

INTERNATIONAL STANDARD

NORME INTERNATIONALE



Marking codes for resistors and capacitors

Codes de marquage des résistances et des condensateurs



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Marking codes for resistors and capacitors

Codes de marquage des résistances et des condensateurs

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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ELECTROTECHNIQUE
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CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references.....	6
3 Colour code for fixed resistors	6
3.1 General rules	6
3.2 Prescription of code colours	6
3.3 Methods for marking resistance value and tolerance	7
3.3.1 Marking of resistance values with two significant numerals	7
3.3.2 Marking of resistance values with two significant numerals and tolerance	8
3.3.3 Marking of resistance values with three significant numerals and tolerance	8
3.4 Methods for TCR marking.....	9
4 Letter and numeral code for resistance and capacitance values	10
4.1 General rules	10
4.2 Resistors	11
4.2.1 The RKM code system	11
4.2.2 Three-character code system for resistors	13
4.2.3 The four-character code system for resistors	14
4.3 Capacitors	15
4.3.1 The multiplier code system for capacitors	15
4.3.2 Three-character code systems for capacitors	17
5 Letter code for tolerance on capacitance or resistance values	18
5.1 General rules	18
5.2 Coding of symmetrical relative tolerances	18
5.3 Coding of asymmetrical relative tolerances	19
5.4 Coding of symmetrical absolute tolerances	19
5.5 Other coding of tolerances	20
6 Coding of properties specific to capacitors	20
6.1 General rules	20
6.2 Coding of the dielectric material of plastic film capacitors.....	20
7 Coding of properties specific to resistors.....	20
7.1 General rules	20
7.2 Coding of the temperature coefficient of resistance	21
8 Date code system for capacitors and resistors.....	21
8.1 General rules	21
8.2 Two-character codes for year and month	22
8.2.1 Choice of a repetition cycle	22
8.2.2 Two-character codes for year and month in a twenty-year cycle	22
8.2.3 Two-character codes for year and month in a ten-year cycle	23
8.3 Four-character codes for year and week	23
8.3.1 Choice of a repetition cycle	23
8.3.2 Fully numerical four-numeral code	23
8.3.3 Alphanumerical twenty-year cycle code	24
8.3.4 Alphanumerical ten-year cycle code	24
8.4 Single-character code for year and month.....	24

Annex A (informative) Special three-character code system for resistors	26
Annex B (informative) Cross-reference for references to the previous edition of this standard	28
Bibliography	30
Figure 1 – Colour marking of a resistor 6,8 k Ω , tolerance ± 20 %	8
Figure 2 – Colour marking of a resistor 750 k Ω , tolerance ± 5 %	8
Figure 3 – Colour marking of a resistor 249 k Ω , tolerance ± 1 %	9
Figure 4 – Colour marking of a resistor with a 6 th band for TCR marking.....	9
Figure 5 – Colour marking of a resistor with an interrupted 6 th band for TCR marking	10
Figure 6 – Colour marking of a resistor using an alternative method of inter-band colour dots for TCR coding.....	10
Table 1 – Code colour prescriptions	7
Table 2 – Coding of resistance values with up to 3 significant numerals	12
Table 3 – Fixed length coding of resistance values with up to 3 significant numerals	13
Table 4 – Coding of resistance values with 4 significant numerals.....	13
Table 5 – Coding of resistance values in the three-character code system	14
Table 6 – Coding of resistance values in the four-character code system	15
Table 7 – Coding of capacitance values with up to 2 significant numerals	16
Table 8 – Fixed length coding of capacitance values with up to 2 significant numerals.....	16
Table 9 – Coding of capacitance values with 3 significant numerals	17
Table 10 – Coding of capacitance values in the picofarad based three-character code system.....	17
Table 11 – Coding of capacitance values in the microfarad based three-character code system.....	18
Table 12 – Letter code for symmetrical relative tolerances.....	19
Table 13 – Letter code for asymmetrical relative tolerances	19
Table 14 – Letter code for symmetrical absolute tolerances of capacitors.....	20
Table 15 – Letter code for the dielectric material of plastic film capacitors.....	20
Table 16 – Letter code for the temperature coefficient of resistance.....	21
Table 17 – Character code letters for the month	22
Table 18 – Code letters for the year in a twenty-year cycle	22
Table 19 – Code letters for the year in a ten-year cycle	23
Table 20 – Single-character code for year and month at a 4-year cycle	25
Table A.1 – Coding of the significant numerals of the E96 series	26
Table A.2 – Coding of the multiplier.....	27
Table B.1 – Cross-reference to Clauses	28
Table B.2 – Cross-reference to Tables	29

INTERNATIONAL ELECTROTECHNICAL COMMISSION

MARKING CODES FOR RESISTORS AND CAPACITORS

FOREWORD

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International Standard IEC 60062 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment.

This sixth edition cancels and replaces the fifth edition published in 2004 and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- introduction of the new code colour pink for the coding of the multiplier 10^{-3} ;
- introduction of new subclauses, 3.2 Prescription of code colours, 3.3 Methods for marking resistance value and tolerance, 3.4 Methods for TCR marking, for improved clarity, the subjects of colour assignment, coding of R value and tolerance, and coding of TCR is dealt with in separate clauses;
- inclusion of illustrations for TCR marking by interrupted colour band;
- inclusion of a new subclause on a fixed length code marking, fixed length code marking of resistance values with up to 3 significant digits, hence a fixed code length of 4 digits, and

fixed length code marking of capacitance values with up to 2 significant digits, hence a fixed code length of 3 digits;

- introduction of two new clauses, Clause 6, Coding of properties specific to capacitors and Clause 7, Coding of properties specific to resistors;
- introduction of Annex A, Special three character coding of resistance value with three significant numerals.

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

FDIS	Report on voting
40/2465/FDIS	40/2473/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.

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

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MARKING CODES FOR RESISTORS AND CAPACITORS

1 Scope

This International Standard specifies designation and marking codes for capacitors and resistors.

It provides coding methods for the resistance or capacitance value and its tolerance, including colour coding for resistors.

It provides coding for parameters specific either to capacitors, like e.g. the dielectric material, or to resistors, like e.g. the temperature coefficient of resistance (TCR).

It also provides date code systems suitable for the marking of small components.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60063, *Preferred number series of resistors and capacitors*

IEC 60757, *Code for designation of colours*

ISO 8601, *Data elements and interchange formats – Information interchange – Representation of dates and times*

3 Colour code for fixed resistors

3.1 General rules

Colour code is applied in a sequence of individual solid colour bands.

The first band shall be the one nearest to the end of the resistor and the bands shall be so placed and spaced that there can be no confusion in reading the coding.

The width of the band used for marking the tolerance shall be 1,5 times to 2 times the width of the other bands in order to avoid any confusion.

Any additional coding shall be so applied as not to confuse the coding for value and tolerance.

Although colour bands are expected to be complete rings around the perimeter of a cylindrical resistor body, incidental interruption of a band shall be permissible if at least two thirds of the band is visible from any radial angle of view.

3.2 Prescription of code colours

The colours black, brown, red, orange, yellow, green, blue, violet, grey and white are used for the coding of the figures 0 through 9 for each significant numeral. Complemented with the colours silver and gold, they are also used for the coding of the multiplier, the tolerance and