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

GB/T 34924-2024

Replacing GB/T 34924-2017

**Guidelines for safety related risk assessment and risk
reduction for low voltage equipment**

低压电气设备安全风险评估和风险降低指南

(English Translation)

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Table of Contents

Preface

1 Scope and purpose

2 Normative references

3 Terms, definitions and abbreviations

4 Basic Principles

5 Determining the limiting conditions of low voltage electrical equipment

6 Hazard Identification

7 Risk Assessment 10

8 Risk Assessment 13

9 Risk reduction 17

10 File

Appendix A (Normative) Safety factors for low voltage electrical equipment

Appendix B (Informative) Supporting Standards

Appendix C (informative) Examples of hazards, hazardous situations and hazardous events

Appendix D (Informative) Tools for applying this document

Reference

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 replaces GB/T 34924-2017 "Guidelines for safety risk assessment and risk reduction of low voltage electrical equipment":

Compared with:2017, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

a) Chapter 1 has been changed to include "scope", "purpose" and "exclusions and limitations" (see Chapter 1, Chapter 1 of the:2017 edition);

b) Added "3:1:7", "3:1:9", "3:1:11", "3:1:12", "3:1:13", "3:1:14", "3:1:24", "3:1:27", "3:1:28", the definitions of terms such as "3:1:29" and "3:1:30" have been changed, and the definitions of terms such as "3:1:2", "3:1:3", "3:1:4", "3:1:5", "3:1:6", "3:1:15", Definitions of terms such as "3:1:16", "3:1:17", "3:1:18", "3:1:20", "3:1:23" and "3:1:25" (see 3.1);

- c) Added abbreviations (see 3.2);
- d) Increased risk of unacceptable repetitive iterative processes (see Figure 2);
- e) Added consideration of "limitation of use" (see Chapter 5);
- f) Added the reason of "protective measures failed to work or did not provide effective protection" (see 8.2:3);
- g) Added "information on the use of residual risks" (see 8.3);
- h) Added "security-related information security risks" (see A:8):

This document is equivalent to IEC GUIDE116:2018 "Guidelines for safety risk assessment and risk reduction of low-voltage electrical equipment", file type Adjusted from IEC guidelines to our national standards:

The following minimal editorial changes were made to this document:

--- Change the name of the standard to "Guidelines for Safety Risk Assessment and Risk Reduction of Low Voltage Electrical Equipment":

1 Scope and purpose

1.1

Scope

This document provides guidance on achieving safety in low voltage electrical equipment based on ISO/IEC Guide 51: These guidelines include risk assessment, Combines knowledge and experience related to the design, use, incidents, accidents and injuries of low-voltage electrical equipment to assess relevant stages of the equipment life cycle Risks (see Chapter 6), and the basic principles for implementing risk reduction measures: Technical committees may wish to use this document as appropriate:

This document provides ISO/IEC Guide 50, ISO/IEC Guide 51 and ISO/IEC Guide 71 for implementing risk assessment:

Additional guidance information for hazard identification, risk estimation and risk assessment (including risk comparison) and necessary risk reduction procedures are established:

The hazards covered by this document include potential harm to persons, property or livestock: Technical committees are not required to use the structure of this document:

This document also includes equipment documentation requirements that address adequate information for safe use of the equipment:

1.2

Purpose

This document is intended to provide technical committees with the documents required for making safety decisions and verifying risk assessments for low voltage electrical equipment:

guide:

This document is applicable to all types of electrical equipment with AC voltage of 1000V and below and DC voltage of 1500V and below:

The voltage at an electrical input or output other than the voltage that may appear inside the equipment:

Appendix A gives the basic health and safety factors applicable to low voltage electrical equipment:

The reference documents for risk assessment are given in Annex B: Hazard related examples are given in Annex C: The record of the technical committee's self-assessment is given in Annex D:

1.3

Exclusions and limitations this document does not apply to essential parts of equipment, electrical systems or installations, for which the risk assessment is largely dependent on the for electrical equipment that is intended to be incorporated into other electrical equipment and for which a risk assessment can be performed based on this document:

Components, usually require further assessment of the safety of the way such components are incorporated:

Note 1: The exclusion scope of basic components should be correctly understood and should not be extended to lamps, starters, fuses, household switches, electrical device components, etc:

Even components that are often used together with other electrical equipment and must be correctly installed to achieve their function are within the scope of application of this document:

Note 2: The risk reduction measures taken by product users depend on the legal provisions of each country, especially the requirements of the occupational health and safety system:

This document is not intended for safety certification: When the technical content of the product standard cannot cover all potential hazards of the equipment in the field, especially when new hazards may arise with emerging technologies, it is encouraged to add safety clauses related to risk assessment to product standards:

If the risk assessment addresses aspects that are not directly related to health and safety, such as environmental protection, energy consumption, climate change, etc., then health

and safety Risk reduction of safety related risks, especially risk reduction for personnel, will take precedence over other aspects: Other aspects can be defined by regulations:

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:

ISO/IEC Guide 51:2014 Safety Aspects Guide for writing standards that consider safety aspects