

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Thyristor valves for high voltage direct current (HVDC) power transmission –  
Part 2: Terminology**

**Valves à thyristors pour le transport d'énergie en courant continu à haute  
tension (CCHT) –  
Partie 2: Terminologie**



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## CONTENTS

|   |    |
|---|----|
| FOREWORD.....   | 3  |
| 1 Scope.....  | 5  |
| 2 Normative references.....   | 5  |
| 3 Symbols and abbreviations .....   | 5  |
| 3.1 General.....  | 5  |
| 3.2 List of letter symbols .....  | 5  |
| 3.3 List of abbreviations .....   | 5  |
| 4 General terms related to converter circuits .....                               | 6  |
| 5 Converter performance .....   | 6  |
| 6 Thyristor valve design.....   | 6  |
| 7 Thyristor valve performance.....  | 11 |
| 8 Thyristor valve voltages, currents and other parameters .....                   | 12 |
| 9 Thyristor valve control .....   | 15 |
| 10 Thyristor valve protection.....  | 16 |
| Bibliography .....  | 22 |
| <br>  |    |
| Figure 1 – Example of a converter unit .....                                      | 17 |
| Figure 2 – Commutation process at rectifier and inverter modes of operation ..... | 18 |
| Figure 3 – Illustrations of commutation in inverter operation.....                | 19 |
| Figure 4 – Typical valve voltage waveforms.....                                   | 20 |
| Figure 5 – An example of thyristor valve composition.....                         | 21 |

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## THYRISTOR VALVES FOR HIGH VOLTAGE DIRECT CURRENT (HVDC) POWER TRANSMISSION –

### Part 2: Terminology

#### FOREWORD

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International Standard IEC 60700-2 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/373/CDV | 22F/395A/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.

A list of all parts in the IEC 60700 series, published under the general title *Thyristor valves for high voltage direct current (HVDC) power transmission*, 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 website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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# THYRISTOR VALVES FOR HIGH VOLTAGE DIRECT CURRENT (HVDC) POWER TRANSMISSION –

## Part 2: Terminology

### 1 Scope

This part of IEC 60700 defines terms for thyristor valves for high-voltage direct current (HVDC) power transmission with line commutated converters most commonly based on three-phase bridge connections for the conversion from AC to DC and vice versa.

### 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 60027(all parts), *Letter symbols to be used in electrical technology*

IEC 60633, *Terminology for high-voltage direct current (HVDC) transmission*

### 3 Symbols and abbreviations

#### 3.1 General

The lists in 3.2 and 3.3 cover only the most frequently used symbols. The lists of symbols of the IEC 60027 series and IEC 60633 apply.

#### 3.2 List of letter symbols

- $\alpha$  (trigger/firing) delay angle
- $\beta$  (trigger/firing) advance angle
- $\mu$  commutation overlap angle
- $\gamma$  extinction angle

#### 3.3 List of abbreviations

The following abbreviations are always in capital letters and without dots:

- ET electrically triggered thyristor
- LT light triggered thyristor
- TU thyristor control unit
- HVDC high-voltage direct current
- VBE valve base electronics
- MVU multiple valve (unit)
- BOD breakover diode