# **EESTI STANDARD**

# EVS-EN IEC 60071-2:2018

- Part . Insulation co-ordination - Part 2: Application guidelines



## EESTI STANDARDI EESSÕNA

### NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 60071-2:2018 sisaldab Euroopa standardi EN IEC 60071-2:2018 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 60071-2:2018 consists of the English text of the European standard EN IEC 60071-2:2018.
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 04.05.2018.	Date of Availability of the European standard is 04.05.2018.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.
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#### ICS 29.080

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# EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

# EN IEC 60071-2

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**English Version** 

### Insulation co-ordination - Part 2: Application guidelines (IEC 60071-2:2018)

Coordination de l'isolement - Partie 2: Lignes directrices en matière d'application (IEC 60071-2:2018) Isolationskoordination - Teil 2: Anwendungsrichtlinie (IEC 60071-2:2018)

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### **European foreword**

The text of document 28/255/FDIS, future edition 4 of IEC 60071-2, prepared by IEC/TC 28 "Insulation co-ordination" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60071-2:2018.

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)	2019-01-20
•	latest date by which the national standards conflicting with the	(dow)	2021-04-20

document have to be withdrawn

This document supersedes EN 60071-2:1997.

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The text of the International Standard IEC 60071-2:2018 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 60099-4:2014	NOTE	Harmonized as EN 60099-2014 (not modified).
IEC 60099-5	NOTE	Harmonized as EN IEC 60099-5.
IEC 60099-8	NOTE	Harmonized as EN IEC 60099-8.
IEC 60507	NOTE	Harmonized as EN 60507.
IEC 62271-1:2017	NOTE	Harmonized as EN 62271-1:2017 (not modified).
IEC 62271-100:2008	NOTE	Harmonized as EN 62271-100:2009 (not modified).

# 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: <u>www.cenelec.eu</u>.

Publication	<u>Year</u>	Title	<u>EN/HD</u>	<u>Year</u>
IEC 60060-1	2010	High-voltage test techniques Part 1: General definitions and test requirements	EN 60060-1	2010
IEC 60071-1	2006	Insulation co-ordination Part 1: Definitions, principles and rules	EN 60071-1	2006
+ A1	2010		+ A1	2010
IEC 60505	2011	Evaluation and qualification of electrical insulation systems	EN 60505	2011
IEC/TS 60815-1	-	Selection and dimensioning of high-voltage insulators intended for use in polluted conditions - Part 1: Definitions, information and general principles	9-	-
ISO 2533	1975	Standard Atmosphere	-	-
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#### **INSULATION CO-ORDINATION –**

#### Part 2: Application guidelines



#### 1 Scope

This part of IEC 60071 constitutes application guidelines and deals with the selection of insulation levels of equipment or installations for three-phase electrical systems. Its aim is to give guidance for the determination of the rated withstand voltages for ranges I and II of IEC 60071-1 and to justify the association of these rated values with the standardized highest voltages for equipment.

This association is for insulation co-ordination purposes only. The requirements for human safety are not covered by this document.

This document covers three-phase systems with nominal voltages above 1 kV. The values derived or proposed herein are generally applicable only to such systems. However, the concepts presented are also valid for two-phase or single-phase systems.

This document covers phase-to-earth, phase-to-phase and longitudinal insulation.

This document is not intended to deal with routine tests. These are to be specified by the relevant product committees.

The content of this document strictly follows the flow chart of the insulation co-ordination process presented in Figure 1 of IEC 60071-1:2006. Clauses 4 to 7 correspond to the squares in this flow chart and give detailed information on the concepts governing the insulation co-ordination process which leads to the establishment of the required withstand levels.

This document emphasizes the necessity of considering, at the very beginning, all origins, all classes and all types of voltage stresses in service irrespective of the range of highest voltage for equipment. Only at the end of the process, when the selection of the standard withstand voltages takes place, does the principle of covering a particular service voltage stress by a standard withstand voltage apply. Also, at this final step, this document refers to the correlation made in IEC 60071-1 between the standard insulation levels and the highest voltage for equipment.

The annexes contain examples and detailed information which explain or support the concepts described in the main text, and the basic analytical techniques used.

#### 2 Normative references

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.

IEC 60060-1:2010, High-voltage test techniques – Part 1: General definitions and test requirements

IEC 60071-1:2006, *Insulation co-ordination – Part 1: Definitions, principles and rules* IEC 60071-1:2006/AMD1:2010