



BS 5057 : 1988

IEC 760 : 1983

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British Standard Specification for

Flat quick-connect terminations

Bornes plates à connexion rapide — Spécifications

Lösbare Flachsteckverbindungen

British Standards Institution

BS 5057 : 1988

National foreword

This British Standard has been prepared under the direction of the Electronic Components Standards Committee and is identical with IEC 760 : 1983 'Flat, quick-connect terminations', published by the International Electrotechnical Commission (IEC), in the development of which the UK has played an active part. It supersedes BS 5057 : 1973, which is withdrawn.

Terminology and conventions. The text of the international standard has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is drawn especially to the following.

Wherever page numbers are quoted they are IEC page numbers.

Cross-references

International standard	Corresponding British Standard
	BS 2011 Basic environmental testing procedures
IEC 68-2-20 : 1979	Part 2. 1T : 1981 Test T. Soldering (Identical)
	BS 5772 Basic testing procedures and measuring methods for electromechanical components for electronic equipment
IEC 512-3 : 1976	Part 3 : 1979 Current-carrying capacity tests (Identical)
IEC 512-5 : 1977	Part 5 : 1979 Impact tests (free components), static load tests (fixed components), endurance tests and overload tests (Identical)
IEC 512-8 : 1984	Part 8 : 1985 Connector tests (mechanical) and mechanical tests on contacts and terminations (Identical)

The Technical Committee has reviewed the provisions of IEC 512-2 and IEC 512-7, to which reference is made in the text, and has decided that they are acceptable for use in conjunction with this standard. Related British Standards to IEC 512-2 and IEC 512-7 are, respectively, BS 5772 : Part 2 : 1979 'General examination, electrical continuity and contact resistance tests, insulation tests and voltage stress tests', and BS 5772 : Part 7 : 1981 'Mechanical operating tests and sealing tests'.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

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British Standard Specification for

Flat quick-connect terminations

1. Scope

This standard is applicable to flat quick-connect terminations consisting of male tabs with hole or dimple detents and the mating female connectors. For reasons of safety, it is recommended that quick-connect terminations beyond the scope of this standard shall not be interchangeable with those listed in Clause 4.

2. Object

- 2.1 To establish uniform requirements for the dimensions and the performance characteristics of flat, quick-connect terminations.
- 2.2 To recommend a standard test program.

Note. — With respect to the various applications, additional performance requirements and tests included in specifications either from the IEC or other bodies may apply.

3. Terminology

3.1 *Quick-connect terminations*

An electrical connection consisting of a male tab and female connector which can be readily inserted and withdrawn without the use of tools.

3.2 *Test tab*

A male tab manufactured to close tolerances for the specific purpose of conducting mechanical tests with production female connectors. The use of test tabs has been found to produce more consistent test results.

3.3 *Male tab*

That portion of a quick-connect termination which receives the female connector.

3.4 *Female connector*

That portion of a quick-connect termination which is pushed onto the male tab.

3.5 *Detent*

A dimple (depression) or hole in the male tab which acts to engage a raised portion on the female connector, thus providing a latch for the mating parts.

3.6 *Reference point*

A specially marked point, used when making electrical test measurements.

Note. — The terminology clauses in this standard will be removed when these terms have been included in the IECV (International Electrotechnical Vocabulary).

4. Classification into groups

Flat quick-connect terminations are classified into groups according to the nominal width of the male tabs. This standard covers the following groups:

- 2.8 mm (0.110 in) series.
- 4.8 mm (0.187 in) series.
- 5.2 mm (0.205 in) series (not recommended for new designs).
- 6.3 mm (0.250 in) series.
- 9.5 mm (0.375 in) series.

5. Values of current

The currents shown in Figure 7, page 27, are for test purposes only. Operating values depend upon the application and can be estimated through analysis of the curves shown on Figures 13, 14, 15, 16, 17 and 18, pages 43 to 47.

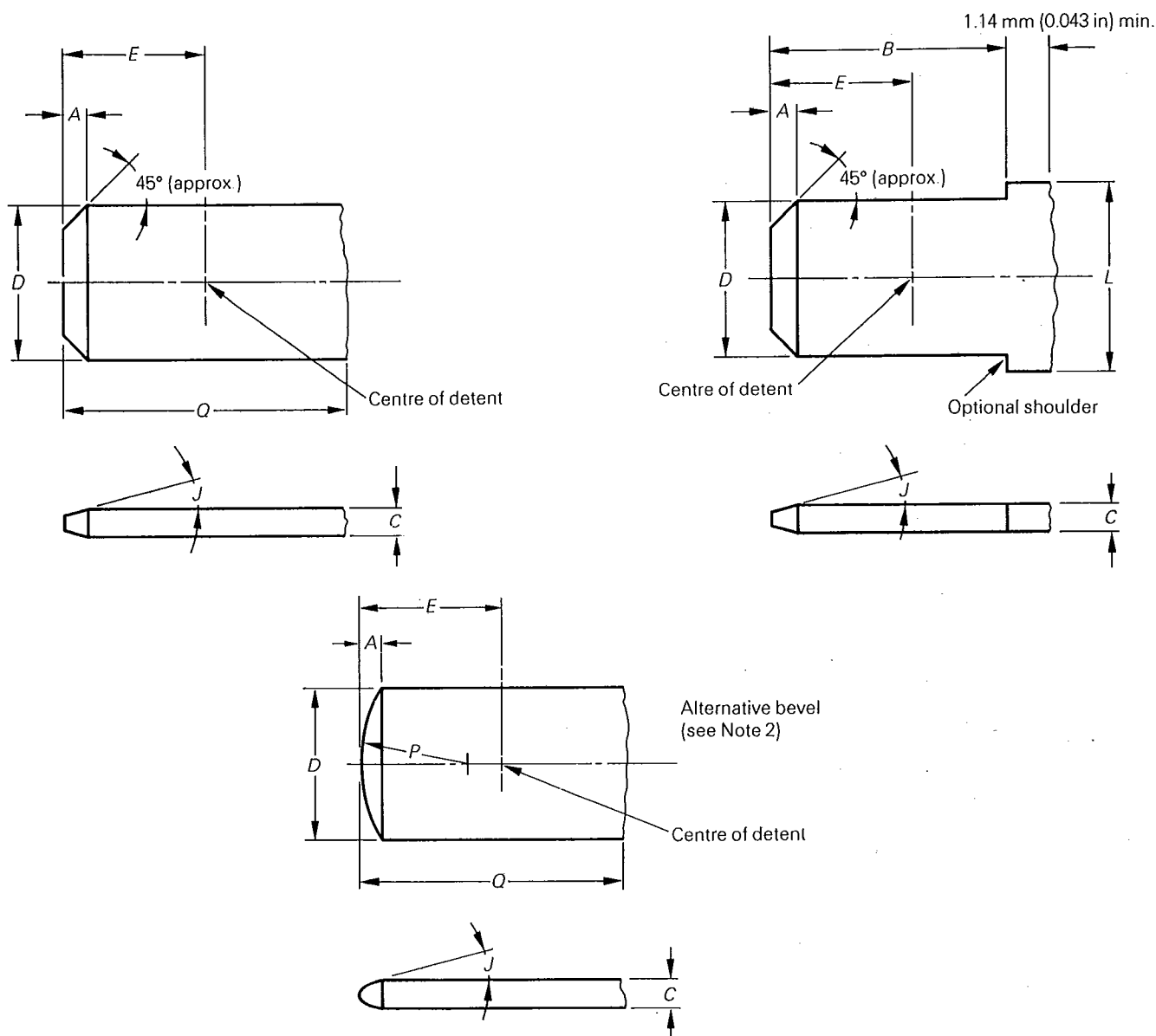
6. Marking

Each male tab or female connector shall have the following information clearly and indelibly marked upon it:

Mark of origin (manufacturer's name or trade mark).

7. Dimensions

The dimensions of the male tabs and female connectors shall comply with those specified herein. Dimensions for male tabs are presented in Figures 1, 2a, 2b and 3, pages 11 and 17. Dimensions for the female connectors are given in Figures 4 and 4a, pages 19 and 21. The shape of the various parts may deviate from those given in the figures, provided that the specified dimensions are not influenced. The dimensions are intended to permit production in either the millimetre or inch system of units.



- Notes 1. — For detent dimensions $\varnothing F$, M and N , see Figures 2a, 2b and 3, page 17.
2. — Bevel $A \times 45^\circ$ need not be a straight line if it is within the confines shown, or it may be a segment of a circle having a radius P and a segment altitude A .
3. — All portions of the tabs shown shall be flat and free from burrs or raised plateaus, except that there may be a raised plateau over the stock thickness of $0.025 \text{ mm (0.001 in)}$ per side, in an area defined by a line surrounding the detent and distant from it by $1.3 \text{ mm (0.051 in)}$.
4. — Dimension L is not specified and may vary as required by the application.
5. — The material shall be half-hard cartridge brass, hardness 62 ± 7 Rockwell 30T, or other material of equivalent hardness.

FIG. 1. — Dimensions of male tabs (see also Figures 2a, 2b and 3).

Dimensions of male tabs (millimetres)

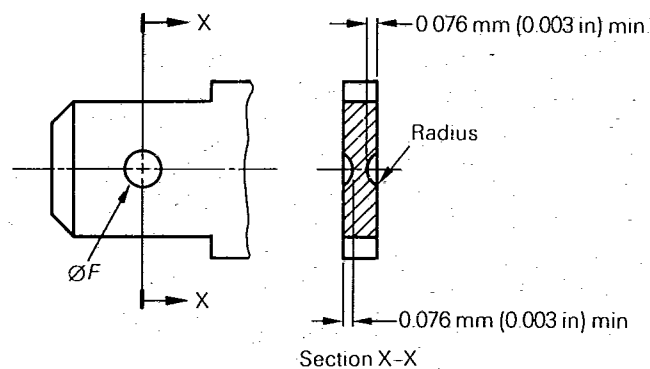
Nominal size	A	B (min.)	C	D	E	ØF	J	M	N	P	Q (min.)
2.8 × 0.5 with dimple	0.7 0.3	7.0	0.54 0.47	2.9 2.7	1.8 1.3	1.3 1.1	12° 8°	1.7 1.4	1.4 1.0	1.4 0.3	8.1
2.8 × 0.5 with hole	0.7 0.3	7.0	0.54 0.47	2.9 2.7	1.8 1.3	1.3 1.1	12° 8°	— —	— —	1.4 0.3	8.1
2.8 × 0.8 with dimple	0.7 0.3	7.0	0.84 0.77	2.9 2.7	1.8 1.3	1.3 1.1	12° 8°	1.7 1.4	1.4 1.0	1.4 0.3	8.1
2.8 × 0.8 with hole	0.7 0.3	7.0	0.84 0.77	2.9 2.7	1.8 1.3	1.3 1.1	12° 8°	— —	— —	1.4 0.3	8.1
4.8 × 0.5* with dimple	0.9 0.6	6.2	0.54 0.47	4.8 4.6	2.8 2.3	1.5 1.3	12° 8°	1.7 1.4	1.5 1.2	1.7 0.6	7.3
4.8 × 0.5* with hole	0.9 0.6	6.2	0.54 0.47	4.8 4.6	3.4 3.0	1.5 1.3	12° 8°	— —	— —	1.7 0.6	7.3
4.8 × 0.8 with dimple	1.0 0.7	6.2	0.84 0.77	4.8 4.6	2.8 2.3	1.5 1.3	12° 8°	1.7 1.4	1.5 1.2	1.8 0.7	7.3
4.8 × 0.8 with hole	1.0 0.7	6.2	0.84 0.77	4.8 4.6	3.4 3.0	1.5 1.3	12° 8°	— —	— —	1.8 0.7	7.3
5.2 × 0.5* with dimple	1.0 0.7	6.2	0.54 0.47	5.3 5.1	2.8 2.3	1.9 1.6	12° 8°	2.5 2.2	2.0 1.8	1.7 0.6	7.3
5.2 × 0.5* with hole	1.0 0.7	6.2	0.54 0.47	5.3 5.1	3.4 3.0	1.9 1.6	12° 8°	— —	— —	1.7 0.6	7.3
5.2 × 0.8* with dimple	1.0 0.7	6.2	0.84 0.77	5.3 5.1	2.8 2.3	1.9 1.6	12° 8°	2.5 2.2	2.0 1.8	1.8 0.7	7.3
5.2 × 0.8* with hole	1.0 0.7	6.2	0.84 0.77	5.3 5.1	3.4 3.0	1.9 1.6	12° 8°	— —	— —	1.8 0.7	7.3
6.3 × 0.8 with dimple	1.0 0.7	7.8	0.84 0.77	6.4 6.2	4.1 3.6	2.0 1.6	12° 8°	2.5 2.2	2.0 1.8	1.8 0.7	8.9
6.3 × 0.8 with hole	1.0 0.7	7.8	0.84 0.77	6.4 6.2	4.7 4.3	2.0 1.6	12° 8°	— —	— —	1.8 0.7	8.9
9.5 × 1.2 with hole	1.3 0.7	12.0	1.23 1.17	9.6 9.4	5.5 4.5	2.0 1.6	14° 6°	— —	— —	2.0 1.0	13.1

* Not recommended for new designs.

Dimensions of male tabs (inches)

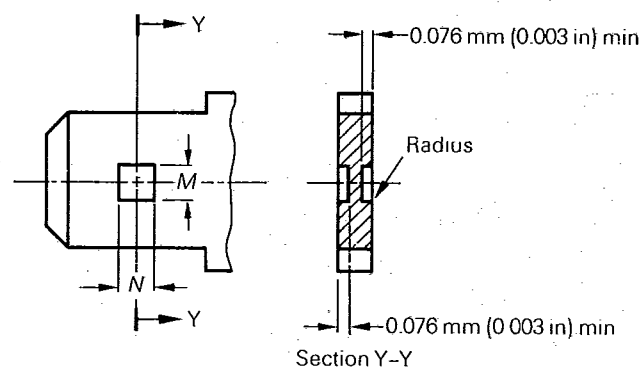
Nominal size	A	B (min.)	C	D	E	ØF	J	M	N	P	Q (min.)
0.110 × 0.020 with dimple	0.028 0.012	0.275	0.021 0.019	0.114 0.106	0.071 0.051	0.051 0.043	12° 8°	0.067 0.055	0.055 0.039	0.055 0.012	0.319
0.110 × 0.020 with hole	0.028 0.012	0.275	0.021 0.019	0.114 0.106	0.071 0.051	0.051 0.043	12° 8°	— —	— —	0.055 0.012	0.319
0.110 × 0.032 with dimple	0.028 0.012	0.275	0.033 0.030	0.114 0.106	0.071 0.051	0.051 0.043	12° 8°	0.067 0.055	0.055 0.039	0.055 0.012	0.319
0.110 × 0.032 with hole	0.028 0.012	0.275	0.033 0.030	0.114 0.106	0.071 0.051	0.051 0.043	12° 8°	— —	— —	0.055 0.012	0.319
0.187 × 0.020* with dimple	0.035 0.024	0.244	0.021 0.019	0.190 0.181	0.110 0.091	0.060 0.050	12° 8°	0.067 0.055	0.059 0.047	0.067 0.024	0.287
0.187 × 0.020* with hole	0.035 0.024	0.244	0.021 0.019	0.190 0.181	0.134 0.117	0.060 0.050	12° 8°	— —	— —	0.067 0.024	0.287
0.187 × 0.032 with dimple	0.040 0.027	0.244	0.033 0.030	0.190 0.181	0.110 0.091	0.060 0.050	12° 8°	0.067 0.055	0.059 0.047	0.071 0.027	0.287
0.187 × 0.032 with hole	0.040 0.027	0.244	0.033 0.030	0.190 0.181	0.134 0.117	0.060 0.050	12° 8°	— —	— —	0.071 0.027	0.287
0.205 × 0.020* with dimple	0.040 0.027	0.244	0.021 0.019	0.210 0.201	0.110 0.091	0.075 0.063	12° 8°	0.098 0.086	0.080 0.070	0.067 0.024	0.287
0.205 × 0.020* with hole	0.040 0.027	0.244	0.021 0.019	0.210 0.201	0.134 0.117	0.075 0.063	12° 8°	— —	— —	0.067 0.024	0.287
0.205 × 0.032* with dimple	0.040 0.027	0.244	0.033 0.030	0.210 0.201	0.110 0.091	0.075 0.063	12° 8°	0.098 0.086	0.080 0.070	0.071 0.027	0.287
0.205 × 0.032* with hole	0.040 0.027	0.244	0.033 0.030	0.210 0.201	0.134 0.117	0.075 0.063	12° 8°	— —	— —	0.071 0.027	0.287
0.250 × 0.032 with dimple	0.040 0.027	0.307	0.033 0.030	0.253 0.244	0.161 0.142	0.080 0.063	12° 8°	0.098 0.086	0.080 0.070	0.071 0.027	0.350
0.250 × 0.032 with hole	0.040 0.027	0.307	0.033 0.030	0.253 0.244	0.186 0.169	0.080 0.063	12° 8°	— —	— —	0.071 0.027	0.350
0.375 × 0.047 with hole	0.051 0.027	0.472	0.048 0.046	0.379 0.370	0.217 0.177	0.080 0.063	14° 6°	— —	— —	0.080 0.039	0.516

* Not recommended for new designs.



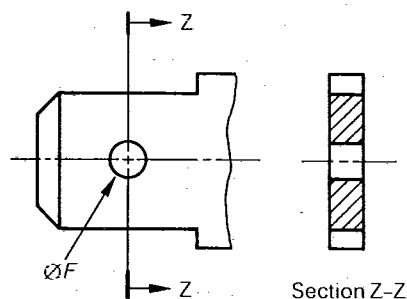
Detent shall be located within 0.076 mm (0.003 in) of the centre-line of the tab.

FIG. 2a. — Dimensions of round dimple detents (see Figure 1, page 11).



Detent shall be located within 0.13 mm (0.005 in) of the centre-line of the tab.

FIG. 2b. — Dimensions of rectangular dimple detents (see Figure 1).



Detent shall be located within 0.076 mm (0.003 in) of the centre-line of the tab.

FIG. 3. — Dimensions of hole detents (see Figure 1).