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Second edition
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Road vehicles — Interchange of digital information on electrical connections between towing and towed vehicles —

Part 4: Diagnostic communication

Véhicules routiers — Échange d'informations numériques sur les connexions électriques entre véhicules tracteurs et véhicules tractés —

Partie 4: Communication de diagnostic



Reference number
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 22, *Road vehicles*, Subcommittee SC 3, *Electrical and electronic equipment*.

This second edition cancels and replaces the first edition (ISO 11992-4:2005), which has been technically revised. It also incorporates ISO 11992-4:2005/Cor1:2006.

ISO 11992 consists of the following parts, under the general title *Road vehicles — Interchange of digital information on electrical connections between towing and towed vehicles*:

- *Part 1: Physical layer and data-link layers*
- *Part 2: Application layer for brakes and running gear*
- *Part 3: Application layer for equipment other than brakes and running gear*
- *Part 4: Diagnostic communication*

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Introduction

This part of ISO 11992 has been established in order to define the implementation of a diagnostic data interchange between a commercial vehicle and its towed vehicle(s), including communication between towed vehicles, using a Controller Area Network (CAN) data link according to ISO 11992-1 and based on the definitions for unified diagnostic services and their implementation on CAN given in the ISO 14229 and ISO 15765 document series.

To achieve this, the document is based on the Open Systems Interconnection (OSI) Basic Reference Model, in accordance with ISO/IEC 7498-1 and ISO/IEC 10731, which structures the communication systems into seven layers. When mapped on this model, the services used by a diagnostic tester (client) and an Electronic Control Unit (ECU, server) based on this document are broken into the following layers according to [Table 1](#):

- application layer (layer 7), based on ISO 11992-4, ISO 14229-1, and ISO 14229-3;
- presentation layer (layer 6), vehicle manufacturer/system supplier specific or ISO 22901, ODX;
- session layer services (layer 5), based on ISO 11992-4 and ISO 14229-2;
- transport layer services (layer 4), based on ISO 11992-4 and ISO 15765-2;
- network layer services (layer 3), based on ISO 11992-4 and ISO 15765-2;
- data link layer (layer 2), specified in ISO 11898-1;
- physical layer (layer 1), specified in ISO 11992-1.

This document does not include any redundant information of the documents listed in this introduction. It focuses on

- additional requirements specific to the implementation of UDS on an ISO 11992 network and
- specific restrictions in the implementation of UDS on an ISO 11992 network.

In case of any contradictions, the definitions given in this document take precedence.

Table 1 — International Standards applicable to the OSI layers

Applicability	OSI seven layers	Diagnostics services on the communication between the commercial vehicles and their towed vehicles
seven layers according to ISO/IEC 7498-1 and ISO/IEC 10731	application (layer 7)	ISO 11992-4, ISO 14229-1, ISO 14229-3
	presentation (layer 6)	vehicle manufacturer specific or ISO 22901
	session (layer 5)	ISO 11992-4, ISO 14229-2
	transport (layer 4)	ISO 11992-4, ISO 15765-2
	network (layer 3)	ISO 11992-4, ISO 15765-2
	data link (layer 2)	ISO 11898-1
	physical (layer 1)	ISO 11992-1