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

GB/T 42286.1-2022

**Electronic railway equipment - On board driving data recording
- Part 1: Technical specification**

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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 the first part of GB/T 42286 "In-vehicle Driving Data Recording of Rail Transit Electronic Equipment". GB/T 42286 has

The following parts were released.

--- Part 1. Technical specifications;

--- Part 2. Conformance testing.

This document is modified to adopt IEC 62625-1.2013 "Rail Transit Electronic Equipment Vehicle Driving Data Recording System Part 1. System specification".

Compared with IEC 62625-1.2013, this document has made the following structural adjustments.

---4.1 corresponds to 3.2 of IEC 62625-1.2013;

---4.2 corresponds to 3.3.1 of IEC 62625-1.2013;

--- Chapter 5 corresponds to Chapter 4 of IEC 62625-1.2013;

--- Chapter 6 corresponds to Chapter 5 of IEC 62625-1.2013.

The technical differences between this document and IEC 62625-1.2013 and their reasons are as follows.

--- Added the term "monitoring data" (see 3.4);

--- Replaced ISO /IEC 8824 (all parts) with normatively referenced GB/T 16262 (all parts) (see 4.2,

3.3.2 of IEC 62625-1.2013), the degree of consistency between the two documents is equivalent, in order to adapt to my country's technical conditions, improve

high operability;

--- Replaced IEC 60571 with normatively quoted GB/T 25119 (see 5.3.1.7, 5.3.1.8, IEC 62625-1.2013

4.3.1.7, 4.3.1.8), the degree of consistency between the two documents is modified to adapt to my country's technical conditions and improve operability;

--- Replace IEC 62498-1 with the normative reference GB/T 32347.1 (see 5.3.1.3, 4.3.1.3 of IEC 62625-1.2013), two

The degree of consistency between the two documents is modified to adapt to my country's technical conditions and increase operability;

--- Replaced IEC 61375 (all parts) with normatively referenced GB/T 28029 (all parts) (see 5.2.5.3, 5.3.1.9.3,

4.2.5.3, 4.3.1.9.3 of IEC 62625-1.2013), the degree of consistency between the two documents is modified to adapt to the technical standards of our country

Technical conditions, increase operability;

--- Changed the general requirements for on-board driving data recording systems (see 5.3.1.1, 4.3.1.1 of IEC 62625-1.2013), no need to

Now "a train formation, ODDRS should include at least one on-board driving data recording unit";

--- Changed the requirements for environmental conditions (see 5.3.1.3, 4.3.1.3 of IEC 62625-1.2013), only need to meet GB/T 32347.1 environment

upon request;

--- Changed the requirements for ODDR unit identification and software upgrades (see 5.3.1.8.6, 4.3.1.8.6 of IEC 62625-1.2013), no

Need to reflect the results of negotiations between the customer and the manufacturer;

--- The normative reference document GB/T 42286.2 (see Chapter 6) has been added to adapt to the technical conditions of our country.

The following editorial changes were made to this document.

---Change the standard name to "Rail Transit Electronic Equipment Vehicle Driving Data Recording Part 1. Technical Specifications" (see standard name name, the standard name of IEC 62625-1.2013);

--- Deleted Note 1 of the term "marshalling" in IEC 62625-1.2013 (see 3.1 of IEC 62625-1.2013);

---Changed the full English names of the abbreviations "ATO" and "ATP" (see 4.1, 3.2 of IEC 62625-1.2013);

--- Changed the abbreviation "GPS" to "GNSS" (see 4.1, 3.2 of IEC 62625-1.2013);

--- Added the note of the abbreviation "ODDRS" (see 4.1);

---Deleted the abbreviations "ATS" "DIS" "EBA" "EMU" "ERTMS" "ETCS" "I/O" in IEC 62625-1.2013

"IT" "JRU" "LKJ" "LSB" "LZB" "PZB" "RAL" "SCMT" "TSI" and "VDV" (of IEC 62625-1.2016 3.2);

---Change the RAL color card to RGB (see 5.2.5.2, 4.2.5.2 of IEC 62625-1.2013);

---Deleted the description of unpublished standards and the responsibility for the application of standards in Chapter 1 of IEC 62625-1.2013;

---Deleted the content irrelevant to the situation in my country in the note of IEC 62625-1.2013 Table 1;

--- Deleted 3.3.2, 4.4 and informative appendix A, appendix B, appendix C and appendix D of IEC 62625-1.2013.

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

In the rail transit market over the past ten years, the demand for on-board event recorders in trains, subways, and trams has continued to increase. transport

The recorders required by businesses are becoming more and more complex, and are no longer satisfied with simple recording of speed, distance and running time. Currently, it is necessary

Develop a common specification to unify such requirements, optimize vehicle design, and reduce costs.

The objective of this document is to check the operation of the train according to the driving rules by recording the events during the operation of the train. This record can

It can be used for inquiries after accidents or events, and can also be used for regular monitoring of the ability and qualifications of drivers to operate trains.

This document is used to guide the direction of technology development, and does not restrict the implementation of on-board driving data recording, and does not restrict the implementation of rail transit train control vehicles.

The existing independent recording unit of the loading device is constrained.

GB/T 42286 is proposed to consist of three parts.

--- Part 1. Technical specifications. The purpose is to standardize the general functions and system requirements for in-vehicle driving data recording.

--- Part 2. Conformance testing. The purpose is to propose a consistency test method to verify whether the realization of on-board driving data recording is meet the requirements specified in this document.

--- Part 3. Audio and video recording specifications. The purpose is to standardize audio and video technical requirements for in-vehicle driving data recording.

On-board driving data recording of rail transit electronic equipment

Part 1. Technical Specifications

1 Scope

This document specifies the functional and performance requirements for on-board driving data recording of rail transit vehicles. These train operation record data reflect the

The behavior of the machine and the state of the on-board system are used to support the safety monitoring and recording of the system.

The data is recorded in such a way as to facilitate the identification of causes and possible consequences for the following purposes.

- a) may be used for investigations in the event of incidents and accidents;
- b) Document the appropriateness of the driver's actions.

This document specifies the general requirements for recording systems, applicable to all types of rail vehicles.

Manage and save the data extracted from the recording device to ensure its integrity. This