IEC 61643-352

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Components for low-voltage surge protection – Part 352: Selection and application principles for telecommunications and signalling network surge isolation transformers (SITs)

Composants pour protection par parafoudres basse tension – Partie 352: Principes de choix et d'application pour les transformateurs d'isolement contre les surtensions (SIT) dans les réseaux de signalisation et de télécommunications

IEC 61643-352:2018-01(en-fr)

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COMPONENTS FOR LOW-VOLTAGE SURGE PROTECTION –

Part 352: Selection and application principles for telecommunications and signalling network surge isolation transformers (SITs)

FOREWORD

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IEC 61643-352 has been prepared by subcommittee 37B: Components for low-voltage surge protection, of IEC technical committee 37: Surge arresters.

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

FDIS	Report on voting
37B/161/FDIS	37B/167/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 in the IEC 61643 series, published under the general title *Low-voltage surge protection*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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- withdrawn,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.

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INTRODUCTION

This document covers surge isolation transformers whose rated impulse withstand voltage coordinates with the expected surge environment of the installation.

This type of surge protective component, SPC, isolates and attenuates transient voltages and is often used in conjunction with current diverting components (e.g. GDT, MOV, etc.) or in SPDs.

COMPONENTS FOR LOW-VOLTAGE SURGE PROTECTION –

Part 352: Selection and application principles for telecommunications and signalling network surge isolation transformers (SITs)

1 Scope

This part of IEC 61643 covers the application of surge isolation transformers (SITs) that are used in telecommunication transformer applications with signal levels up to 400 V peak to peak. These transformers have a high rated impulse voltage with or without screen between the input and output windings. SITs are components for surge protection and are used to mitigate the onward propagation of common-mode voltage surges. This document describes SITs' selection, application principles and related information. This document does not cover power line communication transformers.

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 61643-351, *Components for low-voltage surge protective devices – Part 351: Performance requirements and test methods for telecommunications and signalling network surge isolation transformers (SIT)*

3 Terms, definitions, symbols and abbreviated terms

3.1 Terms and definitions

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/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1.1
surge isolating transformer
SIT
isolation transformer which has high impulse withstand voltage with/without electrostatic screen between input and output windings

3.1.2
electric screen
ES
barrier or enclosure that limits the penetration of an electrostatic field

3.1.3
clearance
shortest distance in air between two conductive parts

[SOURCE: IEC TR 60664-2-1:2011, 3.4]

3.1.4
creepage distance
shortest distance along the surface of a solid insulating material between two conductive parts

[SOURCE: IEC TR 60664-2-1:2011, 3.7]