IEC 61643-341

Edition 2.0 2020-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Components for low-voltage surge protection – Part 341: Performance requirements and test circuits for thyristor surge suppressors (TSS)

Composants pour parafoudres basse tension – Partie 341: Exigences de performance et circuits d'essai pour parafoudres à thyristor (TSS)

IEC 61643-341:2020-05 (en-fr)

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CONTENTS

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COMPONENTS FOR LOW-VOLTAGE SURGE PROTECTION –

Part 341: Performance requirements and test circuits for thyristor surge suppressors (TSS)

FOREWORD

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International Standard IEC 61643-341 has been prepared by subcommittee 37B, Components for low-voltage surge protection, of IEC technical committee 37: Surge arresters.

This second edition of IEC 61643-341 cancels and replaces the first edition published in 2001. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition: Addition of performance values.

The text of this standard is based on the following documents:

FDIS	Report on voting
37B/218/FDIS	37B/220/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of IEC 61643 series, under the general title *Components for low-voltage surge protective devices*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

COMPONENTS FOR LOW-VOLTAGE SURGE PROTECTION –

Part 341: Performance requirements and test circuits for thyristor surge suppressors (TSS)

1 Scope

This part of IEC 61643 specifies standard test circuits and methods for thyristor surge suppressor (TSS) components. These surge protective components, SPCs, are specially formulated thyristors designed to limit overvoltages and divert surge currents by clamping and switching actions. These SPCs are used in the construction of surge protective devices (SPDs) and equipment used in Information & Communications Technologies (ICT) networks with voltages up to AC 1 000 V and DC 1 500 V. This document is applicable to gated or non-gated TSS components with third quadrant (-v and –i) characteristics of blocking, conducting or switching.

This document contains information on

- terminology;
- letter symbols;
- essential ratings and characteristics;
- rating verification and characteristic measurement.

This document does not apply to the conventional three-terminal thyristors as covered by IEC 60747-6.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050-521, *International Electrotechnical Vocabulary – Chapter 521: Semiconductor devices and integrated circuits*

IEC 60068-2-20:2008, *Environmental testing – Part 2-20: Tests – Test T: Test methods for solderability and resistance to soldering heat of devices with leads*

3 Terms, definitions, abbreviated terms and symbols

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
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