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Standards

Irish Standard  
I.S. EN 62231-1:2016

# Composite station post insulators for substations with AC voltages greater than 1 000 V up to 245 kV - Part 1: Dimensional, mechanical and electrical characteristics

**I.S. EN 62231-1:2016**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

I.S. EN 62231-1:2016 is the adopted Irish version of the European Document EN 62231-1:2016, Composite station post insulators for substations with AC voltages greater than 1 000 V up to 245 kV - Part 1: Dimensional, mechanical and electrical characteristics

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EUROPEAN STANDARD

**EN 62231-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2016

ICS 29.080.10

English Version

**Composite station post insulators for substations with AC  
voltages greater than 1 000 V up to 245 kV -  
Part 1: Dimensional, mechanical and electrical characteristics  
(IEC 62231-1:2015)**

Supports isolants composites destinés aux postes à courant alternatif de tensions supérieures à 1 000 V jusqu'à 245 kV -  
Partie 1: Caractéristiques dimensionnelles, mécaniques et électriques  
(IEC 62231-1:2015)

Verbund-Stationstützisolatoren für Unterwerke für Wechselspannungen größer 1 000 V bis einschließlich 245 kV - Teil 1: Maßliche, mechanische und elektrische Eigenschaften  
(IEC 62231-1:2015)

This European Standard was approved by CENELEC on 2015-11-17. 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.

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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**

**EN 62231-1:2016**

**European foreword**

The text of document 36/372/FDIS, future edition 1 of IEC 62231-1, prepared by IEC/TC 36 "Insulators" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62231-1:2016.

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) 2016-08-17
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-11-17

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In the official version, for Bibliography, the following note has to be added for the standard indicated :

IEC 60060-1                      NOTE                      Harmonized as EN 60060-1.

## 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/TS 60815-1	2008	Selection and dimensioning of high-voltage insulators intended for use in polluted conditions - Part 1: Definitions, information and general principles	-	-
IEC/TS 60815-3	-	Selection and dimensioning of high-voltage insulators intended for use in polluted conditions - Part 3: Polymer insulators for a.c. systems	-	-
IEC 62231	2006	Composite station post insulators for substations with a.c. voltages greater than 1 000 V up to 245 kV - Definitions, test methods and acceptance criteria	EN 62231	2006

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**IEC 62231-1**

Edition 1.0 2015-10

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**

**Composite station post insulators for substations with AC voltages greater than  
1 000 V up to 245 kV –**

**Part 1: Dimensional, mechanical and electrical characteristics**

**Supports isolants composites destinés aux postes à courant alternatif de  
tensions supérieures à 1 000 V jusqu'à 245 kV –**

**Partie 1: Caractéristiques dimensionnelles, mécaniques et électriques**

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# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**

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**Composite station post insulators for substations with AC voltages greater than  
1 000 V up to 245 kV –  
Part 1: Dimensional, mechanical and electrical characteristics**

**Supports isolants composites destinés aux postes à courant alternatif de  
tensions supérieures à 1 000 V jusqu'à 245 kV –  
Partie 1: Caractéristiques dimensionnelles, mécaniques et électriques**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**COMPOSITE STATION POST INSULATORS  
FOR SUBSTATIONS WITH AC VOLTAGES GREATER  
THAN 1 000 V UP TO 245 kV –**

**Part 1: Dimensional, mechanical and electrical characteristics**

## FOREWORD

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International Standard IEC 62231-1 has been prepared by IEC technical committee 36: Insulators.

The text of this standard is based on the following documents:

FDIS	Report on voting
36/372/FDIS	36/373/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62231 series, published under the general title *Composite station post insulators for substations with a.c. voltages greater than 1 000 V up to 245 kV*, can be found on the IEC website.

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

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

# COMPOSITE STATION POST INSULATORS FOR SUBSTATIONS WITH AC VOLTAGES GREATER THAN 1 000 V UP TO 245 kV –

## Part 1: Dimensional, mechanical and electrical characteristics

### 1 Scope

This part of IEC 62231 is applicable to composite station post insulators for substations with a.c. voltages greater than 1 000 V up to 245 kV.

It also applies to composite station post insulators of similar design used in power stations of railway systems.

This part of IEC 62231 specifies main dimensions and values for mechanical and electrical characteristics of composite station post insulators.

NOTE The composite station post insulators covered by this standard are primarily intended for outdoor service, but can also be used indoor.

### 2 Normative references

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.

IEC 60815-1:2008, *Selection and dimensioning of high-voltage insulators intended for use in polluted conditions – Part 1: Definitions, information and general principles*

IEC 60815-3, *Selection and dimensioning of high-voltage insulators intended for use in polluted conditions – Part 3: Polymer insulators for a.c. systems*

IEC 62231:2006, *Composite station post insulators for substations with a.c. voltages greater than 1 000 V up to 245 kV – Definitions, test methods and acceptance criteria*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1

##### **composite station post insulator**

post insulator consisting of a solid load bearing cylindrical insulating core, a housing and end fittings attached to the insulating core

[SOURCE: IEC 62231:2006, 3.1]

#### 3.2

##### **creepage distance**

shortest distance or the sum of the shortest distances along the surface on an insulator between two conductive parts which normally have the operating voltage between them

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