

Electrical insulation systems - Procedures for thermal evaluation - Part 31: Applications with a designed life of 5 000 h or less

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 61857-31:2017 sisaldab Euroopa standardi EN 61857-31:2017 ingliskeelset teksti.	This Estonian standard EVS-EN 61857-31:2017 consists of the English text of the European standard EN 61857-31:2017.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 14.04.2017.	Date of Availability of the European standard is 14.04.2017.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 29.080.30

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

ICS 29.080.30

English Version

Electrical insulation systems - Procedures for thermal evaluation
- Part 31: Applications with a designed life of 5 000 h or less
(IEC 61857-31:2017)

Systèmes d'isolement électrique - Modes opératoires pour
l'évaluation thermique - Partie 31 : Applications à durée de
vie nominale inférieure à 5 000 heures
(IEC 61857-31:2017)

Elektrische Isoliersysteme - Verfahren zur thermischen
Bewertung - Teil 31: Anwendungen mit einer vorgesehenen
Betriebsdauer von weniger als 5 000 h
(IEC 61857-31:2017)

This European Standard was approved by CENELEC on 2017-02-28. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

European foreword

The text of document 112/356/CDV, future edition 1 of IEC 61857-31, 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 61857-31:2017.

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) 2017-11-28
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-02-28

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 61857-31:2017 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 61857 (series)

NOTE Harmonized as EN 61857 (series).

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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60505	-	Evaluation and qualification of electrical insulation systems	EN 60505	-
IEC 61857-1	-	Electrical insulation systems - Procedures for thermal evaluation -- Part 1: General requirements - Low-voltage	EN 61857-1	-
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 61857-22	-	Electrical insulation systems - Procedures for thermal evaluation -- Part 22: Specific requirements for encapsulated-coil model - Wire-wound electrical insulation system (EIS)	EN 61857-22	-
IEC/TR 61857-2	-	Electrical insulation systems - Procedures for thermal evaluation - Part 2: Selection of the appropriate test method for evaluation and classification of electrical insulation systems	-	-

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references	6
3 Terms and definitions	6
4 EIS evaluation	7
5 Test objects.....	7
6 Test procedures	7
6.1 Procedure A: Establishing a TE for applications with a designed life of 1 500 h or less: one-temperature ageing.....	7
6.2 Procedure B: Establishing a TE rating for applications with a designed life of 5 000 h or less: one-temperature ageing.....	8
6.3 Procedure C: Establishing a TE rating for applications with a designed life of 5 000 h or less: two-temperature ageing	8
7 Data analysis.....	8
7.1 Analysis – Test Procedures A and B (See 6.1 and 6.2)	8
7.2 Analysis – Test Procedure C (See 6.3)	9
8 Test report.....	9
Bibliography.....	10

Preview generated by EVS

INTRODUCTION

IEC 61857-1 provides the general structure to be followed for an electrical insulation system (EIS) evaluation and classification.

IEC TR 61857-2 provides guidelines to identify the application and to select the preferred test method based on the application.

This part of IEC 61857 provides a test method for EIS applications, such as the automotive industry, when the designed life is 5 000 h or less.

The selection of this test method can be decided by the end product application.

This document is a preview generated by EVS