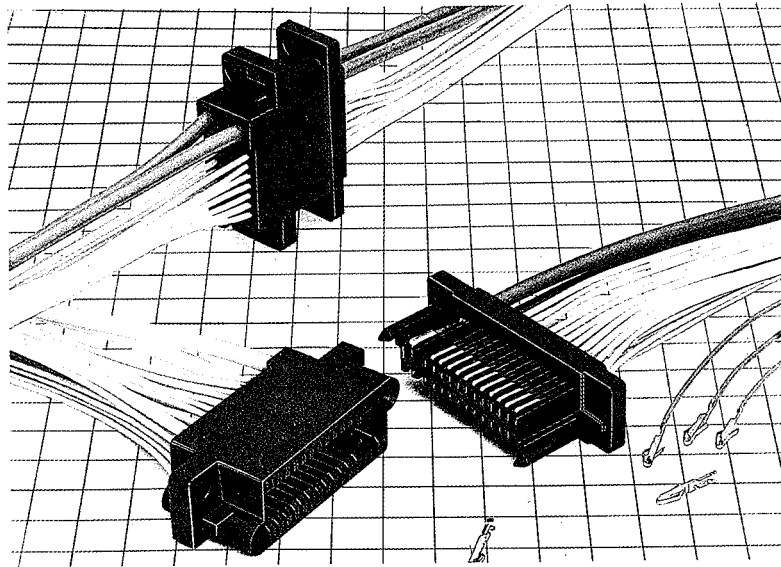


QR/P6 SERIES RECTANGULAR MINIATURE MULTI-CONTACT RACK/PANEL CRIMP CONNECTOR

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 UL1950)
- (7) The connectors of the series have passed UL, CSA and TÜV standards.

Applications

PPC, Transmission/Reception equipment, Data Communication equipment, Vending machines,

Measuring Instruments, Automation equipment, Switch-boards.

Main Specifications

| General ratings of QR/P6 | | |
|--------------------------------|---------------------------|----------------------|
| Contact resistance | Power terminal | 10mΩ or less at DC1A |
| | Signal terminal | 15mΩ 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°C | | | |
| Rated voltage | Power supply unit | AC 250V | | AC 250V | |
| | Signal unit | | | AC 125V | |
| 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 unit | 3A | 3A | 1A |
| | | Signal unit | 1A | 2A | |
| | AWG # 26 | 1A | 1A | 1A | |
| AWG # 28 | — | | | | |

Ordering Information

▲ Connector Unit

QR/P6 - 12P - C - (01)
 (1) (2) (3) (4) (11)

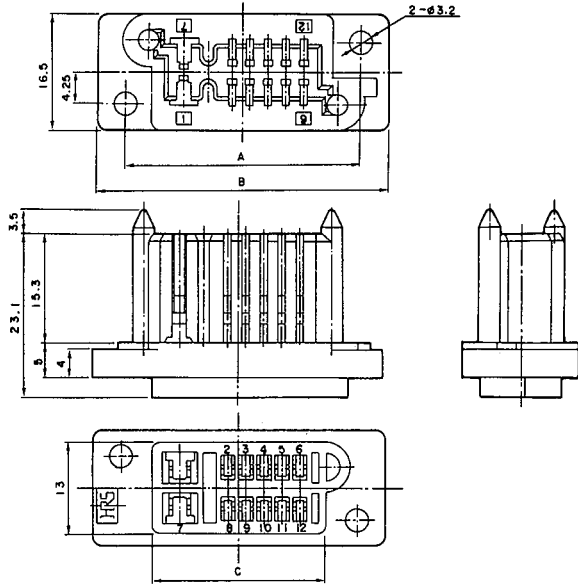
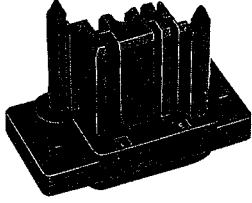
▲ Contact

QR/P1 - PC1A - 111
 (1) (5) (6) (7) (8) (9) (10)

- | | |
|-------------------------------------|---|
| (1) Series name | (7) Crimp barrel size |
| (2) No. of contacts (6, 12, 16, 24) | A : For thin wires |
| (3) Shape of insulator mating part | B : For thick wires |
| P : Insulated male case | (8) Shape |
| S : Insulated female case | 1 : Loose contact |
| (4) Type of termination | 2 : Chain contact |
| C : Crimp termination | (9) Applicable wire |
| (5) Male/Female | 1 : Power terminal AWG # 18~ # 24 |
| PC: Male crimp terminal | Signal terminal AWG # 24~ # 28 |
| SC: Female crimp terminal | 2 : Power terminal AWG # 14~ # 16 |
| (6) Type | Signal terminal AWG # 22 |
| 1 : Power terminal | (10) Surface terminal |
| 2 : Signal terminal | 1 : Selective gold plating with nickel underplating |
| | (11) Specifications meeting UL, CSA, TÜV requirements |

Housing

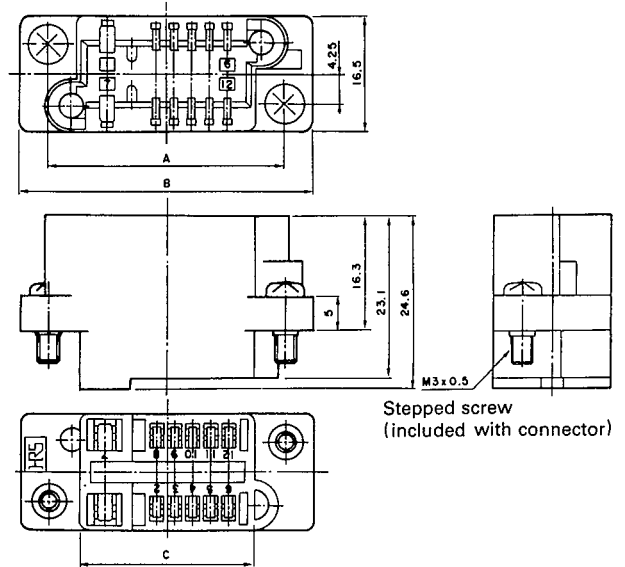
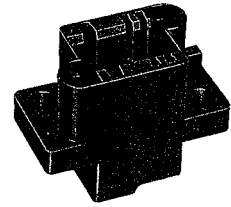
Male housing



Unit : mm

| HRS No. | No. of contacts | Product No. | A | B | C |
|-----------------|-----------------|-----------------|-------|-------|-------|
| CL221-0162-0-01 | 6 | QR/P6-6P-C(01) | 24.67 | 32.67 | 15.87 |
| CL221-0163-2-01 | 12 | QR/P6-12P-C(01) | 33.47 | 41.47 | 24.67 |
| CL221-0207-6-01 | 16 | QR/P6-16P-C(01) | 38.55 | 46.55 | 29.75 |
| CL221-0209-1-01 | 24 | QR/P6-24P-C(01) | 48.71 | 56.71 | 39.91 |

Female housing



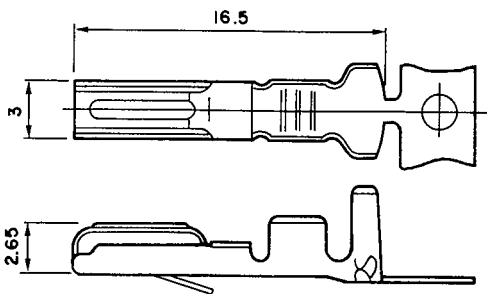
unit: mm

| HRS No. | No. of contacts | Product No. | A | B | C |
|-----------------|-----------------|-----------------|-------|-------|-------|
| CL221-0161-7-01 | 6 | QR/P6-6S-C(01) | 24.67 | 32.67 | 15.87 |
| CL221-0164-5-01 | 12 | QR/P6-12S-C(01) | 33.47 | 41.47 | 24.67 |
| CL221-0208-9-01 | 16 | QR/P6-16S-C(01) | 38.55 | 46.55 | 29.75 |
| CL221-0210-0-01 | 24 | QR/P6-24S-C(01) | 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

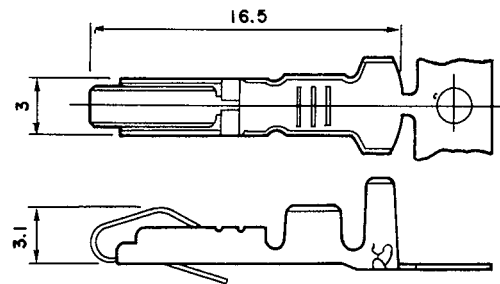
Male power terminal



Selective gold plating with nickel underplating

| Applicable wire | HRS No. | Product No. | Shape | Packaging unit |
|----------------------|-----------------|--------------------|-------------|----------------|
| UL1015 AWG #14-16 | CL221-0114-7-12 | QR/P1-PC1B-121(12) | Loose piece | 100 |
| | CL221-0118-8-12 | QR/P1-PC1B-221(12) | Strip | 3,000 |
| UL1007 AWG #18-24 | CL221-0102-8-12 | QR/P1-PC1A-111(12) | Loose piece | 100 |
| | CL221-0106-9-12 | QR/P1-PC1A-211(12) | Strip | 5,000 |

Female power terminal

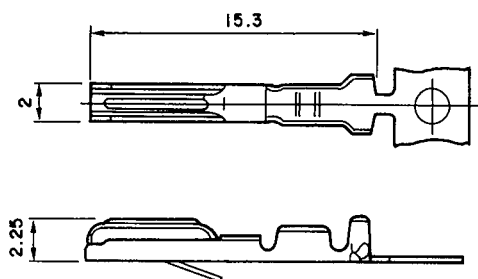


Selective gold plating with nickel underplating

| Applicable wire | HRS No. | Product No. | Shape | Packaging unit |
|----------------------|-----------------|--------------------|-------------|----------------|
| UL1015 AWG #14-16 | CL221-0116-2-12 | QR/P1-SC1B-121(12) | Loose piece | 100 |
| | CL221-0120-0-12 | QR/P1-SC1B-221(12) | Strip | 3,000 |
| UL1007 AWG #18-24 | CL221-0104-3-12 | QR/P1-SC1A-111(12) | Loose piece | 100 |
| | CL221-0108-4-12 | QR/P1-SC1A-211(12) | Strip | 5,000 |

Contact

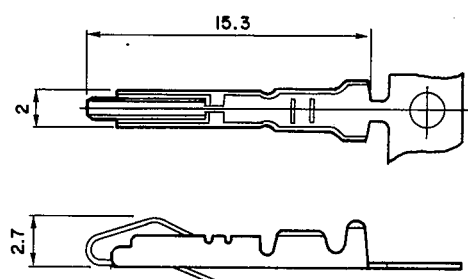
Male signal terminal



Selective gold plating with nickel underplating

| Applicable wire | HRS No. | Part No. | Type | Unit |
|---------------------|-----------------|--------------------|-------|----------|
| UL1007 AWG#24-28 | CL221-0103-0-12 | QR/P1-PC2A-111(12) | Loose | 100pin |
| | CL221-0107-1-12 | QR/P1-PC2A-211(12) | chain | 5,000pin |

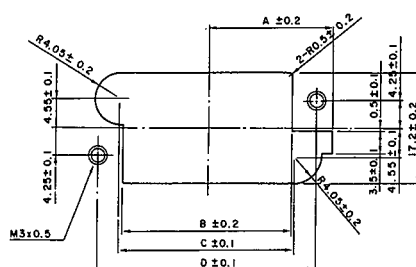
Female signal terminal



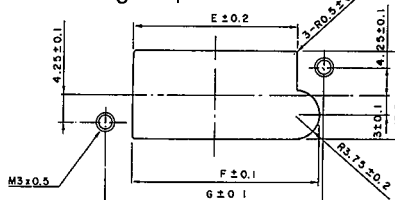
Selective gold plating with nickel underplating

| Applicable wire | HRS No. | Part No. | Type | Unit |
|---------------------|-----------------|--------------------|-------|----------|
| UL1007 AWG#24-28 | CL221-0105-6-12 | QR/P1-SC2A-111(12) | Loose | 100pin |
| | CL221-0109-7-12 | QR/P1-SC2A-211(12) | chain | 5,000pin |

Panel Mounting Dimensions (for Cases with P Insulation)



Mounting on panel inside



Mounting on panel outside

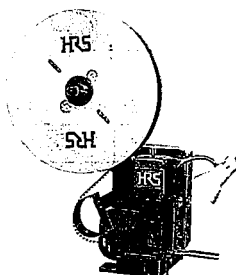
Unit : mm

| Sign | 6 Pin | 12 Pin | 16 Pin | 24 Pin | |
|---------------------------|-------|--------|--------|--------|--------------------------|
| | | | | | Mounting on panel inside |
| 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
 CL901-0005-4

| Type | HRS No. | Part No. | Applicable terminal |
|-------------------------------|---------------|------------------|----------------------------------|
| Hand Crimp Tool | CL250-0020-0 | TC-QR/P1-PC1B | QR/P1-PC1B-121 |
| | CL250-0015-0 | TC-QR/P1-PC1A | QR/P1-PC1A-111 |
| | CL250-0022-6 | TC-QR/P1-SC1B | QR/P1-SC1B-121 |
| | CL250-0017-6 | TC-QR/P1-SC1A | QR/P1-SC1A-111 |
| | CL250-0016-3 | TC-QR/P1-SC2A | QR/P1-PC2A-111 |
| CL250-0018-9 | TC-QR/P1-SC2A | QR/P1-SC2A-111 | |
| Auto Crimp Machine Applicator | CL901-2529-6 | AP105-QR/P1-1B-2 | QR/P1-PC1B-221 QR/P1-SC1B-221 |
| | CL901-2527-0 | AP105-QR/P1-1A-1 | QR/P1-PC1A-211 QR/P1-SC1A-211 |
| | CL901-2528-3 | AP105-QR/P1-2A-1 | QR/P1-PC2A-211 QR/P1-SC2A-211 |
| Hand Tool | CL250-0019-1 | TC-QR/P1-21 | |
| | CL250-0242-2 | TC-QR/P6-21 | |