

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Preferred diameters of wire terminations of capacitors and resistors

Valeurs préférentielles des diamètres des fils de sorties des condensateurs et résistances

[IEC 60301:2012](#)

<https://standards.iteh.ai/catalog/standards/sist/fd12558f-0a67-4427-a4ac-e8c9a91ed3fa/iec-60301-2012>



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CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Preferred diameters of wire terminations	5
Annex A (informative) Imperial wire dimensions	6
Table 1 – Preferred diameters of wire terminations	5
Table A.1 – Typical imperial wire diameters	6

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**PREFERRED DIAMETERS OF WIRE TERMINATIONS
OF CAPACITORS AND RESISTORS**

FOREWORD

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International Standard IEC 60301 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment.

This third edition cancels and replaces the second edition, published in 1971, and its Amendment A.1, published in 1972, and constitutes a technical revision.

The main technical changes with respect to the second edition are the following:

- employment of SI units only in the normative part of this standard, causing transfer of all imperial dimensions from Table 1 to the informative Annex A,
- addition of two smaller diameters of wire terminations in Table 1, and
- tightening of the tolerance ranges defined by minimum and maximum diameters in Table 1.

The text of this standard is based on the following documents:

FDIS	Report on voting
40/2153/FDIS	40/2165/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
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PREFERRED DIAMETERS OF WIRE TERMINATIONS OF CAPACITORS AND RESISTORS

1 Scope

This International Standard gives a series of preferred diameters of the finished wire terminations of capacitors and resistors for use in electronic equipment.

2 Preferred diameters of wire terminations

A series of preferred diameters d of the finished wire terminations is given in Table 1.

Table 1 – Preferred diameters of wire terminations

Minimum diameter d_{\min} mm	Nominal diameter d mm	Maximum diameter d_{\max} mm
0,18	0,2	0,22
0,23	0,25	0,27
0,27	0,3	0,33
0,36	0,4	0,43
0,45	0,5	0,53
0,55	0,6	0,63
0,65	0,7	0,73
0,75	0,8	0,83
0,95	1,0	1,03
1,15	1,2	1,23

The nominal or mean diameter of actual wire terminations may deviate from the listed nominal diameter d , if the actual wire diameter with its tolerance is within the range as defined by the minimum and maximum diameters, d_{\min} and d_{\max} , in Table 1.

NOTE 1 The presented nominal diameters d are intended to apply to the wire terminations of finished products. The diameter of the supplied lead wire material may deviate from this recommendation since all processing applied to the wire material takes effect prior to assessment of the wire termination's diameter.

NOTE 2 The designer of components with wire terminations and the writer of specifications on such products may wish to consider the influence of a wide variation of the diameter of wire terminations on the performance of the respective products, e.g. through the thermal conductivity leading to differences in the thermal management of the component, which probably influences the result of endurance tests and also the functional lifetime of the respective component. Hence, the designer or writer may decide to prescribe a tighter tolerance window for the wire terminations of the respective product, preferably within the ranges given in this standard.

Annex A
(informative)

Imperial wire dimensions

The previous editions of this standard also listed comparable typical wire dimensions as established in the imperial unit system. These dimensions are listed in Table A.1.

Table A.1 – Typical imperial wire diameters

Imperial nominal wire diameter in	Converted metric diameter mm
0,008	0,203
0,010	0,254
0,012	0,305
0,016	0,406
0,020	0,508
0,025	0,635
0,028	0,711
0,032	0,813
0,038	0,965
0,043	1,092

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