

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

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NATIONAL FOREWORD

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English Version

Components for low-voltage surge protection - Part 352:
Selection and application principles for telecommunications and
signalling network surge isolation transformers (SITs)
(IEC 61643-352:2018)

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)

Bauelemente für Überspannungsschutzgeräte für
Niederspannung - Teil 352: Auswahl- und
Anwendungsprinzipien für
Überspannungstrenntransformatoren (SIT) für den Einsatz
in Telekommunikations- und signalverarbeitenden
Netzwerken
(IEC 61643-352:2018)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 37B/161/FDIS, future edition 1 of IEC 61643-352, prepared by IEC/SC 37B, "Components for low-voltage surge protection" of IEC/TC 37 "Surge arresters" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61643-352:2018.

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- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2018-11-14
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-02-14

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Endorsement notice

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60065:2001	NOTE	Harmonized as EN 60065:2002 (modified).
IEC 60068-2-1:2007	NOTE	Harmonized as EN 60068-2-1:2007 (not modified).
IEC 60068-2-2:2007	NOTE	Harmonized as EN 60068-2-2:2007 (not modified).
IEC 60076-1:2011	NOTE	Harmonized as EN 60076-1:2011 (not modified).
IEC 60064-1	NOTE	Harmonized as EN 60064-1.
IEC 60721-3-9:1993	NOTE	Harmonized as EN 60721-3-9:1993 (not modified).
IEC 61340-4-8:2014	NOTE	Harmonized as EN 61340-4-8:2015 (not modified).
IEC 61558-1	NOTE	Harmonized as EN 61558-1.
IEC 61558-2-4:2009	NOTE	Harmonized as EN 61558-2-4:2009 (not modified).
IEC 61558-2-6:2009	NOTE	Harmonized as EN 61558-2-6:2009 (not modified).
IEC 61643-21	NOTE	Harmonized as EN 61643-21.

CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Terms, definitions, symbols and abbreviated terms.....	7
3.1 Terms and definitions.....	7
3.2 Symbols.....	8
3.3 Abbreviated terms.....	9
4 Service conditions	10
4.1 Temperature range	10
4.2 Humidity	10
4.3 Altitude	10
4.4 Microclimate	10
5 SIT surge conditions.....	11
5.1 SIT surge mitigation.....	11
5.2 Common-mode surges.....	12
5.3 Differential-mode surges.....	13
5.3.1 General	13
5.3.2 Ethernet transformer differential surge action	13
6 Selection	13
6.1 General.....	13
6.2 Impulse withstand voltage.....	13
6.3 Rated values of SIT	14
7 Applications.....	14
7.1 General.....	14
7.2 Example of surge protection using SITs with ES for control and terminal equipment installed in two different buildings respectively.....	14
7.3 Example of surge protection using SITs for telecommunication equipment in substation	14
7.4 Example of surge protection using SITs for transmission and switching equipment installed in different floors in a communication building.....	16
7.5 Example of surge protection using SITs for computer network equipment in a data centre	17
7.6 Example of surge protection using SITs for a Power over Ethernet (PoE) system	17
7.7 Example of surge protection using SITs for LAN	18
Annex A (informative) Lightning overvoltages of telecommunication line	19
Bibliography.....	20
Figure 1 – Symbol for a two-winding SIT.....	8
Figure 2 – Symbol for a two-winding SIT with polarity indication	9
Figure 3 – Symbol for a two-winding SIT with electric screen	9
Figure 4 – SIT with centre tapped windings.....	9
Figure 5 – Common-mode surge conditions for SIT.....	11
Figure 6 – Common-mode surge conditions for SIT with an electric screen	12
Figure 7 – Transformer differential surge truncation.....	13

Figure 8 – Example of surge protection using SITs in order to isolate two different buildings	14
Figure 9 – Example of surge protection using SITs in substation.....	15
Figure 10 – Example of surge protection using SITs in a communication building	16
Figure 11 – Example of surge protection using SITs in a data centre	17
Figure 12 – Example of surge protection using SITs for a Power over Ethernet (PoE) system	17
Figure 13 – Example of surge protection using SITs for LAN.....	18
Figure A.1 – Lightning overvoltages of telecommunication line.....	19
Table 1 – List of abbreviated terms used in this document	10
Table 2 – Classification of microclimate condition	10

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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.

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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)

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]