

BS EN 60301:2012



BSI Standards Publication

Preferred diameters of wire terminations of capacitors and resistors

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National foreword

This British Standard is the UK implementation of EN 60301:2012. It is identical to IEC 60301:2012. It supersedes BS 5693:1978 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/40X, Capacitors and resistors for electronic equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English version

**Preferred diameters of wire terminations of capacitors
and resistors
(IEC 60301:2012)**

Valeurs préférentielles des diamètres
des fils de sorties des condensateurs
et résistances
(CEI 60301:2012)

Bevorzugte Durchmesser
für Anschlussdrähte an Kondensatoren
und Widerständen
(IEC 60301:2012)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

The text of document 40/2153/FDIS, future edition 3 of IEC 60301, prepared by IEC/TC 40 "Capacitors and resistors for electronic equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60301:2012.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2013-05-17
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-08-17

This document supersedes HD 349 S1:1977.

EN 60301:2012 includes the following significant technical changes with respect to HD 349 S1:1977:

- 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.

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The text of the International Standard IEC 60301:2012 was approved by CENELEC as a European Standard without any modification.

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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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