

STN	Nízkonapäťové prepäťové ochranné zariadenia Časť 361: Prepäťové izolačné transformátory (SIT) pripojené k distribučnej sieti nízkeho napätia Požiadavky a skúšobné metódy	STN EN IEC 61643-361 34 1395
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Low-voltage surge protective devices - Part 361: Surge isolation transformers (SITs) connected to low-voltage distribution system - Requirements and test methods

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

**Low-voltage surge protective devices - Part 361: Surge isolation transformers (SITs) connected to low-voltage distribution system
- Requirements and test methods
(IEC 61643-361:2026)**

Parafoudres basse tension - Partie 361: Transformateurs d'isolement contre les surtensions (SIT) connectés aux réseaux de distribution basse tension - Exigences et méthodes d'essai
(IEC 61643-361:2026)

Bauelemente für den Überspannungsschutz bei Niederspannungen - Teil 361: Überspannungs-Trenntransformatoren (SIT) in Niederspannungsnetzen - Anforderungen und Prüfverfahren
(IEC 61643-361:2026)

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EN IEC 61643-361:2026 (E)**European foreword**

The text of document 37B/267/FDIS, future edition 1 of IEC 61643-361, prepared by 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 61643-361:2026.

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IEC 60060-1:2025	NOTE	Approved as EN IEC 60060-1:2025 (not modified)
IEC 61643-12	NOTE	Approved as CLC/TS 61643-12
IEC 62305-4	NOTE	Approved as EN IEC 62305-4
IEC 61643-351:2016	NOTE	Approved as EN 61643-351:2017 (not modified)
IEC 60664-1:2020	NOTE	Approved as EN IEC 60664-1:2020 (not modified)
IEC 60099-4:2014	NOTE	Approved as EN 60099-4:2014 (not modified)
IEC 61558 (series)	NOTE	Approved as EN IEC 61558 (series)

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-1	-	Environmental testing - Part 1: General and guidance	EN 60068-1	-



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**Low-voltage surge protective devices -
Part 361: Surge isolation transformers (SITs) connected to low-voltage
distribution system - Requirements and test methods**

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CONTENTS

FOREWORD	3
INTRODUCTION	5
1 Scope	6
2 Normative references	6
3 Terms, definitions and symbols	6
3.1 Terms and definitions	6
3.2 Symbols	8
3.3 Abbreviated terms and acronyms	9
4 Service condition	9
4.1 Temperature range	9
4.2 Humidity range	9
4.3 Altitude and air pressure	9
5 SIT surge condition	10
5.1 General	10
5.2 SITs surge mitigation	10
6 Electrical requirements	11
6.1 General	11
6.2 Insulation resistance	11
6.3 Power frequency withstand voltage	11
6.4 Impulse withstand voltage	12
7 Type tests	12
7.1 General	12
7.2 Test condition	12
7.3 Sample preparation	12
7.4 Insulation resistance	13
7.5 Power frequency withstand voltage	13
7.6 Impulse withstand voltage	14
Annex A (informative) 1,2/50 impulse	17
Bibliography	18
Figure 1 – Symbol of SIT for single phase low-voltage power system (single-line diagram)	8
Figure 2 – Symbol of SIT for single phase low-voltage power system (multi-line diagram)	8
Figure 3 – SITs under common mode surge condition	11
Figure 4 – Sample preparation	13
Figure 5 – Test circuit of insulation resistance	13
Figure 6 – Power frequency withstand voltage test circuit	14
Figure 7 – Construction of pass/fail template from the 1,2/50 open-circuit waveform	15
Figure 8 – Pass/fail template and test waveforms	15
Figure 9 – Impulse withstand voltage test circuit	16
Figure A.1 – 1,2/50 time periods and voltage amplitudes	17

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Table 1 – List of abbreviations and acronyms used in this standard	9
Table 2 – Conditions used for test.....	12
Table A.1 – 1,2/50 voltage impulse generator parameters.....	17

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Low-voltage surge protective devices -
Part 361: Surge isolation transformers (SITs) connected
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IEC 61643-361 has been prepared by subcommittee 37B: Components for low-voltage surge protection, of IEC technical committee 37: Surge arresters. It is an International Standard.

The text of this International Standard is based on the following documents:

Draft	Report on voting
37B/267/FDIS	37B/270/RVD

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

The language used for the development of this International Standard is English.

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This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

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INTRODUCTION

This part of IEC 61643 covers surge isolation transformers (SITs) whose rated impulse withstand voltage coordinates with the expected surge environment of the installation location. This type of surge protective component (SPC) isolates and attenuates transient voltage in conjunction with current diverting components (or SPDs).

SITs are a product with specific enhanced insulation layers between the primary and secondary windings and an electric screen (ES) inserted between primary and secondary windings. With these ES and specific enhanced insulation layers, the surge that appears between the primary winding and earth (common-mode) is greatly attenuated and appears between the secondary winding and earth. SITs are products with a particularly improved impulse withstand voltage compared to ordinary isolating transformers.

It is essential that SITs are protected by an appropriate SPD at their primary side, to avoid any damage to the SIT itself. SITs are intended to be used in surge protection to establish lightning protection zones.

1 Scope

This part of IEC 61643 applies to surge isolation transformers (SITs) dedicated to surge mitigation and for connection to 50/60 Hz power circuits and equipment rated up to 1 000 V RMS. This document covers the surge and mitigation performance of SITs with an impulse withstand voltage performance of at least 30 kV, and provides standard methods for testing and rating.

This document covers surge-related parameters but does not address typical transformer tests and parameters covered by the IEC 61558 series [13]¹. This document also does not cover SIT operation under differential mode lightning surge conditions.

2 Normative references

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