

# JC Series Connector



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## JC Series Connector

### \* Product Characteristics:

JC Series connectors are rugged light-weight, low cost, general purpose, circular connectors designed for use in various industrial applications.

Small and compact with an aluminum alloy shell protected by gray nickel finish. JC connectors feature five key polarization and closed entry socket insulators for positive contact alignment and mating. The JC series is available in three shell styles and eight contact

arrangements accommodating up to twenty-four size 20 contacts. Plug and Receptacle shell styles will accommodate either pin or socket insulators.

A threaded coupling design permits full engagement of the contacts even when the coupling nut is dis-engaged. This feature is useful for bench testing applications.

### \* Applications:

\* Broadcasting Equipment, \* Measurement and Testing Equipment, \* Medical Equipment,  
\* Multi-pin Power Connections, \* Industrial Machinery, \* Automatic Vending Machines.

### \* Features:

#### Proven design

Well established commercial metal shell circular connectors designed in accordance with JIS-C-5432 standard specification.

#### Rugged, small, light-weight with metal shell protection

An aluminum alloy shell ensures rugged protection of the connection.

#### Smooth mating and stable function

Closed-entry socket insulators guide pin contacts to socket contacts which ensure smooth mating of pins to socket contacts. Socket contacts are located deep within the insulators ensuring safety with finger test.

#### Five key polarization

Five key and key groove on the metal shell ensure polarization and contact alignment on mating.

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# JC Series Connector

## \* Product Specifications:

### Materials and Finishes:

| Components                               | Materials           | Finish               |
|--|---------------------|----------------------|
| Shell, Barrel, Coupling nut, Cable clamp | Aluminum alloy      | Nickel plating       |
| Insulator                                | Thermosetting resin | UL94V-0 Colour; blue |
| Contacts                                 | Copper alloy        | Silver plating       |

### Electrical Data:

|                            |  |
|----------------------------|--|
| Current rating:            | #20 contact : 5 amps / #16 contact : 10 amps |
| Maximum operating voltage: | 250 Vr.m.s. AC                               |
| Voltage endurance:         | AC 1,000 Vr.m.s. 1-min                       |
| Insulating resistance:     | more than 1,000 M ohms at 500 V DC           |
| Contact resistance:        | less than 5 M ohms                           |
| Contact termination:       | Solder type                                  |

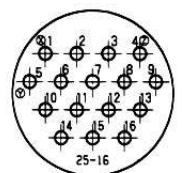
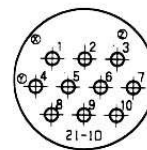
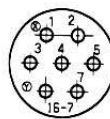
### Mechanical Features:

|                                     |   |
|-------------------------------------|---|
| Shell style:                        | 1A Cable mounting coupling receptacle<br>2A Box mounting receptacle<br>6A Cable connecting plug |
| Shell size:                         | 13, 16, 21 and 25 coupling : Threaded-JC  |
| Polarization:                       | Five keys and key ways  |
| Mating cycle:                       | 500 times   |
| Over-all mating & extraction force: |   |

| Shell size | Pin counts | Spec.             | Shell size | Pin counts | Spec.             |
|------------|------------|-------------------|------------|------------|-------------------|
| 13         | 5          | less than 1.5Kgr. | 13         | 3          | less than 1.4Kgr. |
| 16         | 10         | less than 3.4Kgr. | 16         | 7          | less than 3.2Kgr. |
| 21         | 16         | less than 5.5Kgr. | 21         | 10         | less than 4.5Kgr. |
| 25         | 24         | less than 8.2Kgr. | 25         | 16         | less than 7.2Kgr. |

## \* Contact Arrangements:

Face view of Pin Insert (Socket view is opposite)



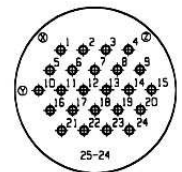
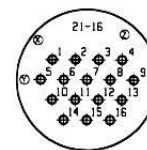
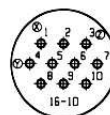
Shell Size  
Number of Contacts  
Service Rating

13-3  
3 #16  
10-amp, #16AWG

13-3  
3 #16  
10-amp, #16AWG

13-3  
3 #16  
10-amp, #16AWG

13-3  
3 #16  
10-amp, #16AWG



Shell Size  
Number of Contacts  
Service Rating

13-5  
5 #20  
5-amp, #20AWG

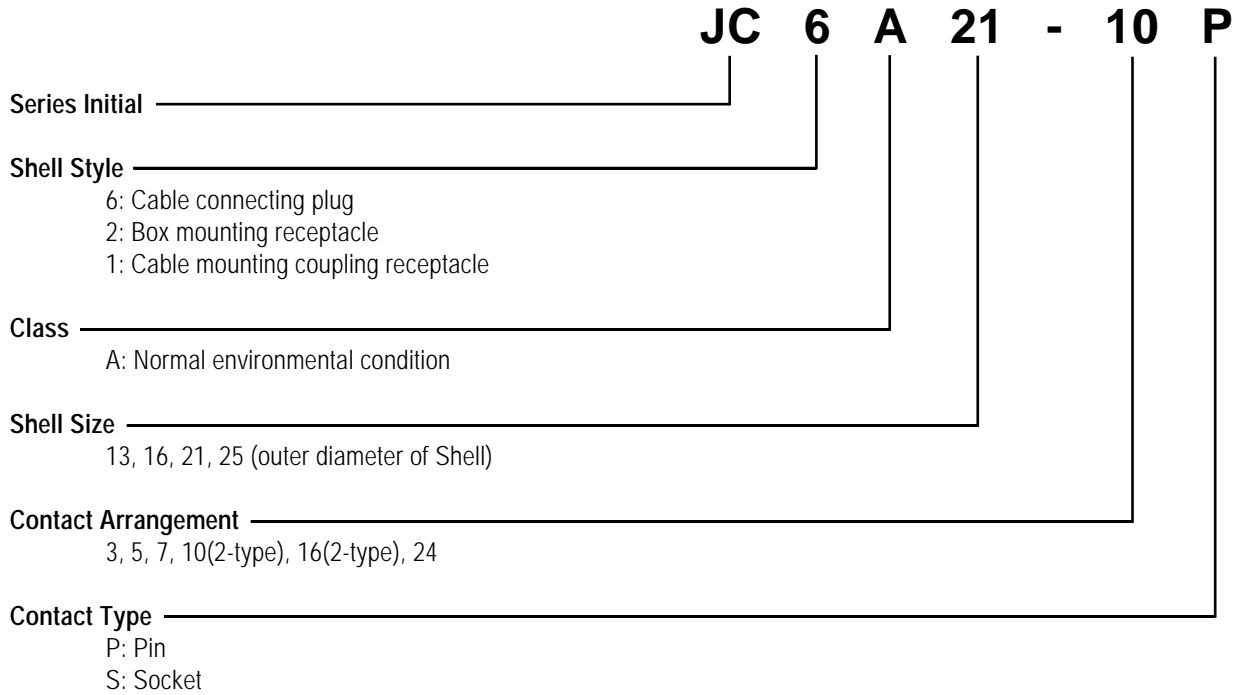
13-5  
5 #20  
5-amp, #20AWG

13-5  
5 #20  
5-amp, #20AWG

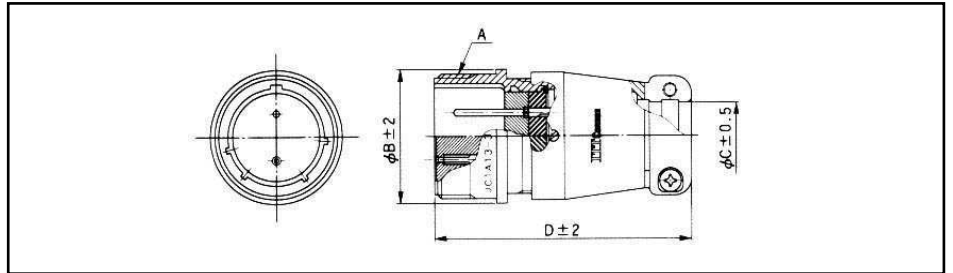
13-5  
5 #20  
5-amp, #20AWG

# JC Series Connector

## \* Part Number Configuration:



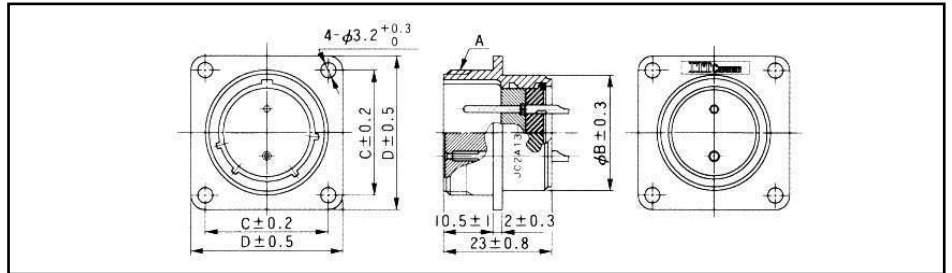
## \* JC 1A



| Shell Size | Number of Contacts | Description | Parts Number | A     | $\phi B$ | $\phi C$ | D    |
|------------|--------------------|-------------|--------------|-------|----------|----------|------|
| 13         | 3                  | JC1A13-3P   | 127039-0033  | M18x1 | 21       | 8        | 44.5 |
|            |                    | JC1A13-3S   | 127039-0034  |       |          |          |      |
|            | 5                  | JC1A13-5P   | 127039-0035  |       |          |          |      |
|            |                    | JC1A13-5S   | 127039-0036  |       |          |          |      |
| 16         | 7                  | JC1A16-7P   | 127039-0037  | M22x1 | 25       | 12       | 47.5 |
|            |                    | JC1A16-7S   | 127039-0038  |       |          |          |      |
|            | 10                 | JC1A16-10P  | 127039-0039  |       |          |          |      |
|            |                    | JC1A16-10S  | 127039-0040  |       |          |          |      |
| 21         | 10                 | JC1A21-10P  | 127039-0041  | M26x1 | 29       | 14       | 51.5 |
|            |                    | JC1A21-10S  | 127039-0042  |       |          |          |      |
|            | 16                 | JC1A21-16P  | 127039-0043  |       |          |          |      |
|            |                    | JC1A21-16S  | 127039-0044  |       |          |          |      |
| 25         | 16                 | JC1A25-16P  | 127039-0045  | M30x1 | 33       | 18       | 54.5 |
|            |                    | JC1A25-16S  | 127039-0046  |       |          |          |      |
|            | 24                 | JC1A25-24P  | 127039-0047  |       |          |          |      |
|            |                    | JC1A25-24S  | 127039-0048  |       |          |          |      |

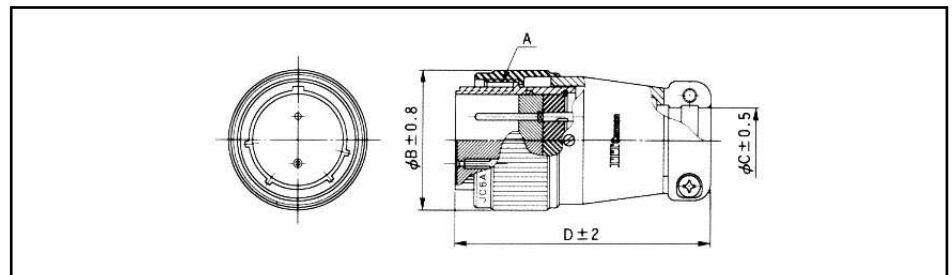
# JC Series Connector

## \* JC 2A



| Shell Size | Number of Contacts | Description | Parts Number | A     | øB | øC | D  |
|------------|--------------------|-------------|--------------|-------|----|----|----|
| 13         | 3                  | JC2A13-3P   | 127039-0017  | M18x1 | 16 | 20 | 26 |
|            |                    | JC2A13-3S   | 127039-0018  |       |    |    |    |
|            | 5                  | JC2A13-5P   | 127039-0019  |       |    |    |    |
|            |                    | JC2A13-5S   | 127039-0020  |       |    |    |    |
| 16         | 7                  | JC2A16-7P   | 127039-0021  | M22x1 | 20 | 23 | 29 |
|            |                    | JC2A16-7S   | 127039-0022  |       |    |    |    |
|            | 10                 | JC2A16-10P  | 127039-0023  |       |    |    |    |
|            |                    | JC2A16-10S  | 127039-0024  |       |    |    |    |
| 21         | 10                 | JC2A21-10P  | 127039-0025  | M26x1 | 24 | 26 | 32 |
|            |                    | JC2A21-10S  | 127039-0026  |       |    |    |    |
|            | 16                 | JC2A21-16P  | 127039-0027  |       |    |    |    |
|            |                    | JC2A21-16S  | 127039-0028  |       |    |    |    |
| 25         | 16                 | JC2A25-16P  | 127039-0029  | M30x1 | 28 | 29 | 35 |
|            |                    | JC2A25-16S  | 127039-0030  |       |    |    |    |
|            | 24                 | JC2A25-24P  | 127039-0031  |       |    |    |    |
|            |                    | JC2A25-24S  | 127039-0032  |       |    |    |    |

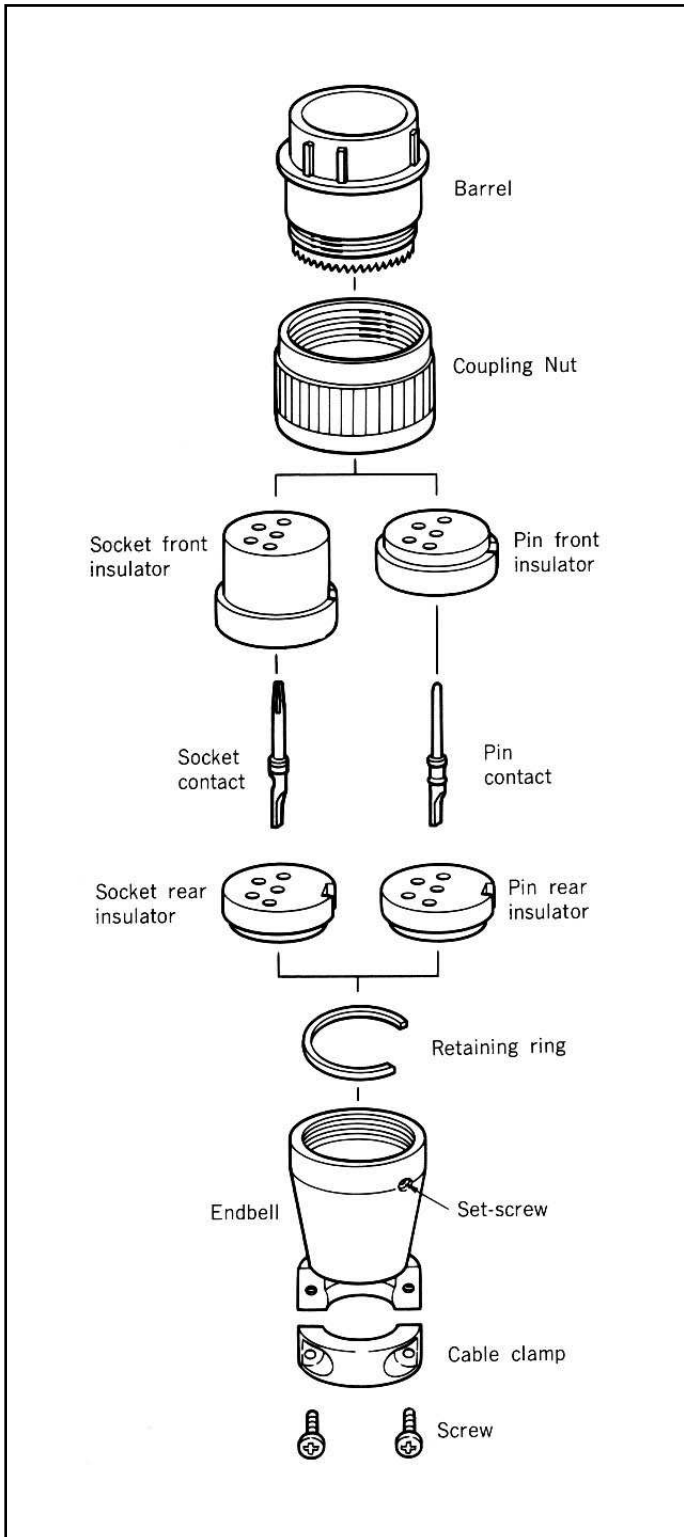
## \* JC 6A



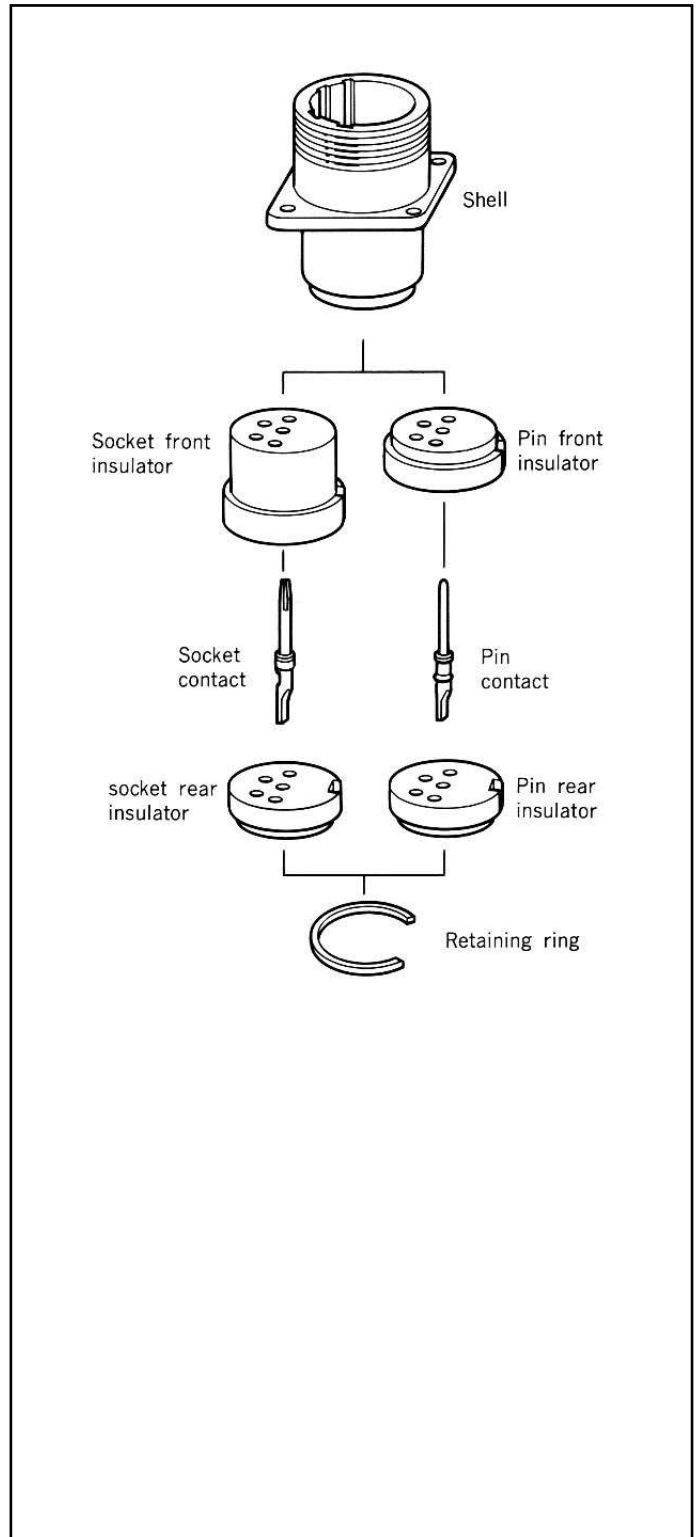
| Shell Size | Number of Contacts | Description | Parts Number | A     | øB   | øC | D  |
|------------|--------------------|-------------|--------------|-------|------|----|----|
| 13         | 3                  | JC6A13-3P   | 127039-0001  | M18x1 | 21.2 | 8  | 46 |
|            |                    | JC6A13-3S   | 127039-0002  |       |      |    |    |
|            | 5                  | JC6A13-5P   | 127039-0003  |       |      |    |    |
|            |                    | JC6A13-5S   | 127039-0004  |       |      |    |    |
| 16         | 7                  | JC6A16-7P   | 127039-0005  | M22x1 | 25.5 | 12 | 49 |
|            |                    | JC6A16-7S   | 127039-0006  |       |      |    |    |
|            | 10                 | JC6A16-10P  | 127039-0007  |       |      |    |    |
|            |                    | JC6A16-10S  | 127039-0008  |       |      |    |    |
| 21         | 10                 | JC6A21-10P  | 127039-0009  | M26x1 | 29.7 | 14 | 53 |
|            |                    | JC6A21-10S  | 127039-0010  |       |      |    |    |
|            | 16                 | JC6A21-16P  | 127039-0011  |       |      |    |    |
|            |                    | JC6A21-16S  | 127039-0012  |       |      |    |    |
| 25         | 16                 | JC6A25-16P  | 127039-0013  | M30x1 | 33.8 | 18 | 56 |
|            |                    | JC6A25-16S  | 127039-0014  |       |      |    |    |
|            | 24                 | JC6A25-24P  | 127039-0015  |       |      |    |    |
|            |                    | JC6A25-24S  | 127039-0016  |       |      |    |    |

# JC Series Connector Exploded View

## \* Plug

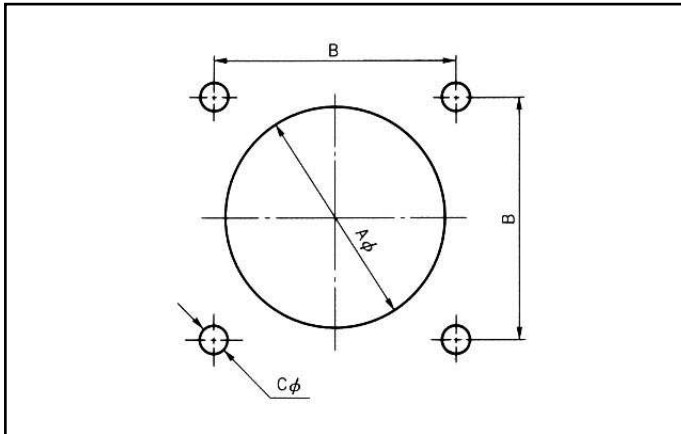


## \* Receptacle



# JC Series Connector

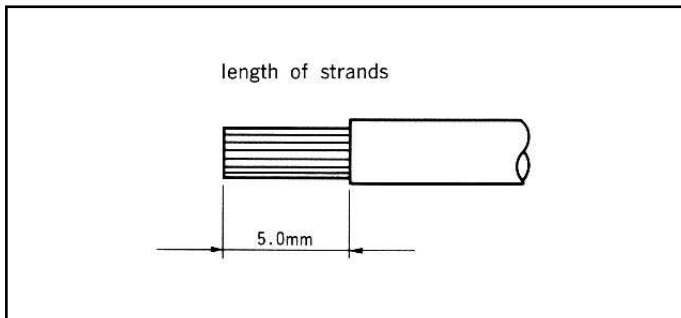
## \* Panel cut-out dimension (page 6)



| Shell Size | Aφ<br>±0.5 | B<br>±0.2 | Cφ<br>-0.3<br>-0 |
|------------|------------|-----------|------------------|
| 13         | 20         | 20        | 3.2              |
| 16         | 24         | 23        | 3.2              |
| 21         | 28         | 26        | 3.2              |
| 25         | 32         | 29        | 3.2              |

(note) In case of rear mounting, panel thickness should be less than 4.00 mm

## \* Applicable Cable Size



| Contact Size | Cable AWG      | Diameter of conductor          |
|--------------|----------------|--------------------------------|
| 20           | #20 or thinner | 0.5mm <sup>2</sup> or smaller  |
| 16           | #16 or thinner | 1.25mm <sup>2</sup> or smaller |

## \* Termination Instruction

Cable must come through Endbell in advance to termination.  
Release the set-screw and remove Endbell from barrel of connector then insert the cable through the Endbell.  
After completion of soldering termination, re-assemble Endbell to Barrel then tighten up set-screw.

