

Outline dimensions of transformers and inductors for use in telecommunication and electronic equipment —

**Part 10: Specification for the outline
dimensions of transformers and
inductors using the Q range of C-cores**

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The preparation of this British Standard was entrusted by the Electronic Components Standards Committee (ECL/-) to Technical Committee ECL/18 upon which the following bodies were represented:

- BEAMA Transmission and Distribution Association
- Electronic Components Industry Federation
- Engineering Equipment and Materials Users' Association
- Ministry of Defence
- National Supervising Inspectorate
- Telecommunication Engineering and Manufacturing Association (TEMA)
- United Kingdom Atomic Energy Authority

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- Electronic Engineering Association

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Contents

	Page
Committees responsible	Inside front cover
Foreword	ii
1 Scope	1
2 Definitions	1
3 Dimensions	1
4 Fixing screws and washers	1
Appendix A Preferred terminal positions	5
Figure 1 — Form C assemblies of Q range C-cores	2
Figure 2 — Form H and form J assemblies of Q range C-cores	3
Figure 3 — Form U assemblies of Q range C-cores	4
Figure 4 — Preferred terminal positions for assemblies Q5C	5
Figure 5 — Preferred terminal positions for assemblies Q6C	5
Figure 6 — Preferred terminal positions for assemblies Q7C	6
Figure 7 — Preferred terminal positions for assemblies Q8C	6
Figure 8 — Preferred terminal positions for assemblies Q9C	7
Figure 9 — Preferred terminal positions for assemblies Q10C	8
Figure 10 — Preferred terminal positions for assemblies Q11C	9
Figure 11 — Preferred terminal positions for assemblies Q5H and Q5J	10
Figure 12 — Preferred terminal positions for assemblies Q6H and Q6J	10
Figure 13 — Preferred terminal positions for assemblies Q7H and Q7J	11
Figure 14 — Preferred terminal positions for assemblies Q8H and Q8J	11
Figure 15 — Preferred terminal positions for assemblies Q9H and Q9J	12
Figure 16 — Preferred terminal positions for assemblies Q10H and Q10J	13
Figure 17 — Preferred terminal positions for assemblies Q11H and Q11J	14
Table 1 — Dimensions of form C assemblies of Q range C-cores	2
Table 2 — Dimensions of form H and form J assemblies of Q range C-cores	3
Table 3 — Dimensions of form U assemblies of Q range C-cores	4
Publications referred to	Inside back cover

Foreword

This Part of BS 6600 has been prepared by the Electronic Components Standards Committee. It is one of a series of standards on the outline dimensions of wound components, using various forms of assembly, that are in preparation for a range of core types. The majority of this work is being carried out by the International Electrotechnical Commission (IEC) in whose work the UK is playing an active part.

This Part of BS 6600 is concerned with transformers and inductors employing C-cores, and has adopted material from specifications that were previously available in the UK from various sources, in particular Parts of DEF STAN 59-37 of the Ministry of Defence. It will be used as the basis of a UK proposal to the IEC.

This Part of this standard has been numbered arbitrarily as Part 10 to enable parity of part numbering to be maintained with corresponding International Standards when, as is expected, they are adopted for publication, with substantially no technical change, as Parts of BS 6600.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 14, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This Part of BS 6600 specifies the overall and fixing centre dimensions of transformers and inductors, using the Q range of C-cores in accordance with BS 5347, for assembly forms C, H, J and U and also the screws to be supplied with them.

A preferred series of terminal positions together with their appropriate reference numbers is given in Appendix A for assembly forms C, H and J.

NOTE 1 Assembly forms C, H and J are well established and the reference letters used in earlier industrial and Ministry of Defence specifications (RCL 215 and RCL 216, DFF 5214 and DEF STAN 59-37) have been retained.

NOTE 2 The titles of the publications referred to in this standard are listed on the inside back cover.

2 Definitions

For the purposes of this Part of BS 6600 the following definitions apply.

2.1

form C assemblies

sealed assemblies of double loop C-cores mounted by tapped holes on the top or bottom faces with the magnetic axis horizontal

NOTE Terminals are commonly fixed in the top or bottom face of the assembly.

2.2

form H and form J assemblies

assemblies of double loop C-cores mounted by tapped holes on the top or bottom of the assembly with the magnetic axis horizontal

NOTE A terminal board forms an integral part of the assembly. In form J assemblies the reduced height is primarily achieved by having negligible clearance between the terminal board and the remainder of the assembly. This feature restricts the number of terminals which can be fitted and a form J assembly is therefore used for simpler windings such as chokes.

2.3

form U assemblies

assemblies of double loop C-cores mounted by clearance holes on four faces with the magnetic axis horizontal or vertical

NOTE No provision is made for terminals, but unused mounting holes may be used to fix a terminal board.

3 Dimensions

The dimensions of the various assembly forms using the Q range of C-cores shall be in accordance with Table 1, Table 2 and Table 3. All dimensions are in millimetres and include an allowance for a protective coating. The completed assembly shall be capable of accepting a gauge of the specified fixing centre dimensions and specified fixing hole size.

NOTE 1 Each assembly is given a unique code for reference purposes. This is of the form Qa.bZ where:

Q denotes the particular range of C-cores used in these assemblies;

a is a number indicating a particular core within the Q range;

b refers to a strip width; and

Z is a letter which denotes the form of assembly used in accordance with clause 1.

NOTE 2 The C dimensions given for forms H and J include a terminal board, but no allowance is made for the height of terminals as this will vary with application. The C dimensions for form C assemblies makes no allowance for the height of terminals.

No allowance has been made for terminals or terminal boards on form U as the use of these may increase dimensions.

NOTE 3 In form U assemblies slotted fixing holes may be used to compensate for minor variations in assembly such as stack height.

NOTE 4 The purpose of Figure 1, Figure 2 and Figure 3 is to provide a guide to the appearance of the completed assembly and references for the corresponding tables of dimensions. They are not intended to specify details of the piece parts.

NOTE 5 The tables give figures for the approximate mass of complete assemblies. These figures are based on a full bobbin of copper wire and a silicon-iron core.

4 Fixing screws and washers

Assembly forms C, H and J shall be supplied with ISO metric, hexagon headed steel fixing screws of diameter and length as given in Table 1 and Table 2, such screws being in accordance with BS 3692. Four screws with assemblies Q5.1C to Q9.4C and eight screws with assemblies Q10.1C to Q11.2C shall be supplied.

The screw threads shall be metric coarse, medium fit M4 × 0.7-6g, M5 × 0.8-6g, M6 × 1.0-6g or M8 × 1.25-6g as appropriate, in accordance with BS 3643.

The associated tapped holes shall be at least as deep as the length of the screw and shall comply with a 6H class of fit.

Each screw shall be supplied with an appropriately sized steel tab washer which complies with BS 5814.

The finish on screws and washers shall be in accordance with BS 3382-1.

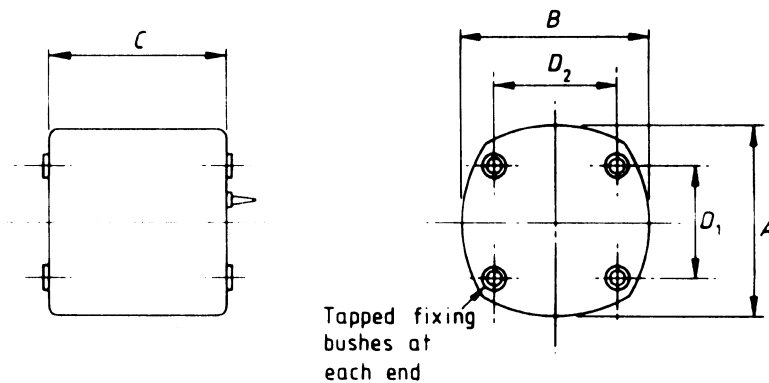


Figure 1 — Form C assemblies of Q range C-cores

Table 1 — Dimensions of form C assemblies of Q range C-cores

Assembly reference	A (max.)	B (max.)	C (max.)	D_1	D_2	Fixing screw		Mass (approx.)
						Size	Length	
	mm	mm	mm	mm	mm		mm	kg
Q5.1C	80.1	72.2	63.5	49.2	46.0	M4	9.5	1.0
Q5.2C			69.9					1.1
Q5.3C			82.6					1.2
Q5.4C			98.0					1.4
Q6.1C	93.7	87.0	69.9	61.9	58.7	M4	9.5	1.4
Q6.2C			76.2					1.5
Q6.3C			88.9					1.6
Q6.4C			98.0					1.7
Q7.1C	102.4	94.5	82.6	66.7	65.1	M5	11.1	1.8
Q7.2C			88.9					1.9
Q7.3C			101.6					2.2
Q7.4C			111.1					2.5
Q8.1C	120.7	108.0	88.9	80.9	73.0	M5	11.1	2.7
Q8.2C			95.3					2.8
Q8.3C			111.1					3.7
Q8.4C			127.0					4.2
Q9.1C	146.1	128.6	96.9	101.6	87.3	M6	12.7	4.8
Q9.2C			106.4					5.2
Q9.3C			122.3					6.1
Q9.4C			138.1					6.8
Q10.1C	173.1	151.0	117.5	123.8	103.2	M6	14.3	7.7
Q10.2C			130.2					8.8
Q10.3C			149.2					10.0
Q10.4C			171.5					14.5
Q11.1C	228.6	200.0	165.1	165.1	133.4	M8	14.3	13.6
Q11.2C			184.2					18.1