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Standards

Irish Standard
I.S. EN 62823:2015

Thyristor valves for thyristor controlled series capacitors (TCSC) - Electrical testing

I.S. EN 62823:2015

Incorporating amendments/corrigenda/National Annexes issued since publication:

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This document is based on:

EN 62823:2015

Published:

2015-11-27

This document was published under the authority of the NSAI and comes into effect on:

2015-12-15

ICS number:

NOTE: If blank see CEN/CENELEC cover page

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National Foreword

I.S. EN 62823:2015 is the adopted Irish version of the European Document EN 62823:2015, Thyristor valves for thyristor controlled series capacitors (TCSC) - Electrical testing

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EUROPEAN STANDARD

EN 62823

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2015

ICS 29.240.99

English Version

**Thyristor valves for thyristor controlled series capacitors
(TCSC) - Electrical testing
(IEC 62823:2015)**

Valves à thyristors pour condensateurs série commandés
par thyristors (CSCT) - Essai électrique
(IEC 62823:2015)

Thyristorventile für thyristorgesteuerte
Reihencondensatoren (TCSC) - Elektrische Prüfung
(IEC 62823:2015)

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

EN 62823:2015

European foreword

The text of document 22F/342/CDV, future edition 1 of IEC 62823, prepared by SC 22F "Power electronics for electrical transmission and distribution systems", of IEC/TC 22 "Power electronic systems and equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62823:2015.

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) 2016-06-24
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| | | |
|---------------|------|-----------------------------|
| IEC 60068-1 | NOTE | Harmonized as EN 60068-1. |
| IEC 60143-1 | NOTE | Harmonized as EN 60143-1. |
| IEC 60721-1 | NOTE | Harmonized as EN 60721-1. |
| IEC 61000-6-5 | NOTE | Harmonized as EN 61000-6-5. |
| IEC 61954 | NOTE | Harmonized as EN 61954. |

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 60060-1 | 2010 | High-voltage test techniques - Part 1: General definitions and test requirements | EN 60060-1 | 2010 |
| IEC 60071-1 | - | Insulation co-ordination - Part 1: Definitions, principles and rules | EN 60071-1 | - |
| IEC 60071-2 | - | Insulation co-ordination - Part 2: Application guide | EN 60071-2 | - |
| IEC 60270 | - | High-voltage test techniques - Partial discharge measurements | EN 60270 | - |

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IEC 62823

Edition 1.0 2015-08

INTERNATIONAL STANDARD

NORME INTERNATIONALE



Thyristor valves for thyristor controlled series capacitors (TCSC) – Electrical testing

Valves à thyristors pour condensateurs série commandés par thyristors (CSCT) – Essai électrique





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IEC 62823

Edition 1.0 2015-08

INTERNATIONAL STANDARD

NORME INTERNATIONALE



Thyristor valves for thyristor controlled series capacitors (TCSC) – Electrical testing

Valves à thyristors pour condensateurs série commandés par thyristors (CSCT) – Essai électrique

INTERNATIONAL
ELECTROTECHNICAL
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ICS 29.240.99

ISBN 978-2-8322-2860-9

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**THYRISTOR VALVES FOR THYRISTOR CONTROLLED
SERIES CAPACITORS (TCSC) – ELECTRICAL TESTING**
FOREWORD

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International Standard IEC 62823 has been prepared by subcommittee 22F: Power electronics for electrical transmission and distribution systems, of IEC technical committee 22: Power electronic systems and equipment.

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

| | |
|-------------|------------------|
| CDV | Report on voting |
| 22F/342/CDV | 22F/354A/RVC |

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.

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THYRISTOR VALVES FOR THYRISTOR CONTROLLED SERIES CAPACITORS (TCSC) – ELECTRICAL TESTING

1 Scope

This International Standard defines routine and type tests on thyristor valves used in thyristor controlled series capacitor (TCSC) installations for AC power transmission.

The tests specified in this International Standard are based on air insulated valves operating in capacitive boost mode or bypass mode. For other types of valve and for a valve operating in inductive boost mode, the test requirements and acceptance criteria are agreed between purchaser and supplier.

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 60060-1:2010, *High-voltage test techniques – Part 1: General definitions and test requirements*

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

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

IEC 60270, *High-voltage test techniques – Partial discharge measurements*

3 Terms and definitions

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

3.1

thyristor valve

electrically and mechanically combined assembly of thyristor levels, complete with all connections, auxiliary components and mechanical structures, which can be connected in series with each phase of the reactor of a TCSC

3.2

valve section

electrical assembly, comprising a number of thyristors and other components, which exhibits prorated electrical properties of a complete valve

Note 1 to entry: This term is mainly used to define a test object for valve testing purposes.

3.3

thyristor level

<of a valve> part of a valve comprising an anti-parallel connected pair of thyristors together with their immediate auxiliaries, and reactor, if any

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