



CTL (PROVISIONAL) DECISION SHEET

Standard- IEC 60950-1:2001	Subclause(s): 1.5.2, 4.5.1, 5.3	No. PDSH-560A Page 1(1)	Year 2010
Category: OFF		Developed by: ETF2	
Subject: Temperature limits of optoelectronic devices used for separation	Key words: - Limits during normal operation - Limits during fault operation	Decision to be confirmed by CTL at its meeting in 2010	
<p>Question:</p> <p>During the tests of subclause 4.5.1 and 5.3, the temperatures of critical components shall be evaluated and shall be compared to their limiting values. For certain materials and components, the standard provides detailed instructions (e.g. in Table 4B, Table B.1, Table C.1) and for others only general compliance statements are provided (e.g. Note 3 of Table 4B part 2, subclause 5.3.8).</p> <p>Optocouplers are often located in proximity to heat sources (e.g. transformers). The reliability of the materials used as insulator can degrade if thermally overstressed. IEC 60950-1 does not provide limit values for opto- couplers, nor does Annex P provide a reference to relevant component standards.</p> <p>a: What are the limit values for optocouplers during normal operation of the EUT? b: What are the limit values for optocouplers during fault operation of the EUT?</p> <p>Decision:</p> <p>Temperature ratings as shown on the corresponding component certificate (refer to “Explanatory Notes” below for the relevant component standards) shall be taken as limit values. For optocouplers bridging safety isolation, the maximum temperature T_s shall not be exceeded during normal operation.</p> <p>Additional information from IEC TC 108: The requirements for optocouplers during fault testing are considered adequately covered by subclauses 5.3.9.1 and 5.3.9.2 of the standard. There was no intention by TC108/MT2 that temperature measurements be applied to optocouplers during fault testing. TC108 does not support placing a minimum limit for T_s, such as the proposed 100 °C, on optocouplers for either normal or fault operation.</p> <p>Explanatory Notes:</p> <p>The relevant IEC component standards are: - IEC 60747-5-1:1997 - IEC 60747-5-2:1997 - IEC 60747-5-3:1997 These standards may be replaced by IEC 60747-5-5 upon its publication.</p>			