

JIS

JAPANESE INDUSTRIAL STANDARD

**Type R01 cylindrical connectors
for use in electronic equipment**

JIS C 5432—1994

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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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Type R01 cylindrical connectors
for use in electronic equipment

C 5432-1994

1. Scope This Japanese Industrial Standard specifies type R01 cylindrical connectors based on JIS C 5401 to be used mainly for electronic equipments (hereafter collectively referred to as "connectors").

Remarks: The standards cited in this Standard 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 connectors for use in electronic equipment
JIS C 5700	General rules for reliability assured electronic components

2. Definitions For the purposes of this Standard, the following definitions apply. Other terms and the definitions are given in JIS C 5401 and JIS C 5402.

- (1) plug connector Connector to be fixed to the free ends of cables.
- (2) receptacle connector Connector to be fixed to panels, chassis and the like.
- (3) cap A dustproof and protective cover to be attached to connecting parts of connector.
- (4) connecting nut A cap nut composing a part of connector to help fitting of connectors and hold the mutual position of connectors.

3. System and priority of standards The system and priority of this standard shall conform to 3. of JIS C 5401, as follows.

- (1) Detail specification (this Standard, JIS C 5432)
- (2) Product-specific general rules (JIS C 5401)
- (3) Sector-specific general rules (JIS C 5001 and JIS C 5700)

4. Designation of type

4.1 Composition of designation of type The designation of type shall be composed as follows.

(1) To denote plug connectors and receptacle connectors

Symbols denoting connector	Symbols denoting type	Symbols denoting shape of connector	Symbols denoting shape of contact	Symbols denoting dimension of lead-in body	Symbols denoting number of contacts	Symbols denoting position of insulator
4.2.1	4.2.2	4.2.3	4.2.4	4.2.5	4.2.6	4.2.7

Example

CN R01 SP M 016 010 X

(2) To denote caps

Symbols denoting connector	Symbols denoting type	Symbols denoting shape of connector	Symbols denoting dimension of lead-in body
4.2.1	4.2.2	4.2.3	4.2.5

Example

CN R01 PC 016

4.2 Symbols

4.2.1 Connector The connector shall be denoted by CN.

4.2.2 Type The type shall be denoted by R01.

4.2.3 Shape of connector The shape of connector shall be denoted by the symbols as shown in Table 1.

Table 1. Shape of connector

Symbol	Shape
SP	Plug connector with connection axis and cable inlet axis arranged on the same straight line
LP	Plug connector with connection axis and cable inlet axis arranged perpendicularly each other
SR	Receptacle connector with connection axis and mounting plate arranged perpendicularly each other
PC	Cap to be attached to the connecting part of plug connection
RC	Cap to be attached to the connecting part of receptacle connector

4.2.4 Shape of contact The shape of contact shall be denoted by the symbols as shown in Table 2.

Table 2. Shape of contact

Symbol	Shape
M	Electrically contacting area is of male type
F	Electrically contacting area is of female type

4.2.5 Dimensions of lead-in bodies The dimensions of lead-in bodies shape of connector shall be denoted by the symbols as shown in Table 3.

Table 3. Dimensions of lead-in bodies

Symbol	Dimensions of lead-in bodies
013	Dimension of A in Attached Figs. 1 and 2 is about 13 mm.
016	Dimension of A in Attached Figs. 1 and 2 is about 16 mm.
021	Dimension of A in Attached Figs. 1 and 2 is about 21 mm.
025	Dimension of A in Attached Figs. 1 and 2 is about 25 mm.

4.2.6 Number of contacts The number of contacts shall be denoted by the symbols as shown in Table 4.

The combination with the symbols denoting the dimensions of lead-in bodies shall be as shown in Table 5.

Table 4. Number of contacts

Symbol	Number of contacts	Symbol	Number of contacts
003	Number of contacts: 3	010	Number of contacts: 10
005	Number of contacts: 5	016	Number of contacts: 16
007	Number of contacts: 7	024	Number of contacts: 24

Table 5. Combination of symbols denoting number of contacts with symbols denoting dimensions of lead-in bodies

Symbol denoting dimension of lead-in body	Symbol denoting number of contacts	
	Diameter of male type contact: 1.0 mm	Diameter of male type contact: 1.6 mm
013	005	003
016	010	007
021	016	010
025	024	016

4.2.7 Position of insulator The position of insulator shall be denoted by either A, X, Y or Z, depending upon the relative position to the lock key in Attached Fig. 3.

The position, A, is preferable.

5. Classification of connectors The classification of connectors shall be as shown in Attached Table 1.

6. Ratings

- (1) Working temperature range -25°C to $+85^{\circ}\text{C}$
- (2) Working relative humidity range 85% or less

(3) Rated voltage 250 V (a.c., effective value)

(4) Rated current As shown in Table 6

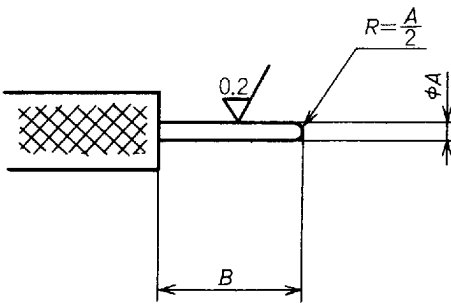
Table 6. Rated current

Diameter of male type contact mm	Rated current (a.c., effective value) A
1.0	5
1.6	10

7. Classification by weather resistance The classification by weather resistance shall be 25/085/04 based on 6. of JIS C 5401.

8. Performance The performance shall be as specified in Table 7.

Table 7. Performance

No.	Item	Performance	Test method (JIS C 5402)															
8.1	Insulation resistance	1000 MΩ or more	As per 5.2 (1) Classification of test method: C However, either A or B may be used. (2) Number of contacts to be tested: all (3) Test voltage: 500 ± 50 V (d.c.) (4) State of connector: not connected															
8.2	Withstand voltage	No flashover nor dielectric breakdown	As per 5.1 (1) Classification of test method: C However, either A or B may be used. (2) Number of contacts to be tested: all (3) Test voltage: 1 kV (a.c., effective value) (4) State of connector: not connected															
8.3	Contact resistance	5 mΩ or less	As per 5.3 (1) Number of contacts to be tested: any 6 contacts per one connector. If the number of contacts is less than 6, test all the contacts. (2) Measurement current: 1 A (d.c.)															
8.4	Inter-changeability	Engagement with and separation from connectors having appropriate mating parts are possible in a normal manner	As per 4.3															
8.5	Gauge retention force of contact	<table><tr><th>Diameter of contact mm</th><th>Retention force N</th></tr><tr><td>1.0</td><td>0.2 or more</td></tr><tr><td>1.6</td><td>0.5 or more</td></tr></table>	Diameter of contact mm	Retention force N	1.0	0.2 or more	1.6	0.5 or more	As per 6.4 (1) Mounting method of contact: to be inserted into connector (2) Number of contacts to be tested: any 6 contacts per one connector. If the number of contacts is less than 6, test all the contacts. (3) Gauge used: As per the figure below.  Unit: mm <table><tr><th>Diameter of contact</th><th>A</th><th>B</th></tr><tr><td>1.0</td><td>0.970 ± 0.003</td><td>8.0 ± 0.1</td></tr><tr><td>1.6</td><td>1.570 ± 0.003</td><td>10.0 ± 0.1</td></tr></table>	Diameter of contact	A	B	1.0	0.970 ± 0.003	8.0 ± 0.1	1.6	1.570 ± 0.003	10.0 ± 0.1
Diameter of contact mm	Retention force N																	
1.0	0.2 or more																	
1.6	0.5 or more																	
Diameter of contact	A	B																
1.0	0.970 ± 0.003	8.0 ± 0.1																
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