

### SLOVENSKI STANDARD SIST EN IEC 62896:2024

01-november-2024

Hibridni izolatorji za izmenične in enosmerne visokonapetostne aplikacije za izmenične napetosti nad 1000 V in enosmerne napetosti nad 1500 V - Definicije, preskusne metode, merila sprejemljivost (IEC 62896:2024)

Hybrid insulators for AC and DC for high-voltage applications greater than 1 000 V AC and 1 500 V DC - Definitions, test methods and acceptance criteria (IEC 62896:2024)

Hybridisolatoren für Wechsel- und Gleichspannungsanwendungen für Spannungen größer 1000 V AC und 1500 V DC – Definitionen, Prüfmethoden und Annahmebedingungen (IEC 62896:2024)

Isolateurs hybrides pour applications haute tension en courant alternatif et en courant continu supérieures à 1 000 V en courant alternatif et 1 500 V en courant continu - Définitions, méthodes d'essai et critères d'acceptationb (IEC 62896:2024)

ttps://standards.iteh.ai/catalog/standards/sist/4f7a13d0-b71a-4eac-98c1-48d489cbb4fa/sist-en-jec-62896-2024

Ta slovenski standard je istoveten z: EN IEC 62896:2024

ICS:

29.080.10 Izolatorji Insulators

SIST EN IEC 62896:2024 en,fr,de

### iTeh Standards (https://standards.iteh.ai) Document Preview

SIST EN IEC 62896:2024

https://standards.iteh.ai/catalog/standards/sist/4f7a13d0-b71a-4eac-98c1-48d489cbb4fa/sist-en-jec-62896-2024

### EUROPEAN STANDARD NORME EUROPÉENNE FUROPÄISCHE NORM

**EN IEC 62896** 

June 2024

ICS 29.080.10

#### **English Version**

Hybrid insulators for AC and DC for high-voltage applications greater than 1 000 V AC and 1 500 V DC - Definitions, test methods and acceptance criteria (IEC 62896:2024)

Isolateurs hybrides pour applications haute tension en courant alternatif et en courant continu supérieures à 1 000 V en courant alternatif et 1 500 V en courant continu - Définitions, méthodes d'essai et critères d'acceptation (IEC 62896:2024)

Hybridisolatoren für Wechsel- und Gleichspannungsanwendungen für Spannungen größer 1000 V AC und 1500 V DC - Begriffe, Prüfverfahren und Annahmebedingungen (IEC 62896:2024)

This European Standard was approved by CENELEC on 2024-06-18. 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

#### EN IEC 62896:2024 (E)

### **European foreword**

The text of document 36/594/FDIS, future edition 1 of IEC 62896, prepared by IEC/TC 36 "Insulators" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62896:2024.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2025-03-18 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2027-06-18 document have to be withdrawn

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

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

### **Endorsement notice**

The text of the International Standard IEC 62896:2024 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 standard indicated:

IEC 60273	NOTE	Approved as HD 578 S1
IEC 60305 eh.ai/ca	NOTE tand	Approved as EN IEC 60305
IEC 60433	NOTE	Approved as EN IEC 60433
IEC 60672-1	NOTE	Approved as EN 60672-1
IEC 60672-2	NOTE	Approved as EN 60672-2
IEC 60672-3	NOTE	Approved as EN 60672-3
IEC 61109	NOTE	Approved as EN 61109
IEC 61952	NOTE	Approved as EN 61952
IEC 62231	NOTE	Approved as EN 62231

### 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.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60050-471	2007	International Electrotechnical Vocabulary - Part 471: Insulators	-	-
IEC 60168	- (l. 4	Tests on indoor and outdoor post insulators of ceramic material or glass for systems with nominal voltages greater than 1000 V	EN 60168	-
IEC 60383-1	2023	Insulators for overhead lines with a nominal voltage above 1000 V - Part 1: Ceramic or glass insulator units for a.c. systems - Definitions, test methods and acceptance criteria	EN IEC 60383-1	2023
IEC 60383-2	alog <sup>7</sup> sta	Insulators for overhead lines with a nominal voltage above 1000 V - Part 2: Insulator strings and insulator sets for a.c. systems - Definitions, test methods and acceptance criteria	EN 60383-2	-iec <del>-</del> 62896-20
IEC 62155	-	Hollow pressurized and unpressurized ceramic and glass insulators for use in electrical equipment with rated voltages greater than 1 000 V	EN 62155	-
IEC 62217	-	Polymeric HV insulators for indoor and outdoor use - General definitions, test methods and acceptance criteria	EN 62217	-
IEC 61211	-	Insulators of ceramic material or glass for overhead lines with a nominal voltage greater than 1 000 V - Impulse puncture testing in air	EN 61211	-
IEC 61325	-	Insulators for overhead lines with a nominal voltage above 1000 V - Ceramic or glass insulator units for d.c. systems - Definitions, test methods and acceptance criteria	EN 61325	-

### iTeh Standards (https://standards.iteh.ai) Document Preview

SIST EN IEC 62896:2024

https://standards.iteh.ai/catalog/standards/sist/4f7a13d0-b71a-4eac-98c1-48d489cbb4fa/sist-en-jec-62896-2024



IEC 62896

Edition 1.0 2024-05

## INTERNATIONAL STANDARD

## NORME INTERNATIONALE

Hybrid insulators for AC and DC for high-voltage applications greater than 1 000 V AC and 1 500 V DC – Definitions, test methods and acceptance criteria

Isolateurs hybrides pour applications haute tension en courant alternatif et en courant continu supérieures à 1 000 V en courant alternatif et 1 500 V en courant continu – Définitions, méthodes d'essai et critères d'acceptation

SIST EN IEC 62896:2024

https://standards.iteh.ai/catalog/standards/sist/4f7a13d0-b71a-4eac-98c1-48d489cbb4fa/sist-en-jec-62896-2024

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 29.080.10 ISBN 978-2-8322-8755-2

Warning! Make sure that you obtained this publication from an authorized distributor.

Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.

### CONTENTS

FΟ	REWORD.		3
IN٦	TRODUCTI	ON	5
1	Scope		6
2	Normativ	e references	6
3	Terms ar	nd definitions	7
4	Identifica	tion	11
5		nental conditions	
6		es	
7		ation of tests	
		sign tests	
		pe tests	
	,,	nple testsnple tests	
		utine tests	
8		ests	
	•	neral	
		sts on interfaces and connections of end fittings	
	8.2.1	General	
	8.2.2	Pre-stressing	
	8.2.3	Verification tests	
		sts on Shed and Housing Material	
	8.3.1	Hardness test	
	8.3.2	Accelerated weathering test	
	8.3.3	Tracking and erosion test	17
	8.3.4	Flammability test	17
	8.3.5 eh.a	Hydrophobicity transfer test	<del>6<b>17</b>96-2024</del>
	8.4 Tes	t on core material	17
	8.4.1	Porosity test	17
9	Type test	ts	17
	9.1 Ger	neral	17
	9.2 Ele	ctrical tests	17
		chanical tests	
10	Sample t	ests	18
11	Routine t	ests	18
	11.1 Ger	neral	18
	11.2 Vis	ual examination	18
Bib	liography		19
Fig	ure 1 – Cla	assification of insulator designs	8
		ermal cycle test	
		uired design and type tests	
ıal	pie 2 – Des	ign tests	15

#### INTERNATIONAL ELECTROTECHNICAL COMMISSION

# HYBRID INSULATORS FOR AC AND DC HIGH-VOLTAGE APPLICATIONS GREATER THAN 1 000 V AC AND 1 500 V DC – DEFINITIONS, TEST METHODS AND ACCEPTANCE CRITERIA

#### **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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at https://patents.iec.ch. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 62896 has been prepared by IEC technical committee 36: Insulators. It is an International Standard.

This first edition cancels and replaces the IEC TS 62896 published in 2015. This edition constitutes a technical revision.

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

- a) modifications of terms and definitions;
- b) modifications of tests procedures included in IEC TR 62039 and IEC 62217 (Hydrophobicity transfer test):
- c) harmonization of Table 1 (Tests to be carried out after design and type changes) with other product standards and IEC 62217.

– 4 –

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

Draft	Report on voting	
36/594/FDIS	36/597/RVD	

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at <a href="https://www.iec.ch/members\_experts/refdocs">www.iec.ch/members\_experts/refdocs</a>. The main document types developed by IEC are described in greater detail at <a href="https://www.iec.ch/publications">www.iec.ch/publications</a>.

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

- reconfirmed,
- withdrawn, or
- revised.

iTeh Standards (https://standards.iteh.ai) Document Preview

SIST EN IEC 62896:2024

https://standards.iteh.ai/catalog/standards/sist/4f7a13d0-b71a-4eac-98c1-48d489cbb4fa/sist-en-iec-62896-2024