

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Composite string insulator units for overhead lines with a nominal voltage
greater than 1 000 V –
Part 2: Dimensional and electrical characteristics**

**Isolateurs composites destinés aux lignes aériennes de tension nominale
supérieure à 1 000 V –
Partie 2: Caractéristiques dimensionnelles et électriques**

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REDLINE VERSION

VERSION REDLINE



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Part 2: Dimensional and electrical characteristics

Isolateurs composites destinés aux lignes aériennes de tension nominale supérieure à 1 000 V –

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CONTENTS

FOREWORD	3
INTRODUCTION to Amendment 2	5
1 Scope	6
2 Normative references	6
3 Mechanical and dimensional characteristics	7
4 Electrical characteristics	7
5 Designation	7
6 Marking	7
7 Tolerances	7
8 Field control and arc protection devices	8
Annex A (informative) Information on creepage distance	11
Table 1 – Designation and characteristics of composite insulators	8

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMPOSITE STRING INSULATOR UNITS FOR OVERHEAD LINES WITH A NOMINAL VOLTAGE GREATER THAN 1 000 V –

Part 2: Dimensional and electrical characteristics

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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This consolidated version of the official IEC Standard and its amendments has been prepared for user convenience.

IEC 61466-2 edition 1.2 contains the first edition (1998-08) [documents 36B/179/FDIS and 36B/183/RVD], its amendment 1 (2002-01) [documents 36B/202/FDIS and 36B/204/RVD] and its amendment 2 (2018-05) [documents 36/427/FDIS and 36/429/RVD].

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendments 1 and 2. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 61466-2 has been prepared by subcommittee 36B: Insulators for overhead lines, of IEC technical committee 36: Insulators.

Annex A is for information only.

The committee has decided that the contents of the base publication and its amendments 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.

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INTRODUCTION to Amendment 2

Amendment 2 implements the introduction of UHV (ultra-high voltage) applications and the relevant characteristics of composite insulators.

COMPOSITE STRING INSULATOR UNITS FOR OVERHEAD LINES WITH A NOMINAL VOLTAGE GREATER THAN 1 000 V –

Part 2: Dimensional and electrical characteristics

1 Scope

This part of IEC 61466 is applicable to composite string insulator ~~s~~ units with a specified mechanical load (SML) of 40 kN ~~and 70 kN~~ to 600 kN for AC overhead ~~distribution~~ lines with a nominal voltage greater than 1 000 V and a frequency not greater than 100 Hz.

It also applies to insulators of similar design used in substations or ~~on electric traction lines~~ for railway applications.

This standard applies to string insulator units of composite type with ~~couplings~~ fittings in accordance with IEC 61466-1.

This standard ~~prescribes specified~~ specifies values for electrical and dimensional characteristics ~~of for composite string insulators units~~ for overhead ~~distribution~~ lines with a ~~highest~~ minimum lightning impulse withstand voltage (BIL) ~~level of 325 kV~~ up to 3 100 kV and a specified mechanical load (SML) of 40 kN ~~and 70 kN~~ to 600 kN.

NOTE General definitions and methods of testing are given in IEC 61109.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61466. At the time of publication, the editions indicated were valid. All normative documents are subjected to revision, and parties to agreements based on this part of IEC 61466 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60071-1:1993, *Insulation co-ordination – Part 1: Definitions, principles and rules*

IEC 60071-2:1976, *Insulation co-ordination – Part 2: Application guide*

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 61109:1992, *Composite insulators for a.c. overhead lines with a nominal voltage greater than 1 000 V – Definitions, test methods and acceptance criteria*

IEC 61466-1:1997, *Composite string insulator units for overhead lines with a nominal voltage greater than 1 000 V – Part 1: Standard strength classes and end fittings*

FINAL VERSION

VERSION FINALE

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Part 2: Dimensional and electrical characteristics

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Partie 2: Caractéristiques dimensionnelles et électriques

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Part 2: Dimensional and electrical characteristics

1 Scope

This part of IEC 61466 is applicable to composite string insulator units with a specified mechanical load (SML) of 40 kN to 600 kN for AC overhead lines with a nominal voltage greater than 1 000 V and a frequency not greater than 100 Hz.

It also applies to insulators of similar design used in substations or for railway applications.

This standard applies to string insulator units of composite type with fittings in accordance with IEC 61466-1.

This standard specifies values for electrical and dimensional characteristics for composite insulators for overhead lines with a minimum lightning impulse withstand voltage (BIL) up to 3 100 kV and a specified mechanical load (SML) of 40 kN to 600 kN.

NOTE General definitions and methods of testing are given in IEC 61109.

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