

Blank detail specification: Fixed low power non-wire wound resistors
(Assessment level S)

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ICS 31.040.10

Referenčna številka
SIST EN 140101:2002(en)

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Descriptors: Electronic components, fixed low power resistors, non-wire wound resistors, blank detail specification, assessment level S

English version

**Blank Detail Specification:
Fixed low power non-wire wound resistors (Assessment level S)**

Spécification particulière cadre:
Résistances fixes non bobinées à faible
dissipation (Niveau d'assurance de la
qualité S)

Vordruck für Bauartspezifikation:
Nichtdrahtgewickelte Festwiderstände
kleiner Belastbarkeit
(Bewertungsstufe S)

This European Standard was approved by CENELEC on 1994-06-20. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung
Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

This European Standard was prepared by the Technical Committee CENELEC TC/CECC SC40XB, Resistors (former CECC/WG 4A)

The text of the draft based on document CECC(Secretariat)3464 was submitted to the formal vote; together with the voting report, circulated as document CECC(Secretariat)3566, it was approved as EN 140101 on 1994-06-20.

This European Standard supersedes CECC 40 101:1981.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 1997-06-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 1997-06-01



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Key for page 4

The numbers between square brackets on the first page correspond to the following indications which should be given:

Identification of the harmonised detail specification

- [1] The name of the National Standards Organisation under whose authority the detail specification is drafted.
- [2] The CECC symbol and the number allotted to the national detail specification by the CECC General Secretariat.
- [3] The number and issue number of the national generic and sectional specification.
- [4] The national number of the detail specification, date of issue and any further information required by the national system.

Identification of the resistor

- [5] A short description of the type of resistor.
- [6] Information on typical construction (where applicable) e.g. wire wound insulated.
- [7] Outline drawing with main dimensions which are of importance for interchangeability and/or reference to the national or international documents for outlines. Alternatively, this drawing may be given in an appendix to the detail specification.
- [8] Application or group of applications covered, or, preferably, the level of quality assessment covered by the detail specification.
- [9] Reference data on the most important properties, to allow comparison between the various resistor types.

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Specification available from:	[1]	CECC 40 101-XXX	[2]
ELECTRONIC COMPONENTS OF ASSESSED QUALITY IN ACCORDANCE WITH:	[3]		[4]
Outline and dimensions: - (see table 1) (First angle projection)	[7]	FIXED LOW POWER NON-WIRE WOUND RESISTORS	[5]
			[6]
		ASSESSMENT LEVEL "S"	[8]
NOTE 1: Other shapes are permitted within the dimensions given.			
NOTE 2: These resistors are (not) suitable for printed wiring applications.			

Table 1: Dimensions

[9]

Style	Rated dissipation (W at 70 °C)	Limiting element voltage (V d.c. or a.c. r.m.s.)	Isolation voltage (V d.c. or a.c. peak)	Maximum dimensions		d		
				L	D	min	nom	max

All dimensions are in millimetres.

1 Ratings and characteristics

* Resistance range ... Ω to ... Ω

Standard selection tolerances \pm ... %

Climatic category ... / ... / ...

* The preferred values are those of the E series of IEC 63. Where the use of intermediate values is essential, they should, wherever possible, be chosen from a series in that document.

See the relevant Qualified Products List for the availability of components qualified to this detail specification.

Vibration severity 10 Hz to 500 Hz; 0,75 mm or 98 m/s² (whichever is the less severe)

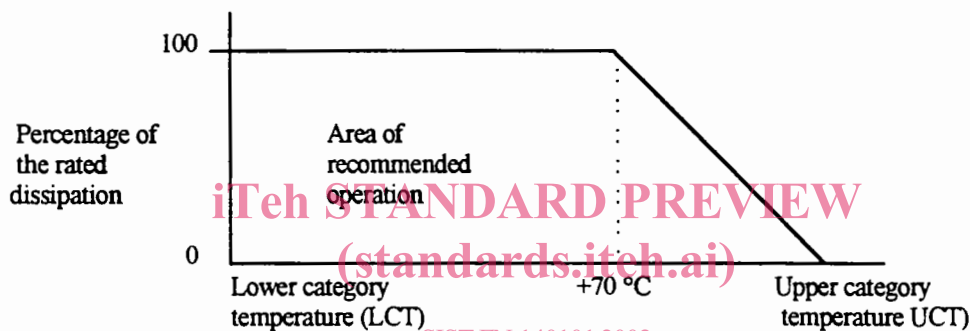
Low air pressure 8,5 kPa (85 mbar)

Limit of resistance change after \pm (... % R + ... Ω)
1 000 h endurance test

Temperature characteristic of resistance (20 °C to 70 °C) $\Delta R: \leq \pm$... % R
($\Delta R/\Delta T: \leq \pm$... 10⁻⁶/°C)

1.1 Derating

Resistors covered by this specification are derated according to the curve:



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NOTE: Various parameters have been precisely specified for this component. It should not be assumed that any parameter not specified will remain unchanged from one component to another.

If it should be necessary, for any reason, for further parameter(s) to be controlled, then a more detailed specification shall be used.

The additional test method(s) shall be fully described, and appropriate limits, AQLs and Inspection Levels specified.

2 Marking

The marking of the component and package shall be in accordance with the requirements of 2.4 of EN 140000.

3 Related documents

National authorised institutions will complete this section, making reference to any documents, recommendations and specifications directly referred to in their national equivalent of this document.

4 Ordering information

Orders for resistors covered by this specification shall contain the following information:

- Resistance value.
- Tolerance.
- Style and national specification number of this detail specification.

5 Certified test records

National Authorised institutions shall indicate in this clause whether certified test records shall be prepared in accordance with 3.9 of EN 140000.

6 Additional information (not for inspection purposes)

The detail specification may include information (which is not required to be verified by the inspection procedure), such as circuit diagrams, curves, drawings and notes for the clarification of the detail specification.

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7 Inspection requirements (see table 2)

7.1 When drying is called for, procedure 1 of 4.3 of EN 140000 shall be used.

7.2 When the manufacturer desires to obtain qualification approval by adopting the fixed sample size procedure (see 3.5.3 of EN 140000) use shall be made of the test schedule given in annex A.1 or A.2 of EN 140100. The conditions of the test and the performance requirements shall be identical to those prescribed for the quality conformance inspection in the detail specification.

8 Assessed process average procedures

When the assessed process average procedure as specified in CECC 00 014 is used, the detailed specification shall give the limits required in 3.12 of EN 140000. The detail specification shall prescribe at relevant places that non-operatives have to be recorded.

Table 2: Inspection requirements

See notes, page 10

Clause number and test	Conditions of test	IL	AQL	Performance requirements				
Group A inspection								
To be conducted on a sampling basis, lot by lot								
Sub-group A1 Non-destructive								
4.4.1 Visual examination		S-4	1,0 %	As in 4.4.1				
4.4.1 Marking				As in 4.4.1				
Sub-group A2 Non-destructive								
4.4.2 Dimensions (gauging)	A gauge-plate of ... mm shall be used	S-4	1,0 %	As specified in table 1				
4.5 Resistance				As in 4.5.2				
Group B inspection								
To be conducted on a sampling basis, lot- by- lot								
Sub-group B1 Non-destructive								
4.7 Voltage proof	(Insulated resistors only)	S-3	1,0 %	As in 4.7.3				
Sub-group B2 Destructive								
4.17.1 Soldering-solderability	Method 1 (The detail specification shall state whether the terminations are suitable for printed wiring)	S-3	2,5 %	As in 4.17				
4.13 Overload	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Resistor style</th> <th>Load duration</th> </tr> </thead> <tbody> <tr> <td style="height: 40px;"></td> <td style="height: 40px;"></td> </tr> </tbody> </table> <p>The applied voltage shall be 2,5 times the rated voltage or twice the limiting element voltage, whichever is the less.</p> <p>Visual examination</p> <p>Resistance SIST EN 140101:2002</p>	Resistor style	Load duration					As in 4.13.3
Resistor style	Load duration							
<p>https://standards.iteh.ai/catalog/standards/sist/3a36cdf7-e70f-4716-a145-de0767bccb70/sist-en-140101-2002</p>								
Sub-group B3 Non-destructive								
4.8 Temperature characteristics of resistance	The test is applicable only where a temperature coefficient of resistance of less than $50 \times 10^{-6}/^{\circ}\text{C}$ is claimed.	S-3	2,5 %	$\Delta R: \dots \% R$				
	One cycle of 20 °C to 70 °C to 20 °C only.							