INTERNATIONAL STANDARD

ISO 6722-4

First edition
1993-02-01

Road vehicles — Unscreened low-tension cables —

Part 4:
Conductor sizes and dimensions for thin-wall insulated cables

Véhicules routiers — Câbles basse tension non blindés —

Partie 4: Sections et dimensions des conducteurs à enveloppe isolante mince

Reference number
ISO 6722-4:1993(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 6722-4 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Sub-Committee SC 3, *Electrical and electronic equipment*.

ISO 6722 consists of the following parts, under the general title *Road vehicles — Unscreened low-tension cables*:

— *Part 1: General requirements and test methods*

— *Part 2: Cable classes, applicable tests and special requirements*

— *Part 3: Conductor sizes and dimensions for thick-wall insulated cables*

— *Part 4: Conductor sizes and dimensions for thin-wall insulated cables*

Annex A of this part of ISO 6722 is for information only.

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland
Printed in Switzerland

INTERNATIONAL STANDARD ISO 6722-4:1993(E)

Road vehicles — Unscreened low-tension cables —

Part 4:
Conductor sizes and dimensions for thin-wall insulated cables

1 Scope

This part of ISO 6722 specifies the conductor sizes and dimensions of thin-wall insulated unscreened low-tension cables used in road vehicle applications.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 6722. 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 6722 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 6722-1:1984, *Road vehicles — Unscreened low-tension cables — Part 1: General requirements and test methods.*

ISO 6722-2:1985, *Road vehicles — Unscreened low-tension cables — Part 2: Cable classes, applicable tests and special requirements.*

3 Cable colour identification

The preferred colours for road vehicle cable insulations are:

black, white, blue, orange, brown, green, violet, red, yellow and grey.

4 Dimensional requirements

Insulated cables covered by this part of ISO 6722 shall conform to the values specified in table 1. For other requirements, different conductor constructions may be used providing they meet the nominal cross-sectional area and the conductor resistance requirement. Annex A indicates current cable sizes that differ from table 1.

5 Tests and performance requirements

The test methods and the performance requirements shall be as specified in ISO 6722-1 and ISO 6722-2.

Table 1

Conductor								Insulation thickness		Outside cable diameter
Nominal cross-sectional area	Construction 1		Construction 2		Diameter	Maximum resistance at 20 °C mΩ/m				
	No. of wires	Diameter of wires	No. of wires	Diameter of wires		Plain copper	Tinned copper			
mm²	approx.	max. mm	approx.	max. mm	max. mm			nom. mm	min.[1] mm	max. mm
0,22	7	0,21	—	—	0,7	84,8	86,5	0,3	0,24	1,3
0,35	12		7	0,26	0,9	54,4	55,5			1,5
0,5	16			0,32	1,1	37,1	38,2	0,35	0,28	1,9
			19	0,19						
0,75	24			0,23	1,3	24,7	25,4			2,1
1	32			0,26	1,5	18,5	19,1			2,3
1,5	30	0,26		0,32	1,8	12,7	13			2,6
2	28	0,31		0,37	2	9,42	9,69			2,8
2,5	50	0,26		0,41	2,2	7,6	7,82			3
3	44	0,31		0,46	2,4	6	6,17	0,4	0,32	3,4
			37	0,32						
4	56			0,37	2,8	4,71	4,85			3,8
5	70			0,41	3,1	3,94	4,02	0,45	0,36	4,2
6	84			0,45	3,4	3,14	3,23			4,5
10	80	0,41	—	—	4,5	1,82	1,85	0,6	0,48	6
16	126		—	—	6,3	1,16	1,18	0,65	0,52	7,9
25	196		—	—	7,8	0,743	0,757			9,4

1) The minimum insulation thickness is calculated as 80 % of the nominal insulation thickness.

Annex A
(informative)

Cross-sectional areas and resistances for low-tension cables in current sizes

Table A.1 summarizes various national sizes for low tension cables not shown in table 1. Only the nominal cross-sectional area and the maximum resistance of the conductor are shown because of the variety of constructions currently employed.

Table A.1

Nominal cross-sectional area of conductor mm^2	Maximum conductor resistance at 20 °C mΩ/m	
	Plain copper	Tinned copper
0,3	64,2	65,6
0,6	33	33,7
0,65	29,3	30,2
0,8	23,3	23,8
0,85	20,8	21,2
1,25	14,7	15
1,4	13,9	14,2
4,5	4,06	4,18
7	2,72	2,8
8	2,32	2,45
8,5	2,2	2,26
13	1,5	1,53
15	1,25	1,28
19	1	1,02
20	0,99	1,02

UDC 621.315.21:629.11

Descriptors: road vehicles, electrical installation, low voltage, electric cables, insulated cables, electric conductors, dimensions, diameters, sections, identification methods, colour marking.

Price based on 3 pages