

CCS Q 78



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

GB/Z 35850.3-2021

**Programmable electronic systems in safety-related applications for
lifts(elevators), escalators and moving walks - Part 3: Life cycle guideline for
programmable electronic systems related to PESSRAL and PESSRAE**

Issued on: December 31, 2021

Implemented on: July 1, 2022

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

Table of Contents

foreword

Introduction

1 Scope

2 Normative references

3 Terms and Definitions

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 35850 "Application of programmable electronic systems related to the safety of elevators, escalators and moving walks"

point: GB/T 35850 has released the following parts:

--- Part 1: Elevator (PESSRAL);

--- Part 2: Escalators and moving walks (PESSRAE);

--- Part 3: Life-cycle guidelines for PESSRAL and PESSRAE-related programmable electronic systems:

This document uses the redrafted law to modify the use of ISO /T R22201-3:2016 "Elevators, escalators and moving walks safety-related

Applications of Programmable Electronic Systems Part 3: Lifecycle Guidelines for Programmable Electronic Systems Associated with PESSRAL and PESSRAE:

Compared with ISO /T R22201-3:2016, this document has made the following structural adjustments:

---In Chapter 4, the numbering and title of the overhanging paragraphs, namely "4:1 Overview", have been added, and the numbering of subsequent clauses has been adjusted to comply with

Provisions and ease of application of GB/T 1:1-2020;

--- In Chapter 5, the sub-item level of item a) has been changed to comply with the provisions of GB/T 1:1-2020:

The technical differences between this document and ISO /T R22201-3:2016 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:

* Added references to GB/T 35850:1 and GB/T 35850:2 (see Chapter 3):

--- In the term 3:4 "maintenance organization", the definition has been modified to suit my country's national conditions:

The following editorial changes have been made to this document:

--- In terms and definitions, the link address of the terminology database maintained by ISO and IEC for standardization has been deleted;

--- In the references, the corresponding international documents are replaced by national standards, and GB/T 18775-2009 is added to comply with

The provisions of GB/T 1:1-2020 and ease of application:

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

Introduction

This document describes the life cycle planning of PESSRAL and PESSRAE and the activities of the various post-installation phases (eg repairs, interface

maintenance activities such as replacement and retrofit) to help ensure the safety integrity level (SIL) of the system over its life cycle:

Elevators, escalators and moving walks

Applications of Safety-Related Programmable Electronic Systems

Part 3: PESSRAL and PESSRAE

Lifecycle Guidelines for Relevant Programmable Electronic Systems

1 Scope

This document provides the competency requirements for the preparation of GB/T 35850:1 (PESSRAL) and GB/T 35850:2 (PESSRAE)

Additional information and procedures in the instructions for use by caregivers when

performing maintenance operations on programmable electronic systems:

This document applies to elevators, escalators and moving walks to which safety-related programmable electronic systems are applied:

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 35850:1 Application of programmable electronic systems related to the safety of elevators, escalators and moving walks - Part 1: Electrical

Ladder (PESSRAL) (GB/T 35850:1-2018, ISO 22201-1:2017, MOD)

GB/T 35850:2 Application of safety-related programmable electronic systems for elevators, escalators and moving walks - Part 2: Automatic

Escalators and moving walks (PESSRAE) (GB/T 35850:2-2019, ISO 8102-6:2019, MOD)

3 Terms and Definitions

The terms and definitions defined in GB/T 35850:1 and GB/T 35850:2 and the following terms and definitions apply to this document:

3:1

Competent maintainercompetentmaintenanceperson

have been appropriately trained, certified in terms of knowledge and practical experience, and have received the necessary guidance from their maintenance organization (3:4)

and support for maintenance personnel who can safely carry out the required maintenance operations:

NOTE: In the maintenance organization (3:4), the skills of maintenance personnel are constantly updated:

3:2

designequivalent

OEM or third-party certified products that meet the same design specifications for SIL-rated components/subsystems, but for PE

Non-SIL rated parts of the system have different specifications:

3:3

functionalequivalent

The product has a different SIL rated component/subsystem design specification than the original certified product, but meets the same functional requirements:

3:4

maintenanceorganization

A legal person or legal entity that has the required qualifications to represent the owner (3:7) of the elevator equipment and to perform maintenance work by competent maintenance personnel (3:1):