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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
12: Power metering and monitoring devices (PMD)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 61557-12:2022 sisaldab Euroopa standardi EN IEC 61557-12:2022 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 61557-12:2022 consists of the English text of the European standard EN IEC 61557-12:2022.
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EUROPEAN STANDARD

EN IEC 61557-12

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2022

ICS 17.220.20; 29.080.01; 29.240.01

Supersedes EN 61557-12:2008 and all of its amendments and corrigenda (if any)

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 12: Power metering and monitoring devices (PMD)
(IEC 61557-12:2018)**

Sécurité électrique dans les réseaux de distribution basse tension jusqu'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 12: Dispositifs de comptage et de surveillance du réseau électrique (PMD)
(IEC 61557-12:2018)

Elektrische Sicherheit in Niederspannungsnetzen bis AC 1 000 V und DC 1 500 V - Geräte zum Prüfen, Messen oder Überwachen von Schutzmaßnahmen - Teil 12: Geräte zur Energiemessung und -überwachung (PMD)
(IEC 61557-12:2018)

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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European foreword

The text of document 85/644/FDIS, future edition 2 of IEC 61557-12, 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 61557-12:2022.

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
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For the relationship with EU Directive(s) / Regulation(s), see informative Annex ZZ, which is an integral part of this document.

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IEC 60044-7:1999	NOTE	Harmonized as EN 60044-7:2000 (not modified)
IEC 60044-8:2002	NOTE	Harmonized as EN 60044-8:2002 (not modified)
IEC 60051 (series)	NOTE	Harmonized as EN IEC 60051 (series)
IEC 60071-1:2006	NOTE	Harmonized as EN 60071-1:2006 (not modified)
IEC 60359:2001	NOTE	Harmonized as EN 60359:2002 (not modified)
IEC 60364-6	NOTE	Harmonized as HD 60364-6
IEC 60364-8-1	NOTE	Harmonized as HD 60364-8-1
IEC 61000-4-5	NOTE	Harmonized as EN 61000-4-5
IEC 61000-4-7:2002	NOTE	Harmonized as EN 61000-4-7:2002 (not modified)

IEC 61000-4-15	NOTE	Harmonized as EN 61000-4-15
IEC 61010-2-030	NOTE	Harmonized as EN IEC 61010-2-030
IEC 61010-2-031	NOTE	Harmonized as EN 61010-2-031
IEC 61010-2-032	NOTE	Harmonized as EN IEC 61010-2-032
IEC 61140:2001	NOTE	Harmonized as EN 61140:2002 (not modified)
IEC 61557-2:2007	NOTE	Harmonized as EN 61557-2:2007 (not modified)
IEC 61557-3:2007	NOTE	Harmonized as EN 61557-3:2007 (not modified)
IEC 61557-4:2007	NOTE	Harmonized as EN 61557-4:2007 (not modified)
IEC 61557-5:2007	NOTE	Harmonized as EN 61557-5:2007 (not modified)
IEC 61557-7:2007	NOTE	Harmonized as EN 61557-7:2007 (not modified)
IEC 61557-8:2014	NOTE	Harmonized as EN 61557-8:2015 (not modified)
IEC 61557-9:2014	NOTE	Harmonized as EN 61557-9:2015 (not modified)
IEC 61557-13:2011	NOTE	Harmonized as EN 61557-13:2011 (not modified)
IEC 61869-2:2012	NOTE	Harmonized as EN 61869-2:2012 (not modified)
IEC 61869-3:2011	NOTE	Harmonized as EN 61869-3:2011 (not modified)
IEC 62020	NOTE	Harmonized as EN 62020
IEC 62052-11:2003	NOTE	Harmonized as EN 62052-11:2003 (not modified)
IEC 62053 (series)	NOTE	Harmonized as EN 62053 (series)
IEC 62053-21:2003	NOTE	Harmonized as EN 62053-21:2003 (not modified)
IEC 62053-22:2003	NOTE	Harmonized as EN 62053-22:2003 (not modified)
IEC 62053-23:2003	NOTE	Harmonized as EN 62053-23:2003 (not modified)
IEC 62053-24:2014	NOTE	Harmonized as EN 62053-24:2015 (not modified)
IEC 62586 (series)	NOTE	Harmonized as EN 62586-2:2017/A1 (series)
IEC 62586-1	NOTE	Harmonized as EN 62586-1
ISO 50001	NOTE	Harmonized as EN ISO 50001

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

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 60068-2-1	-	Environmental testing - Part 2-1: Tests - Test A: Cold	EN 60068-2-1	-
IEC 60068-2-2	-	Environmental testing - Part 2-2: Tests - Test B: Dry heat	EN 60068-2-2	-
IEC 60068-2-30	-	Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)	EN 60068-2-30	-
IEC 60529	-	Degrees of protection provided by enclosures (IP Code)	-	-
IEC 61000-4-30	2015	Electromagnetic compatibility (EMC) - Part 4-30: Testing and measurement techniques - Power quality measurement methods	EN 61000-4-30	2015
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 61326-1	2012	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements	EN 61326-1	2013
IEC 62053-31	1998	Electricity metering equipment (a.c.) - Particular requirements - Part 31: Pulse output devices for electromechanical and electronic meters (two wires only)	EN 62053-31	1998

Annex ZZ (informative)

Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered

This European Standard has been prepared under a Commission's standardization request relating to harmonized standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZ.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

Table ZZ.1 — Correspondence between this European standard and Annex I of Directive 2014/35/EU [2014 OJ L96]

Safety objectives of Directive 2014/35/EU (Annex I)	Clause(s) / subclause(s) of this EN	Remarks / Notes
1. General conditions		
1 (a) the essential characteristics, the recognition and observance of which will ensure that electrical equipment will be used safely and in applications for which it was made, shall be marked on the electrical equipment, or, if this is not possible, on an accompanying document	1; 2; 3; 4; 5; 6	
1 (b) the electrical equipment, together with its component parts, shall be made in such a way as to ensure that it can be safely and properly assembled and connected	1; 2; 3; 4; 5; 6	
1 (c) the electrical equipment shall be so designed and manufactured as to ensure that protection against the hazards set out in points 2 and 3 is assured, providing that the equipment is used in applications for which it was made and is adequately maintained	Same as those covering safety objectives 2 a) to 2 d) and 3 a) to 3 c) in addition to the clauses 1; 3; 4	
2. Protection against hazards arising from the electrical equipment		
Measures of a technical nature shall be laid down in accordance with point 1, in order to ensure that:		
2 (a) persons and domestic animals are adequately protected against the danger of physical injury or other harm which might be caused by direct or indirect contact	4.9; 4.10; 6.1; 6.2; 6.3	

2 (b) temperatures, arcs or radiation which would cause a danger, are not produced	4.9; 4.10; 6.1; 6.2; 6.3	
2 (c) persons, domestic animals and property are adequately protected against non-electrical dangers caused by the electrical equipment which are revealed by experience	4.9; 4.10; 6.1; 6.2; 6.3	
2 (d) the insulation is suitable for foreseeable conditions	4.9; 4.10; 6.1; 6.2; 6.3	
3. Protection against hazards which may be caused by external influences on the electrical equipment Technical measures shall be laid down in accordance with point 1, in order to ensure that the electrical equipment:		
3 (a) meets the expected mechanical requirements in such a way that persons, domestic animals and property are not endangered	4.9; 4.10; 6.1; 6.2; 6.3	
3 (b) is resistant to non-mechanical influences in expected environmental conditions, in such a way that persons, domestic animals and property are not endangered	4.9; 4.10; 6.1; 6.2; 6.3	
3 (c) does not endanger persons, domestic animals and property in foreseeable conditions of overload	4.10; 5.2; 5.3; 6.1; 6.2; 6.3	

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

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INTERNATIONAL STANDARD

NORME INTERNATIONALE



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Part 12: Power metering and monitoring devices (PMD)

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Partie 12: Dispositifs de comptage et de surveillance du réseau électrique (PMD)



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NORME INTERNATIONALE



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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 12: Power metering and monitoring devices (PMD)**

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This second edition cancels and replaces the first 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) PMD-A has been withdrawn due the fact these devices are now mainly covered by the IEC 62586 series of standards.
- b) Three categories of PMD have been created with a list of minimum required functions for each category.

- c) Added a new Annex A explaining the different applications linked to the relevant standards and devices, and another new Annex C about the power factor conventions.

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

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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.

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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.

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
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