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Third edition
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Road vehicles — Multi-core connecting cables —

Part 3: Construction, dimensions and marking of unscreened sheathed low-voltage cables

Véhicules routiers — Câbles de raccordement multiconducteurs —

Partie 3: Construction, dimensions et marquage des câbles basse tension gainés non blindés

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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).

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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 32, *Electrical and electronic components and general system aspects*.

This third edition cancels and replaces the second edition (ISO 4141-3:2006), which has been technically revised. The main changes compared to the previous edition are as follows:

— temperature range of cable defined as Class A and Class B have been added;

— normative references ISO 11446-1 and ISO 11446-2 (replacing ISO 11446), and ISO 25981 were added;

— reference to ISO 25981 was added to 5.1.1;

— the minimum diameter according to ISO 12098 was changed from 14 to 13 in Table 1;

— in 5.3 the definitions of L_B, L_W (was L_A) and $L_{Emax.}$ (was $L_{Amax.)}$ were added;

— in Table 2, Type 3 L_W changed;

— Figure 2 was added;

— reference to ISO 25981 was added to Table 3;

— reference to ISO 25981 was added to Table A.1.

A list of all parts in the ISO 4141 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.

Road vehicles — Multi-core connecting cables —

Part 3: Construction, dimensions and marking of unscreened sheathed low-voltage cables

1 Scope

This document specifies the construction, dimensions and marking of unscreened sheathed low-voltage multi-core cables for the connection of towing and towed vehicles, suitable for temperature range of class A and class B defined in ISO 6722-1:2011, Table 1.

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 1185, *Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 24 N (normal) for vehicles with 24 V nominal supply voltage*

ISO 1724, *Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 12 N (normal) for vehicles with 12 V nominal supply voltage*

ISO 3731, *Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 24 S (supplementary) for vehicles with 24 V nominal supply voltage*

ISO 3732, *Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 12 S (supplementary) for vehicles with 12 V nominal supply voltage*

ISO 4141-1, *Road vehicles — Multi-core connecting cables — Part 1: Test methods and requirements of basic performance sheathed cables*

ISO 4141-2, *Road vehicles — Multi-core connecting cables — Part 2: Test methods and requirements of high performance sheathed cables*

ISO 7638-1, *Road vehicles — Connectors for the electrical connection of towing and towed vehicles — Part 1: Connectors for braking systems and running gear of vehicles with 24 V nominal supply voltage*

ISO 7638-2, *Road vehicles — Connectors for the electrical connection of towing and towed vehicles — Part 2: Connectors for braking systems and running gear of vehicles with 12 V nominal supply voltage*

ISO 11446-1, *Road vehicles — Connectors for the electrical connection of towing and towed vehicles — Part 1: 13-pole connectors for vehicles with 12 V nominal supply voltage not intended to cross water fords*

ISO 11446-2, *Road vehicles — Connectors for the electrical connection of towing and towed vehicles — Part 2: 13-pole connectors for vehicles with 12 V nominal supply voltage intended to cross water fords*

ISO 12098, *Road vehicles — Electrical connections between towing vehicles and trailers — 15 pole connector for commercial vehicles equipped with 24V systems — Dimensional characteristics and contact allocation*

ISO 25981, *Road vehicles — Connectors for the electrical connection of towing and towed vehicles — Connectors for electronically monitored charging systems with 12V or 24V nominal supply voltage*