

JIS

JAPANESE INDUSTRIAL STANDARD

General rules of one-part connectors for printed wiring board

JIS C 5420—1991

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by

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In the event of any doubt arising,
the original Standard in Japanese is to be final authority.

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for printed wiring board

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1. Scope

This Japanese Industrial Standard specifies the common matters and the matters which should be defined in individual specifications of connectors, which are directly connected to the edge-connector terminals of the printed wiring board, out of those for printed wiring board to be used for the electronic equipment (hereafter referred to as the "connector").

Remarks 1. Applicable standards are as follows:

- JIS C 5001 General Rules for Electronic Components
- JIS C 5401 General Rules of Connectors for Use in Electronic Equipment
- JIS C 5402 Method for Test of Connector for Electronics Equipment
- JIS C 5603 Glossary of Terms Relating to Printed Wiring Board
- JIS C 5700 General Rules for Reliability Assured Electronic Components
- JIS Z 9015 Sampling Inspection Procedures and Tables by Attributes with Severity Adjustment (Receiving Inspection Where a Consumer can Select Suppliers)

2. Corresponding International Standards are as follows:

- IEC 603-1 (1981) Connectors for frequencies below 3 MHz for use with printed boards. Part 1: General rules and guide for the preparation of detail specifications
- IEC 603-1A (1982) Connectors for frequencies below 3 MHz for use with printed boards. First supplement: Appendix B: Example of detail specification. Group of related two-part connectors for printed boards for basic grid 2.54 mm (0.1 in) with common mounting features

2. Definitions

For the main terms used in this Standard the definitions in JIS C 5001, JIS C 5401, JIS C 5402, JIS C 5603 and JIS C 5700 apply.

3. Systems and priorities of the ratings

The systems and priorities of the ratings of the connectors follow 3. in JIS C 5401 (Systems and priorities of the ratings).

And, this specification (JIS C 5420) corresponds to the general rules of type classification.

4. Type designation

4.1 Composition of type designation The type designation shall be composed in the following arrangement.

Symbols denoting connector (4.2.1)	Symbols denoting type (4.2.2)	Symbols denoting the thickness of corresponding printed wiring board (4.2.3)	Symbols denoting the number of contacts (4.2.4)	Symbols denoting the contact composition (4.2.5)
Example: CN	P01	16	044	A
Symbols denoting contact pitches (4.2.6)	Symbols denoting the contact terminations (4.2.7)	Symbols denoting mounting construction (4.2.8)	Symbols denoting grade (4.2.9)	Symbols denoting other necessary items (4.2.10)
200	S	2	B	

4.2 Symbols

4.2.1 Connector The symbol denoting the connector shall be CN.

4.2.2 Type The symbol denoting the type shall be P□□, by the combination of P and 2-digit numerals.

The 2-digit numerals shall be defined by individual specification.

Remarks: □ stands for a numeral.

4.2.3 Thickness of the corresponding printed wiring board The symbols denoting the thickness of the corresponding printed wiring boards to be inserted in the connector shall be represented by 2-digit numerals, and shall follow Table 1.

Table 1. Thickness of the corresponding
printed wiring board

Unit: mm

Symbol	Thickness of the printed wiring board
01	0.1
02	0.2
03	0.3
04	0.4
05	0.5
06	0.6
08	0.8
10	1.0
12	1.2
16	1.6
20	2.0
24	2.4
32	3.2

4.2.4 Number of contacts The symbols denoting the number of contacts shall be represented by 3-digit numerals and shall follow Table 2.

Table 2. Number of contacts

Symbol	Number of Contacts	Symbol	Number of contacts	Symbol	Number of contacts
006	6	036	36	076	76
010	10	038	38	080	80
012	12	042	42	084	84
014	14	044	44	086	86
018	18	048	48	088	88
020	20	052	52	100	100
022	22	056	56	120	120
026	26	060	60	140	140
028	28	064	64	160	160
030	30	068	68	180	180
034	34	072	72	200	200

4.2.5 Contact composition The symbols denoting the contact composition shall be 1-English capital letter, and shall follow Table 3.

Table 3. Contact composition

Symbol	Contact composition
A	A contact that engages with only one side of the printed wiring board
B	A contact that engages with and are connected electrically to both sides of the printed wiring board
C	A contact that engages with both sides of the printed wiring board and each of them is electrically independent

4.2.6 Contact pitches The symbols denoting contact pitches (connector side) shall be 3-digit numerals and follow Table 4.

Table 4. Contact pitches

Unit: mm

Symbol	Contact pitch (mm system)	Symbol	Contact pitch (inch system)
050	0.50	127	1.27
080	0.80	254	2.54
100	1.00	318	3.18
125	1.25	396	3.96
150	1.50		
200	2.00		
250	2.50		
400	4.00		

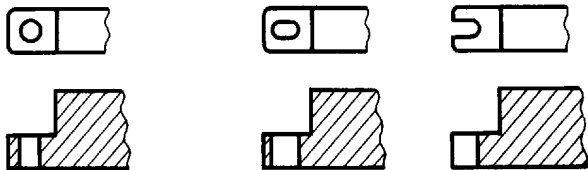
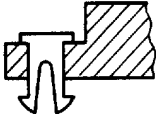
4.2.7 Contact termination The symbols denoting the contact terminations shall be 1-English capital letter and follow Table 5.

Table 5. Contact termination

Symbol	Contact terminal
S	Connected by soldering the lead wire for electric connection
W	Connected by winding the lead wire for electric connection without soldering
C	Connected by caulking the lead wire for electric connection
D	Connected by press-connection the lead wire for electric connection without peeling wiring cover
I	Connected to the central wire with projected part of the terminal through wiring cover without peeling it for electric connection
T	Connected by soldering to the part hole of the printed wiring board
M	Connected to the printed wiring board by surface-mounting
P	Connected to the part hole of the printed wiring board by forced-in pressure

4.2.8 Mounting construction The symbols denoting the mounting construction shall be 1-digit numeral, and follow Table 6.

Table 6. Mounting construction

Symbol	Mounting construction	Informative reference
1	With a screw tapped metal fittings	
2	With a round hole, an oval hole, and a half hole	
3	With a pivotable mounting metal fittings	
4	Without mounting portion	
9	With a construction other than 1 to 4	

4.2.9 Grade The symbols denoting the grade shall be 1-English capital letter and follow Table 7.

Table 7. Grade

Symbol	Contents of grade
B	Require quality evaluation, and the level is general level
C	Require quality evaluation, and the level is simple level
X	Not specially defined for quality evaluation

Informative reference: The levels correspond to the levels defined in JIS C 5700.

4.2.10 Other necessary items The symbols denoting the other necessary items shall be applied to stand for the characteristics, constructions, materials and the other necessary items which cannot be represented by 4.2.1 to 4.2.9, and be defined in the individual specifications.

5. Ratings

5.1 Category temperature range for use The category temperature range for use shall be selected from Table 8, and be defined in individual specifications.

Table 8. Category temperature range for use

Unit: °C
-10 to + 70
-25 to + 70
-25 to + 85
-40 to + 85
-55 to + 100
-55 to + 125
-65 to + 155

5.2 Rated voltage The rated voltage shall be selected from Table 9, and be defined in individual specifications.

Table 9. Rated voltage

Unit: V (AC effective value)	
12.5	125
31.5	200
50	250
63	500
100	

5.3 Rated current The rated current shall be selected from Table 10, and be defined in individual specifications.

Table 10. Rated current

Unit: A (AC effective value)	
0.5	5
1	8
3.15	10