



NSAI
Standards

Irish Standard
I.S. EN 61557-13:2011

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 13: Hand-held and hand-manipulated current clamps and sensors for measurement of leakage currents in electrical distribution systems (IEC 61557-13:2011 (EQV))

I.S. EN 61557-13:2011

Incorporating amendments/corrigenda issued since publication:

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NSAI 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie	Sales: T +353 1 857 6730 F +353 1 857 6729 W standards.ie
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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 13: Hand-held and hand-manipulated current clamps and sensors for
measurement of leakage currents in electrical distribution systems
(IEC 61557-13:2011)**

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 13: Pincés et capteurs de courant portatifs et manipulés à la main pour la mesure des courants de fuite dans les réseaux de distribution électriques
(CEI 61557-13:2011)

Elektrische Sicherheit in Niederspannungsnetzen bis AC 1 000 V und DC 1 500 V -
Geräte zum Prüfen, Messen oder Überwachen von Schutzmaßnahmen -
Teil 13: Handgehaltene und handbediente Strommesszangen und Stromsonden zur Messung von Ableitströmen in elektrischen Anlagen
(IEC 61557-13:2011)

This European Standard was approved by CENELEC on 2011-08-12. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

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Foreword

The text of document 85/387/FDIS, future edition 1 of IEC 61557-13, 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 61557-13:2011.

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) 2012-05-12
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2014-08-12

This standard is to be used in conjunction with EN 61557-1:2007.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 61557-13:2011 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60359

NOTE Harmonized as EN 60359.

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 61000-4-8	2009	Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	EN 61000-4-8	2010
IEC 61010-1	-	Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements	EN 61010-1	-
IEC 61010-2-030	-	Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-030: Particular requirements for testing and measuring circuits	EN 61010-2-030	-
IEC 61010-2-032	2002	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	EN 61010-2-032	2002
IEC 61326-1	-	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements	EN 61326-1	-
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 test, measuring and monitoring equipment used in low-voltage distribution systems	EN 61326-2-2	-
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

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**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 13: Hand-held and hand-manipulated current clamps and sensors
for measurement of leakage currents in electrical distribution systems**

FOREWORD

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International Standard IEC 61557-13 has been prepared by IEC technical committee TC85: Measuring equipment for electrical and electromagnetic quantities.

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

FDIS	Report on voting
85/387/FDIS	85/391/RVD

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

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

This part is to be used in conjunction with IEC 61557-1:2007.

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 stability 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.

INTRODUCTION

During periodical inspections of electrical installations, it is increasingly difficult to carry out measurements of insulation resistances with devices according to IEC 61557-2 when the installations cannot be switched off for long periods and when there are sensitive appliances connected. Therefore, the measurement of leakage currents can provide additional information about the safe or unsafe situation of an installation.

Furthermore, the user has the opportunity to place current clamps and sensors on different points of the distribution system for troubleshooting nuisance tripping of RCDs, alarms of RCMs and other problems caused by low frequency leakage currents.

Unfortunately, the presence of high external magnetic fields has a big impact on the performance of commonly used current clamps and sensors. High uncertainty and non-repeatability of readings can lead to unsafe interpretations.

This standard defines performance classes for current clamps and sensors in relationship to ranges of high external magnetic fields and gives guidance to the user to choose the appropriate measuring device for a given situation.

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