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Commercial Vehicle Controller Area Network (CAN)
Communication Protocol
商用车控制器局域网（CAN）通信协议

(English Translation)

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FOREWORD

This document is drafted in accordance with the rules given in GB/T 1.1-2020 “*Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents*”.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The organizations issuing this document shall not be held responsible for identifying any or all such patent rights.

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Commercial Vehicle Controller Area Network (CAN) Communication Protocol

1 SCOPE

This document specifies the technical requirements for the physical layer, data link layer and application layer of the controller area network (CAN) communication protocol for commercial vehicles, and describes the corresponding test methods.

This document is applicable to the vehicles of categories M₂, M₃ and N with the CAN bus networks using shielded or unshielded twisted pair at the physical layer and with a CAN bus communication rate of 250 kbit/s or 500 kbit/s, while this document may be used as a reference for other categories of vehicles.

2 NORMATIVE REFERENCES

The following normative documents contain provisions which, through normative reference in this text, constitute essential provision of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendment) applies.

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|---------------|--|
| GB/T 41588.1 | Road Vehicles—Controller Area Network (CAN) - Part 1: Data Link Layer and Physical Signaling |
| GB/T 41588.2 | Road Vehicles—Controller Area Network (CAN) - Part 2: High-Speed Medium Access Unit |
| IEC 62153-4-3 | Metallic communication cable test methods — Part 4-3: Electromagnetic compatibility (EMC) — Surface transfer impedance — Triaxial method |

3 TERMS AND DEFINITIONS

For the purposes of this document, the terms and definitions given in GB/T 41588.1 and GB/T 41588.2, as well as the following apply.

3.1 acknowledgement (ACK)

a parameter group (message) used to indicate a positive or negative response to a received message or operation request, or a bit field within a CAN data frame used to confirm that a message has been received by at least one node

3.2 address

an 8-bit value used to identify a communication device in the network

Note: The address is used to identify the source address (3.39) of the CAN data frame in this document, or, in some cases, the destination address (3.13).

3.3 arbitration

the process of resolving conflicts that occur when two or more nodes in a network attempt to access the CAN bus simultaneously

3.4 bus

topology of a communication network, where all nodes are reached by passive links which allow transmission in both directions

[Source: GB/T 41588.1-2022, 3.3]

3.5 bus communication rate

the maximum amount of data transmitted over the bus per unit time

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