# SLOVENSKI STANDARD
# SIST EN ISO 8092-2:2004

**01-september-2004**

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**Cestna vozila - Priključki za električno opremo, vgrajeni na armaturi vozila - 2. del: Definicije, preskusne metode in splošne zahtevane lastnosti (ISO 8092-2:2000)**

Road vehicles - Connections for on-board electrical wiring harnesses - Part 2: Definitions, test methods and general performance requirements (ISO 8092-2:2000)

Straßenfahrzeuge - Steckverbindungen für das elektrische Fahrzeug-Bordnetz - Teil 2: Begriffe, Prüfungen und allgemeine Anforderungen (ISO 8092-2:2000)



Véhicules routiers - Connexions pour faisceaux de câblage électrique embarqués - Partie 2: Définitions, méthodes d'essai et exigences générales (ISO 8092-2:2000)



**Ta slovenski standard je istoveten z:** **EN ISO 8092-2:2001**

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**ICS:**

| | | |
|---|---|---|
| 43.040.10 | Električna in elektronska oprema | Electrical and electronic equipment |

**SIST EN ISO 8092-2:2004** **en**

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# EN ISO 8092-2

December 2001

ICS 43.040.10

Supersedes EN 28092-2:1998

English version

# Road vehicles - Connections for on-board electrical wiring harnesses - Part 2: Definitions, test methods and general performance requirements (ISO 8092-2:2000)

Véhicules routiers - Connexions pour faisceaux de câblage électrique embarqués - Partie 2: Définitions, méthodes d'essai et exigences générales (ISO 8092-2:2000)

Straßenfahrzeuge - Steckverbindungen für das elektrische Fahrzeug-Bordnetz - Teil 2: Begriffe, Prüfungen und allgemeine Anforderungen (ISO 8092-2:2000)

This European Standard was approved by CEN on 17 November 2001.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.



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 Management Centre has the same status as the official versions.



CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

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## Foreword

The text of ISO 8092-2:2000 has been prepared by Technical Committee ISO/TC 22 "Road vehicles" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 8092-2:2001 by CMC.

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 June 2002, and conflicting national standards shall be withdrawn at the latest by June 2002.

This document supersedes EN 28092-2:1998.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.



## Endorsement notice

The text of ISO 8092-2:2000 has been approved by CEN as EN ISO 8092-2:2001 without any modifications.

INTERNATIONAL STANDARD

**ISO 8092-2**

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2002-01-15

# Road vehicles — Connections for on-board electrical wiring harnesses —

## Part 2: Definitions, test methods and general performance requirements



*Véhicules routiers — Connexions pour faisceaux de câblage électrique embarqués —*

*Partie 2: Définitions, méthodes d'essai et exigences générales*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 8092 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 8092-2 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 3, *Electrical and electronic equipment*.

This third edition cancels and replaces the second edition (ISO 8092-2:1996), which has been technically revised.



ISO 8092 consists of the following parts, under the general title *Road vehicles — Connections for on-board electrical wiring harnesses*:



— *Part 1: Tabs for single-pole connections — Dimensions and specific requirements*

— *Part 2: Definitions, test methods and general performance requirements*

— *Part 3: Tabs for multi-pole connections — Dimensions and specific requirements*

— *Part 4: Pins for single- and multi-pole connections — Dimensions and specific requirements*

Annexes A and B of this part of ISO 8092 are for information only.

# Road vehicles — Connections for on-board electrical wiring harnesses —

# Part 2: Definitions, test methods and general performance requirements

## 1 Scope

This part of ISO 8092 defines terms and specifies test methods and general performance requirements for single- and multi-pole connections used with on-board electrical wiring harnesses in road vehicles.

This part of ISO 8092 is applicable to connectors designed to be disconnected after mounting in the vehicle for repair and maintenance only. It does not cover one-part connections, i.e. where one part of the connection has direct contact with the pattern of the printed circuit board.

This part of ISO 8092 is not applicable to the internal connections of electronic devices.



## 2 Normative references



The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 8092. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 8092 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 1817, *Rubber, vulcanized — Determination of the effect of liquids.*

ISO 6722-3, *Road vehicles — Unscreened low-tension cables — Part 3: Conductor sizes and dimensions for thick-wall insulated cables.*

ISO 6722-4, *Road vehicles — Unscreened low-tension cables — Part 4: Conductor sizes and dimensions for thin-wall insulated cables.*

ISO 7309, *Road vehicles — Hydraulic braking systems — ISO reference petroleum base fluid.*

ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests.*

IEC 60050-581, *International Electrotechnical Vocabulary — Electromechanical components for electronic equipment.*

IEC 60068-2-27, *Environmental testing — Part 2: Tests — Test Ea and guidance: Shock.*

IEC 60512-11-7, *Electromechanical components for electronic equipment — Basic testing procedures and measuring methods — Part 11: Climatic tests — Section 7: Test 11 g: Flowing mixed gas corrosion test.*

IEC 60529, *Degrees of protection provided by enclosures (IP code).*

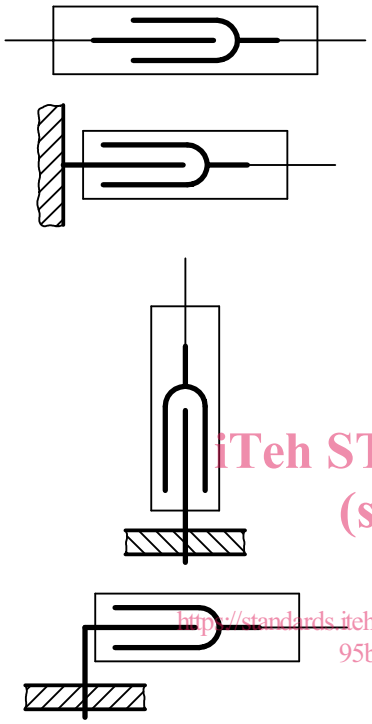
SAE J311b, *Fluid for passenger car type automatic transmissions.*

## 3 Terms and definitions

For the purposes of this part of ISO 8092, the terms and definitions given in IEC 60050-581 and the following apply.

**3.1**
**connection**
two mated connectors or contacts

See Figure 1 for examples.



a) **Cable-to-cable connection**

b) **Connection to apparatus**

c) **Connection to printed circuit board (vertical type)**

d) **Connection to printed circuit board (horizontal type)**



**Figure 1 — Typical examples of connections**

**3.2**
**connector**
assembly of contact and housing that terminates conductors for the purpose of providing connection and disconnection to a suitable mating connector

**3.3**
**contact**
conductive element in a connector (including means for cable attachment) that mates with a corresponding element to provide an electrical path

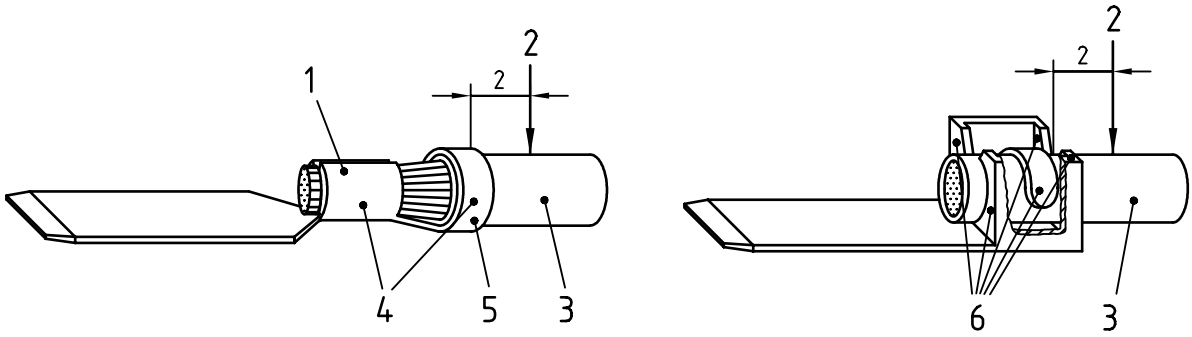
**3.4**
**contact area**
area in contact between two mated contacts that provides an electrical path

**3.5**
**male contact**
contact (including means for cable attachment) designed for electrical engagement on its outer surface and to enter a female contact, thus forming an electrical connection

EXAMPLES Tab, pin, blade.

See Figure 2.

Dimensions in millimetres




**Key**

1 Conductor crimp
2 Reference point
3 Cable
4 Cable attachment
5 Insulation support / sealing grip
6 Cable attachment by insulation displacement

**Figure 2 — Male contact**



**3.6**
**female contact**
contact (including means for cable attachment) designed for electrical engagement on its inner surface, and to accept the entry of a male contact, thus forming an electrical connection

EXAMPLES Receptacle, sleeve.



See Figure 3.

**3.7**
**positive-locking female contact**
female contact with automatic positive-locking and manual unlocking device engaging a hole or dimple in the male contact

**3.8**
**cable attachment**
any permanent joining of cable to contact

EXAMPLES Crimp, insulation displacement, welding, screwing.

**3.9**
**detent**
raised portion of the female contact that engages a hole or dimple in the male contact thus providing a latch for the mated parts

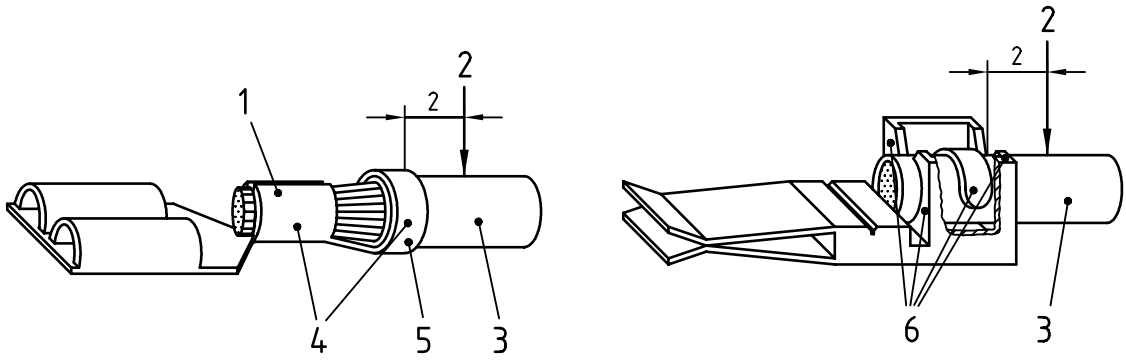
**3.10**
**reference point**
point 2 mm away from the rear-most edge of a male or female contact used for measuring the connection resistance (voltage drop)

See Figures 2 and 3, and 4.8.

**3.11**
**multi-pole connection**
two mated connectors with more than one contact pair

See Figure 4.

Dimensions in millimetres

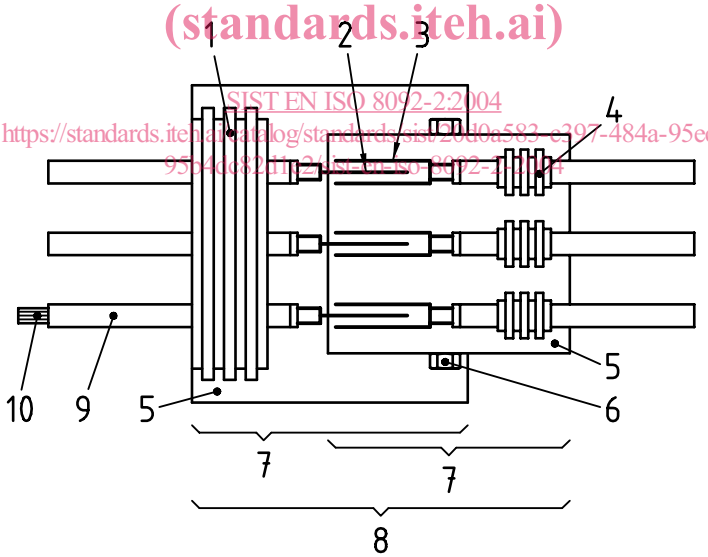



**Key**

1 Conductor crimp
2 Reference point
3 Cable
4 Cable attachment
5 Insulation support / sealing grip
6 Cable attachment by insulation displacement

**Figure 3 — Female contact**






**Key**

1 Multiple cable seal
2 Male contact
3 Female contact
4 Single cable seal
5 Housing
6 Housing seal
7 Connector
8 Connection
9 Cable
10 Conductor

**Figure 4 — Multi-pole connectors/connection**

**3.12**
**connector polarization**
device or connector shape preventing connection in any but the manner specified