

QR/P8 Series

Ultra-compact, Rectangular, High Pin Count, Rack and Panel Crimp Connector



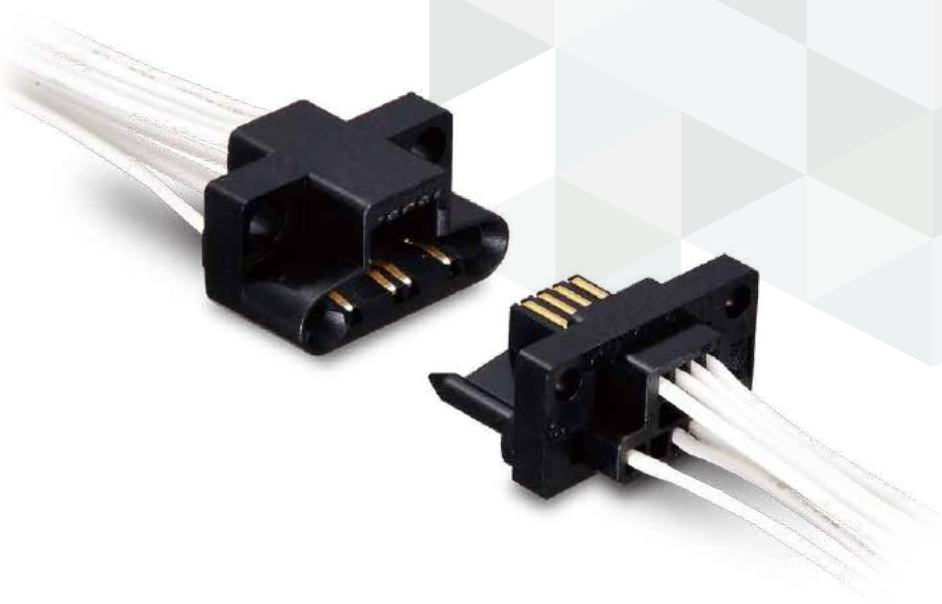
Compact



Floating



Plug-In



Overview

The QR/P8 Series is a more compact version of the rectangular, multi-pin count and plug-in connection QR/P, QR/P1 and QR/P4 Series for racks and panels, which have been well received in the market.

Three different pin counts are available: 8, 12 and 20. Wire connection is performed using crimp termination for easier connection and higher reliability.

Features

1. Smaller size with the same number of pin counts as the QR/P4 Series (20% reduction)
2. The guide pin and housing are molded into one piece for space-saving.
3. Use of stepped screws enables a floating design.
4. UL, CSA, TÜV certified.

Product Specifications

| | | |
|-----------------------|------------------------|-----------------------------|
| Operating Temperature | -10 to +60℃ | |
| Rated Current | Power | 3A Max. (When using 20 AWG) |
| | Signal | 2A Max. (When using 24 AWG) |
| Rated Voltage | Power | 300V AC |
| | Signal | 30V AC |
| Contact Resistance | 30mΩ Max. at 1A DC | |
| Insulation Resistance | 1000MΩ Min. at 500V DC | |
| Withstand Voltage | Power | 2000V AC for 1 min. |
| | Signal | 500V AC for 1 min. |

| Safety Standard | | | UL, CSA | TÜV |
|-----------------------|--------|--------|-------------|---------|
| Operating Temperature | | | -10 to +60℃ | |
| Rated Current | 20 AWG | | 3A | 2.5A |
| | 22 AWG | | | 1A |
| | 24 AWG | Power | 2A | |
| | | Signal | | |
| | 26 AWG | | 1A | |
| | 28 AWG | | | |
| Rated Voltage | Power | | 300V AC | 380V AC |
| | Signal | | 30V AC | 30V AC |

Materials / Finish

| Item | Material | Color / Finish | Remarks |
|-----------|-----------------|---|---------|
| Insulator | Polycarbonate | Black | UL94V-0 |
| Contact | Phosphor Bronze | Partial Gold Plating (Nickel Underplating) | — |

Product Number Structure

Refer to the chart below when determining the product specifications from the product number.
Please select from the product numbers listed in this catalog when placing orders.

Connector Unit

QR/P8

-

12

P

-

C

(21)

1

2

3

4

5

Contact

QR/P8

-

PC

-

1

1

1

1

6

7

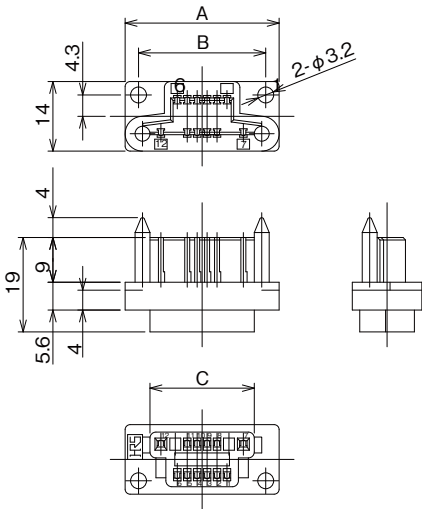
8

9

| | | | |
|-----------------------------|--|---------------------|---|
| 1 Series Name | QR/P8 | 6 Contact Gender | PC : Male Crimp Contact SC : Female Crimp Contact |
| 2 No. of Pos. | 8, 12, 20 | 7 Contact Type | 1 : Loose Contact 2 : Reel Contact |
| 3 Insulator Gender | P : Male Insulation Case S : Female Insulation Case | 8 Applicable Cable | 1 : Thick Cable 20 to 24 AWG ...2 contact holes on both sides 2 : Thin Cable 24 to 28 AWG |
| 4 Contact Connection Method | C : Crimp Connection | 9 Surface Treatment | 1 : Partial Gold Plating (Nickel Underplating) |
| 5 Specification | (21) : UL, CSA, TÜV | | |

Housing

Male Housing

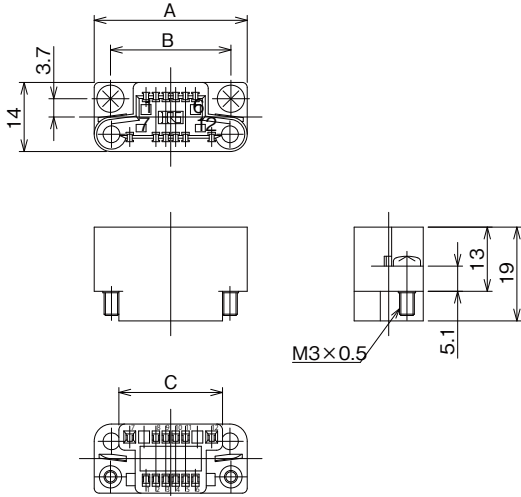


Unit : mm

| Part No. | HRS No. | No. of Pos. | A | B | C | Purchase Unint |
|-----------------|------------------|-------------|------|------|------|----------------|
| QR/P8-8P-C(21) | CL0221-0167-3-21 | 8 | 27.0 | 21.6 | 17.0 | 50pcs per bag |
| QR/P8-12P-C(21) | CL0221-0169-9-21 | 12 | 31.0 | 25.6 | 21.0 | |
| QR/P8-20P-C(21) | CL0221-0171-0-21 | 20 | 39.0 | 33.6 | 29.0 | |

Note : When attaching to the panel, make sure that the mated clearance dimensions on the male and females sides are 1.5mm or less.

Female Housing



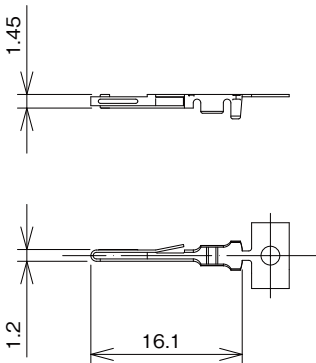
Unit : mm

| Part No. | HRS No. | No. of Pos. | A | B | C | Purchase Unint |
|-----------------|------------------|-------------|------|------|------|----------------|
| QR/P8-8S-C(21) | CL0221-0168-6-21 | 8 | 27.0 | 20.4 | 17.0 | 50pcs per bag |
| QR/P8-12S-C(21) | CL0221-0170-8-21 | 12 | 31.0 | 24.4 | 21.0 | |
| QR/P8-20S-C(21) | CL0221-0172-3-21 | 20 | 39.0 | 32.4 | 29.0 | |

Note : When attaching to the panel, make sure that the mated clearance dimensions on the male and females sides are 1.5mm or less.

Contact

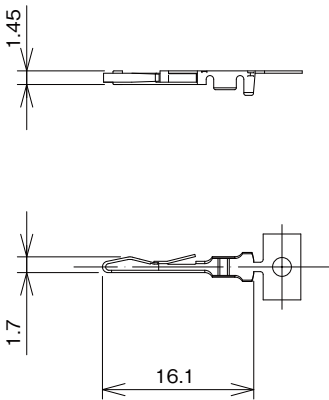
Male Contact for Thick Cable (2 Contact Holes on Both Sides)



| Part No. | HRS No. | Applicable Cable | Type of Packing | Purchase Unit |
|--------------|------------------|------------------|-----------------|-------------------|
| QR/P8-PC-111 | CL0221-0182-7-00 | 20 to 24 AWG | Loose | 100pcs per bag |
| QR/P8-PC-211 | CL0221-0175-1-00 | | Reel | 8,000pcs per reel |

Note : The contacts for thick cables can be crimped when using an applicable cable size of 24 AWG, but the contacts for thin cables are recommended.

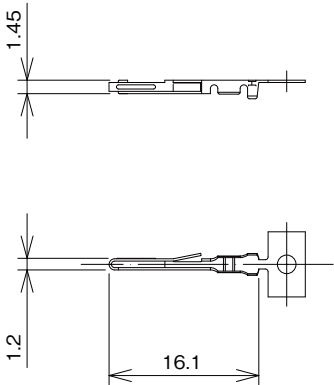
Female Contact for Thick Cable (2 Contact Holes on Both Sides)



| Part No. | HRS No. | Applicable Cable | Type of Packing | Purchase Unit |
|------------------|------------------|------------------|-----------------|-------------------|
| QR/P8-SC-111(12) | CL0221-0183-0-12 | 20 to 24 AWG | Loose | 100pcs per bag |
| QR/P8-SC-211(12) | CL0221-0173-6-12 | | Reel | 8,000pcs per reel |

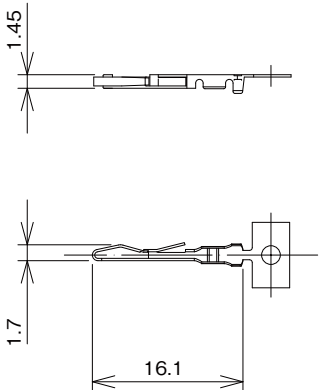
Note : The contacts for thick cables can be crimped when using an applicable cable size of 24 AWG, but the contacts for thin cables are recommended.

Male Contact for Thin Cable



| Part No. | HRS No. | Applicable Cable | Type of Packing | Purchase Unit |
|--------------|------------------|------------------|-----------------|-------------------|
| QR/P8-PC-121 | CL0221-0184-2-00 | 24 to 28 AWG | Loose | 100pcs per bag |
| QR/P8-PC-221 | CL0221-0176-4-00 | | Reel | 8,000pcs per reel |

Female Contact for Thin Cable

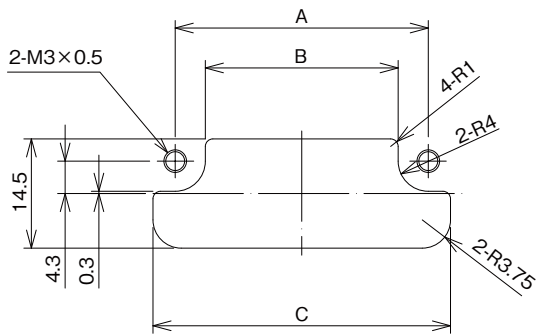


| Part No. | HRS No. | Applicable Cable | Type of Packing | Purchase Unit |
|------------------|------------------|------------------|-----------------|-------------------|
| QR/P8-SC-121(12) | CL0221-0185-5-12 | 24 to 28 AWG | Loose | 100pcs per bag |
| QR/P8-SC-221(12) | CL0221-0174-9-12 | | Reel | 8,000pcs per reel |

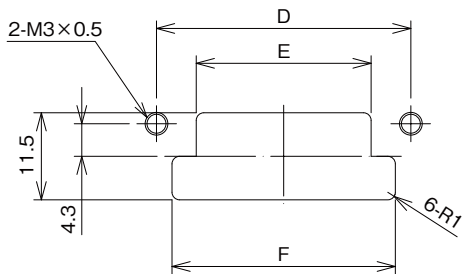
Panel Mounting Dimensions

Male Housing
(QR/P8-#P-C)

Attachment from Panel Rear Side



Attachment from Panel Front Side

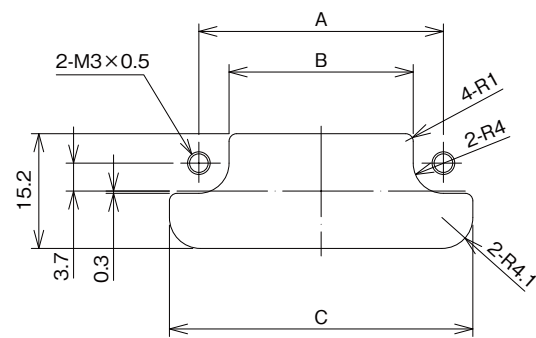


Unit : mm

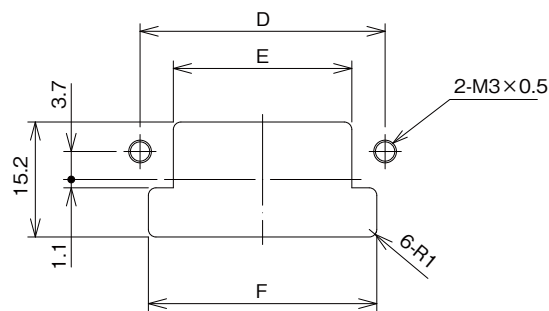
| Type | | 8pos. | 12pos. | 20pos. |
|-------------|---|-------|--------|--------|
| Rear Mount | A | 21.6 | 25.6 | 33.6 |
| | B | 13.6 | 17.6 | 25.6 |
| | C | 27.5 | 31.5 | 39.5 |
| Front Mount | D | 21.6 | 25.6 | 33.6 |
| | E | 11.1 | 15.1 | 23.1 |
| | F | 17.5 | 21.5 | 29.5 |

Female Housing
(QR/P8-#S-C)

Attachment from Panel Rear Side



Attachment from Panel Front Side



Unit : mm

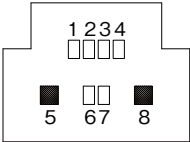
| Type | | 8pos. | 12pos. | 20pos. |
|-------------|---|-------|--------|--------|
| Rear Mount | A | 20.4 | 24.4 | 32.4 |
| | B | 12.4 | 16.4 | 24.4 |
| | C | 28.2 | 32.2 | 40.2 |
| Front Mount | D | 20.4 | 24.4 | 32.4 |
| | E | 11.6 | 15.6 | 23.6 |
| | F | 18.2 | 22.2 | 30.2 |

Contact Arrangement

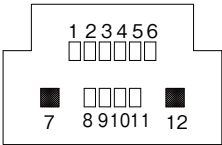
Male Housing (View from the Connection Side)

- : Contact hole for thick cables (Can insert contacts for thin cables)
- : Contact hole for thin cables

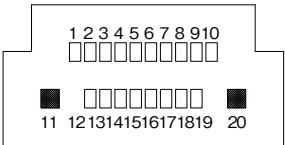
QR/P8-8P-C(21)



QR/P8-12P-C(21)



QR/P8-20P-C(21)



Tools



Manual Crimp Tool

Automatic Crimp Tool
CM-105C

| Type | Part No. | HRS No. | Applicable Contact |
|------------------------------------|---------------|------------------|------------------------------|
| Manual Crimp Tool | TC-QR/P8-111 | CL0250-0030-4-00 | QR/P8-PC-111 QR/P8-SC-111 |
| | TC-QR/P8-121 | CL0250-0031-7-00 | QR/P8-PC-121 QR/P8-SC-121 |
| Automatic Crimp Tool Applicator | AP105-QR/P8-1 | CL0901-2533-3-00 | QR/P8-PC-211 QR/P8-SC-211 |
| | AP105-QR/P8-2 | CL0901-2534-6-00 | QR/P8-PC-221 QR/P8-SC-221 |
| Extraction Tool | TC-QR/P8-21 | CL0250-0033-2-00 | - |

While Taking into Consideration

Specifications mentioned in this catalog are reference values.

When considering to order or use this product, please confirm the Drawing and Product Specifications sheets.

Use an appropriate cable when using the connector in combination with cables.

If considering usage of a non- specified cable, please contact your sales representative.

If assembly process is done by jigs & tools which are not identified by Hirose, assurance will not be given.

If considering usage for below mentioned applications, please contact your sales representative.

In cases where the application will demand a high level of reliability, such as automotive, medical instruments, public infrastructure, aerospace/ defense etc. Hirose must review before assurance of reliability can be given.