

# CTL DECISION SHEET

<b>Standard(s):</b> <b>IEC60335-1 incl. Part 2's</b>	<b>Sub clause(s):</b> <b>19.11</b>	<b>Sheet n°:</b> <b>DSH 568</b>
<b>Subject:</b> <b>Varistors (VDR's) across the mains</b>	<b>Key words:</b> <b>Certification differences</b>	<b>Decision approved during the CTL Plenary Meeting 2006</b>
<p><b>Question:</b>  Reports from different Testing Laboratories and clients expose essential differences in interpretation and testing practice between laboratories and/or Certification Bodies.  Actually, the practice of one Certification Body is now being a market factor.</p> <p>Based on above concerns we ask for clarification:  1: Shall Cl. 19.11 be strictly followed or can solutions given under 2. be accepted.  2: Can any of the decisions (made by OSM/EE) be accepted?</p> <p>- A: VDR's across the mains are accepted if the VDR is separately certified according to IEC 61051-1 or according to CECC 42200.  - B: VDR across the mains with a protective device to guard against short-circuit is acceptable.  - C: If A and B are acceptable, should, because of the fact that VDR's may burn or burst during life-time due to an increasing temperature stress caused by increase of leakage current with a number of switching cycles in the VDR, a thermal interrupting device on the VDR connected in series with the VDR be required.</p> <p><b>Decision:</b>  1. VDR's are not short-circuited if they are used within their manufacturer's declared specification, when tested according to Sub-clause 19.11.2 of IEC60335-1(1991).  2. VDR's are short-circuited regardless of compliance with IEC61051-1, when tested according to Sub-clause 19.11.2 of IEC60335-1(2001).</p> <p><b>Explanatory notes:</b>  There exist differences for handling VDR's between IEC60335-1(1991) and IEC60335-1(2001) when applying those standards. This issue is brought to TC 61 and following questions and answers are confirmed in Delft meeting 2005:</p> <p><b>Q1.</b> Is there any reason to differentiate the requirements for VDR's between Third (1991) and Forth (2001) edition of IEC60335-1?  A1: Yes, tha VDR's can fall at short-circuit at the end of the life and therefore there is a differentiation to accomodate this situation in the fourth edition</p> <p><b>Q2.</b> According to the current standards, is the following interpretation correct?</p> <p>- VDR's are not short-circuited if they comply with IEC61051-1 and are used within their manufacturer's declared specification, when tested according to Sub-clause 19.11.2 of IEC60335-1(1991).  A2.1 The interpretation is not correct because they do not have to comply with 61051-1. they only have to be used with the manufacturers specification.  - VDR's are short-circuited regardless of compliance with IEC61051-1, when tested according to Subclause 19.11.2 of IEC60335-1(2001).  A2.2 Yes this interpretation is correct</p>		