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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 19749.3-2022

Coupling capacitors and capacitor dividers - Part 3: AC or DC coupling capacitor for harmonic-filters applications

Issued on: March 9, 2022 **Implemented on: October 1, 2022**

Issued by: State Administration for Market Regulation, China National Standardization Administration

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foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1.Structure and Drafting Rules of Standardization Documents"

drafted.

This document is part 3 of GB/T 19749 "Coupling capacitors and capacitive voltage dividers". GB/T 19749 has issued the following

part.

--- Part 1.General;

--- Part 2.DC or AC single-phase coupling capacitors connected between lines and ground for power line carrier (PLC);

--- Part 3.AC or DC coupling capacitors for harmonic filters.

This document uses the redrafted method to modify the use of IEC 60358-3.2013 "Coupling capacitors and capacitive voltage dividers - Part 3.For harmonic

AC or DC Coupling Capacitors for Wave Filters.

The technical differences between this document and IEC 60358-3.2013 and their reasons are as follows.

--- Regarding normative reference documents, this document has made adjustments with technical differences to adapt to the technical conditions of our country and the circumstances of the adjustment.

The situation is reflected in Chapter 2 "Normative References", and the specific adjustments are as follows.

* Replace IEC 60358-1.2012 with the revised GB/T 19749.1-2016;

* Deleted IEC 60060-1.2012, IEC 60060-2, IEC 60358-2, IEC 60481, IEC 60869-5;

---Add a paragraph "Permanently grounded when the low-voltage terminal of the coupling capacitor is not connected to other equipment" at the end of the "Scope" chapter to further clarify

scope;

--- The word "arrester" that appears alone in the international standard is clearly defined as "AC gapless metal oxide arrester".

The following editorial changes have been made to this document.

--- Changed "Appendix AA" to "Appendix 3A", "Appendix BB" to "Appendix 3B", and adjusted the bar number and figure number accordingly;

--- Adjusted references.

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

GB/T 19749 "Coupling Capacitors and Capacitive Voltage Dividers" is intended to consist of the following four parts.

--- Part 1.General. The purpose is to establish general principles and related rules to be followed by coupling capacitors and capacitive voltage dividers.

--- Part 2.DC or AC single-phase coupling capacitors connected between line and ground for power line carrier (PLC). aim at

Specific requirements and related rules for establishing such coupling capacitors.

--- Part 3.AC or DC coupling capacitors for harmonic filters. The purpose is to establish the special characteristics of such coupling capacitors

requirements and related rules.

--- Part 4.DC or AC single-phase capacitive voltage divider connected between line and ground. The purpose is to establish the

Special requirements and related rules.

This document is used together with GB/T 19749.1-2016, unless otherwise specified in this document, this document implements GB/T 19749.1-2016

Provisions. In order to simplify the repeated expression of the same requirements, the terms of this document are the same as GB/T 19749.1-2016, when GB/T 19749.1-

When a clause in.2016 is not covered in this document, the clause shall apply as long as it

is reasonable. When this document states "additions", "modifications" or

When "replaced", the relevant content in GB/T 19749.1-2016 shall be adjusted accordingly. Supplement to these terms in the same reference

are given under the heading, while additional clauses are numbered starting at 300.

Coupling Capacitors and Capacitive Dividers

Part 3.AC or AC for harmonic filters

DC Coupling Capacitors

1 Scope

Chapter 1 in GB/T 19749.1-2016 is replaced by the following.

This document specifies the terms and definitions, conditions of use, ratings, design requirements of AC or DC coupling capacitors used in harmonic filters

requirements, test conditions, test classification, routine tests, type tests, special tests and equipment marking.

This document applies to DC or AC voltages above 1000V, connected between line and ground, and connected to tuning devices of harmonic filters.

flow single-phase coupling capacitors.

The low-voltage terminal of the coupling capacitor is permanently grounded when not connected to other equipment.

NOTE. Typical diagrams of coupling capacitors to which this document applies are shown in Figure 3A.1 and Figure 3A.2.

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations

documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to

this document.

GB/T 19749.1-2016 Coupling capacitors and capacitive voltage dividers - Part 1.General (IEC 60358-1.2012, MOD)

3 Terms and Definitions

The terms and definitions defined in GB/T 19749.1-2016 and the following terms and

definitions apply to this document.

3.300 Definition of harmonic filters

3.300.1

filter capacitor filtercapacitor

In cooperation with other components, it is mainly used to reduce the power capacitors of network harmonics.

[Source. GB/T 2900.16-1996, 2.1.7]

3.300.2

tuningdevice

Capacitor accessory for improving network harmonics, consisting of passive components that are tuned together with filter capacitors to the frequency to be filtered.

3.300.3

A device connected between the low-voltage terminal of a filter capacitor and ground to limit the overcurrent across the tuning device under the following conditions.

Voltage.

a) When a short circuit occurs between the high voltage terminal and the ground;