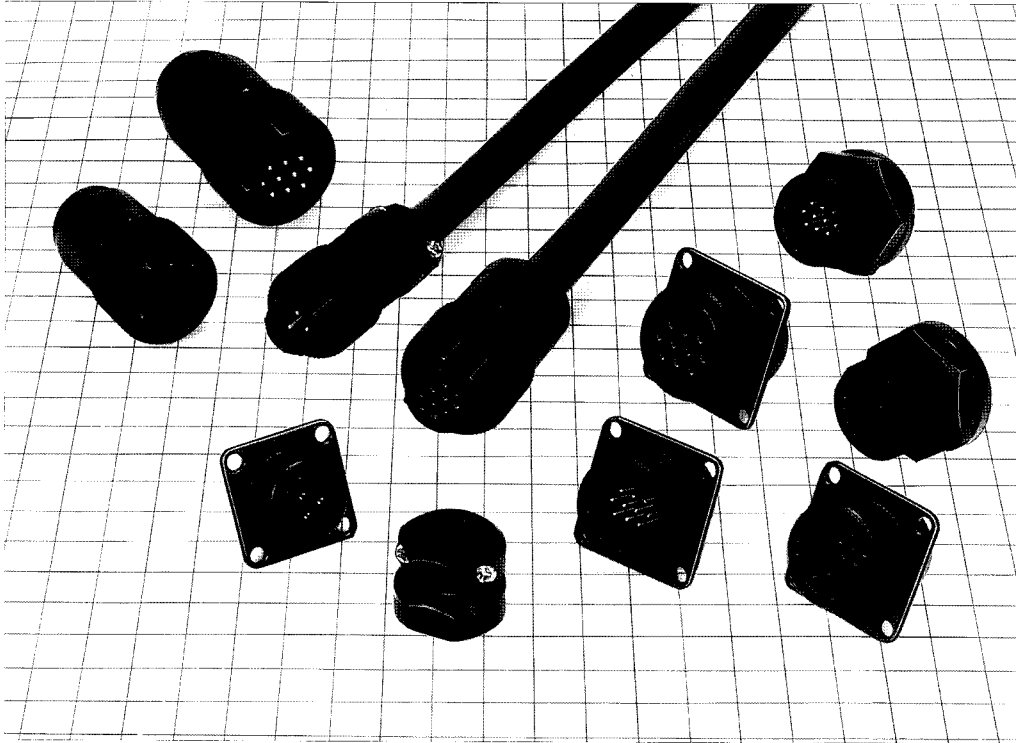




# JR Series

## High-performance water-proof circular connector JR-W connector



### General Description

JR-W connector is a water-proof connector developed for interfaces of machine tools, communications equipment, etc. JR-W connector is also corrosion resistant so that it can be used satisfactorily even in adverse environments.

### Features

- |   |  |
|---|--|
| <p>(1) Water-proof structure<br/>The connector is structured so that water will not soak into it when placed under water to a depth of 1.8 m for 48 hours. (IP67 or more)</p> <p>(2) Outstanding corrosion resistance<br/>Outer metal is plated with black chromium to prevent corrosion.</p> | <p>(3) Smooth connection<br/>Connecting part is provided with five guides to make connection very smooth.</p> <p>(4) Versatile<br/>JR-W connector is variable in shell sizes and core numbers. Cable clamps are available in various sizes, so that various combinations can be made in accordance with application.</p> |
|---|--|

### Application

Machine tools, FA-related equipment, communications equipment, various electronic equipment and devices.

## Material & Treatment

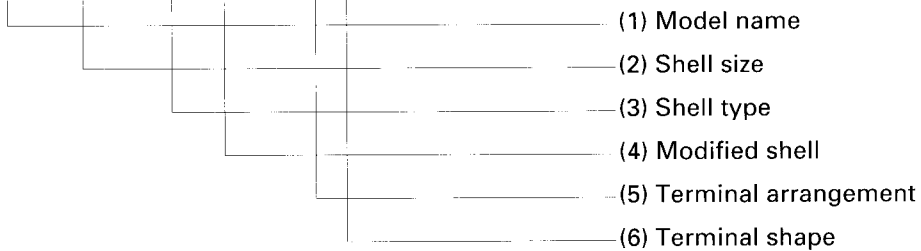
| Part name       | Material                          | Treatment               |
|-----------------|-----------------------------------|-------------------------|
| Shell           | Aluminum alloy, brass, zinc alloy | Black chromium plating  |
| Insulator       | Synthetic resin                   | Black or greenish brown |
| Male terminal   | Copper alloy                      | Silver plating          |
| Female terminal | Copper alloy                      | Silver plating          |

In addition, products with varied material or treatments are available.  
 Please contact your Hirose sales representative for more information.

## Structure of Product No.

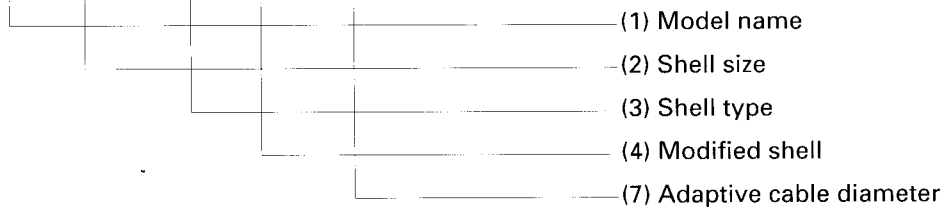
### ● Plug · Receptacle

JR 13 W P A - 3 P



### ● Cord clamp

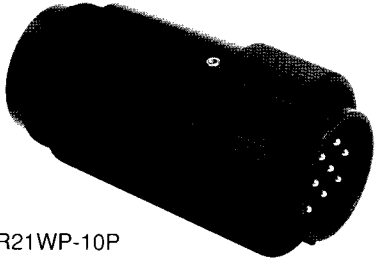
JR 13 W C C A - 4



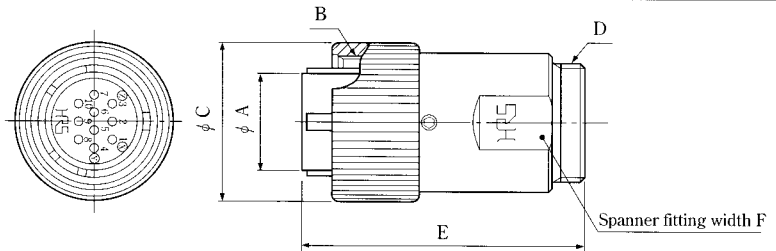
- (1) Model name: Indicates JR series.
- (2) Shell size: Indicated by the outer diameter of the shell for connecting the plug.
- (3) Shell type: Shell types are as follows.
  - WP: Water-proof plug
  - WR: Water-proof receptacle
  - WCC: Water-proof cord clamp
- (4) Modified shell: Changes in order of A, B, D, E... every time the outer sheath shape is changed. But, C, J, P and R are not used to prevent confusion.
- (5) Terminal arrangement: Indicated by the number of terminals.
- (6) Terminal shape: Identified as follows.
  - P: Male terminal
  - PC: Pressure connection type male terminal
  - S: Female terminal
  - SC: Pressure connection type female terminal
- (7) Adaptive cable diameter: Indicates the adaptive cable diameter.

## Soldering type

### ■ Plug (water-proof type)



JR21WP-10P



(This shape is one example.)

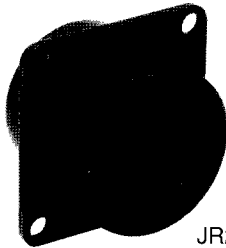
| HRSNo.     | Product No. | No. of pins | φ A  | B     | φ C  | D        | E    | F    |
|------------|-------------|-------------|------|-------|------|----------|------|------|
| 114-2001-5 | JR13WP-3P   | 3           | 12.7 | M18×1 | 21.8 | M16×0.75 | 44.7 | 17   |
| 114-2002-8 | JR13WP-5P   | 5           | 12.7 | M18×1 | 21.8 | M16×0.75 | 44.7 | 17   |
| 114-2003-0 | JR16WP-7P   | 7           | 16.3 | M22×1 | 21.8 | M20×0.75 | 46.5 | 21   |
| 114-2004-3 | JR16WP-10P  | 10          | 16.3 | M22×1 | 25.8 | M20×0.75 | 46.5 | 21   |
| 114-2005-6 | JR21WP-10P  | 10          | 20.5 | M26×1 | 29.8 | M24×0.75 | 51   | 25.4 |
| 114-2006-9 | JR21WP-16P  | 16          | 20.5 | M26×1 | 29.8 | M24×0.75 | 51   | 25.4 |
| 114-2007-1 | JR25WP-4P   | 4           | 24.7 | M30×1 | 33.8 | M28×0.75 | 56   | 29   |
| 114-2008-4 | JR25WP-5P   | 5           | 24.7 | M30×1 | 33.8 | M28×0.75 | 56   | 29   |
| 114-2009-7 | JR25WP-8P   | 8           | 24.7 | M30×1 | 33.8 | M28×0.75 | 56   | 29   |
| 114-2010-6 | JR25WP-16P  | 16          | 24.7 | M30×1 | 33.8 | M28×0.75 | 56   | 29   |
| 114-2011-9 | JR25WP-24P  | 24          | 24.7 | M30×1 | 33.8 | M28×0.75 | 56   | 29   |

| HRSNo.     | Product No. | No. of pins | φ A  | B     | φ C  | D        | E    | F    |
|------------|-------------|-------------|------|-------|------|----------|------|------|
| 114-2012-1 | JR13WP-3S   | 3           | 12.7 | M18×1 | 21.8 | M16×0.75 | 44.7 | 17   |
| 114-2013-4 | JR13WP-5S   | 5           | 12.7 | M18×1 | 21.8 | M16×0.75 | 44.7 | 17   |
| 114-2014-7 | JR16WP-7S   | 7           | 16.3 | M22×1 | 25.8 | M20×0.75 | 46.5 | 21   |
| 114-2015-0 | JR16WP-10S  | 10          | 16.3 | M22×1 | 25.8 | M20×0.75 | 46.5 | 21   |
| 114-2016-2 | JR21WP-10S  | 10          | 20.5 | M26×1 | 29.8 | M24×0.75 | 51   | 25.4 |
| 114-2017-5 | JR21WP-16S  | 16          | 20.5 | M26×1 | 29.8 | M24×0.75 | 51   | 25.4 |
| 114-2018-8 | JR25WP-4S   | 4           | 24.7 | M30×1 | 33.8 | M28×0.75 | 56   | 29   |
| 114-2019-0 | JR25WP-5S   | 5           | 24.7 | M30×1 | 33.8 | M28×0.75 | 56   | 29   |
| 114-2020-0 | JR25WP-8S   | 8           | 24.7 | M30×1 | 33.8 | M28×0.75 | 56   | 29   |
| 114-2021-2 | JR25WP-16S  | 16          | 24.7 | M30×1 | 33.8 | M28×0.75 | 56   | 29   |
| 114-2022-5 | JR25WP-24S  | 24          | 24.7 | M30×1 | 33.8 | M28×0.75 | 56   | 29   |

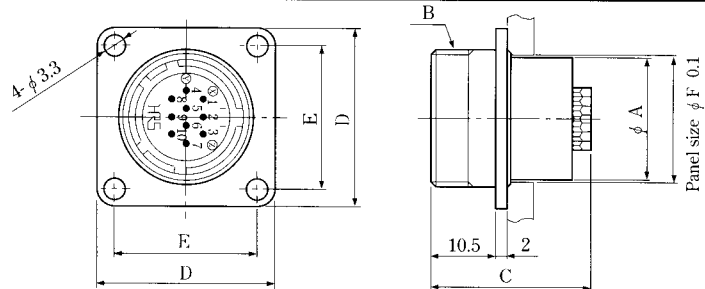
Note 1. Use the plug in combination with the cord clamp.

### ■ Receptacle (water-proof type)

#### ● Screw type



JR21WR-10S

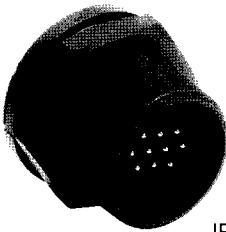


(This shape is one example.)

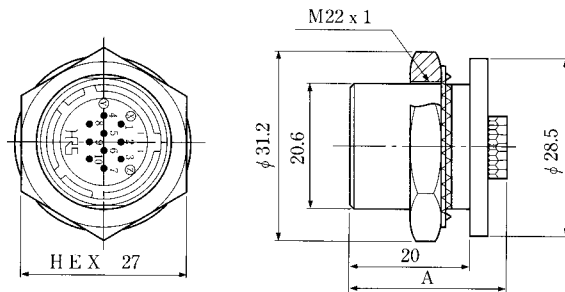
| HRSNo.     | Product No. | No. of pins | φ A  | B     | C    | D  | E  | F    |
|------------|-------------|-------------|------|-------|------|----|----|------|
| 114-2023-8 | JR13WR-3P   | 3           | 15.9 | M18×1 | 26.6 | 26 | 20 | 16.3 |
| 114-2024-0 | JR13WR-5P   | 5           | 15.9 | M18×1 | 26.1 | 26 | 20 | 16.3 |
| 114-2025-3 | JR16WR-7P   | 7           | 19.9 | M22×1 | 26.6 | 29 | 23 | 20.3 |
| 114-2026-6 | JR16WR-10P  | 10          | 19.9 | M22×1 | 26.1 | 29 | 23 | 20.3 |
| 114-2027-9 | JR21WR-10P  | 10          | 23.9 | M26×1 | 26.6 | 32 | 26 | 24.3 |
| 114-2028-1 | JR21WR-16P  | 16          | 23.9 | M26×1 | 26.1 | 32 | 26 | 24.3 |
| 114-2029-4 | JR25WR-4P   | 4           | 27.9 | M30×1 | 28   | 35 | 29 | 28.3 |
| 114-2030-3 | JR25WR-5P   | 5           | 27.9 | M30×1 | 26.6 | 35 | 29 | 28.3 |
| 114-2031-6 | JR25WR-8P   | 8           | 27.9 | M30×1 | 26.6 | 35 | 29 | 28.3 |
| 114-2032-9 | JR25WR-16P  | 16          | 27.9 | M30×1 | 26.6 | 35 | 29 | 28.3 |
| 114-2033-1 | JR25WR-24P  | 24          | 27.9 | M30×1 | 26.1 | 35 | 29 | 28.3 |

| HRSNo.     | Product No. | No. of pins | φ A  | B     | C    | D  | E  | φ F  |
|------------|-------------|-------------|------|-------|------|----|----|------|
| 114-2034-4 | JR13WR-3S   | 3           | 15.9 | M18×1 | 28   | 26 | 20 | 16.3 |
| 114-2035-7 | JR13WR-5S   | 5           | 15.9 | M18×1 | 27   | 26 | 20 | 16.3 |
| 114-2036-0 | JR16WR-7S   | 7           | 19.9 | M22×1 | 28   | 29 | 23 | 20.3 |
| 114-2037-2 | JR16WR-10S  | 10          | 19.9 | M22×1 | 27   | 29 | 23 | 20.3 |
| 114-2038-5 | JR21WR-10S  | 10          | 23.9 | M26×1 | 28   | 32 | 26 | 24.3 |
| 114-2039-8 | JR21WR-16S  | 16          | 23.9 | M26×1 | 27   | 32 | 26 | 24.3 |
| 114-2040-7 | JR25WR-4S   | 4           | 27.9 | M30×1 | 28   | 35 | 29 | 28.3 |
| 114-2041-0 | JR25WR-5S   | 5           | 27.9 | M30×1 | 27.8 | 35 | 29 | 28.3 |
| 114-2042-2 | JR25WR-8S   | 8           | 27.9 | M30×1 | 27.8 | 35 | 29 | 28.3 |
| 114-2043-5 | JR25WR-16S  | 16          | 27.9 | M30×1 | 28   | 35 | 29 | 28.3 |
| 114-2044-8 | JR25WR-24S  | 24          | 27.9 | M30×1 | 27   | 35 | 29 | 28.3 |

#### ● Nut type



JR16WRA-10P

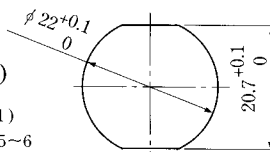


(This shape is one example.)

| HRSNo.     | Product No. | No. of pins | A    |
|------------|-------------|-------------|------|
| 114-2143-0 | JR16WRA-7P  | 7           | 26.6 |
| 114-2096-1 | JR16WRA-10P | 10          | 26.1 |
| 114-2144-2 | JR16WRA-7S  | 7           | 28   |
| 114-2145-5 | JR16WRA-10S | 10          | 27   |

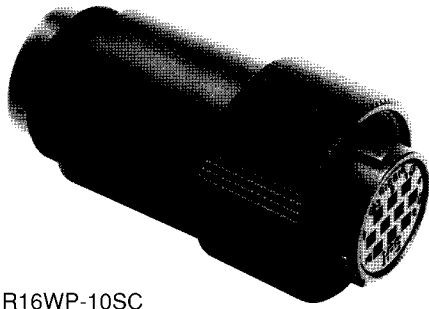
Fitting panel size view (1:1)

t = 1.5~6

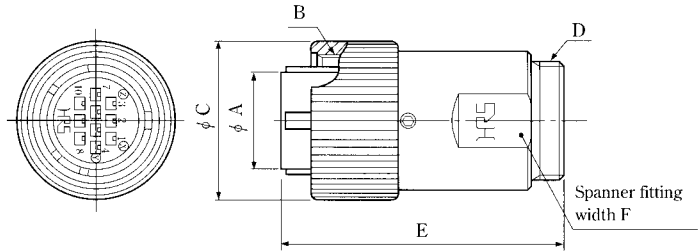


## Crimp type

### ■ Plug (water-proof type)



JR16WP-10SC



(This shape is one example.)

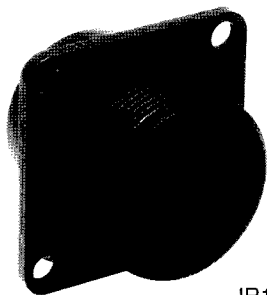
| HRSNo.     | Product No. | No. of pins | φA   | B     | φC   | D        | E    | F    | Contact diameter |
|------------|-------------|-------------|------|-------|------|----------|------|------|------------------|
| 114-2150-5 | JR16WP-3PC  | 3           | 16.3 | M22×1 | 21.8 | M20×0.75 | 46.5 | 21   | 1.6              |
| 114-2114-1 | JR16WP-10PC | 10          | 16.3 | M22×1 | 25.8 | M20×0.75 | 46.5 | 21   | 1                |
| 114-2115-4 | JR21WP-10PC | 10          | 20.5 | M26×1 | 29.8 | M24×0.75 | 51   | 25.4 | 1.6              |
| 114-2116-7 | JR21WP-16PC | 16          | 20.5 | M26×1 | 29.8 | M24×0.75 | 51   | 25.4 | 1                |
| 114-2118-2 | JR25WP-24PC | 24          | 24.7 | M30×1 | 33.8 | M28×0.75 | 56   | 29   | 1                |

| HRSNo.     | Product No. | No. of pins | φA   | B     | φC   | D        | E    | F    | Contact diameter |
|------------|-------------|-------------|------|-------|------|----------|------|------|------------------|
| 114-2151-8 | JR16WP-3SC  | 3           | 16.3 | M22×1 | 25.8 | M20×0.75 | 46.5 | 21   | 1.6              |
| 114-2122-0 | JR16WP-10SC | 10          | 16.3 | M22×1 | 25.8 | M20×0.75 | 46.5 | 21   | 1                |
| 114-2123-2 | JR21WP-10SC | 10          | 20.5 | M26×1 | 29.8 | M24×0.75 | 51   | 25.4 | 1.6              |
| 114-2124-5 | JR21WP-16SC | 16          | 20.5 | M26×1 | 29.8 | M24×0.75 | 51   | 25.4 | 1                |
| 114-2126-0 | JR25WP-24SC | 24          | 24.7 | M30×1 | 33.8 | M28×0.75 | 56   | 29   | 1                |

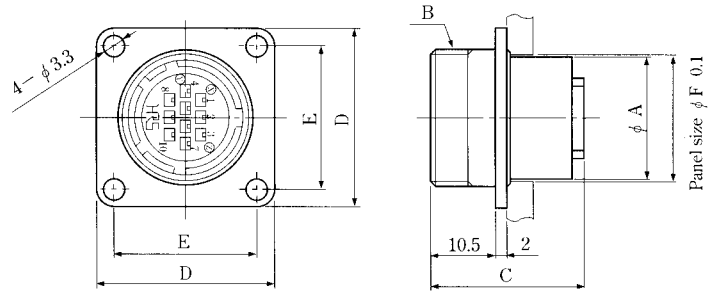
Note 1. Use the plug in combination with the cord clamp.

### ■ Receptacle (water-proof type)

#### ● Screw type



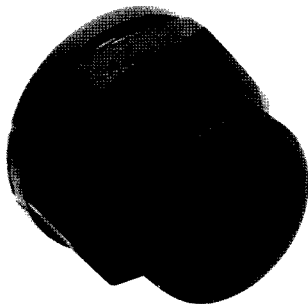
JR16WP-10RC



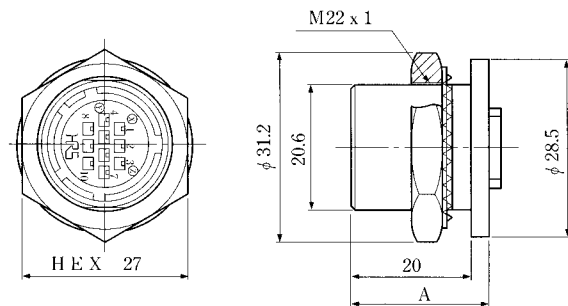
(This shape is one example.)

| HRSNo.     | Product No. | No. of pins | φA   | B     | C    | D  | E  | φF   | Contact diameter |
|------------|-------------|-------------|------|-------|------|----|----|------|------------------|
| 114-2152-0 | JR16WR-3PC  | 3           | 19.9 | M22×1 | 27.6 | 29 | 23 | 20.3 | 1.6              |
| 114-2130-8 | JR16WR-10PC | 10          | 19.9 | M22×1 | 25.1 | 29 | 23 | 20.3 | 1                |
| 114-2131-0 | JR21WR-10PC | 10          | 23.9 | M26×1 | 27.6 | 32 | 26 | 24.3 | 1.6              |
| 114-2132-3 | JR21WR-16PC | 16          | 23.9 | M26×1 | 25.1 | 32 | 26 | 24.3 | 1                |
| 114-2134-9 | JR25WR-24PC | 24          | 27.9 | M30×1 | 25.1 | 35 | 29 | 28.3 | 1                |

| HRSNo.     | Product No. | No. of pins | φA   | B     | C    | D  | E  | φF   | Contact diameter |
|------------|-------------|-------------|------|-------|------|----|----|------|------------------|
| 114-2153-3 | JR16WR-3SC  | 3           | 19.9 | M22×1 | 27.6 | 29 | 23 | 20.3 | 1.6              |
| 114-2138-0 | JR16WR-10SC | 10          | 19.9 | M22×1 | 23.0 | 29 | 23 | 20.3 | 1                |
| 114-2139-2 | JR21WR-10SC | 10          | 23.9 | M26×1 | 27.6 | 32 | 26 | 24.3 | 1.6              |
| 114-2140-1 | JR21WR-16SC | 16          | 23.9 | M26×1 | 23.0 | 32 | 26 | 24.3 | 1                |
| 114-2142-7 | JR25WR-24SC | 24          | 27.9 | M30×1 | 23.0 | 35 | 29 | 28.3 | 1                |



JR16WRA-10PC

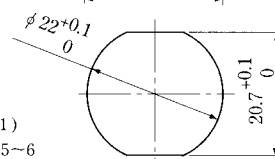


(This shape is one example.)

| HRSNo.     | Product No.   | No. of pins | A    | Contact diameter |
|------------|---------------|-------------|------|------------------|
| 114-2098-7 | JR16WRA-3PC   | 3           | 27.6 | 1.6              |
| 114-2095-9 | JR16WRA-10PC  | 10          | 25.1 | 1                |
| 114-2149-6 | JR16WPRA-3SC  | 3           | 27.6 | 1.6              |
| 114-2148-3 | JR16WPRA-10SC | 10          | 23   | 1                |

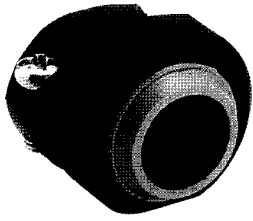
Fitting panel size view (1:1)

t = 1.5~6

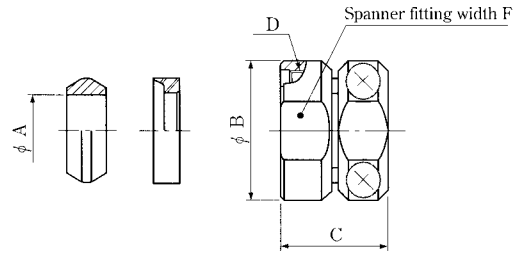


## Cord Clamp

### Standard type



JR16WCC-12

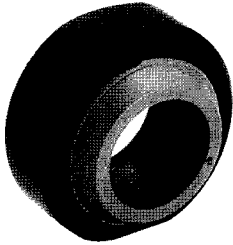


(This shape is one example.)

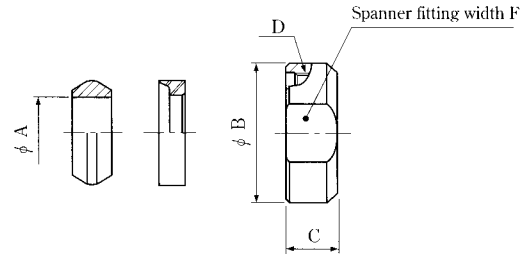
| HRSNo.     | Product No. | $\phi A$ | $\phi B$ | C    | D        | E  |
|------------|-------------|----------|----------|------|----------|----|
| 114-2045-0 | JR13WCC-4   | 4        | 20       | 17   | M16×0.75 | 17 |
| 114-2046-3 | JR13WCC-5   | 5        | 20       | 17   | M16×0.75 | 17 |
| 114-2047-6 | JR13WCC-6   | 6        | 20       | 17   | M16×0.75 | 17 |
| 114-2048-9 | JR13WCC-7   | 7        | 20       | 17   | M16×0.75 | 17 |
| 114-2049-1 | JR13WCC-8   | 8        | 20       | 17   | M16×0.75 | 17 |
| 114-2050-0 | JR13WCC-9   | 9        | 20       | 17   | M16×0.75 | 17 |
| 114-2051-3 | JR13WCC-10  | 10       | 20       | 17   | M16×0.75 | 17 |
| 114-2052-6 | JR16WCC-4   | 4        | 23       | 17.5 | M20×0.75 | 21 |
| 114-2053-9 | JR16WCC-6   | 6        | 23       | 17.5 | M20×0.75 | 21 |
| 114-2054-1 | JR16WCC-8   | 8        | 23       | 17.5 | M20×0.75 | 21 |
| 114-2055-4 | JR16WCC-10  | 10       | 23       | 17.5 | M20×0.75 | 21 |
| 114-2056-7 | JR16WCC-12  | 12       | 23       | 17.5 | M20×0.75 | 21 |

| HRSNo.     | Product No. | $\phi A$ | $\phi B$ | C    | D        | E    |
|------------|-------------|----------|----------|------|----------|------|
| 114-2057-0 | JR21WCC-6   | 6        | 27       | 17.5 | M24×0.75 | 25.4 |
| 114-2058-2 | JR21WCC-8   | 8        | 27       | 17.5 | M24×0.75 | 25.4 |
| 114-2059-5 | JR21WCC-10  | 10       | 27       | 17.5 | M24×0.75 | 25.4 |
| 114-2060-4 | JR21WCC-12  | 12       | 27       | 17.5 | M24×0.75 | 25.4 |
| 114-2061-7 | JR21WCC-14  | 14       | 27       | 17.5 | M24×0.75 | 25.4 |
| 114-2062-0 | JR21WCC-16  | 16       | 27       | 17.5 | M24×0.75 | 25.4 |
| 114-2063-2 | JR25WCC-8   | 8        | 31       | 18   | M28×0.75 | 29   |
| 114-2064-5 | JR25WCC-10  | 10       | 31       | 18   | M28×0.75 | 29   |
| 114-2065-8 | JR25WCC-12  | 12       | 31       | 18   | M28×0.75 | 29   |
| 114-2066-0 | JR25WCC-14  | 14       | 31       | 18   | M28×0.75 | 29   |
| 114-2067-3 | JR25WCC-16  | 16       | 31       | 18   | M28×0.75 | 29   |
| 114-2068-6 | JR25WCC-18  | 18       | 31       | 18   | M28×0.75 | 29   |

### Simple type



JR16WCCA-12



(This shape is one example.)

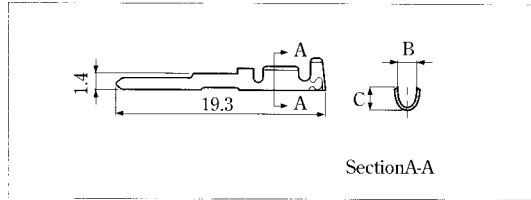
| HRSNo.     | Product No. | $\phi A$ | $\phi B$ | C   | D        | E  |
|------------|-------------|----------|----------|-----|----------|----|
| 114-2069-9 | JR13WCCA-4  | 4        | 19       | 7.5 | M16×0.75 | 17 |
| 114-2070-8 | JR13WCCA-5  | 5        | 19       | 7.5 | M16×0.75 | 17 |
| 114-2071-0 | JR13WCCA-6  | 6        | 19       | 7.5 | M16×0.75 | 17 |
| 114-2072-3 | JR13WCCA-7  | 7        | 19       | 7.5 | M16×0.75 | 17 |
| 114-2073-6 | JR13WCCA-8  | 8        | 19       | 7.5 | M16×0.75 | 17 |
| 114-2074-9 | JR13WCCA-9  | 9        | 19       | 7.5 | M16×0.75 | 17 |
| 114-2075-1 | JR13WCCA-10 | 10       | 19       | 7.5 | M16×0.75 | 17 |
| 114-2076-4 | JR16WCCA-4  | 4        | 23       | 8   | M20×0.75 | 21 |
| 114-2077-7 | JR16WCCA-6  | 6        | 23       | 8   | M20×0.75 | 21 |
| 114-2078-0 | JR16WCCA-8  | 8        | 23       | 8   | M20×0.75 | 21 |
| 114-2079-2 | JR16WCCA-10 | 10       | 23       | 8   | M20×0.75 | 21 |
| 114-2080-1 | JR16WCCA-12 | 12       | 23       | 8   | M20×0.75 | 21 |

| HRSNo.     | Product No. | $\phi A$ | $\phi B$ | C   | D        | E    |
|------------|-------------|----------|----------|-----|----------|------|
| 114-2081-4 | JR21WCCA-6  | 6        | 27       | 8   | M24×0.75 | 25.4 |
| 114-2082-7 | JR21WCCA-8  | 8        | 27       | 8   | M24×0.75 | 25.4 |
| 114-2083-0 | JR21WCCA-10 | 10       | 27       | 8   | M24×0.75 | 25.4 |
| 114-2084-2 | JR21WCCA-12 | 12       | 27       | 8   | M24×0.75 | 25.4 |
| 114-2085-5 | JR21WCCA-14 | 14       | 27       | 8   | M24×0.75 | 25.4 |
| 114-2086-8 | JR21WCCA-16 | 16       | 27       | 8   | M24×0.75 | 25.4 |
| 114-2087-0 | JR25WCCA-8  | 8        | 31       | 8.5 | M28×0.75 | 29   |
| 114-2088-3 | JR25WCCA-10 | 10       | 31       | 8.5 | M28×0.75 | 29   |
| 114-2089-6 | JR25WCCA-12 | 12       | 31       | 8.5 | M28×0.75 | 29   |
| 114-2090-5 | JR25WCCA-14 | 14       | 31       | 8.5 | M28×0.75 | 29   |
| 114-2091-8 | JR25WCCA-16 | 16       | 31       | 8.5 | M28×0.75 | 29   |
| 114-2092-0 | JR25WCCA-18 | 18       | 31       | 8.5 | M28×0.75 | 29   |

Note: The simple type cord clamp does not provide a high cable clamping force.

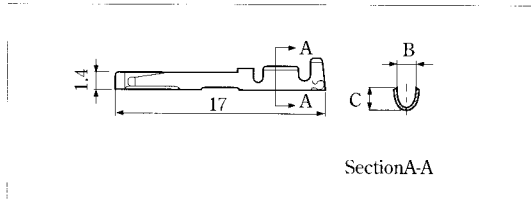
## Contact

### For contact diameter 1 Male terminal



| Type                | HRSNo.     | Product No. | B    | C   | Adaptive wire  |
|---------------------|------------|-------------|------|-----|----------------|
| Loose terminal      | 114-0243-3 | JRC-PC2-112 | 1.6  | 2.0 | AWG# 20 ~ # 24 |
|                     | 114-0244-6 | JRC-PC2-122 | 1.45 | 1.5 | AWG# 24 ~ # 28 |
| Continuous terminal | 114-0245-9 | JRC-PC2-212 | 1.6  | 2.0 | AWG# 20 ~ # 24 |
|                     | 114-0246-1 | JRC-PC2-222 | 1.45 | 1.5 | AWG# 24 ~ # 28 |

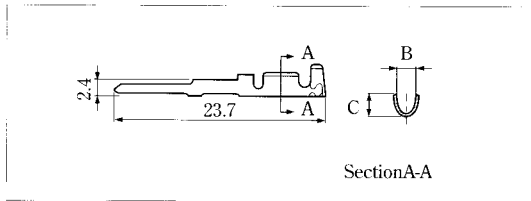
### Female terminal



| Type                | HRSNo.     | Product No. | B    | C   | Adaptive wire  |
|---------------------|------------|-------------|------|-----|----------------|
| Loose terminal      | 114-0247-4 | JRC-SC2-112 | 1.6  | 2.0 | AWG# 20 ~ # 24 |
|                     | 114-0248-7 | JRC-SC2-122 | 1.45 | 1.5 | AWG# 24 ~ # 28 |
| Continuous terminal | 114-0249-0 | JRC-SC2-212 | 1.6  | 2.0 | AWG# 20 ~ # 24 |
|                     | 114-0250-9 | JRC-SC2-222 | 1.45 | 1.5 | AWG# 24 ~ # 28 |

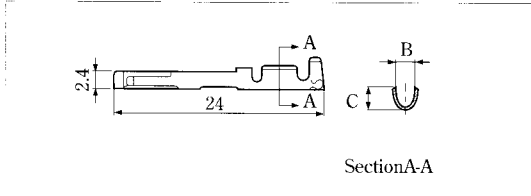
Note: The loose terminal includes 100 terminals per pack, and the continuous terminal includes 8,000 terminals per reel.

### For contact diameter 1.6 Male terminal



| Type                | HRSNo.     | Product No. | B   | C   | Adaptive wire  |
|---------------------|------------|-------------|-----|-----|----------------|
| Loose terminal      | 114-0239-6 | JRC-PC-112  | 2.3 | 2.9 | AWG# 16 ~ # 20 |
| Continuous terminal | 114-0240-5 | JRC-PC-212  | 2.3 | 2.9 | AWG# 16 ~ # 20 |

### Female terminal



| Type                | HRSNo.     | Product No. | B   | C   | Adaptive wire  |
|---------------------|------------|-------------|-----|-----|----------------|
| Loose terminal      | 114-0241-8 | JRC-SC-112  | 2.3 | 2.9 | AWG# 16 ~ # 20 |
| Continuous terminal | 114-0242-0 | JRC-SC-212  | 2.3 | 2.9 | AWG# 16 ~ # 20 |

Note: The loose terminal includes 100 terminals per pack, and the continuous terminal includes 8,000 terminals per reel.

## Applicable Tool

### For contact diameter 1

| Type                    | HRSNo.     | Product No. | Adaptive contact                       | Adaptive wire  |
|-------------------------|------------|-------------|--|----------------|
| Manual crimp tool       | 150-0006-1 | RM-TC-11    | JRC- <sup>PC</sup> <sub>SC</sub> 2-112 | AWG# 20 ~ # 24 |
|                         | 150-0007-4 | RM-TC-12    | JRC- <sup>PC</sup> <sub>SC</sub> 2-122 | AWG# 24 ~ # 28 |
| Automatic crimp machine |            | CM-105      |  |                |
| Pulling tool            | 150-0008-7 | RM-TP       |  |                |

### For contact diameter 1.6

| Type                    | HRSNo.     | Product No. | Adaptive contact                      | Adaptive wire  |
|-------------------------|------------|-------------|---------------------------------------|----------------|
| Manual crimp tool       | 150-0033-4 | JRC-TC-11   | JRC- <sup>PC</sup> <sub>SC</sub> -112 | AWG# 16        |
|                         | 150-0034-7 | JRC-TC-12   | JRC- <sup>PC</sup> <sub>SC</sub> -122 | AWG# 18 ~ # 20 |
| Automatic crimp machine |            | CM-105      |                                       |                |
| Pulling tool            | 150-0025-7 | JRC-TP      |                                       |                |

### Hexagon wrench driver (1.27 opposite side)

| HRSNo.     | Product No. |
|------------|-------------|
| 150-0066-3 | PB205/1.27  |

## Connection Work Procedure (plug side)

The connection work procedure on the receptacle side is omitted because it does not need a special work procedure.

### Schematic drawing

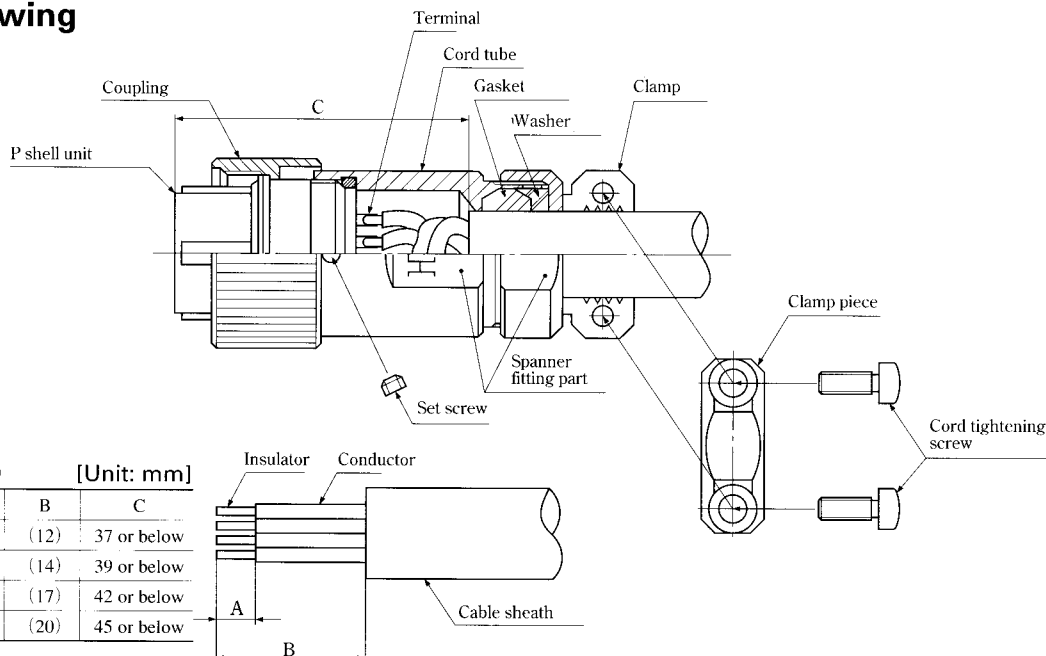


Table 1 (Solder type) [Unit: mm]

| Shell size | A   | B    | C           |
|------------|-----|------|-------------|
| 13         | (3) | (12) | 37 or below |
| 16         | (3) | (14) | 39 or below |
| 21         | (3) | (17) | 42 or below |
| 25         | (3) | (20) | 45 or below |

Table 2 (Pressure connection type) [Unit: mm]

| Shell size | Pole | A       | B    | C           |
|------------|------|---------|------|-------------|
| 16         | 3    | 4 ~ 4.5 | (19) | 39 or below |
|            | 10   | 3.5 ~ 4 |      |             |
| 21         | 10   | 4 ~ 4.5 | (22) | 42 or below |
|            | 16   | 3.5 ~ 4 |      |             |
| 25         | 24   | 3.5 ~ 4 | (25) | 45 or below |

Table 3 [Unit: mm]

| Shell size | Torque  |
|------------|---------|
| 13         | 2 ~ 2.5 |
| 16         | 3 ~ 3.5 |
| 21         | 4 ~ 4.5 |
| 25         | 5 ~ 5.5 |

### Work procedure

#### 1. Disassembly of connector

- (1) To remove the plug, remove the set screw, fit a receptacle adaptive to the P shell unit to fix, and remove the cord tube.
- (2) To remove the cord clamp, remove the cord tightening screws. (Note 1)

#### 2. Connection

##### 2.1 Soldering type

- (1) Use the cable so that the conductor can be soldered properly into the solder cup with the cable sheath diameter adaptive to each cord clamp.
- (2) After the terminal treatment of the cable with a size given in Table 1, thread on the cable the clamp, washer, gasket, cord tube and coupling in this order and direction as shown above.
- (3) Solder to connect the conductors to the terminals of the P shell unit. Shrinkable tube is recommended to be used at the connecting part because insulating performance might deteriorate due to solder whiskers or dewing. After connecting, adjust to meet the C size. (Note 2)

##### 2.2 Crimp type






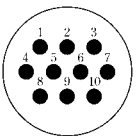
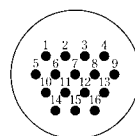
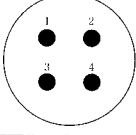
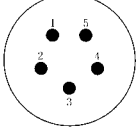
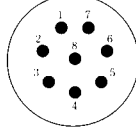
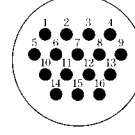
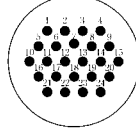
- (1) Use the cable having the conductor and coating diameter adaptive to the crimp terminal with the cable sheath diameter adaptive to each cord clamp.
- (2) After the terminal treatment of the cable with a size given in Table 2, thread on the cable the clamp, washer, gasket, cord tube and coupling in this order and direction as shown above.
- (3) After crimping the adaptive crimp terminals to the conductor, insert the crimp terminals into the terminal holes of the P shell unit. After inserting, adjust to meet the C size. (Note 2)

#### 3. Assembly of connector

- (1) Fit the connected P shell unit to the receptacle fixed with a vice or the like. Torque the cord tube to the level as given in Table 3.
- (2) Fit the gasket, washer and clamp. Torque the clamp to the level as given in Table 3 while preventing the cable from being rotated. And, Loctite 271 produced by Loctite Japan Co Ltd. is recommended to be applied as locking. (Note 3)
- (3) Torque the set screw to 0.2 to 0.25 N.m.
- (4) Torque the cord tightening screws (two positions) to 0.3 to 0.35 N.m. (Notes 4 and 5)

Note 1: Omitted if the cord clamp is a simple type. Note 2: Keep the size until assembling is completed. Note 3: After tightening, check water proof before using. Note 4: Check the clamp strength before using. Note 5: Omitted if the cord clamp is a simple type.

## Terminal Arrangement and Major Performance

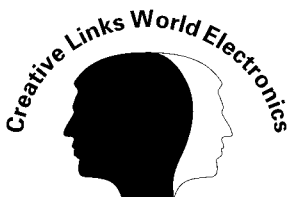
|                           |   |   |  |   |   |
|---------------------------|---|---|--|---|---|
| Shell size                |    |   |   |   |   |
| <b>13</b>                 | 3   |   | 5  |   |   |
| Pole                      | 3   |   | 5  |   |   |
| Voltage resistance        | 100V AC for 1 minute  |   | 100V AC for 1 minute   |   |   |
| Current capacity          | 10 A  |   | 5 A  |   |   |
| Insulation resistance     | 1000 M ohm or above   |   | 1000 M ohm or above  |   |   |
| Contact resistance        | 5 m ohm or below  |   | 5 m ohm or below   |   |   |
| Solder pot inner diameter | $\phi$ 1.7  |   | $\phi$ 1.1   |   |   |
| Shell size                |    |    |   |   |   |
| <b>16</b>                 | 3   | 7   | 10   |   |   |
| Pole                      | 3   | 7   | 10   |   |   |
| Voltage resistance        | 2000V AC for 1 minute   | 1000V AC for 1 minute   | 1000V AC for 1 minute  |   |   |
| Current capacity          | 10 A  | 10 A  | 5 A (Crimp type 3 A)   |   |   |
| Insulation resistance     | 1000 M ohm or above   | 1000 M ohm or above   | 1000 M ohm or above  |   |   |
| Contact resistance        | 5 m ohm or below  | 5 m ohm or below  | 5 m ohm or below (Crimp type 10m $\Omega$ )  |   |   |
| Solder pot inner diameter | — (Only crimp type is available)  | $\phi$ 1.7  | $\phi$ 1.1   |   |   |
| Shell size                |    |   |   |   |   |
| <b>21</b>                 | 10  |   | 16   |   |   |
| Pole                      | 10  |   | 16   |   |   |
| Voltage resistance        | 1000V AC for 1 minute   |   | 1000V AC for 1 minute  |   |   |
| Current capacity          | 10 A  |   | 5 A (Crimp type 3 A)   |   |   |
| Insulation resistance     | 1000 M ohm or above   |   | 1000 M ohm or above  |   |   |
| Contact resistance        | 5 m ohm or below  |   | 5 m ohm or below (Crimp type 10m $\Omega$ )  |   |   |
| Solder pot inner diameter | $\phi$ 1.7  |   | $\phi$ 1.1   |   |   |
| Shell size                |  |  |  |  |  |
| <b>25</b>                 | 4   | 5   | 8  | 16  | 24  |
| Pole                      | 4   | 5   | 8  | 16  | 24  |
| Voltage resistance        | 3000V AC for 1 minute   | 3000V AC for 1 minute   | 3000V AC for 1 minute  | 1000V AC for 1 minute   | 1000V AC for 1 minute   |
| Current capacity          | 30A   | 10A   | 10A  | 10A   | 5A (Crimp type 3 A)   |
| Insulation resistance     | 10,000 M ohm or above   | 10,000 M ohm or above   | 10,000 M ohm or above  | 1000 M ohm or above   | 1000 M ohm or above   |
| Contact resistance        | 5 m ohm or below  | 5 m ohm or below  | 5 m ohm or below   | 5 m ohm or below  | 5 m ohm or below (Crimp type 10m $\Omega$ )   |
| Solder pot inner diameter | $\phi$ 3.4  | $\phi$ 1.7  | $\phi$ 1.7   | $\phi$ 1.7  | $\phi$ 1.1  |

Remarks: 1. Illustrations show the fitting faces of connectors having male terminals.

2. The voltage resistance is indicated at a test voltage value. The regular voltage is one tenth or below of the test voltage value.

### Notes in Use

1. Be sure to turn off the power to the circuit before connecting or disconnecting the connector.
2. Be sure to use the connector having female terminals on the power side to the circuit.
3. Be sure to use the connector with the screw lock activated (thoroughly tightened).
4. Use the connector as the combination of water-proof types.



**HRS**®

\* The contents of the catalogue were in effect as of September 1996. The contents may be subject to change for improvement or the like without advance notice.

**HIROSE ELECTRIC CO., LTD**

5-23, OSAKI 5-CHOME, SHINAGAWA-KU, TOKYO 141, JAPAN  
 PHONE: 3-3491-9741 TELE FAX: 3-3493-2933

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