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Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC - Equipment for testing, measuring or monitoring of protective measures - Part 9: Equipment for insulation fault location in IT systems

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>See Eesti standard EVS-EN IEC 61557-9:2025 sisaldab Euroopa standardi EN IEC 61557-9:2025 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 04.04.2025.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN IEC 61557-9:2025 consists of the English text of the European standard EN IEC 61557-9:2025.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 04.04.2025.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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EUROPEAN STANDARD

EN IEC 61557-9

NORME EUROPÉENNE

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Supersedes EN 61557-9:2015; EN 61557-9:2015/AC:2016-06; EN 61557-9:2015/AC:2017-02

English Version

Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC - Equipment for testing, measuring or monitoring of protective measures - Part 9: Equipment for insulation fault location in IT systems  
(IEC 61557-9:2023)

Sécurité électrique dans les réseaux de distribution basse tension au plus égale à 1 000 V en C.A et 1 500 V en C.C - Dispositifs de contrôle, de mesure ou de surveillance de mesures de protection - Partie 9: Dispositifs de localisation de défauts d'isolement pour réseaux IT  
(IEC 61557-9:2023)

Elektrische Sicherheit in Niederspannungsnetzen bis AC 1 000 V und DC 1 500 V - Geräte zum Prüfen, Messen oder Überwachen von Schutzmaßnahmen - Teil 9: Einrichtungen zur Isolationsfehlersuche in IT-Systemen  
(IEC 61557-9:2023)

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## European foreword

The text of document 85/896/FDIS, future edition 4 of IEC 61557-9, prepared by TC 85 "Measuring equipment for electrical and electromagnetic quantities" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61557-9:2025.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2026-04-30 level by publication of an identical national standard or by endorsement
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In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 60364-4-41:2005	NOTE	Approved as HD 60364-4-41:2017 +A11:2017
IEC 60664 series	NOTE	Approved as EN 60664 series
IEC 60664-1	NOTE	Approved as EN IEC 60664-1
IEC 60664-3	NOTE	Approved as EN 60664-3
IEC 61557-15	NOTE	Approved as EN 61557-15
IEC 61810-2:2017	NOTE	Approved as EN 61810-2:2017 (not modified)

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC – Equipment for testing, measuring or monitoring of protective measures –**

**Part 9: Equipment for insulation fault location in IT systems**

**Sécurité électrique dans les réseaux de distribution basse tension au plus égale à 1 000 V C.A et 1 500 V C.C – Dispositifs de contrôle, de mesure ou de surveillance de mesures de protection –**

**Partie 9: Dispositifs de localisation de défauts d'isolement pour réseaux IT**



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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

**Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC – Equipment for testing, measuring or monitoring of protective measures –**

**Part 9: Equipment for insulation fault location in IT systems**

**Sécurité électrique dans les réseaux de distribution basse tension au plus égale à 1 000 V C.A et 1 500 V C.C – Dispositifs de contrôle, de mesure ou de surveillance de mesures de protection –**

**Partie 9: Dispositifs de localisation de défauts d'isolement pour réseaux IT**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRICAL SAFETY IN LOW VOLTAGE DISTRIBUTION SYSTEMS UP TO 1 000 V AC AND 1 500 V DC – EQUIPMENT FOR TESTING, MEASURING OR MONITORING OF PROTECTIVE MEASURES –****Part 9: Equipment for insulation fault location in IT systems**

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IEC 61557-9 has been prepared by IEC technical committee 85: Measuring equipment for electrical and electromagnetic quantities. It is an International Standard.

This fourth edition cancels and replaces the third edition published in 2014. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) new terms and definitions on maximum admissible locating AC and DC currents and voltages;
- b) the requirements on locating current and locating voltage have been revised;

- c) performance requirements have been added;
- d) the test requirements for locating current and locating voltage have been revised;
- e) the structure of this document has been adapted to that of IEC 61557-1:2019;
- f) the limit values under Clause A.2 were adapted to fit the changed test methods in 6.2.3.

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

Draft	Report on voting
85/896/FDIS	85/901/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

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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

A list of all parts in the IEC 61557 series, published under the general title *Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC – Equipment for testing, measuring or monitoring of protective measures*, can be found on the IEC website.

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# ELECTRICAL SAFETY IN LOW VOLTAGE DISTRIBUTION SYSTEMS UP TO 1 000 V AC AND 1 500 V DC – EQUIPMENT FOR TESTING, MEASURING OR MONITORING OF PROTECTIVE MEASURES –

## Part 9: Equipment for insulation fault location in IT systems

### 1 Scope

This part of IEC 61557 specifies the requirements for the insulation fault location system (IFLS) that localizes insulation faults in any part of the system in unearthed IT AC systems and unearthed IT AC systems with galvanically connected DC circuits having nominal voltages up to 1 000 V AC, as well as in unearthed IT DC systems with voltages up to 1 500 V DC, independent of the measuring principle.

NOTE 1 IT systems are described in IEC 60364-4-41. Further information on insulation fault location can be found in the following International Standards: IEC 60364-4-41:2005, 411.6 and IEC 60364-4-41:2005/AMD1:2017, 411.6, and IEC 60364-5-53:2019/AMD1:2020, 531.3.

NOTE 2 This document covers both passive IFLS and active IFLS. Active IFLS can be used in de-energised systems.

NOTE 3 This document does not cover IMD complying with IEC 61557-8.

### 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 60068-2-1:2007, *Environmental testing – Part 2-1: Tests – Test A: Cold*

IEC 60068-2-2:2007, *Environmental testing – Part 2-2: Tests – Test B: Dry heat*

IEC 60068-2-6, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

IEC 60068-2-27:2008, *Environmental testing – Part 2-27: Tests – Test Ea and guidance: Shock*

IEC 60364-7-710:2021, *Low-voltage electrical installations – Part 7-710: Requirements for special installations or locations – Medical locations*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 60721-3-1:2018, *Classification of environmental conditions – Part 3-1: Classification of groups of environmental parameters and their severities – Storage*

IEC 60721-3-2:2018, *Classification of environmental conditions – Part 3-2: Classification of groups of environmental parameters and their severities – Transportation and handling*

IEC 60721-3-3:2019, *Classification of environmental conditions – Part 3-3: Classification of groups of environmental parameters and their severities – Stationary use at weatherprotected locations*

IEC 60947-5-1:2016, *Low-voltage switchgear and controlgear – Part 5-1: Control circuit devices and switching elements – Electromechanical control circuit devices*

IEC 60947-5-4:2002, *Low-voltage switchgear and controlgear – Part 5-4: Control circuit devices and switching elements – Method of assessing the performance of low-energy contacts – Special tests*

IEC 60947-5-4:2002/AMD1:2019

IEC 61010-1:2010, *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements*

IEC 61010-1:2010/AMD1:2016

IEC 61010-2-030, *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-030: Particular requirements for equipment having testing or measuring circuits*

IEC 61010-031, *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 031: Safety requirements for hand-held and hand-manipulated probe assemblies for electrical test and measurement*

IEC 61010-2-032, *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-032: Particular requirements for hand-held and hand-manipulated current sensors for electrical test and measurement*

IEC 61140, *Protection against electric shock – Common aspects for installation and equipment*

IEC 61326-1:2020, *Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements*

IEC 61326-2-2, *Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 2-2: Particular requirements – Test configurations, operational conditions and performance criteria for portable testing, measuring and monitoring equipment used in low-voltage distribution systems*

IEC 61326-2-4, *Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 2-4: Particular requirements – Test configurations, operational conditions and performance criteria for insulation monitoring devices according to IEC 61557-8 and for equipment for insulation fault location according to IEC 61557-9*

IEC 61557-1:2019, *Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC – Equipment for testing, measuring or monitoring of protective measures – Part 1: General requirements*

IEC 61557-8:2014, *Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC – Equipment for testing, measuring or monitoring of protective measures – Part 8: Insulation monitoring devices for IT systems*

IEC 61810-2:2017, *Electromechanical elementary relays – Part 2: Reliability*