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Standards

Irish Standard  
I.S. EN 62823:2015&A1:2020

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

**I.S. EN 62823:2015&A1:2020**

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

EN 62823:2015/A1:2020

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## National Foreword

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EUROPEAN STANDARD

**EN 62823:2015/A1**

NORME EUROPÉENNE

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March 2020

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English Version

**Thyristor valves for thyristor controlled series capacitors (TCSC)  
- Electrical testing  
(IEC 62823:2015/A1:2019)**

Valves à thyristors pour condensateurs série commandés  
par thyristors (CSCT) - Essai électrique  
(IEC 62823:2015/A1:2019)

Thyristorventile für thyristorgesteuerte  
Reihencondensatoren (TCSC) - Elektrische Prüfung  
(IEC 62823:2015/A1:2019)

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## **EN 62823:2015/A1:2020 (E)**

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The text of document 22F/518/CDV, future IEC 62823/A1, 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/A1:2020.

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) 2020-10-08
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-01-08

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EUROPEAN STANDARD

**EN 62823**

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November 2015

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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)

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## 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.

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

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

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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 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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# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**



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**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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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



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**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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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

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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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