CTL PROVISIONAL DECISION SHEET (PDSH)

Standard(s) (incl. year)	Subclause(s)	Tracking No.	Year
IEC 60335-1:2010 /AMD1:2013 /AMD2:2016	19.11.4	PDSH 2125	2019
Category			
HOUS			
Subject	**Keywords**	**Developed by**	**To be approved**
Observation time on reaction after surge test of sub-clause 19.11.4.4	- Stand-by mode - Electronic disconnection - Surge test	ETF 1	2020 CTL Plenary Meeting

Question

In sub-clause 19.11.4.4, the test is specified as follows:

> The power supply terminals of the appliance are subjected to voltage surges in accordance with IEC 61000-4-5, five positive impulses and five negative impulses being applied at the selected points. An open circuit test voltage of 2 kV is applicable for the line-to-line coupling mode, a generator having a source impedance of 2 Ω being used. An open circuit test voltage of 4 kV is applicable for the line-to-earth coupling mode, a generator having a source impedance of 12 Ω being used.
>
> Earthed heating elements in class I appliances are disconnected during this test.
>
> NOTE If a feedback system depends on inputs related to a disconnected heating element, an artificial network may be needed.
>
> For appliances having surge arresters incorporating spark gaps, the test is repeated at a level that is 95 % of the flashover voltage.

What is the applicable observation time for reaction of the test sample after subjecting the appliance to the surge impulse test of sub-clause 19.11.4.4?

Decision

For the verification of compliance with the requirement of the test in sub-clause 19.11.4, the observation time will depend on the construction of the appliance and the compliance criteria; therefore, the observation shall be for the time sufficient to observe the reaction and determine compliance.

Explanatory notes

Appliances having a device with an off position obtained by electronic disconnection, or a device that can be placed in the stand-by mode are subjected to certain EMC tests according to sub-clauses 19.11.4. Especially after surge test of sub-clause 19.11.4.4, it is possible that the reaction of appliance (e.g. starting of the motor) occurs after the test has completed for a certain period of time.

In specific cases it was detected that the reaction of the appliance, so as starting of the motor, occurred 5 minutes or up to 30 minutes after application of the surge impulses.

Unfortunately, the standard does not specify a suitable observation time for this test.

The decision is based on the comment from TC61 Busan meeting held on October 2018.

CEICT