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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/Z 44074-2024

**Switchgear and controlgear and their assemblies for low
voltage - Environmental aspects**

Issued on: May 28, 2024

Implemented on: December 1, 2024

**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 for standardization documents"

Drafting.

This document is equivalent to IEC TS63058.2021 "Environmental factors for low-voltage switchgear and controlgear and their complete equipment".

The type was adjusted from IEC technical specifications to my country's national standardization guiding technical documents.

The following minimal editorial changes were made to this document.

(ILCD) Handbook moved from Chapter 2 to References.

Introduction

For the benefit of the future, people are paying more and more attention to protecting the natural environment. To achieve this goal, it is necessary to

The efficient use of energy and materials within the life cycle should be adopted to protect the world's limited natural resources. In addition, it is advisable to avoid or minimize the use of materials that may have a negative impact on the environment.

Substances and materials that are harmful or cause climate change. From product conception to the end of its service life, the environmental impact of all relevant processes should be considered, including

including how to dispose of or recycle the material for recycling.

In order to protect natural resources, manufacturers of low-voltage switchgear and controlgear and their assemblies should ensure environmentally conscious design.

(ECD), including.

- Gradually eliminate or minimize the use of hazardous substances or materials;
- Efficient use of energy and materials in product manufacturing;
- Ensure that the actual energy consumption of the product during use is the lowest;
- At the end of product life, recycle materials for future use as much as possible and sort hazardous components that require special handling.

There is an increasing number of products that require declarations and environmentally conscious design, and in some cases it is mandatory.

It can take many forms, for example, Type II or Type III environmental declaration, material declaration (MD). In some companies, Green Public Procurement (GPP) is applicable.

ECD is part of ISO 14001 certification. Some countries and regions are also actively promoting environmental protection, such as the EU's Ecodesign

Directive, China's eco-design initiative. In the medium term, most customers have a demand for systematic ECD.

Assessing the environmental impact of low voltage switchgear and controlgear and their assemblies is part of the ECD process. ECD requires identification,

Measuring and reporting specific impacts. IEC 62430 describes the basic principles of ECD, which aims to reduce the potential impact of products on the environment.

Generally, the impact of low-voltage switchgear and control equipment and their complete sets on the environment is related to the entire system to which they belong and the

Processes such as air conditioning of buildings, steel manufacturing or shipping have a far greater impact on lifetime than any associated low pressure

Manufacture and use of switchgear and controlgear.

Although low voltage switchgear and control equipment and their complete equipment have relatively small impact on the environment, the market still needs appropriate methods to

Simplified methods for estimating environmental impacts and readily available data are used to enable stakeholders (such as contractors,

It is easier for installers and end users to assess system-level environmental impacts.

The purpose of this document is to provide specific rules for assessing the environmental

impact and providing appropriate data for low-voltage switchgear and controlgear and their assemblies.

These rules establish a common environmental impact assessment programme.

Low voltage switchgear and control equipment and complete sets of equipment environmental factor

1 Scope

This document provides manufacturers of low voltage switchgear and controlgear and their complete equipment with the ability to assess and improve the environmental impact of their products.

Guidance for the effective communication of common environmental information throughout the supply chain.

This document provides.

---Guidelines for the process and general requirements for implementing environmentally aware product design principles as specified in IEC 62430, which are applicable to low-voltage switchgear

Equipment and control equipment and their complete sets are crucial;

--- Product Specific Rules (PSR) for Life Cycle Assessment (LCA);

Note 1. The general methods and processes for performing LCA comply with the requirements of ISO 14044 and GB/T 24040, but this document does not describe these methods and processes.

NOTE 2 PSR and LCA can be used for quantitative ECD and also for certain environmental claims, such as Type III.

--- Standard environmental impact data obtained from case studies and their use;

NOTE 3 This is to encourage manufacturers to apply more effective quantitative methods in the ECD process to improve the environmental efficiency of their products.

--- General rules for restricted substances and information on materials contained in products according to IEC 62474;

---Guidelines for product end-of-life processing information.

NOTE 4 This document is intended to replace Annex O and Annex W in IEC 60947-1:2020.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to

This document.

GB/T 7251.1-2023 Low-voltage switchgear and controlgear Part 1.General (IEC 61439-1:2020, IDT)

GB/T 24040-2008 Principles and framework for environmental management life cycle assessment (ISO 14040:2006, IDT)

Note. GB/T 24021-2001 Environmental management Environmental labels and declarations Self-declaration of environmental information (Type II environmental labels) (ISO 14021:1999, IDT)

ISO 14044:2006/AMD1:2017

ISO 14044:2006/AMD2:2020

Note. GB/T 24044-2008 Environmental management life cycle assessment requirements and guidelines (ISO 14044:2006, IDT)

IEC 60050-904 International Electrotechnical Vocabulary Part 904.Environmental standards for electrical and electronic products and systems

Note. GB/T 23686-2022 Environmentally aware design principles, requirements and guidance (IEC 62430:2019, MOD)