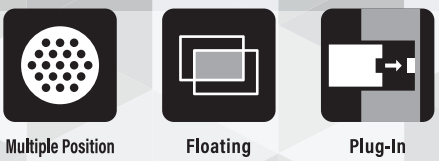
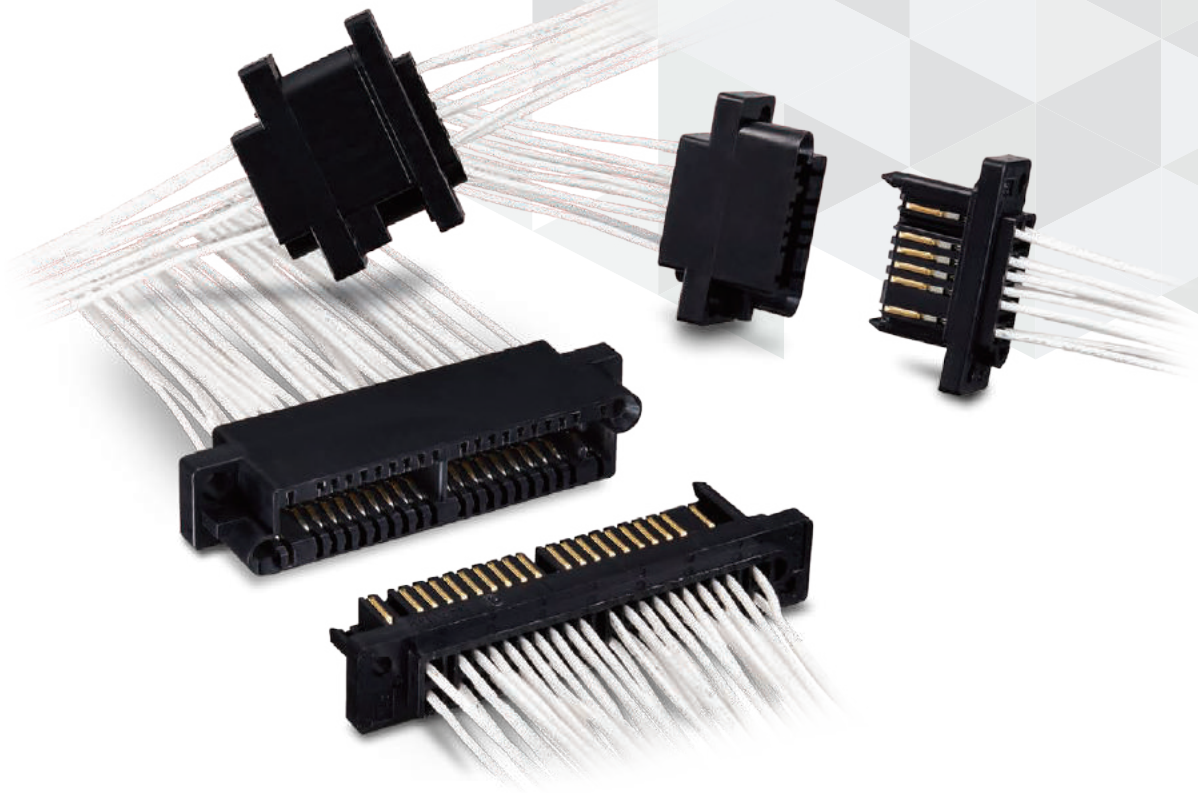
PRODUCT CATALOG

HIROSE ELECTRIC CO.,LTD.

QR/P4 Series

Small, Rectangular, High Pin Count, Rack and Panel Crimp Connector





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Product page
https://www.hirose.com/en/product/series/QR__P4

Jul. 2023

Overview

The QR/P4 Series is a more compact version of the rectangular, multi-pin count and plug-in connection QR/P and QR/P1 Series for racks and panels, which have been well received in the market. The QR/P4 Series is a compact rack and panel connector that enables even higher density mounting.
Six different pin counts are available: 8, 12, 16, 24, 32 and 40. Wire connection is performed using crimp termination for easier workability and high reliability.

Features

1. The plug-in design enables a large effective mating length.

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.

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Product Specifications

Operating Temperature	-10 to +60℃	
Rated Current	Power	3A Max. (When using 20 AWG)
	Signal	1A
Rated Voltage	Power	300V AC
	Signal	250V AC
Contact Resistance	Power Contact	15mΩ Max. (1A DC)
	Signal Contact	15mΩ Max. (1A DC)
Insulation Resistance	5000MΩ Min. at 500V DC	
Withstanding Voltage	Power	2000V AC for 1 min.
	Signal	500V AC for 1 min.

Safety Standard		UL, CSA	TÜV
Operating Temperature		-10 to +60℃	
Rated Voltage	Power	300V AC	250V AC, 300V DC
	Signal	250V AC	125V AC, 150V DC
Rated Current	20 AWG	3A	2.5A
	22 AWG		1A
	24 AWG	2A	
	26 AWG	1A	
	28 AWG		-

Materials / Finish

Item	Material	Color / Finish	Remarks
Insulator	PBT	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/P4 - 12 P - C (21)
❶ ❷ ❸ ❹ ❿

Contact

QR/P1 - PC 2A - 1 1 1
❶ ❺ ❻ ❼ ❽ ❾

❶ Series Name	QR/P4 QR/P1 (Note 1)	❻ Size of Barrel	2A : Thin Cable (UL1007) 2B : Thick Cable (UL1007) (Note 2)
❷ No. of Pos.	8, 12, 16, 24, 32, 40	❼ Contact Type	1 : Loose Contact 2 : Reel Contact
❸ Insulator Gender	P : Male Insulation Case S : Female Insulation Case	❽ Applicable Cable	1 : Thin Cable 24 to 28 AWG 2 : Thick Cable 20 to 24 AWG
❹ Contact Connection Method	C : Crimp Connection	❾ Surface Treatment	1 : Partial Gold Plating (Nickel Underplating)
❺ Contact Type	PC : Male Crimp Contact SC : Female Crimp Contact	❿ Specification	(21) : UL, CSA, TÜV

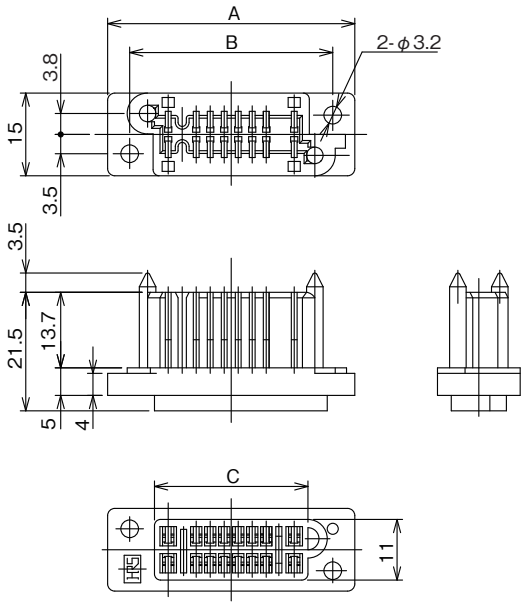
Note 1 : The QR/P4 Series uses the contacts of the existing QR/P1 Series.
Note 2 : For 4 contact holes on both sides.

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Housing

Male Housing





Unit : mm

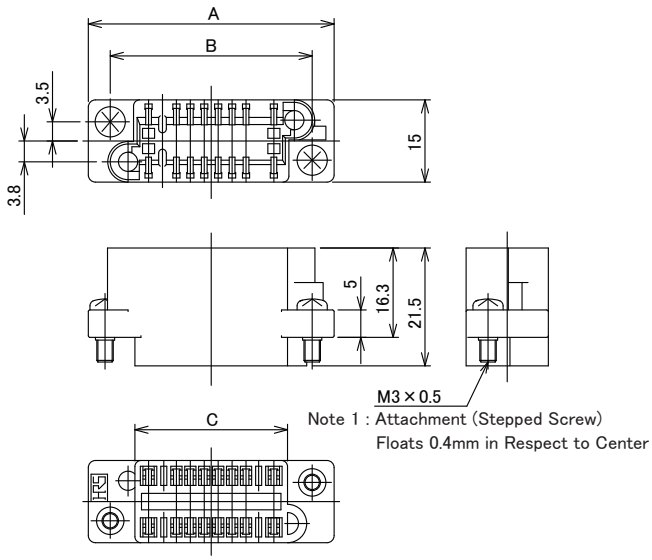
Part No.	HRS No.	No. of Pos.	A	B	C	Purchase Unit
QR/P4-8P-C(21)	CL0221-0159-5-21	8	34.68	26.68	17.68	50pcs per bag
QR/P4-12P-C(21)	CL0221-0139-8-21	12	39.8	31.8	22.8	
QR/P4-16P-C(21)	CL0221-0155-4-21	16	44.84	36.84	27.84	
QR/P4-24P-C(21)	CL0221-0141-0-21	24	55.0	47.0	38.0	
QR/P4-32P-C(21)	CL0221-0153-9-21	32	67.7	59.7	50.7	
QR/P4-40P-C(21)	CL0221-0211-3-21	40	77.86	69.86	60.86	

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

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Female Housing





Unit : mm

Part No.	HRS No.	No. of Pos.	A	B	C	Purchase Unit
QR/P4-8S-C(21)	CL0221-0160-4-21	8	34.68	26.68	17.68	50pcs per bag
QR/P4-12S-C(21)	CL0221-0140-7-21	12	39.8	31.8	22.8	
QR/P4-16S-C(21)	CL0221-0156-7-21	16	44.84	36.84	27.84	
QR/P4-24S-C(21)	CL0221-0142-2-21	24	55.0	47.0	38.0	
QR/P4-32S-C(21)	CL0221-0154-1-21	32	67.7	59.7	50.7	30pcs per bag
QR/P4-40S-C(21)	CL0221-0212-6-21	40	77.86	69.86	60.86	

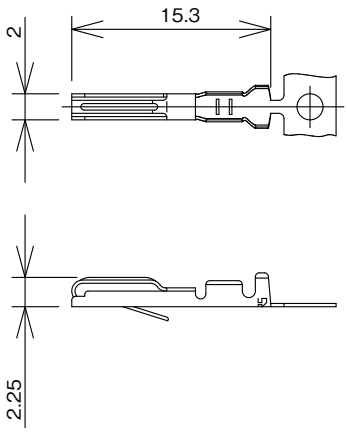
Note 1 : It is also possible to purchase only the stepped screw of attachment.
Part No. QR/P4-SCREW(01) HRS No.CL0221-0181-4-01 Purchase Unit 100pcs per bag
Note 2 : When attaching to the panel, make sure that the mated clearance dimensions on the male and females sides are 1.5mm or less.

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Contact

Male Contact for Thick Cable



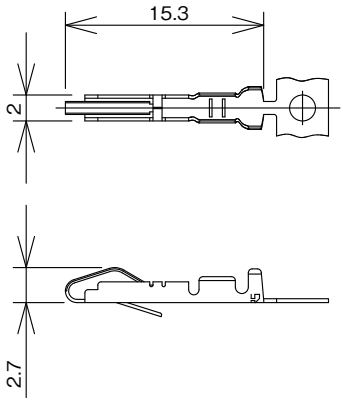


Part No.	HRS No.	Applicable Cable	Type of Packing	Purchase Unit
QR/P1-PC2B-121(12)	CL0221-0115-0-12	20 to 24 AWG	Loose	100pcs per bag
QR/P1-PC2B-221(12)	CL0221-0119-0-12		Reel	5,000pcs per reel

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





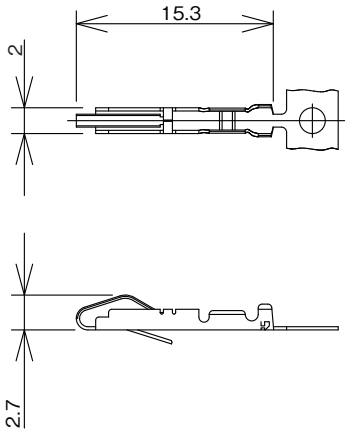
Part No.	HRS No.	Applicable Cable	Type of Packing	Purchase Unit
QR/P1-SC2B-121(12)	CL0221-0117-5-12	20 to 24 AWG	Loose	100pcs per bag
QR/P1-SC2B-221(12)	CL0221-0121-2-12		Reel	5,000pcs per reel

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.

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Male Contact for Thin Cable

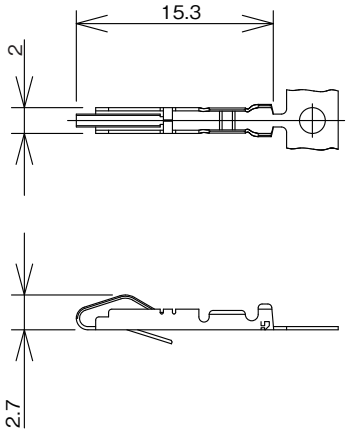




Part No.	HRS No.	Applicable Cable	Type of Packing	Purchase Unit
QR/P1-PC2A-111(12)	CL0221-0103-0-12	24 to 28 AWG	Loose	100pcs per bag
QR/P1-PC2A-211(12)	CL0221-0107-1-12		Reel	5,000pcs per reel

Female Contact for Thin Cable





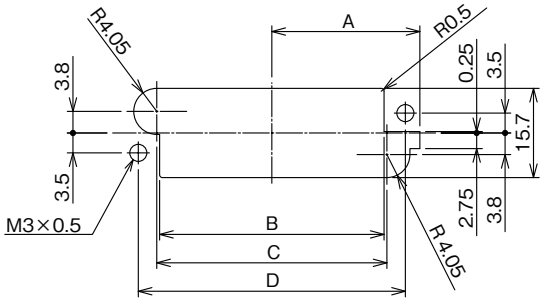
Part No.	HRS No.	Applicable Cable	Type of Packing	Purchase Unit
QR/P1-SC2A-111(12)	CL0221-0105-6-12	24 to 28 AWG	Loose	100pcs per bag
QR/P1-SC2A-211(12)	CL0221-0109-7-12		Reel	5,000pcs per reel

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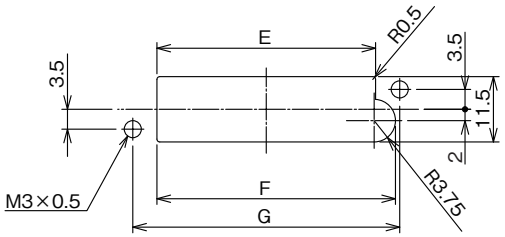
Panel Mounting Dimensions

Male Housing (QR/P4-#P-C)

Attachment from Panel Rear Side



Attachment from Panel Front Side



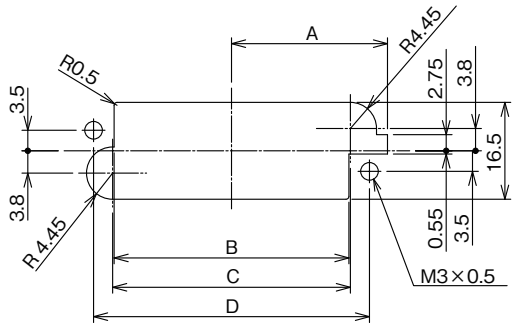
Unit : mm

Type		8pos.	12pos.	16pos.	24pos.	32pos.	40pos.
Rear Mount	A	15.87	18.45	20.97	26.05	32.40	37.48
	B	19.18	24.30	29.34	39.50	52.20	62.36
	C	20.18	25.30	30.34	40.50	53.20	63.36
	D	26.68	31.80	36.84	47.0	59.70	69.86
Front Mount	E	18.18	23.30	28.34	38.50	51.20	61.36
	F	21.68	26.80	31.84	42.0	54.70	64.86
	G	26.68	31.80	36.84	47.0	59.70	69.86

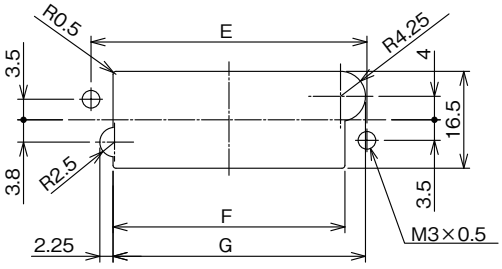
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Female Housing (QR/P4-#S-C)

Attachment from Panel Rear Side



Attachment from Panel Front Side



Unit : mm

Type		8pos.	12pos.	16pos.	24pos.	32pos.	40pos.
Rear Mount	A	16.37	18.95	21.49	26.57	32.90	37.98
	B	19.68	24.80	29.84	40.0	52.70	62.86
	C	20.18	25.30	30.34	40.5	53.20	63.36
	D	26.68	31.80	36.84	47.0	59.70	69.86
Front Mount	E	26.68	31.80	36.84	47.0	59.70	69.86
	F	19.18	24.30	29.34	39.5	52.20	62.36
	G	22.68	27.80	32.84	43.0	55.70	65.86

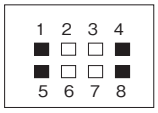
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Contact Arrangement

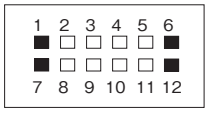
Male Housing (View from the Connection Side)

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

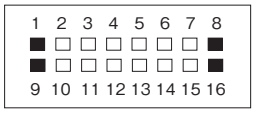
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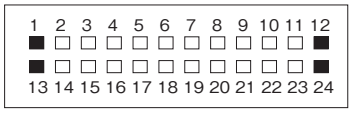
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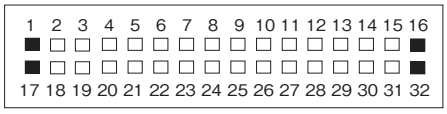
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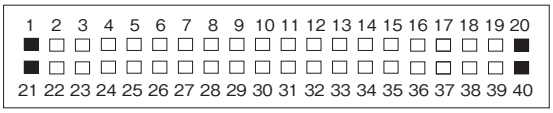
QR/P4-24P-C(21)



QR/P4-32P-C(21)



QR/P4-40P-C(21)



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Tools



Manual Crimp Tool



Applicator

Type	Part No.	HRS No.	Applicable Contact
Manual Crimp Tool	TC-QR/P1-PC2B	CL0250-0021-3-00	QR/P1-PC2B-121
	TC-QR/P1-PC2A	CL0250-0016-3-00	QR/P1-PC2A-111
	TC-QR/P1-SC2B	CL0250-0023-9-00	QR/P1-SC2B-121
	TC-QR/P1-SC2A	CL0250-0018-9-00	QR/P1-SC2A-111
Automatic Crimp Tool Applicator	AP105-QR/P1-2B-2	CL0901-2530-5-00	QR/P1-PC2B-221 QR/P1-SC2B-221
	AP105-QR/P1-2A-1	CL0901-2528-3-00	QR/P1-PC2A-211 QR/P1-SC2A-211
Extraction Tool	TC-QR/P4-21	CL0250-0029-5-00	QR/P1-SC2・PC2

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While Taking into Consideration

Specifications mentioned in this catalog are reference values.
When considering to order or use this product, please review 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, the warranty of the product may be affected.
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.

HIROSE ELECTRIC CO.,LTD. 2-6-3,Nakagawa Chuoh,Tsuzuki-Ku,Yokohama-Shi 224-8540,JAPAN
https://www.hirose.com

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