

PC62.69

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Type of Project: Modify Existing Approved PAR

PAR Request Date: 01-Oct-2013

PAR Approval Date: 11-Dec-2013

PAR Expiration Date: 31-Dec-2017

Status: Modification to a Previously Approved PAR

Root PAR: PC62.69 **Approved on:** 14-Jun-2013

1.1 Project Number: PC62.69

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Title: Standard for the Surge Parameters of Isolating Transformers Used in Networking Devices and Equipment

3.1 Working Group: 3.6.2 LV Solid State Surge Protective Components WG (PE/SPDLV/LV3.6.2)

Contact Information for Working Group Chair

Name: Michael Maytum

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Contact Information for Working Group Vice-Chair

None

3.2 Sponsoring Society and Committee: IEEE Power and Energy Society/Surge Protective Devices/Low Voltage (PE/SPDLV)

Contact Information for Sponsor Chair

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4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 01/2014

4.3 Projected Completion Date for Submittal to RevCom: 08/2014

5.1 Approximate number of people expected to be actively involved in the development of this project: 15

5.2 Scope: This standard sets terms, test methods, test circuits, measurement procedures and preferred result values for the surge parameters of isolating transformers used in networking devices and equipment. Three types of isolating transformer are considered; mains, switch mode power supply and signal (e.g. Ethernet data). The surge parameters of the isolating transformer insulation barrier covered by this standard are:

- Rated impulse voltage
- Input winding to output winding capacitance
- Insulation resistance

Additional parameters for signal isolating transformers are:

- Core saturation voltage-time product
- Rated input winding rms current for a given temperature rise

This standard does not cover the transformer parameters required to ensure appropriate operation on the service e.g. signal transformer return loss.

Changes in scope: This standard sets terms, test methods, test circuits, measurement procedures and preferred result values for the surge parameters of isolating transformers used in networking devices and equipment. Three types of isolating transformer are considered; mains ~~low frequency power~~, ~~high~~ ~~switch~~ ~~frequency power (switching mode power supplies)~~ ~~supply~~ and signal (e.g. Ethernet data). The surge parameters of the isolating transformer insulation barrier covered by this standard are: - Rated impulse voltage - Input winding to output winding capacitance - Insulation resistance Additional parameters for signal isolating transformers are: - Core saturation voltage-time product - Rated input winding rms current for a given temperature rise This standard does not cover the transformer parameters required to ensure appropriate operation on the service e.g. signal transformer return loss.

5.3 Is the completion of this standard dependent upon the completion of another standard: No

5.4 Purpose: The main purpose of this standard is to define a series of transformer impulse withstand voltage ratings that are higher than those of IEEE Std 802.3(TM) [B6] with the intent to improve transformer insulation performance in uncontrolled environments. In the interests of International standardization the voltage values used are harmonized with the series defined in IEC 60664-1[B7] for low-voltage equipment insulation coordination. This IEEE standard is applicable to home networking installations, which are typically uncontrolled environments, where the surge voltage levels and the corresponding required transformer impulse withstand voltages can be higher than the LAN A controlled environment as defined by IEEE Std 802.3(TM) [B6].

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5.5 Need for the Project: Reduction of LAN equipment and device failures in uncontrolled or severe surge environments through use of higher voltage rated isolation transformers

5.6 Stakeholders for the Standard: Network Equipment and Device Manufacturers, Designers, Specifiers and Users

Intellectual Property

6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: Yes

If yes please explain: IEC for standardized definitions reproduction

6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

7.1 Are there other standards or projects with a similar scope?: No

7.2 Joint Development

Is it the intent to develop this document jointly with another organization?: No

8.1 Additional Explanatory Notes (Item Number and Explanation): 5.4# The only PAR change is the Purpose clause. Legal during the MEC process required the clause text to be modified to that shown in new 5.4 entry