
International Standard



6722/3

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**Road vehicles — Unscreened low-tension cables —
Part 3 : Conductor sizes and dimensions**

Véhicules routiers — Câbles basse tension non blindés — Partie 3 : Sections et dimensions des conducteurs

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Descriptors : road vehicles, low voltage switchgear, electric cables, dimensions.

Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 6722/3 was prepared by Technical Committee ISO/TC 22, *Road vehicles*.

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Road vehicles — Unscreened low-tension cables — Part 3: Conductor sizes and dimensions

0 Introduction

ISO 6722 consists of three parts:

- Part 1: General requirements and test methods.
- Part 2: Cable classes, applicable tests and special requirements.
- Part 3: Conductor sizes and dimensions.

1 Scope and field of application

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

2 References

ISO 6722/1, *Road vehicles — Unscreened low-tension cables — Part 1: General requirements and test methods.*

ISO 6722/2, *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

The insulated cables covered by this part of ISO 6722 shall conform to the nominal area and maximum resistance values shown in table 1. Other values are given as a guide for constructions where there are no special requirements.

Refer to the annex for current cable sizes that differ from table 1.

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Nominal conductor area	Approximate number of wires ²⁾	Maximum diameter of single wires ²⁾	Maximum diameter of conductor	Maximum resistance of conductor at 20 °C (mΩ/m)		Nominal insulation thickness ³⁾	Maximum overall cable diameter ³⁾
				Plain copper	Tinned copper		
mm ²		mm	mm			mm	mm
0,05 ¹⁾	7	0,11	0,4	349	356	0,3	1
0,22 ¹⁾	7	0,21	0,7	84,8	86,5	0,3	1,3
0,38 ¹⁾	12	0,21	0,9	54,4	55,5	0,3	1,5
0,5	16	0,21	1,1	37,1	38,2	0,6	2,3
0,75	24	0,21	1,3	24,7	25,4	0,6	2,5
1	32	0,21	1,5	18,5	19,1	0,6	2,7
1,5	30	0,26	1,8	12,7	13,0	0,6	3
2,5	50	0,26	2,2	7,60	7,82	0,7	3,6
4	56	0,31	2,8	4,71	4,85	0,8	4,4
6	84	0,31	3,4	3,14	3,23	0,8	5
10	80	0,41	4,5	1,82	1,85	1,0	6,5
16	126	0,41	6,3	1,16	1,18	1,0	8,3
25	196	0,41	7,8	0,743	0,757	1,3	10,4
35	276	0,41	9,0	0,527	0,538	1,3	11,6
50	396	0,41	10,5	0,368	0,375	1,5	13,5
70	360	0,51	12,5	0,259	0,264	1,5	15,5
95	475	0,51	14,8	0,196	0,200	1,6	18,0
120	608	0,51	16,5	0,153	0,156	1,6	19,7

1) Sizes 0,05, 0,22, and 0,38 mm² are for special applications only.

2) Other conductor constructions are acceptable providing they meet the nominal conductor area and the conductor resistance requirements.

3) For special applications for classes A, B, and C, and certain materials for class C (see ISO 6722/2 for the classes), the nominal insulation thickness and maximum overall cable diameter may be increased as agreed with the user.

Annex

Areas and resistances for low-tension cables in current sizes

(This annex does not form part of the Standard.)

Table 2 summarizes various national sizes for low-tension cables not shown in table 1. Only the nominal conductor area and the maximum resistance are shown because of the variety of constructions currently employed.

Table 2

Nominal conductor area mm ²	Maximum resistance at 20 °C (mΩ/m)	
	Plain copper	Tinned copper
0,6	33,0	33,7
0,65	29,3	30,2
0,8	23,3	23,8
0,85	20,8	21,2
1,25	14,7	15,0
1,4	13,9	14,2
2	9,42	9,69
3	6,00	6,17
4,5	4,06	4,18
5	3,94	4,02
7	2,72	2,80
8	2,20	2,26
13	1,50	1,53
15	1,25	1,28
19	1,00	1,02
20	0,99	1,02
30	0,61	0,68
32	0,57	0,58
40	0,46	0,47
60	0,29	0,30
62	0,30	0,31
75	0,25	0,26
81	0,220	0,224
85	0,210	0,214
100	0,170	0,173
103	0,180	0,184

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