INTERNATIONAL STANDARD

ISO 10487-2

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Passenger cars — Connections for car radios —

Part 2:
Performance requirements

Voitures particulières — Connexions pour autoradios —

Partie 2: Exigences de performance

Reference number
ISO 10487-2:1995(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.

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.

International Standard ISO 10487-2 was prepared by Technical Committee ISO/TC 22, *Road vehicles*.

ISO 10487 consists of the following parts, under the general title *Passenger cars — Connections for car radios*:

— *Part 1: Dimensions and general requirements*

— *Part 2: Performance requirements*

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Passenger cars — Connections for car radios —

Part 2:
Performance requirements

1 Scope

This part of ISO 10487 specifies performance requirements of multi-pole connectors in accordance with ISO 10487-1.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 10487. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 10487 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 8092-2:—[1], *Road vehicles — Connections for on-board electrical wiring harnesses — Part 2: Definitions, test methods and general performance requirements.*

ISO 10487-1:1992, *Passenger car radio connections — Part 1: Dimensions and general requirements.*

3 Specifications and ratings

Car radio connectors in accordance with ISO 10487-1 are specified as

— applicable to environmental temperatures between − 40 °C and + 85 °C (class 2 as defined in table 4 of ISO 8092-2:—);

— unsealed;

— without locking devices for extractable car radios, or with locking devices for permanent car radio connections.

Car radio connector ratings are as follows:

a) nominal voltage: 12 V or 24 V, as selected by the car radio manufacturer;

b) nominal current: 10 A for 12 V and 5 A for 24 V.

4 Test methods and performance requirements

All test procedures shall be carried out at an ambient temperature of (23 ± 5) °C, and a relative humidity between 45 % and 75 %, unless otherwise stated.

The tests shall be applied with all contacts fitted.

Test procedures, test sequences and performances shall be as specified in table 1. Each group of samples shall consist of five connectors and shall be submitted to the test sequences shown vertically by crosses in the appropriate column in table 1.

1) To be published. (Revision of ISO 8092-2:1988)

Table 1 — Test procedures

Test	Sample group							Test method	Performance requirements
	A	B	C	D	E	F	G		
Visual examination	X	X	X	X	X	X	X	Subclause 4.2.1 of ISO 8092-2:—	Subclause 4.2.2 of ISO 8092-2:—
Tensile strength of crimped connection	X							Subclause 4.4.1 of ISO 8092-2:—	Subclause 4.4.2 of ISO 8092-2:—
Contact insertion	X							Not applicable to sockets. For plugs subclause 4.6.1 of ISO 8092-2:—	For plugs subclause 4.6.2 of ISO 8092-2:—
Contact retention	X							Not applicable to sockets. For plugs subclause 4.7.1 of ISO 8092-2:—	For plugs subclause 4.7.2 of ISO 8092-2:—
First connection of the connector		X						Subclause 4.3.1 of ISO 8092-2:—	Disconnecting force: part A[1]: 40 N max. part B[1]: 40 N max. part C[1]: 50 N max. parts A and B: 80 N max. parts A, B and C: 130 N max.
Connection resistance at millivolt level and specified current		X	X	X	X	X		Subclause 4.8.1 of ISO 8092-2:—	Contact resistance: 10 mΩ max.
First disconnection to tenth connection of the connector		X						Subclause 4.3.1 of ISO 8092-2:—	First and tenth disconnecting forces: part A[1]: 40 N max. part B[1]: 40 N max. part C[1]: 50 N max. parts A and B: 80 N max. parts A, B and C: 130 N max.
Current cycling			X					Subclause 4.17.1 of ISO 8092-2:— 6 A for 12 V, 3 A for 24 V.	Subclause 4.17.2 of ISO 8092-2:—
Insulation resistance				X				Subclause 4.12.1 of ISO 8092-2:—	Insulation resistance: 20 MΩ min.
Dielectric strength				X				Subclause 4.13.1 of ISO 8092-2:—	Subclause 4.13.2 of ISO 8092-2:—
Temperature/humidity cycling				X				Subclause 4.10.1 of ISO 8092-2:—	Subclause 4.10.2 of ISO 8092-2:—
Vibration					X			Subclause 4.11.1 of ISO 8092-2:—	Subclause 4.11.2 of ISO 8092-2:—

Test	Sample group							Test method	Performance requirements
	A	B	C	D	E	F	G		
Temperature rise							X	Subclause 4.14.1 of ISO 8092-2:— but with cables of a nominal cross-sectional area of 0,75 mm^2, and with a test current: 6 A for nominal voltage 12 V, or 3 A for nominal voltage 24 V.	Subclause 4.14.2 of ISO 8092-2:—
Connection resistance at millivolt level and specified current		X	X		X			Subclause 4.8.1 of ISO 8092-2:—	Contact resistance: 10 mΩ max.
Locking device strength		X						Subclause 4.5.1 of ISO 8092-2:— (applicable to permanent car radio connector)	Subclause 4.5.2 of ISO 8092-2:—
Durability of extractable connector							X	Applicable to extractable car radio connector only. Test the extractable connectors by performing 5 000 cycles of connection and disconnection as specified in subclause 4.3.1 of ISO 8092-2:— but without force measurements. Then measure the contact resistance in accordance with subclause 4.8.1 of ISO 8092-2:—.	Contact resistance: 10 mΩ max.
Insulation resistance				X				Subclause 4.12.1 of ISO 8092-2:—	Insulation resistance: 20 MΩ min.
Dielectric strength				X		X		Subclause 4.13.1 of ISO 8092-2:—	Subclause 4.13.2 of ISO 8092-2:—
Salt spray						X		Subclause 4.16.1 of ISO 8092-2:—	Subclause 4.16.2 of ISO 8092-2:—
Connection resistance at millivolt level and specified current				X		X	X	Subclause 4.8.1 of ISO 8092-2:—	Contact resistance: 10 mΩ max.
Visual examination	X	X	X	X	X	X	X	Subclause 4.2.1 of ISO 8092-2:—	Subclause 4.2.2. of ISO 8092-2:—

1) In accordance with ISO 10487-1.

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Price based on 3 pages