

**LIIGPINGEPIIRIKUD. OSA 4: SÄDEMIKETA  
METALLOKSIID-LIIGPINGEPIIRIKUD  
VAHELDUVVOOLUSÜSTEEMIDELE**

**Surge arresters - Part 4: Metal-oxide surge arresters  
without gaps for a.c. Systems**

**EESTI STANDARDI EESSÕNA****NATIONAL FOREWORD**

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English Version

## Surge arresters - Part 4: Metal-oxide surge arresters without gaps for a.c. systems (IEC 60099-4:2014)

Parafoudres - Partie 4: Parafoudres à oxyde métallique sans éclateur pour réseaux à courant alternatif  
(CEI 60099-4:2014)

Überspannungsableiter - Teil 4: Metalloxidableiter ohne Funkenstrecken für Wechselspannungsnetze  
(IEC 60099-4:2014)

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## Foreword

The text of document 37/416/FDIS, future edition 3 of IEC 60099-4, prepared by IEC/TC 37 "Surge arresters" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60099-4:2014.

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

IEC 60068-2-17	NOTE	Harmonized as EN 60068-2-17.
IEC 60099-1	NOTE	Harmonized as EN 60099-1.
IEC 60099-5:2013	NOTE	Harmonized as EN 60099-5:2013 (not modified).
IEC 60721-3-2	NOTE	Harmonized as EN 60721-3-2.
IEC 62271-202:2006	NOTE	Harmonized as EN 62271-202:2007 (not modified).
ISO 3274	NOTE	Harmonized as EN ISO 3274.

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## INTRODUCTION

This part of IEC 60099 presents the minimum criteria for the requirements and testing of gapless metal-oxide surge arresters that are applied to a.c. power systems with  $U_s$  above 1 kV.

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## SURGE ARRESTERS –

### Part 4: Metal-oxide surge arresters without gaps for a.c. systems

#### 1 Scope

This part of IEC 60099 applies to non-linear metal-oxide resistor type surge arresters without spark gaps designed to limit voltage surges on a.c. power circuits with  $U_s$  above 1 kV.

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

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

IEC 60068-2-11:1981, *Environmental testing – Part 2-11: Tests – Test kA: Salt mist*

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ISO 4892-2, *Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc lamps*

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### **3 Terms and definitions**

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

#### **3.1**

##### **acceptance tests**

tests made on arresters or representative samples after agreement between manufacturer and user

#### **3.2**

##### **arrester – dead-front type**

##### **dead-front arrester**

arrester assembled in a screened/shielded housing providing system insulation and conductive ground shield, intended to be installed in an enclosure for the protection of underground and pad-mounted distribution equipment and circuits

Note 1 to entry: The use of dead-front arresters is common in the USA. Most dead-front arresters are load-break arresters.

Note 2 to entry: The arresters are assembled in an insulated housing with varying levels of shielding and screening as determined by safety or contact requirements for the installation. The differences between the descriptions from one manufacturer to another in regard to shielding, screening and degrees of such can be very subtle, but the focus is on safety and conductivity of the exterior housing to either permit, or not, workers to handle the arresters energized and with or without live line tools.

#### **3.3**

##### **arrester disconnecter**

device for disconnecting an arrester from the system in the event of arrester failure, to prevent a persistent fault on the system and to give visible indication of the failed arrester

Note 1 to entry: Clearing of the fault current through the arrester during disconnection generally is not a function of the device.

#### **3.4**

##### **arrester – liquid-immersed type**

##### **liquid-immersed arrester**

arrester designed to be immersed in an insulating liquid

#### **3.5**

##### **arrester – separable type**

##### **separable arrester**

arrester assembled in an insulated or screened/shielded housing providing system insulation, intended to be installed in an enclosure for the protection of distribution equipment and systems