

**Elektriohutus madalpingelistes
jaotussüsteemides vahelduvpingel kuni 1 kV
ja alalispingel kuni 1,5 kV. Kaitsemeetmete
katsetamis-, mõõtmis- ja seireseadmed. Osa
6: Rikkevoolukaitseaparaatide efektiivsus
TT-, TN- ja IT-süsteemides**

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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 61557-6:2007 sisaldab Euroopa standardi EN 61557-6:2007 ingliskeelset teksti.	This Estonian standard EVS-EN 61557-6:2007 consists of the English text of the European standard EN 61557-6:2007.
Standard on kinnitatud Eesti Standardikeskuse 17.12.2007 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 17.12.2007 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on .	Date of Availability of the European standard text .
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 17.220.20, 29.080.01, 29.240.01

Võtmesõnad: electrical safety, equipment for testing, low voltage distribution systems, measuring or monitoring of protective measures, residual current devices (rcd), tn and it systems, tt

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**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 61557-6:2007)**

Sécurité électrique dans les réseaux
de distribution basse tension
de 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 résiduel (DCR)
dans les réseaux TT, TN et IT
(CEI 61557-6:2007)

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 61557-6:2007)

This European Standard was approved by CENELEC on 2007-10-01. 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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CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 85/279A/CDV, future edition 2 of IEC 61557-6, prepared by IEC TC 85, Measuring equipment for electrical and electromagnetic quantities, was submitted to the IEC-CENELEC parallel Unique Acceptance Procedure and was approved by CENELEC as EN 61557-6 on 2007-10-01.

This European Standard supersedes EN 61557-6:1998.

The following changes were made with respect to EN 61557-6:1998:

- title and scope complemented;
- definitions complemented;
- revision of requirements;
- "tripping tests" and "non-tripping tests" subclauses complemented;
- "operating instructions" subclause complemented;
- addition of Annex A.

This standard is to be used in conjunction with EN 61557-1.

The following dates were fixed:

- | | | |
|--|-------|------------|
| – latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2008-07-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2010-10-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61557-6:2007 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	NOTE Harmonized as EN 60359:2002 (not modified).
IEC 61008-1	NOTE Harmonized as EN 61008-1:2004 (modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC/TR 60755	- ¹⁾	General requirements for residual current operated protective devices	-	-
IEC 60947-2	- ¹⁾	Low-voltage switchgear and controlgear - Part 2: Circuit-breakers	EN 60947-2	2006 ²⁾
IEC 61008 (mod)	Series	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)	EN 61008	Series
IEC 61009 (mod)	Series	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)	EN 61009	Series
IEC 61010-1	2001	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements	EN 61010-1 + corr. June	2001 2002
IEC 61557-1	2007	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 1: General requirements	EN 61557-1	2007

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

INTERNATIONAL
STANDARD

IEC
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INTERNATIONALE

61557-6

Second edition
Deuxième édition
2007-07

**Electrical safety in low voltage distribution
systems up to 1000 V a.c. and 1500 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 de
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 résiduel (DCR)
dans les réseaux TT, TN et IT**



Reference number
Numéro de référence
IEC/CEI 61557-6:2007



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**INTERNATIONAL
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Commission Electrotechnique Internationale
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Международная Электротехническая Комиссия

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*For price, see current catalogue
Pour prix, voir catalogue en vigueur*

CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Normative references.....	5
3 Terms and definitions	5
4 Requirements	6
5 Marking and operating instructions.....	9
5.1 Marking	9
5.2 Operating instructions.....	9
6 Tests	9
Annex A (normative) Measuring equipment for residual current protective devices (RCDs) of type B.....	11
Bibliography	13
Table 1 – Calculation of operating uncertainty	7

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRICAL SAFETY IN LOW VOLTAGE DISTRIBUTION
SYSTEMS UP TO 1000 V a.c. AND 1500 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**

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

This second edition cancels and replaces the first edition published in 1997. This edition constitutes a technical revision.

The following changes were made with respect to the previous edition (1997):

- a) title and scope complemented;
- b) definitions complemented;
- c) revision of requirements;
- d) "tripping tests" and "non-tripping tests" subclauses complemented;

- e) markings complemented;
- f) addition of Annex A.

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

Enquiry draft	Report on voting
85/279A/CDV	85/298/RVC

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.

This part of IEC 61557 shall be used in conjunction with Part 1.

A list of all parts of the IEC 61557 series, published under the general title *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*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site 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.

ELECTRICAL SAFETY IN LOW VOLTAGE DISTRIBUTION SYSTEMS UP TO 1000 V a.c. AND 1500 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

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.

2 Normative references

The following referenced documents are indispensable for the application 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 61010-1:2001, *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements*

IEC 61557-1:2007, *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 1: General requirements*

3 Terms and definitions

For the purposes of this document, the definitions given in IEC 61557-1 and the following definitions apply.

3.1

fault current

I_{Δ}

current flowing to earth due to an insulation fault