

CTL DECISION SHEET (DSH)

Standard(s) (incl. year)	Subclause(s)	Tracking No.	Year
IEC/EN 61558-1 All editions	15.2	DSH 1021A	2017
Category			
SAFE			
Subject	Keywords	Developed by	Approved at
Short circuit and overload protection	<ul style="list-style-type: none"> - Transformers - Steady state conditions - Short circuit 	ETF5-OSM/LUM	2018 CTL Plenary Meeting
Question			
<p>Inherently short-circuit proof transformers shall be tested by short-circuiting the output windings until steady-state conditions are reached.</p> <p>In the IEC 61558-1 “steady-state condition” is not explained. Referring to other standards for the meaning of “steady-state conditions”. Or “thermal stability”. The thermal stability is the change of temperature of less than 1°C per hour. So the following questions arise:</p> <p>Is it correct to record the temperatures after one hour when temperatures didn't change (more than 1°C/h)?</p> <p>How shall an inherently short-circuit proof transformer be assessed when the above mentioned requirements are fulfilled, but the transformer is damaged 6h, after reaching the steady state condition, in a way where safety will be impaired? (The transformer bursts).</p>			
Decision			
<p>Yes. Steady state conditions may be considered reached when the temperatures do not vary by more than 1°C.</p>			
Explanatory notes			
