



NSAI
Standards

Irish Standard
I.S. EN 60871-4:2014

Shunt capacitors for AC power systems having a rated voltage above 1 000 V - Part 4: Internal fuses

I.S. EN 60871-4:2014

Incorporating amendments/corrigenda/National Annexes issued since publication:

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NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

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EUROPEAN STANDARD

EN 60871-4

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2014

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Supersedes EN 60871-4:1996

English Version

**Shunt capacitors for AC power systems having a rated voltage
above 1 000 V - Part 4: Internal fuses
(IEC 60871-4:2014)**

Condensateurs shunt pour réseaux à courant alternatif de
tension assignée supérieure à 1 000 V - Partie 4: Fusibles
internes
(CEI 60871-4:2014)

Parallelkondensatoren für Wechselspannungs-
Starkstromanlagen mit einer Bemessungsspannung über
1 000 V - Teil 4: Eingebaute Sicherungen
(IEC 60871-4:2014)

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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

Foreword

The text of document 33/548/FDIS, future edition 2 of IEC 60871-4, prepared by IEC/TC 33, "Power capacitors and their applications" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60871-4:2014.

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) 2015-02-01
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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 60871-1 | 2005 | Shunt capacitors for a.c. power systems having a rated voltage above 1 000 V -- Part 1: General | EN 60871-1 | 2005 |

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IEC 60871-4

Edition 2.0 2014-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Shunt capacitors for AC power systems having a rated voltage above 1 000 V –
Part 4: Internal fuses**

**Condensateurs shunt pour réseaux à courant alternatif de tension assignée
supérieure à 1 000 V –
Partie 4: Fusibles internes**

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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

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IEC 60871-4

Edition 2.0 2014-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Shunt capacitors for AC power systems having a rated voltage above 1 000 V –
Part 4: Internal fuses**

**Condensateurs shunt pour réseaux à courant alternatif de tension assignée
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Partie 4: Fusibles internes**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SHUNT CAPACITORS FOR AC POWER SYSTEMS HAVING A RATED VOLTAGE ABOVE 1 000 V –

Part 4: Internal fuses

FOREWORD

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International Standard IEC 60871-4 has been prepared by IEC technical committee 33: Power capacitors and their applications.

This second edition cancels and replaces the first edition published in 1996. This edition constitutes a technical revision.

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

- The disconnecting requirements have been modified.

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

| | |
|-------------|------------------|
| FDIS | Report on voting |
| 33/548/FDIS | 33/561/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 60871 series, published under the general title *Shunt capacitors for AC power systems having a rated voltage above 1 000 V*, 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.

SHUNT CAPACITORS FOR AC POWER SYSTEMS HAVING A RATED VOLTAGE ABOVE 1 000 V –

Part 4: Internal fuses

1 Scope and object

This part of IEC 60871 applies to internal fuses which are designed to isolate faulty capacitor elements, in order to allow operation of the remaining parts of that capacitor unit and the bank in which the capacitor unit is connected. Such fuses are not a substitute for a switching device such as a circuit-breaker, or for external protection of the capacitor bank or any part thereof.

The object of this part of IEC 60871 is to formulate requirements regarding performance and testing and to provide a guide for coordination of fuse protection.

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 60871-1:2005, *Shunt capacitors for a.c. power systems having a rated voltage above 1000 V – Part 1: General*

3 Terms and definitions

For the purpose of this part of IEC 60871, the terms and definitions in IEC 60871-1, as well as the following, apply.

3.1

rated voltage of a capacitor element

U_{Ne}

r.m.s. value of the alternating voltage for which the capacitor element has been designed

4 Performance requirements

4.1 General

The fuse is connected in series to the element(s) which the fuse is intended to isolate if the element(s) becomes faulty. The range of currents and voltages for the fuse is therefore dependent on the capacitor design, and in some cases also on the bank in which the fuse is connected.

The requirements are valid for a bank or a capacitor switched by restrike-free circuit-breakers. If the circuit-breakers are not restrike-free, other requirements shall be agreed between manufacturer and purchaser.

The operation of an internal fuse is in general determined by one or both of the two following factors:

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