Fourth edition
2021-07

Road vehicles — Diagnostic communication over Controller Area Network (DoCAN) —

Part 4: Requirements for emissions-related systems

Véhicules routiers — Diagnostic sur gestionnaire de réseau de communication (DoCAN) —

Partie 4: Exigences applicables aux systèmes associés aux émissions

Reference number
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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 31, *Data communication*.

This fourth edition cancels and replaces the third edition (ISO 15765-4:2016), which has been technically revised.

The main changes compared to the previous edition are as follows:

— changed all time-related parameters to $t_{\text{Parameter\_Name}}$;

— corrected all occurrences of ⊣⊨ $P2_{\text{CAN\_max}}$ and changed to $\Delta t_{\text{P2\_CAN\_Client\_Max}}$;

— Clause 6 title has been changed to application;

— subclause 6.1 title has been changed to vehicle communication initialisation sequence;

— subclause 6.2 title has been changed to external test equipment communication initialisation sequence;

— changed N_As to $t_{\text{N\_As}}$ and changed timeout value to 33 ms;

— changed N_Ar to $t_{\text{N\_Ar}}$ and changed timeout value to 33 ms;

— added clarification in 10.3.3 regarding the acceptance of physically addressed request messages.

A list of all parts in the ISO 15765 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document has been established in order to define common requirements for vehicle diagnostic systems implemented on a controller area network (CAN) communication link, as specified in ISO 11898-1 and ISO 11898-2. Although primarily intended for diagnostic systems, it also meets requirements from other CAN-based systems needing a network layer protocol.

To achieve this, it is based on the Open Systems Interconnection (OSI) basic reference model specified in ISO/IEC 7498-1 and ISO/IEC 10731, which structures communication systems into seven layers.

When mapped on this model, the application protocol and lower OSI layers framework requirements specified/referenced in the ISO 15765 series are structured according to Figure 1.

Figure 1 illustrates a standards-based documentation concept, which consists of the lower OSI layers framework, which specifies requirements related to the transport layer, network layer, data link layer and physical layer standards of the OSI layers 4, 3, 2, and 1.

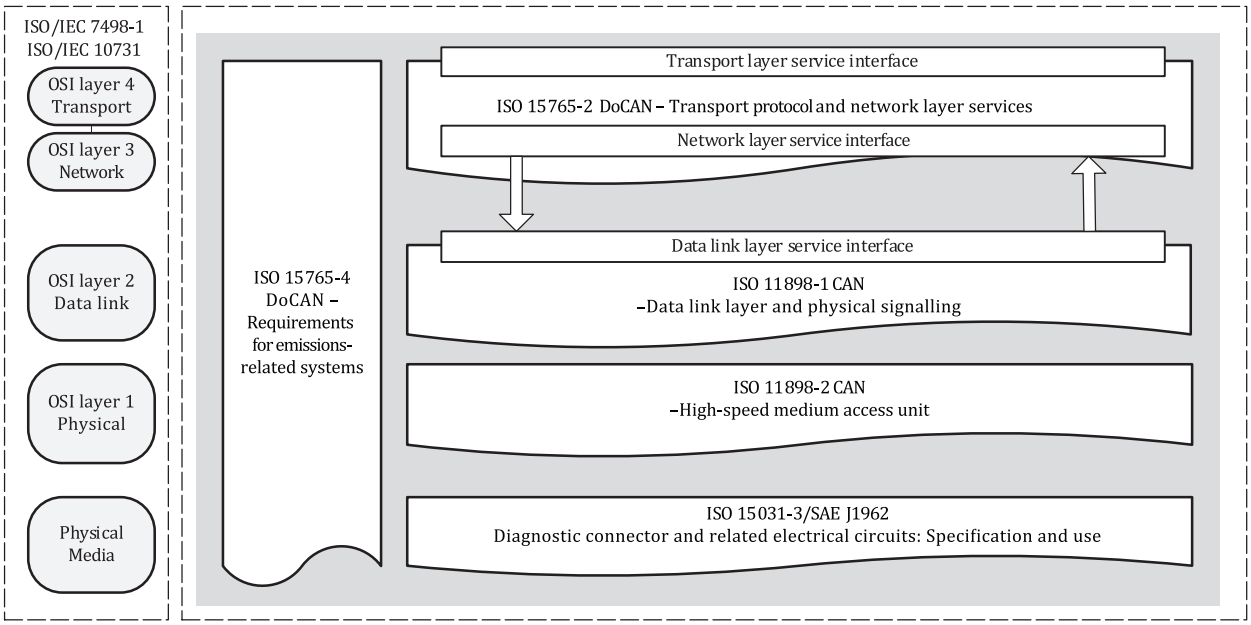

Figure 1 — DoCAN related OSI layers framework