

# INTERNATIONAL STANDARD

**IEC**  
**60099-6**

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## Surge arresters –

### Part 6: Surge arresters containing both series and parallel gapped structures – Rated 52 kV and less

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOREWORD

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International Standard IEC 60099-6 has been prepared by IEC technical committee 37: Surge arresters.

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

FDIS	Report on voting
37/282/FDIS	37/283/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.

Annexes A, B, C and D form an integral part of this standard.

Annexes E and F are for information only.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

The committee has decided that the contents of this publication will remain unchanged until 2004. At this date, the publication will be

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- withdrawn;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

## INTRODUCTION

This part of IEC 60099 presents the minimum criteria for the requirements and testing of metal-oxide surge arresters containing gapped structures that are applied to a.c. power systems.

Arresters covered by this standard can be applied to overhead installations in place of the non-linear type arresters covered in IEC 60099-1 and IEC 60099-4.

An accelerated ageing procedure is incorporated in the standard to simulate the long-term effects of voltage and temperature on the arrester. This is necessary since during the arrester's service life the gaps and resistor elements will have portions of the system power frequency voltage continuously applied across them.

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## SURGE ARRESTERS –

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#### 1 General

##### 1.1 Scope

This part of IEC 60099 applies to non-linear metal-oxide resistor type surge arresters with spark gaps designed to limit voltage surges on a.c. power circuits.

This standard basically applies to all metal-oxide surge arresters with gaps and housed in either porcelain or polymeric housings.

This standard specifies requirements and tests for metal-oxide surge arresters with internal series gaps, with rated voltages 52 kV and below.

The following arrester types and ratings are presently under consideration, but are not addressed in this standard. They will not be addressed until more information can be ascertained on the individual subjects:

- series gapped arresters above 54 kV;
- externally gapped arresters, all ratings;
- shunt gapped arresters, all ratings;
- line discharge class 2, 3, 4 and 5.

##### 1.2 Normative references

The following referenced documents are indispensable for the application 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 60060-1:1989, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60060-2:1994, *High-voltage test techniques – Part 2: Measuring systems*

IEC 60099-1:1991, *Surge arresters – Part 1: Non-linear resistor type gapped surge arresters for a.c. systems*

IEC 60099-3:1990, *Surge arresters – Part 3: Artificial pollution testing of surge arresters*

IEC 60099-4:1991, *Surge arresters – Part 4: Metal-oxide surge arresters without gaps for a.c. systems*

Amendment 1 (1998)

Amendment 2 (2001)<sup>1</sup>

IEC 60270: 2000, *High-voltage test techniques – Partial discharge measurements*

<sup>1</sup> A consolidated edition 1.2 exists (2001) that includes edition 1.0 (1991), its amendment 1 (1998) and amendment 2 (2001).