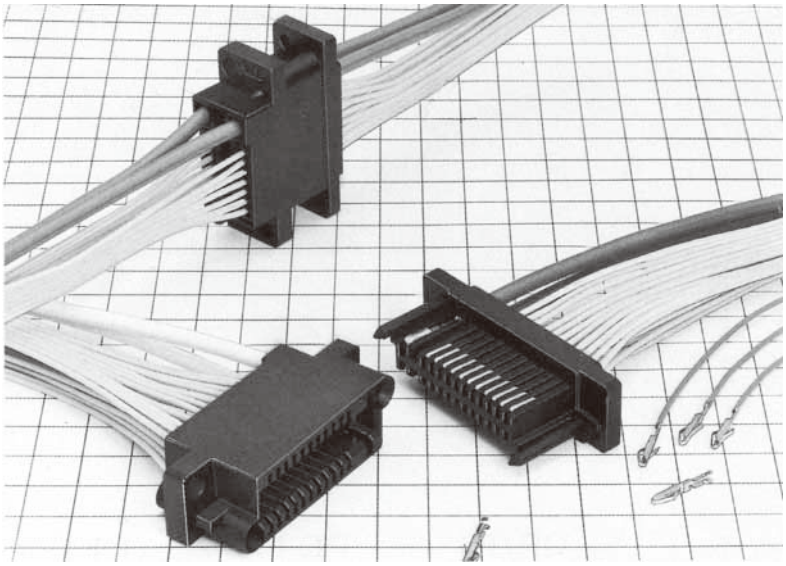
# QR/P6 SERIES

**QR/P6 SERIES RECTANGULAR MINIATURE MULTI-CONTACT RACK/PANEL CRIMP CONNECTOR**

## General

The QR/P6 Series are miniaturized versions of the QR/P and QR/P1 series. Rectangular multi-contact rack and panel connectors for plug-in connection. Available in 6, 12, 16, and 24 contacts for highly efficient and reliable crimp termination.



## Features

(1) Offers smooth insertion/extraction and stable contact pressure through point-blade contact, and has ample allowance for the deviations in contact length specific to plug-in connection.
(2) Miniaturized by separating power contacts from signal contacts.
(3) Signal contacts in the housing are located in pitches of 2.54mm. The opposed contacts at one end of the connector are spaced 6.9mm so that they can withstand high voltage. Can be used for power supplies. Uses flame-retardant insulator (UL94-0).
(4) Miniaturized using guide pins integral with the insulator.
(5) Ensures smooth insertion and extraction, and designed to be fixed with stepped screws on a panel or rack.
(6) The female housing is designed to allow the contact part of the female terminal to be below the mating surface, meeting the Finger Test Requirements (complying with UL 1950)
(7) The connectors of the series have passed UL, CSA and TÜV standard.

## Application

PPC, Transmission/Reception equipment, Data Communication, equipment, Vending machines, Measuring Instruments, Automation equipment, Switch-boards.

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## Main Specification

| General ratings of QR/P6 | | |
|---|---|---|
| Contact Resistance | Power terminal | 10mΩ or less at DC1A |
| | Signal terminal | 15.mΩ or less at DC1A |
| Insulation Resistance | 5000MΩ or less at DC 500V | |
| Withstand Voltage (for 1 min.) | Power unit | AC 1000V |
| | Signal unit | AC 500V |
| Rated current | Power terminal | 10A |
| | Signal terminal | 1A |
| Rated voltage | AC 120V | |

| Main materials | | |
|---|---|---|
| Insulator | PBT resin | Black |
| Terminal | Phosphor bronze | Selective Gold plating with nickel underplating |

＊UL94V-0

| QR/P6 ratings approved by safety standards | | | | | |
|---|---|---|---|---|---|
| Safety standard | | | UL | CSA | TÜV |
| Operating temperature range | | | −10～+60℃ | | |
| Rated voltage | Power supply unit | | AC 250V | | AC250V |
| | Signal unit | | | | AC125V |
| Rated current | AWG#14 | | 10A | 10A | 10A |
| | AWG#16 | | | 8A | |
| | AWG#18 | | 5A | 5A | 5A |
| | AWG#20 | | 3A | 3A | 2.5A |
| | AWG#22 | | | | 1A |
| | AWG #24 | Power supply | 3A | 3A | 1A |
| | | Signal unit | 1A | 2A | |
| | AWG#26 | | 1A | 1A | 1A |
| | AWG#28 | | | | —— |

## Ordering Information

▲ Connector Unit

QR / P6 — 12 P — C — (21)

(1) (2)(3) (4) (11)

▲ Contact

QR / P1 — PC 1 A — 1 1 1

(1) (5)(6)(7) (8)(9)(10)

(1) Series name
(2) No.of contacts (6, 12, 16, 24)
(3) Shape of insulator mating part
P: Insulator male case
S: Insulator female case
(4) Type of termination
C: Crimp termination
(5) Male/ Female
PC: Male crimp terminal
SC: Female crimp terminal
(6) Type
1: Power terminal
2: Signal terminal
(7) Crimp barrel size
A: For thin wires
B: For thick wires
(8) Shape
1: Loose contact
2: Chain contact
(9) Applicable wire
1: Power terminal AWG # 18 - # 24
Signal terminal AWG # 24 - # 28
2: Power terminal AWG # 14 - # 16
(10) Surface terminal
1: Selective gold plating with nickel underplating
(11) Specifications meeting UL, CSA TÜV requirements

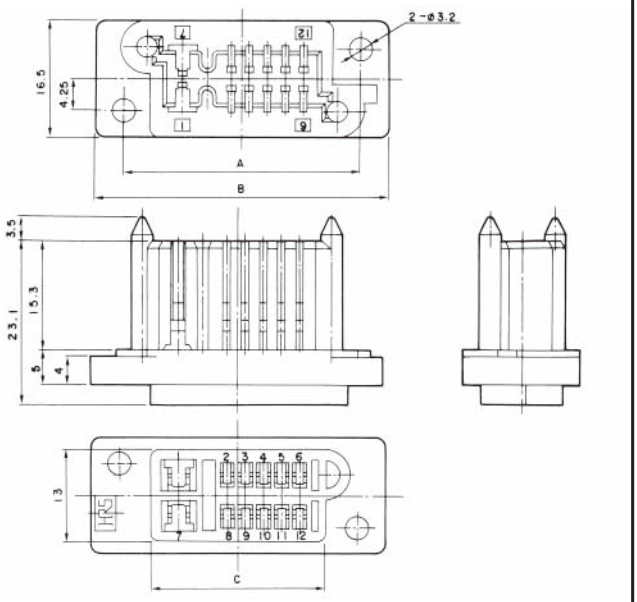
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## Housing

Male Housing

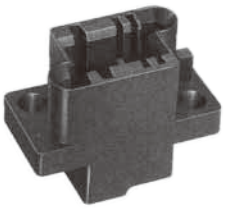


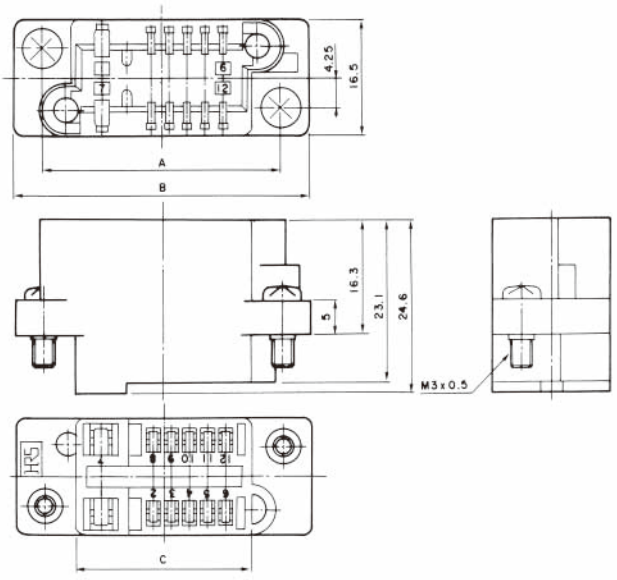



Unit: mm

| HRS No. | No. of Pin | Part No. | A | B | C | RoHS |
|---|---|---|---|---|---|---|
| CL0221-0162-0-21 | 6 | QR/P6- 6P-C(21) | 24.67 | 32.67 | 15.87 | ○ |
| CL0221-0163-2-21 | 12 | QR/P6-12P-C(21) | 33.47 | 41.47 | 24.67 | |
| CL0221-0207-6-21 | 16 | QR/P6-16P-C(21) | 38.55 | 46.55 | 29.75 | |
| CL0221-0209-1-21 | 24 | QR/P6-24P-C(21) | 48.71 | 56.71 | 39.91 | |

Famale housing





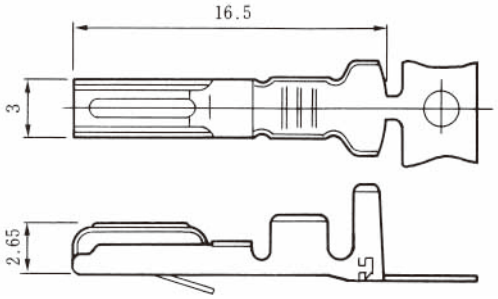

Unit: mm

| HRS No. | No. of Pin | Part No. | A | B | C | RoHS |
|---|---|---|---|---|---|---|
| CL0221-0161-7-21 | 6 | QR/P6- 6S-C(21) | 24.67 | 32.67 | 15.87 | ○ |
| CL0221-0164-5-21 | 12 | QR/P6-12S-C(21) | 33.47 | 41.47 | 24.67 | |
| CL0221-0208-9-21 | 16 | QR/P6-16S-C(21) | 38.55 | 46.55 | 29.75 | |
| CL0221-0210-0-21 | 24 | QR/P6-24S-C(21) | 48.71 | 56.71 | 39.91 | |

Note: Determine the combinations with the panel so that the mating clearance between the P side and S side is 1.5mm.

## Contact

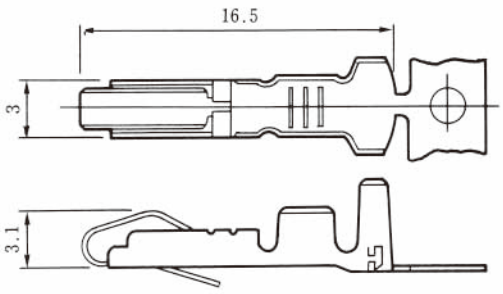
Male power terminal




Selective gold plated with nickel underplating

| Applicable Wire | HRS No. | Part No. | Type | Packing | RoHS |
|---|---|---|---|---|---|
| UL1015 AWG#14～16 | CL0221-0114-7-12 | QR/P1-PC1B-121(12) | Loose contact | 100pin | ○ |
| | CL0221-0118-8-12 | QR/P1-PC1B-221(12) | Chain contact | 3,000pin | |
| UL1007 AWG#18～24 | CL0221-0102-8-12 | QR/P1-PC1A-111(12) | Loose contact | 100pin | |
| | CL0221-0106-9-12 | QR/P1-PC1A-211(12) | Chain contact | 5,000pin | |

Female power terminal

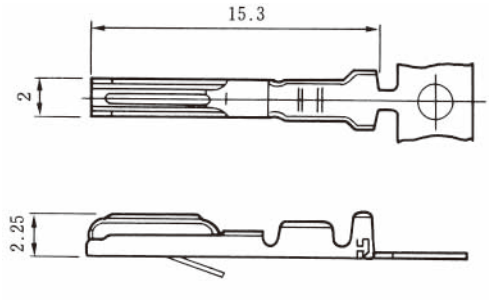



Selective gold plated with nickel underplating

| Applicable Wire | HRS No. | Part No. | Type | Packing | RoHS |
|---|---|---|---|---|---|
| UL1015 AWG#14～16 | CL0221-0116-2-12 | QR/P1-SC1B-121(12) | Loose contact | 100pin | ○ |
| | CL0221-0120-0-12 | QR/P1-SC1B-221(12) | Chain contact | 3,000pin | |
| UL1007 AWG#18～24 | CL0221-0104-3-12 | QR/P1-SC1A-111(12) | Loose contact | 100pin | |
| | CL0221-0108-4-12 | QR/P1-SC1A-211(12) | Chain contact | 5,000pin | |

## Contact

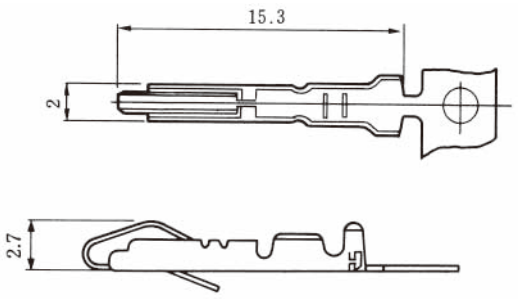
Male signal terminal




Selective gold plated with nickel underplating

| Applicable Wire | HRS No. | Part No. | Type | Packing | RoHS |
|---|---|---|---|---|---|
| UL1007 AWG#24～28 | CL0221-0103-0-12 | QR/P1-PC2A-111 (12) | Loose | 100pin | ○ |
| | CL0221-0107-1-12 | QR/P1-PC2A-211 (12) | Chain | 5,000pin | |

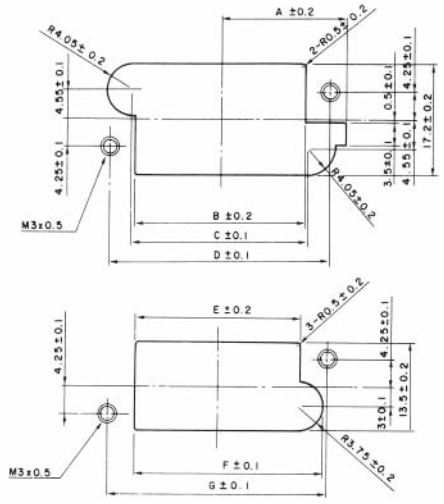
Female signal terminal




Selective gold plated with nickel underplating

| Applicable Wire | HRS No. | Part No. | Type | Packing | RoHS |
|---|---|---|---|---|---|
| UL1007 AWG#24～28 | CL0221-0105-6-12 | QR/P1-SC2A-111 (12) | Loose | 100pin | ○ |
| | CL0221-0109-7-12 | QR/P1-SC2A-211 (12) | Chain | 5,000pin | |

## Panel Mounting Dimensions (for Cases with P Insulation)




Mounting on panel outside

Unit: mm

| No. of pin | | 8 Pin | 12 Pin | 16 Pin | 24 Pin |
|---|---|---|---|---|---|
| Mounting on panel inside | A | 14.87 | 19.27 | 21.85 | 26.95 |
| | B | 17.17 | 25.97 | 31.18 | 41.34 |
| | C | 18.17 | 26.97 | 32.05 | 42.21 |
| | D | 24.67 | 33.47 | 38.55 | 48.71 |
| Mounting on panel outside | E | 16.37 | 25.17 | 30.25 | 40.41 |
| | F | 19.87 | 28.67 | 33.75 | 43.91 |
| | G | 24.67 | 33.47 | 38.55 | 48.71 |

## Applicable Tools



Hand crimping tool



Automatic crimping machine
CM-105
CL0901-0005-4-00

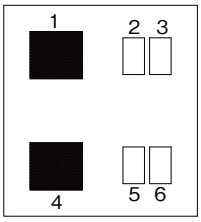
| Type | HRS No. | Part No. | Applicator terminay |
|---|---|---|---|
| Hand Crimp Tool | CL0250-0020-0-00 | TC-QR/P1-PC1B | QR/P1-PC1B-121 |
| | CL0250-0015-0-00 | TC-QR/P1-PC1A | QR/P1-PC1A-111 |
| | CL0250-0022-6-00 | TC-QR/P1-SC1B | QR/P1-SC1B-121 |
| | CL0250-0017-6-00 | TC-QR/P1-SC1A | QR/P1-SC1A-111 |
| | CL0250-0016-3-00 | TC-QR/P1-PC2A | QR/P1-PC2A-111 |
| | CL0250-0018-9-00 | TC-QR/P1-SC2A | QR/P1-SC2A-111 |
| Auto Crimp Machine Applicator | CL0901-2529-6-00 | AP105-QR/P1-1B-2 | QR/P1-PC1B-221<br>QR/P1-SC1B-221 |
| | CL0901-2527-0-00 | AP105-QR/P1-1A-1 | QR/P1-PC1A-211<br>QR/P1-SC1A-211 |
| | CL0901-2528-3-00 | AP105-QR/P1-2A-1 | QR/P1-PC2A-211<br>QR/P1-SC2A-211 |
| Hand Tool | CL0250-0242-2-00 | TC-QR/P6-21 | |

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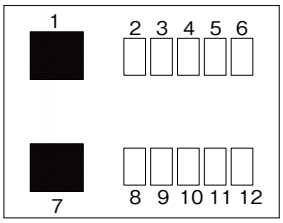
# Contacts for thick wire  Contact Configuration

**Male Housing (Viewed from Wiring Side)**

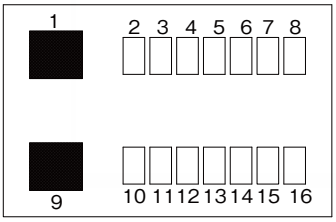
**■: indicates a contact hole for thick wire**



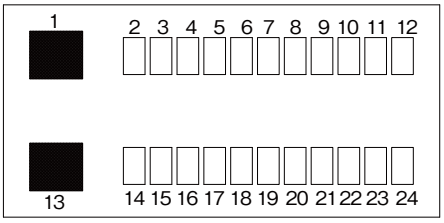

QR/P6-6P-C(21)




QR/P6-12P-C(21)




QR/P6-16P-C(21)




QR/P6-24P-C(21)

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