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REDLINE VERSION

Elsäkerhet i elektriska starkströmsanläggningar för lågspänning – Utrustning för provning, mätning och övervakning av skyddsåtgärder – Del 6: Jordfelsövervakning i TT- och TN- och IT-system

*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 6: Effectiveness of residual current devices (RCD) in TT, TN and IT systems*

En så kallad ”Redline version” (RLV) innehåller både den fastställda IEC-standarden och en ändringsmarkerad standard. Alla tillägg och borttagningar sedan den tidigare utgåvan är markerade med färg. Med en RLV sparar du mycket tid när du ska identifiera och bedöma aktuella ändringar i standarden. SEK Svensk Elstandard kan bara ge ut en RLV i de fall den finns tillgänglig från IEC.

REDLINE VERSION



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

Part 6: Effectiveness of residual current devices (RCD) in TT, TN and IT systems

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 17.220.20; 29.080.01; 29.240.01

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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1 000 V AC AND 1 500 V DC – EQUIPMENT FOR TESTING, MEASURING
OR MONITORING OF PROTECTIVE MEASURES –****Part 6: Effectiveness of residual current devices (RCD)
in TT, TN and IT systems**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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This Redline version provides you with a quick and easy way to compare all the changes between this standard and its previous edition. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

International Standard IEC 61557-6 has been prepared by IEC technical committee 85: Measuring equipment for electrical and electromagnetic quantities.

This third edition cancels and replaces the second edition published in 2007. This edition constitutes a technical revision.

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

- a) addition of requirements for testing a new type of RCD;
- b) addition of requirements for type B RCDs (former Annex B);
- c) addition of new Annex B on recommended tripping times;
- d) alignment of the structure with that of the whole IEC 61557 series.

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

FDIS	Report on voting
85/ 684/FDIS	85/ 697/RVD

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

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

This International Standard is to be used in conjunction with IEC 61557-1:2019.

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 6: Effectiveness of residual current devices (RCD) in TT, TN and IT systems

1 Scope

~~This part of IEC 61557 specifies the requirements for measuring equipment applied to the testing of the effectiveness of protective measures by regular disconnections of residual current protective devices (RCD) in TT, TN and IT systems.~~

This part of IEC 61557 specifies the requirements applicable to measuring equipment for testing the effectiveness of protective measures of residual current devices (RCD) installed in TT, TN and IT systems.

It is not the purpose of this document to verify the RCD according to their product standards.

NOTE Applicable tripping tests for time and current of RCD are listed in Annex A, Table A.1.

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/TR 60755, General requirements for residual-current operated protective devices~~

~~IEC 60947-2, Low-voltage switchgear and controlgear – Part 2: Circuit-breakers~~

~~IEC 61008 (all parts), Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)~~

~~IEC 61009 (all parts), Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)~~

IEC 61010-1:2004/2010, *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements*
IEC 61010-1:2010/AMD1:2016¹

IEC 61010-2-030:2017, *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*

¹ A consolidated version of this publication exists, comprising IEC 61010-1:2010 and IEC 61010-1:2010/AMD1:2016.

| IEC 61557-1:~~2007~~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*

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Som svensk standard gäller europastandarden EN IEC 61557-6:2021. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 61557-6:2021.

Nationellt förord

Europastandarden EN IEC 61557-6:2021

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61557-6, Third edition, 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 6: Effectiveness of residual current devices (RCD) in TT, TN and IT systems**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden ska användas tillsammans med SS-EN IEC 61557-1, utg 3, 2022.

Tidigare fastställd svensk standard SS-EN 61557-6, utgåva 2, 2007, gäller ej fr o m 2024-11-10.

ICS 17.220.20; 29.080.01; 29.240.01

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EUROPEAN STANDARD

EN IEC 61557-6

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2021

ICS 17.220.20; 29.080.01; 29.240.01

Supersedes EN 61557-6:2007 and all of its amendments
and corrigenda (if any)

English Version

Electrical safety in low voltage distribution systems up to 1 000 V
a.c. and 1 500 V d.c. - Equipment for testing, measuring or
monitoring of protective measures - Part 6: Effectiveness of
residual current devices (RCD) in TT, TN and IT systems
(IEC 61557-6:2019)

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 6: Efficacité des dispositifs à
courant différentiel résiduel (DDR) dans les réseaux TT, TN
et IT
(IEC 61557-6:2019)

Elektrische Sicherheit in Niederspannungsnetzen bis AC 1
000 V und DC 1 500 V - Geräte zum Prüfen, Messen oder
Überwachen von Schutzmaßnahmen - Teil 6: Wirksamkeit
von Fehlerstrom-Schutzeinrichtungen (RCD) in TT-, TN-
und IT-Systemen
(IEC 61557-6:2019)

This European Standard was approved by CENELEC on 2021-11-10. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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Europäisches Komitee für Elektrotechnische Normung

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Ref. No. EN IEC 61557-6:2021 E

SEK Svensk Elstandard

SS-EN IEC 61557-6, utg 3:2022

European foreword

The text of document 85/684/FDIS, future edition 3 of IEC 61557-6, prepared by IEC/TC 85 "Measuring equipment for electrical and electromagnetic quantities" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61557-6:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2022-08-10
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-11-10

This document supersedes EN 61557-6:2007 and all of its amendments and corrigenda (if any).

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The text of the International Standard IEC 61557-6:2019 was approved by CENELEC as a European Standard without any modification.

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

IEC 60359:2001	NOTE	Harmonized as EN 60359:2002 (not modified)
IEC 60364-4-41	NOTE	Harmonized as HD 60364-4-41
IEC 61008-1	NOTE	Harmonized as EN 61008-1
IEC 61009-1	NOTE	Harmonized as EN 61009-1

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61010-1	2010	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements	EN 61010-1	2010
+ A1 (mod)	2016		+ A1	2019
IEC 61010-2-030	2017	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-030: Particular requirements for equipment having testing or measuring circuits	EN IEC 61010-2-030	2021
-	-		+ A11	2021
IEC 61010-031	-	Safety requirements for electrical equipment for measurement, control and laboratory use - Part 031: Safety requirements for hand-held probe assemblies for electrical measurement and test	EN 61010-031	-
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	EN IEC 61557-1	2021

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electrical safety in low voltage distribution systems up to 1 000 V a.c. and 1 500 V d.c. – Equipment for testing, measuring or monitoring of protective measures –

Part 6: Effectiveness of residual current devices (RCD) in TT, TN and 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 6: Efficacité des dispositifs à courant différentiel résiduel (DDR) dans les réseaux TT, TN et IT

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRICAL SAFETY IN LOW VOLTAGE DISTRIBUTION SYSTEMS UP TO
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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 6: Effectiveness of residual current devices (RCD) in TT, TN and IT systems

1 Scope

This part of IEC 61557 specifies the requirements applicable to measuring equipment for testing the effectiveness of protective measures of residual current devices (RCD) installed in TT, TN and IT systems.

It is not the purpose of this document to verify the RCD according to their product standards.

NOTE Applicable tripping tests for time and current of RCD are listed in Annex A, Table A.1.

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.

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IEC 61010-1:2010/AMD1:2016¹

IEC 61010-2-030:2017, *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 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*

¹ A consolidated version of this publication exists, comprising IEC 61010-1:2010 and IEC 61010-1:2010/AMD1:2016.