We had a case in which a customer disagreed with us about short-circuiting some important clearances that were less than the values stated in the tables because he claimed the clearances were FUNCTIONAL only. However, it is our practice to short-circuit all the key distances – both in primary and secondary circuits – which are below the values of the corresponding tables, where these faults can lead to dangerous situations, such as overheating.</p> <ol style="list-style-type: none"> <li>1) Is the procedure we are using adequate?</li> <li>2) How should the word “necessarily” of the note be interpreted?</li> <li>3) Can we consider these kinds of distances as basic insulation although they are not directly involved with electric shock?</li> </ol> <p><b><u>Decision</u></b></p> <ol style="list-style-type: none"> <li>1) Caution must be exercised when applying fault conditions across insulation in the MAINS. Specifically, according to Sub-clauses 4.3.1 and 13.1, faults across required insulations (BASIC, SUPPLEMENTARY, REINFORCED) between parts of different polarity DIRECTLY CONNECTED TO THE MAINS are not permitted. Fault conditions according to the last paragraph of Sub-clause 13.1 may be applied to clearance and creepage distances as follows: (1) in applications other than between parts of different polarity DIRECTLY CONNECTED TO THE MAINS and (2) in applications involving insulation provided for functional purposes which does not meet the values specified in Clause 13 for BASIC INSULATION.</li> <li>2) Refer to the Explanatory note.</li> <li>3) No. Clearance and creepage distances that are not regarded as a safeguard against electric shock are not considered as basic insulation.</li> </ol> <p><b><u>Explanatory Notes:</u></b></p> <p>Some clarification about this in the standard can be helpful, especially in reference to the term “necessarily” mentioned above.</p>		