

CTL DECISION SHEET

<u>Standard(s):</u> IEC 60950-1:2001 IEC 60950-1:2005	<u>Sub clause(s):</u> 5.3.2, Annex B	DSH 631A
<u>Subject:</u> Testing of abnormal conditions of dc motors in secondary circuits.	<u>Key words:</u> DC fan, overload, Annex B	Approved by the 45th CTL Plenary Meeting 2008
<u>Question:</u> 1. Is the test as described in Annex B.6 required for small dc motors (e.g. fans used in notebooks or power supplies)? 2. Is it permitted to skip the limit temperatures of Tables B.1 and B.2 for dc motors in SELV circuits (following the second dashed paragraph of NOTE to subclause 5.3.2)?		
<u>Decision:</u> 1. Yes, the test is required, except for motors associated with air handling (fans). Note -This is in line with the proposed modification of B.1 for Amd.1 to IEC 60950-1. 2. Yes, it is permitted for such dc motors to exceed the limit temperatures of Tables B.1 and B.2 during tests of subclauses B.6 and B.7.		
<u>Explanatory Notes:</u> Question 1.: <p style="margin-left: 40px;">The test is only required, if there is a possibility of an overload occurring. The possibility of an overload occurring on a dc secondary fan is minimal.</p> <p style="margin-left: 40px;">Annex B.1 already exempts the running overload tests (per B.4) on “motors that are used for air-handling only and where the air propelling component is coupled to the motor shaft.”</p> <p style="margin-left: 40px;">Annex B.4 generally applies to 8primary fans, but similar considerations can be applied to B.6 for dc secondary fans too.</p> <p style="margin-left: 40px;">This is in line with the proposal for the Hazard Based Standard IEC 62368.</p> Question 2.: <p style="margin-left: 40px;">Sub-clause 5.3.2 of IEC 60950-1:2001/2005 makes reference in the normative text to Annex B for the compliance verification.</p> <p style="margin-left: 40px;">Sub-clause 5.3.2 of IEC 60950-1:2001/2005 allows in the second dashed paragraph of the NOTE (which is only informative, see in the Foreword to IEC 60950-1:2005) that motors used in secondary circuits may exceed the temperature limits if this does not create a hazard.</p> <p style="margin-left: 40px;">This information is contradicting – and the normative text has generally preference over the informative text NOTE. However, as the NOTE is providing examples on how to achieve compliance with requirements of subclause 5.3.2, it is considered that:</p> <ul style="list-style-type: none"> - Tests of Annex B are still required, but limit temperatures (Table B.2) can be exceeded. - The test of B.6.3 must be performed to see that the motor does not create a hazard. 		