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REDLINE VERSION

Kraftkondensatorer – Kondensatorbatterier för faskompensering, för lågspänning

*Power capacitors –
Low-voltage power factor correction banks*

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REDLINE VERSION



Power capacitors – Low-voltage power factor correction banks

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 31.060.70

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**POWER CAPACITORS –
LOW-VOLTAGE POWER FACTOR CORRECTION BANKS****FOREWORD**

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This Redline version is not an official IEC Standard and is intended only to provide the user with an indication of what changes have been made to the previous version. Only the current version of the standard is to be considered the official document.

This Redline version provides you with a quick and easy way to compare all the changes between this standard and its previous edition. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

International Standard IEC 61921 has been prepared by IEC technical committee 33: Power capacitors and their applications.

This second edition cancels and replaces the first edition published in 2003. It constitutes a technical revision.

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

- numerous changes regarding verification methods to align with IEC 61439-1;
- modification of marking;
- add routine verification of rated output;
- new Annex D with guidance on methods for temperature rise verification;
- update of normative references;
- general editorial review.

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

FDIS	Report on voting
33/607/FDIS	33/611/RVD

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

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

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

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- withdrawn,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

IMPORTANT – The “colour inside” logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this publication using a colour printer.

POWER CAPACITORS – LOW-VOLTAGE POWER FACTOR CORRECTION BANKS

1 Scope

This International Standard is applicable to low-voltage AC **shunt** capacitor banks intended to be used for power factor correction purposes, **possibly** equipped with a built-in switchgear and controlgear apparatus capable of connecting to or disconnecting from the mains part(s) of the bank with the aim to correct its power factor.

Low-voltage power factor correction banks if not otherwise indicated hereinafter and where applicable ~~shall~~ comply with the requirements of ~~IEC 60439-1 and those of IEC 60439-3~~ IEC 61439-1 and IEC 61439-2.

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 60439-1:1999, Low-voltage switchgear and controlgear assemblies – Part 1: Type-tested and partially type-tested assemblies~~

~~IEC 60439-3:1990, Low-voltage switchgear and controlgear assemblies – Part 3: Particular requirements for low-voltage switchgear and controlgear assemblies intended to be installed in places where unskilled persons have access for their use – Distribution boards~~

IEC 60831-1:1996 2014, Shunt power capacitors of the self-healing type for AC systems having a rated voltage up to and including 1 000 V – Part 1: General – Performance, testing and rating – Safety requirements – Guide for installation and operation

IEC 60931-1:1996, Shunt power capacitors of the non-self-healing type for AC systems having a rated voltage up to and including 1000 V – Part 1: General – Performance, testing and rating – Safety requirements – Guide for installation and operation

IEC 61439-1:2011, Low-voltage switchgear and controlgear assemblies – Part 1: General rules

IEC 61439-2:2011, Low-voltage switchgear and controlgear assemblies – Part 2: Power switchgear and controlgear assemblies

IEC 61642:1997, Industrial AC networks affected by harmonics – Application of filters and shunt capacitors

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Kraftkondensatorer – Kondensatorbatterier för faskompensering, för lågspänning

*Power capacitors –
Low-voltage power factor correction banks*

Som svensk standard gäller europastandarden EN IEC 61921:2025. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 61921:2025.

Nationellt förord

Europastandarden EN IEC 61921:2025

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61921, Second edition, 2017 - Power capacitors - Low-voltage power factor correction banks**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 61921, utg 1:2003 med eventuella tillägg, ändringar och rättelser gäller ej fr o m 2028-08-31.

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English Version

Power capacitors - Low-voltage power factor correction banks (IEC 61921:2017)

Condensateurs de puissance - Batteries de compensation
du facteur de puissance basse tension
(IEC 61921:2017)

Leistungskondensatoren - Kondensatorbatterien zur
Korrektur des Niederspannungsleistungsfaktors
(IEC 61921:2017)

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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

European foreword

The text of document 33/607/FDIS, future edition 2 of IEC 61921, prepared by TC 33 "Power capacitors and their applications" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61921:2025.

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) 2026-08-31
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2028-08-31

This document supersedes EN 61921:2003 and all of its amendments and corrigenda (if any).

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This document has been prepared under a standardization request addressed to CENELEC by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

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 61921:2017 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 60060-1:2010	NOTE	Approved as EN 60060-1:2010 (not modified)
IEC 60831-2:2014	NOTE	Approved as EN 60831-2:2014 (not modified)
IEC 60931-2:1995	NOTE	Approved as EN 60931-2:1996 (not modified)
IEC 60931-3:1996	NOTE	Approved as EN 60931-3:1996 (not modified)
IEC 61000-2-2:2002	NOTE	Approved as EN 61000-2-2:2002 (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: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61439-1	2011	Low-voltage switchgear and controlgear assemblies - Part 1: General rules	-	-
IEC 61439-2	2011	Low-voltage switchgear and controlgear assemblies - Part 2: Power switchgear and controlgear assemblies	-	-
IEC 60831-1	2014	Shunt power capacitors of the self-healing type for a.c. systems having a rated voltage up to and including 1 000 V - Part 1: General - Performance, testing and rating - Safety requirements - Guide for installation and operation	EN 60831-1	2014
IEC 60931-1	1996	Shunt power capacitors of the non-self-healing type for a.c. systems having a rated voltage up to and including 1000 V - Part 1: General - Performance, testing and rating - Safety requirements - Guide for installation and operation	EN 60931-1	1996
IEC 61642	1997	Industrial a.c. networks affected by harmonics - Application of filters and shunt capacitors	EN 61642	1997

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Power capacitors – Low-voltage power factor correction banks

Condensateurs de puissance – Batteries de compensation du facteur de puissance basse tension

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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Low-voltage power factor correction banks if not otherwise indicated hereinafter and where applicable comply with the requirements of IEC 61439-1 and IEC 61439-2.

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 61439-1:2011, *Low-voltage switchgear and controlgear assemblies – Part 1: General rules*

IEC 61439-2:2011, *Low-voltage switchgear and controlgear assemblies – Part 2: Power switchgear and controlgear assemblies*

IEC 60831-1:2014, *Shunt power capacitors of the self-healing type for AC systems having a rated voltage up to and including 1 000 V – Part 1: General – Performance, testing and rating – Safety requirements – Guide for installation and operation*

IEC 60931-1:1996, *Shunt power capacitors of the non-self-healing type for AC systems having a rated voltage up to and including 1000 V – Part 1: General – Performance, testing and rating – Safety requirements – Guide for installation and operation*

IEC 61642:1997, *Industrial AC networks affected by harmonics – Application of filters and shunt capacitors*