



# SLOVENSKI STANDARD

## SIST EN 61858-1:2014

01-september-2014

Nadomešča:  
SIST EN 61858:2008

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**Sistemi električne izolacije - Toplotno vrednotenje sprememb preverjenega sistema električne izolacije z EIS - 1. del: Žično navitje EIS (IEC 61858-1:2014)**

Electrical insulation systems - Thermal evaluation of modifications to an established EIS - Part 1: Wire-wound winding EIS

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**Ta slovenski standard je istoveten z: EN 61858-1:2014**

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**ICS:**

29.080.30      Izolacijski sistemi      Insulation systems

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EUROPEAN STANDARD

**EN 61858-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2014

ICS 29.080.30

Supersedes EN 61858:2008

English Version

Electrical insulation systems - Thermal evaluation of  
modifications to an established electrical insulation system (EIS)  
- Part 1: Wire-wound winding EIS  
(IEC 61858-1:2014)

Systèmes d'isolation électrique - Évaluation thermique des  
modifications apportées à un système d'isolation électrique  
(SIE) éprouvé - Partie 1: Système d'isolation électrique à  
enroulements à fils  
(CEI 61858-1:2014)

Elektrische Isoliersysteme - Thermische Bewertung von  
Veränderungen an einem erprobten elektrischen  
Isoliersystem (EIS) - Teil 1: EIS mit Runddraht-Wicklungen  
(IEC 61858-1:2014)

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

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

## Foreword

The text of document 112/252/CDV, future edition 1 of IEC 61858-1, prepared by IEC/TC 112 "Evaluation and qualification of electrical insulating materials and systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61858-1:2014.

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) 2014-12-19
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-03-19

This document supersedes EN 61858:2008.

EN 61858-1:2014 includes the following significant technical changes with respect to EN 61858:2008:

- a) this part is specifically for wire-wound winding EIS;
- b) new figures and charts support the contents.

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Endorsement notice

The text of the International Standard IEC 61858-1:2014 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 60034-18-21	NOTE	Harmonized as EN 60034-18-21.
IEC 60317-15	NOTE	Harmonized as EN 60317-15.

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When 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](http://www.cenelec.eu)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60085	2007	Electrical insulation - Thermal evaluation and designation	EN 60085	-
IEC 60172	-	Test procedure for the determination of the temperature index of enamelled winding wires	EN 60172	-
IEC 60216-5	-	Electrical insulating materials - Thermal endurance properties - Part 5: Determination of relative thermal endurance index (RTE) of an insulating material	EN 60216-5	-
IEC 60317-1	-	Specifications for particular types of winding wires - Part 1: Polyvinyl acetal enamelled round copper wire, class 105		-
IEC 60317-2	-	Specifications for particular types of winding wires - Part 2: Solderable polyurethane enamelled round copper wire, class 130, with a bonding layer	EN 60317-2	-
IEC 60317-3	-	Specifications for particular types of winding wires - Part 3: Polyester enamelled round copper wire, class 155		-
IEC 60317-4	-	Specifications for particular types of winding wires - Part 4: Solderable polyurethane enamelled round copper wire, class 130	EN 60317-4	-
IEC 60317-8	-	Specifications for particular types of winding wires - Part 8: Polyesterimide enamelled round copper wire, class 180	EN 60317-8	-
IEC 60317-12	-	Specifications for particular types of winding wires - Part 12: Polyvinyl acetal enamelled round copper wire, class 120	EN 60317-12	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60317-13	-	Specifications for particular types of winding wires - Part 13: Polyester or polyesterimide overcoated with polyamide-imide enamelled round copper wire, class 200	EN 60317-13	-
IEC 60317-19 <sup>1)</sup>	-	Specifications for particular types of winding wires - Part 19: Solderable polyurethane enamelled round copper wire overcoated with polyamide, class 130	EN 60317-19	-
IEC 60317-20	-	Specifications for particular types of winding wires - Part 20: Solderable polyurethane enamelled round copper wire, class 155	EN 60317-20	-
IEC 60317-21	-	Specifications for particular types of winding wires - Part 21: Solderable polyurethane enamelled round copper wire overcoated with polyamide, class 155	EN 60317-21	-
IEC 60317-22	-	Specifications for particular types of winding wires - Part 22 : Polyester or polyesterimide enamelled round copper wire overcoated with polyamide, class 180	EN 60317-22	-
IEC 60317-23	-	Specifications for particular types of winding wires - Part 23: Solderable polyesterimide enamelled round copper wire, class 180	EN 60317-23	-
IEC 60317-25	-	Specifications for particular types of winding wires - Part 25: Polyester or polyesterimide overcoated with polyamide-imide enamelled round aluminium wire, class 200	EN 60317-25	-
IEC 60317-26	-	Specifications for particular types of winding wires - Part 26: Polyamide-imide enamelled round copper wire, class 200	EN 60317-26	-
IEC 60317-34 <sup>1)</sup>	-	Specifications for particular types of winding wires - Part 34: Polyester enamelled round copper wire, class 130 L	EN 60317-34 <sup>1)</sup>	-
IEC 60317-35	-	Specifications for particular types of winding wires - Part 35: Solderable polyurethane enamelled round copper wire, class 155, with a bonding layer	EN 60317-35	-
IEC 60317-36	-	Specifications for particular types of winding wires - Part 36: Solderable polyesterimide enamelled round copper wire, class 180, with a bonding layer	EN 60317-36	-

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<sup>1)</sup> Withdrawn publication.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60317-37	-	Specifications for particular types of winding wires - Part 37: Polyesterimide enamelled round copper wire, class 180, with a bonding layer	EN 60317-37	-
IEC 60317-38	-	Specifications for particular types of winding wires - Part 38: Polyester or polyesterimide overcoated with polyamide-imide enamelled round copper wire, class 200, with a bonding layer	EN 60317-38	-
IEC 60317-42	-	Specifications for particular types of winding wires - Part 42: Polyester-amide-imide enamelled round copper wire, class 200	EN 60317-42	-
IEC 60317-43	-	Specifications for particular types of winding wires - Part 43: Aromatic polyimide tape wrapped round copper wire, class 240	EN 60317-43	-
IEC 60317-46	-	Specifications for particular types of winding wires - Part 46: Aromatic polyimide enamelled round copper wire, class 240	EN 60317-46	-
IEC 60317-48	-	Specifications for particular types of winding wires - Part 48: Glass-fibre wound resin or varnish impregnated, bare or enamelled round copper wire, temperature index 155	EN 60317-48	-
IEC 60317-50	-	Specifications for particular types of winding wires - Part 50: Glass-fibre wound silicone resin or varnish impregnated, bare or enamelled round copper wire, temperature index 200	EN 60317-50	-
IEC 60317-51	-	Specifications for particular types of winding wires - Part 51: Solderable polyurethane enamelled round copper wire, class 180	EN 60317-51	-
IEC 60317-53	-	Specifications for particular types of winding wires - Part 53: Aromatic polyamide (aramid) tape wrapped rectangular copper wire, temperature index 220	EN 60317-53	-
IEC 60317-54 <sup>1)</sup>	-	Specifications for particular types of winding wires - Part 54: Polyester enamelled round copper wire, class 155L	-	-
IEC 60317-55	-	Specifications for particular types of winding wires - Part 55: Solderable polyurethane enamelled round copper wire overcoated with polyamide, Class 180	EN 60317-55	-

<sup>1)</sup> Withdrawn publication.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60317-57	-	Specifications for particular types of winding wires - Part 57: Polyamide-imide enamelled round copper wire, class 220	EN 60317-57	-
IEC 60505	-	Evaluation and qualification of electrical insulation systems	EN 60505	-
IEC 61033	-	Test methods for the determination of bond strength of impregnating agents to an enamelled wire substrate	EN 61033	-
IEC 61857	Series	Electrical insulation systems - Procedures for thermal evaluation	EN 61857	Series
IEC 61857-1	2008	Electrical insulation systems - Procedures for thermal evaluation - Part 1: General requirements - Low-voltage	EN 61857-1	2009
IEC 61857-21	-	Electrical insulation systems - Procedures for thermal evaluation - Part 21: Specific requirements for general-purpose models - Wire-wound applications	EN 61857-21	-
IEC 62317-2	-	Ferrite cores - Dimensions - Part 2: Pot-cores for use in telecommunications, power supply, and filter applications	EN 62317-2	-

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IEC 61858-1

Edition 1.0 2014-02

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Electrical insulation systems – Thermal evaluation of modifications to an established electrical insulation system (EIS) –  
Part 1: Wire-wound winding EIS**

**Systèmes d'isolation électrique – Évaluation thermique des modifications apportées à un système d'isolation électrique (SIE) éprouvé –  
Partie 1: Système d'isolation électrique à enroulements à fils**

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INTERNATIONALE

PRICE CODE  
CODE PRIX



ICS 29.080.30

ISBN 978-2-8322-1410-7

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**ELECTRICAL INSULATION SYSTEMS –  
THERMAL EVALUATION OF MODIFICATIONS TO  
AN ESTABLISHED ELECTRICAL INSULATION SYSTEM (EIS) –****Part 1: Wire-wound winding EIS**

## 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 61858-1 has been prepared by IEC technical committee 112: Evaluation and qualification of electrical insulating materials and systems.

This first edition of IEC 61858-1 cancels and replaces the third edition of IEC 61858, published in 2008. It constitutes a technical and editorial revision.

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

- a) this part is specifically for wire-wound winding EIS;
- b) new figures and charts support the contents.