



NSAI
Standards

Irish Standard
I.S. EN ISO 15005:2017

Road vehicles - Ergonomic aspects of transportation and control systems - Dialogue management principles and compliance procedures (ISO 15005:2017)

I.S. EN ISO 15005:2017

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This document is based on:

EN ISO 15005:2017

Published:

2017-03-15

This document was published under the authority of the NSAI and comes into effect on:

2017-04-02

ICS number:

13.180

43.040.15

NOTE: If blank see CEN/CENELEC cover page

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National Foreword

I.S. EN ISO 15005:2017 is the adopted Irish version of the European Document EN ISO 15005:2017, Road vehicles - Ergonomic aspects of transportation and control systems - Dialogue management principles and compliance procedures (ISO 15005:2017)

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EUROPEAN STANDARD

EN ISO 15005

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2017

ICS 13.180; 43.040.15

Supersedes EN ISO 15005:2002

English Version

Road vehicles - Ergonomic aspects of transportation and control systems - Dialogue management principles and compliance procedures (ISO 15005:2017)

Véhicules routiers - Aspects ergonomiques du transport et des systèmes de commande - Principes de gestion du dialogue et procédures de conformité (ISO 15005:2017)

Straßenfahrzeuge - Ergonomische Aspekte von Fahrerinformations- und -assistenzsystemen - Grundsätze des Dialogmanagements und Komformitätsprüfungen (ISO 15005:2017)

This European Standard was approved by CEN on 23 February 2017.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EN ISO 15005:2017 (E)

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European foreword

This document (EN ISO 15005:2017) has been prepared by Technical Committee ISO/TC 22 “Road vehicles” in collaboration with Technical Committee CEN/TC 278 “Intelligent transport systems” the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2017, and conflicting national standards shall be withdrawn at the latest by September 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of ISO 15005:2017 has been approved by CEN as EN ISO 15005:2017 without any modification.

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INTERNATIONAL STANDARD

ISO
15005

Second edition
2017-02

Road vehicles — Ergonomic aspects of transportation and control systems — Dialogue management principles and compliance procedures

*Véhicules routiers — Aspects ergonomiques du transport et des
systèmes de commande — Principes de gestion du dialogue et
procédures de conformité*



Reference number
ISO 15005:2017(E)

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ISO 15005:2017(E)



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ISO 15005:2017(E)

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).

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For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 22, *Road vehicles*, Subcommittee SC 39, *Ergonomics*.

This second edition cancels and replaces the third edition (ISO 15005:2002), which has been technically revised. The main changes compared to the previous edition are as follows:

- improvements were made to the clarity of the text and references were updated; and
- a section related to “learnability” was added as 5.4.

Introduction

This document deals with the ergonomic design of transport information and control systems (TICS) and provides general ergonomic principles for their dialogues, independent of any specific dialogue techniques.

The utmost care needs to be taken in the design and installation of TICS equipment in order to ensure that it does not impair the driver's safe control of the vehicle. This is in recognition of the fact that the driving environment has variable conditions, such as road surface, visibility, weather, ambient lighting and traffic conditions.

Dialogue management principles for TICSs are characterized by the need to take into account the following:

- TICSs are intended for use in a moving vehicle.
- TICSs help functions are appropriate to a moving vehicle.
- TICS dialogues take place in a constantly changing vehicle environment.
- TICS technologies are suited to that environment.
- TICS dialogues include the driver's vehicle-control actions in response to the TICS.

The driver of a vehicle equipped with a TICS device is responsible for the safety of the vehicle, its occupants and other road users. A dialogue therefore takes into account the driver workload as a whole, including the cognitive, perceptual and physical tasks associated with driving, so that there will be no impairment of the safe and effective operation of the vehicle. An important objective is to ensure effective and efficient TICS operation while respecting the in-vehicle environment and recognizing the paramount importance of the primary driving task.

In addition to the recommendations and requirements related to the principles it presents, this document also gives the conditions for compliance. As the manner in which each dialogue principle is applied will depend on the particular characteristics of the TICS function and the specific dialogue technique used, application examples have been provided.

The ultimate beneficiary of this document will be the TICS end-user: the driver of the road vehicle. It is the needs of the driver that have determined the ergonomic requirements included by the developers of this document.

Road vehicles — Ergonomic aspects of transportation and control systems — Dialogue management principles and compliance procedures

1 Scope

This document specifies ergonomic principles for the design of the dialogues that take place between the driver of a road vehicle and the vehicle's transport information and control systems (TICS) while the vehicle is in motion. It also specifies compliance verification conditions for the requirements related to these principles.

This document is applicable to TICS consisting of either single or multiple devices, which can be either independent or interconnected. It is not applicable to TICS without dialogues, TICS failures or malfunctions, or controls or displays used for non-TICS functions.

The requirements and recommendations of this document can be reconsidered for drivers with special needs.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3958, *Passenger cars — Driver hand-control reach*

ISO 15006, *Road vehicles — Ergonomic aspects of transport information and control systems — Specifications for in-vehicle auditory presentation*

ISO 15008, *Road vehicles — Ergonomic aspects of transport information and control systems — Specifications and test procedures for in-vehicle visual presentation*

ISO/TS 16951, *Road vehicles — Ergonomic aspects of transport information and control systems (TICS) — Procedures for determining priority of on-board messages presented to drivers*

SAE J1050¹⁾, *Describing and Measuring the Driver's Field of View*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

communication

exchange or transfer of information

1) SAE International.

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