INTERNATIONAL STANDARD

ISO 8092-1

Second edition
1996-02-01

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

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

Véhicules routiers — Connexions pour faisceaux de câblage électrique embarqués —
Partie 1: Languettes pour raccordements unipolaires — Dimensions et exigences particulières

Reference number
ISO 8092-1:1996(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 8092-1 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 3, *Electrical and electronic equipment*.

This second edition cancels and replaces the first edition (ISO 8092-1:1989), of which it constitutes a technical revision.

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*

Annex A of this part of ISO 8092 is for information only.

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

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

1 Scope

This part of ISO 8092 specifies dimensions for the tabs of single-pole connections and specific requirements, for on-board electrical wiring harnesses of road vehicles, which can be fitted into female contacts such as those given in annex A. It applies to connectors designed to be disconnected after mounting in the vehicle for the purposes of repair and/or maintenance only.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this part of ISO 8092. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this part of ISO 8092 are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 8092-2:1996, *Road vehicles — Connections for on-board electrical wiring harnesses — Part 2: Definitions, test methods and general performance requirements.*

3 Definitions

For the purposes of this part of ISO 8092, the definitions given in ISO 8092-2 apply.

4 Dimensions

Tabs for single-pole connections shall conform to the dimensions given in table 1 and figure 1.

Details not specified are left to the manufacturer's choice.

5 Specific performance requirements

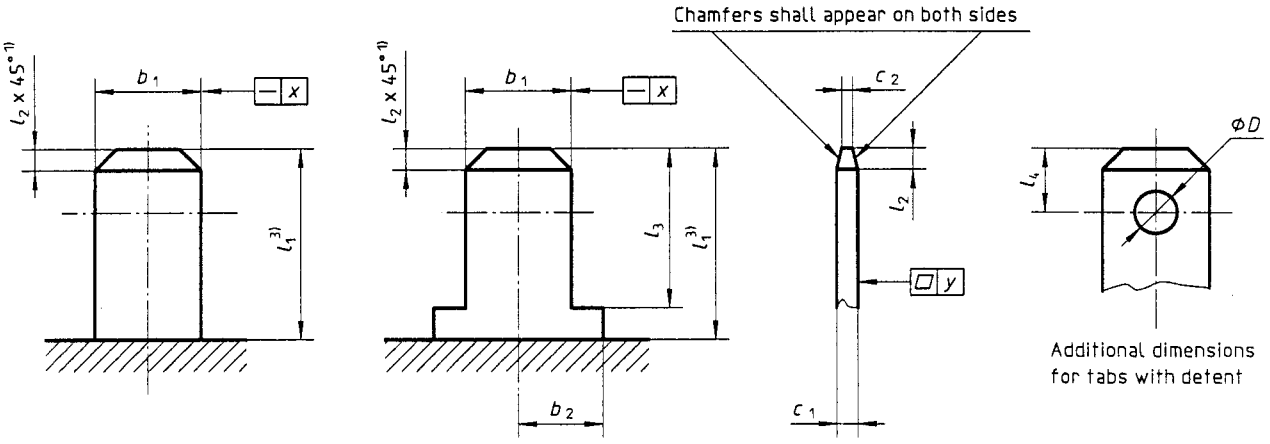
Single-pole connections shall be in conformity with the general performance requirements of ISO 8092-2, and shall meet the following specific requirements.

5.1 Design requirements

A tab without detent requires external means of retention to the mating part. If tabs are stamped or stamped and formed, the usable contact area shall be specified and care shall be taken to assure that gaps, seams and rounded edges do not affect the contact performance.

5.2 Connection forces and disconnection forces

Connectors for single-pole connections, tested in accordance with ISO 8092-2:1995, subclause 4.3 shall meet the requirements in table 2.



a) Tab without shoulder

b) Tab with shoulder 2)

1) Bevel $l_2 \times 45°$ need not be a straight line but shall not be a concave curve if it is within the confines shown; it may be a radius of l_2.

2) Tabs with one shoulder are optional.

3) l_1 is the tab length required for engaging the female contact (functional area of tab). Retention features of the tab shall not be within this length (see 5.1).

Figure 1 — Tab dimensions

Table 1 — Tab dimensions

Dimensions in millimetres

Dimension		Size[1]					
		2,8 × 0,5	**2,8 x 0,8**	4,8 × 0,5	**4,8 x 0,8**	**6,3 x 0,8**	**9,5 x 1,2**
l_1	min.	8,1		8		10,1	14,5
l_2	max.	0,6		0,9		1,0	1,3
	min.	0,3		0,6		0,5	0,7
l_3	max.	7,3		6,5		8,1	12,5
	min.	7,0		6,2		7,8	12,0
l_4 [2]	max.	1,8		3,4		4,7	5,5
	min.	1,3		3,0		4,0	4,5
b_1	max.	2,9		4,9		6,4	9,6
	min.	2,7		4,7		6,2	9,4
b_2	max.	2,3		3,5		4,7	6,5
	min.	2,0		3,0		3,7	5,5
c_1	max.	0,54	0,84	0,54	0,84	0,84	1,23
	min.	0,47	0,77	0,47	0,77	0,77	1,17
c_2	max.	0,3	0,5	0,3	0,5	0,5	0,7
	min.	0,1	0,3	0,1	0,3	0,3	0,5
x		0,2					
y		0,07					0,06
D [2]	max.	1,3		1,5		2	
	min.	1,1		1,3		1,6	1,7

1) Recommended tab sizes are shown in bold type.

2) For tabs with detent only.

Table 2 — Performance requirements for connection and disconnection forces of connectors for single-pole connections

Connection and disconnection		Force, N						
		Tab size						
		2,8		4,8		6,3		9,5
		P[1]	F[2]	P	F	P	F	F
First connection force	max.	27	53	30	67	45	80	100
First disconnection force	max.	27	53	30	67	45	80	100
10th disconnection force	min.	4	6	7	15	9	18	30

1) P refers to positive locking female contact.

2) F refers to female contact without positive locking.

5.3 Connection resistance

Single-pole connections, tested in accordance with ISO 8092-2:1995, subclause 4.8, shall meet the requirements in table 3.

Table 3 — Maximum permitted connection resistance

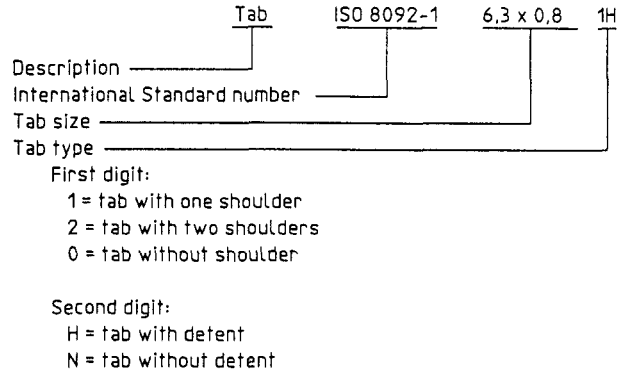
Connection resistance		
Initial	After endurance	
	1)	1)
mΩ	mΩ	% of initial measured value
max.	max.	max.
5	10	150

1) As selected by supplier and user.

6 Designation

Tabs in accordance with this part of ISO 8092 shall be designated as follows.

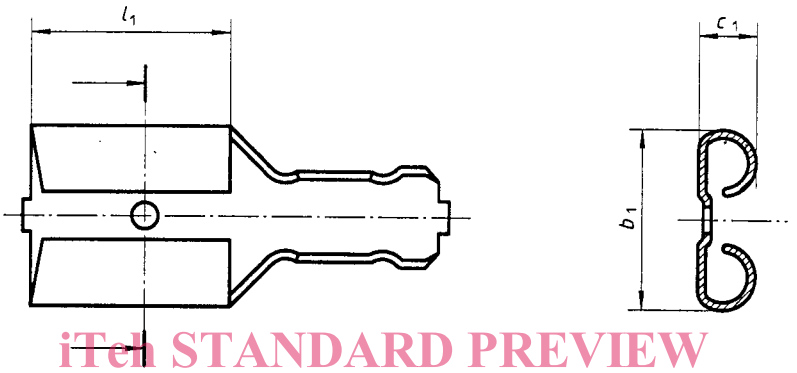
EXAMPLE



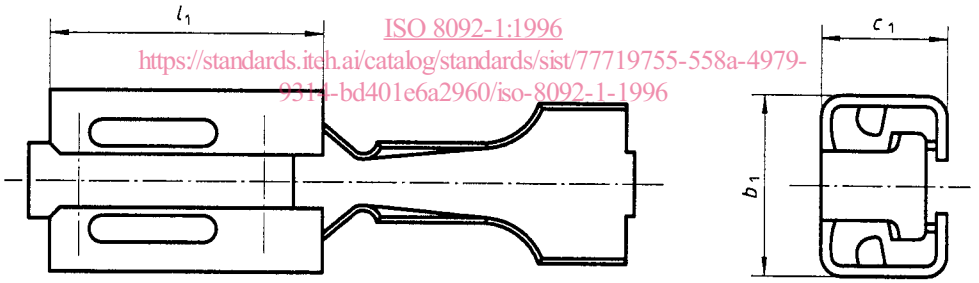
Annex A
(informative)

Examples of single-pole female contacts

This annex shows examples in figure A.1 of single-pole female contact designs and reference dimensions in table A.1. All other designs that meet the performance requirements specified in ISO 8092-2 are acceptable.



Type 1



Type 2

Figure A.1 — Typical forms

Table A.1 — Dimensions

Dimensions in millimetres

Size	Type	l_1	c_1	b_1
2,8	1 2	6,4 8,9	2,2 4,6	3,8 3,9
4,8	1 2	6,4 8,9	2,5 4,2	5,8 5,6
6,3	1 2	7,8 8,9	3,2 4,2	7,7 7,2
9,5	1 2	12 —	3,8 —	11 —

ICS 43.040.10

Descriptors: road vehicles, electrical installation, cable harnesses, electric connections, electric connectors, single-pole connectors, plug connectors, connector feathers, specifications, dimensions.

Price based on 5 pages