



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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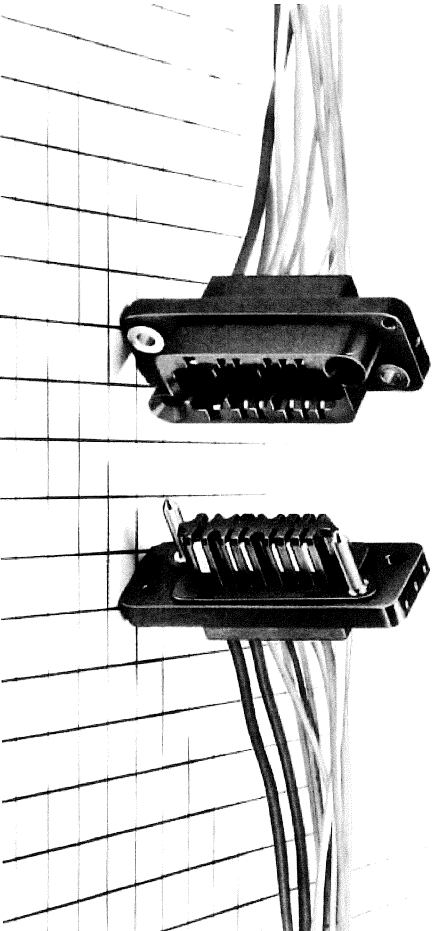


QR/P1 SERIES CONNECTOR

Small Rectangular Multi-electrode Solderless Connectors for Racks and Panels

General

QR/P series connectors are small and compact high density versions of original OR/P series. Available in 8, 12, 16, 24 and 32 way. Crimps terminals assure positive and reliable termination with minimum labor.



Features

1. The coupling mechanism assures stable and reliable contact pressure through point and blade contact, in addition to smooth coupling that is sufficiently capable of dealing with variations in the coupling length specific to the plug-in connection.
2. Compact contacts due to separate power contacts from signal contacts.
3. One opposed pair (in 12 contacts), 2 pairs (in 8, 16, and 24 contacts), and 3 pairs (in 32 contacts) can be used as power supply contacts. They are spaced further apart than the others so as to have enough creeping distance to withstand a high voltage. Fire-retardant insulation materials (UL94-0) are used.
4. The Guide Pin is made of steel nickel plated to be strong enough against accidental coupling shock.
5. The mount of a receptacle housing is done through Floating Bushes. Thus, they may help to give more smooth coupling of connectors by self-adjusting function.

Application

PPC, Transmission and reception equipment, Data Communication, Vending Machine, Measuring Instruments, Automatic Equipment, Switchboards, etc.

How To Use Connectors

General rating of QR/P1		
Contact resistance	Power unit	10m Ω or less at DC1A
	Signal unit	10m Ω or less at DC1A
Insulation resistance	5000M Ω higher at DV 500V	
Withstand voltage (for 1 min.)	Power terminal	AC 1000V
	Signal terminal	AC 500V
Rated current	Power unit	13Amax (AWG #14 use)
	Signal unit	3A
Rated voltage	Power terminal	AC 250V
	Signal terminal	AC 125V

Material		
Insulator	Polyethylene terephthalate	Black
Terminal	Phosphor bronze	Selective gold plating with nickel underplating

Ratings authorized by QR/P1 safety standards						
Safety standard	UL		CSA		TÜV	
Operating temperature range	-10~+60℃					
	Power supply unit	AC120V	AC250V	AC125V	AC250V	AC250, DC300V
Rated voltage	AWG#14	AC120V	10A	3A	10A	AC125, DC150V
				8A	3A	
	AWG#16	AC120V	10A	3A	8A	10A
				5A	5A	
	AWG#18	AC120V	3A	1A	3A	25A
				1A	1A	
AWG#20	AC120V	3A	1A	3A	1A	
			1A	1A		
AWG#22	AC120V	3A	1A	3A	1A	
			1A	1A		
Rated current	Power supply #24	AC120V	2A	1A	2A	1A
			1A	0.5A	1A	
			0.5A	0.5A	0.5A	
AWG#26	Signal unit	AC120V	1A	0.5A	1A	0.5A
			0.5A	0.5A	0.5A	
AWG#28	Signal unit	AC120V	1A	0.5A	1A	0.5A

Ordering Information

▲ Connector unit	QR/P1	—	12P	—	C	—	(51)
	(1)		(2)(3)		(4)		(11)
▲ Terminal	QR/P1	—	PC1A	—	111		
	(1)		(5)(6)(7)		(8)(9)(10)		

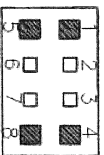
- (1) Series name
- (2) No. of contacts (8, 12, 16, 24, 32)
- (3) Shape of insulator mating part
P: Insulator male case
S: Insulator female case
- (4) Type of termination
C: Crimp terminal
M: Male/Female
PC: Male crimp terminal
SC: Female crimp terminal
- (5) Type
1: Power terminal
2: Signal terminal
- (6) Terminal
- (7) Crimp barrel size
A: For thin wires
B: For thick wires
- (8) Shape
1: Loose piece terminal
2: Strip terminal
- (9) Applicable wire
1: Power terminal AWG # 18 - # 24
Signal terminal AWG # 24 - # 28
2: Power terminal AWG # 14 - # 16
Signal terminal AWG # 20 - # 24
- (10) Surface terminal
1: Selective gold plating with nickel underplating
2: Selective gold plating with nickel underplating
- (11) Specifications meeting UL, CSA TÜV requirements

The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information. All non-Roh's products have been discontinued, or will be discontinued soon. Please check the products status on the Hirose website Roh's search at www.hirose-connectors.com, or contact your Hirose sales representative.

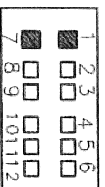
Contacts for thick wire Contact Configuration

Male Housing (Viewed from Wiring Side)

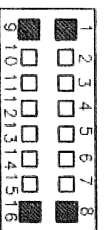
■ indicates a contact hole for thick wire



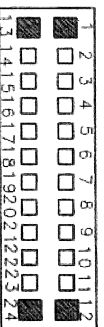
QR/P1-8P-C (51)



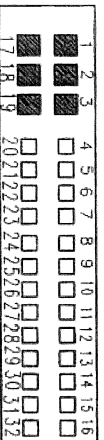
QR/P1-12P-C (51)



QR/P1-16P-C (51)



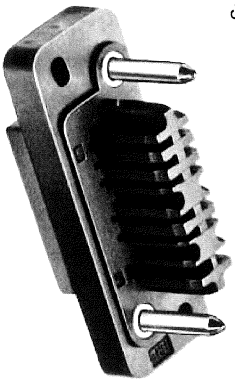
QR/P1-24P-C (51)



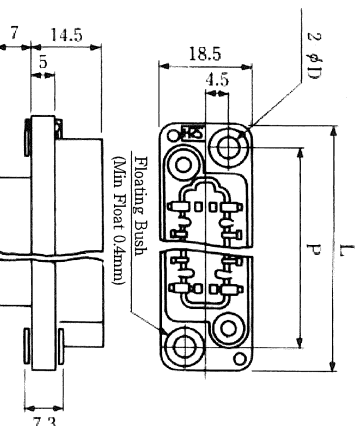
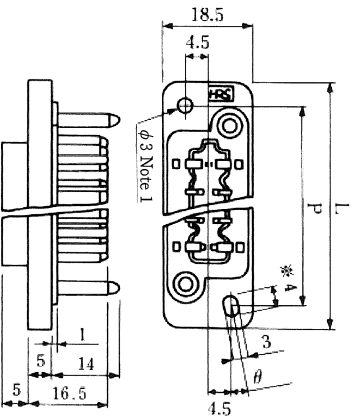
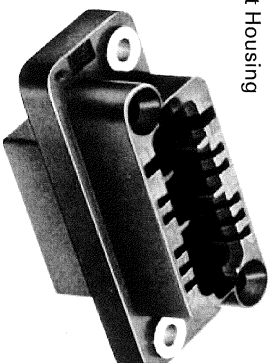
QR/P1-32P-C (51)

Housing

Plug Housing



Socket Housing



HRS No.	No. of Pin	Part No.	L	P	θ	RoHS
CI221-01244-51	8	QR/P1-8P-C(51)	46.4	36.9	13.7°	
CI221-01002-51	12	QR/P1-12P-C(51)	51	42	12.1°	
CI221-01104-51	16	QR/P1-16P-C(51)	57.6	48.1	10.6°	○
CI221-01121-51	24	QR/P1-24P-C(51)	68.8	59.3	8.6°	
CI221-01314-51	32	QR/P1-32P-C(51)	85.5	76.0	6°	

Unit: mm

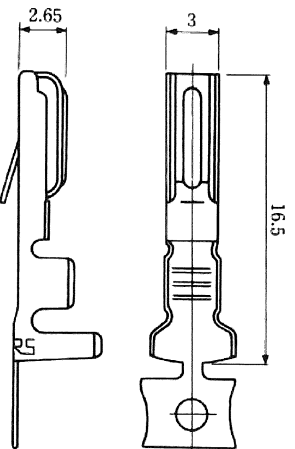
HRS No.	No. of Pin	Part No.	L	P	D	RoHS
CI221-01253-51	8	QR/P1-8S-C(51)	46.4	36.9	4.3	
CI221-01015-51	12	QR/P1-12S-C(51)	51	42	3.3	
CI221-01119-51	16	QR/P1-16S-C(51)	57.6	48.1	4.3	○
CI221-01134-51	24	QR/P1-24S-C(51)	68.8	59.3	4.3	
CI221-01329-51	32	QR/P1-32S-C(51)	85.5	76.0	4.3	

Unit: mm

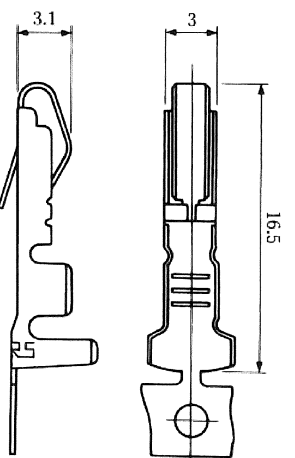
Note: Determine the combinations with the panel so that the mating clearance between the P side and S side is 1.5mm or less.

Crimp Contact (Power Circuit)

Male Contact



Female Contact



Plating: Partly gold plated over nickel plating

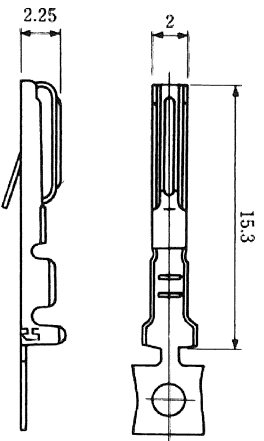
Plating: Partly gold plated over nickel plating

Applicable Wire	HRS No.	Part No.	Type	Packing	RoHS
AWG#14~16	CI221-01147-12	QR/P1-PC1B-121 (12)	Loose contact	100pin	
	CI221-01188-12	QR/P1-PC1B-221 (12)	Chain contact	3,000pin	
AWG#18~24	CI221-01028-12	QR/P1-PC1A-111 (12)	Loose contact	100pin	○
	CI221-01069-12	QR/P1-PC1A-211 (12)	Chain contact	5,000pin	

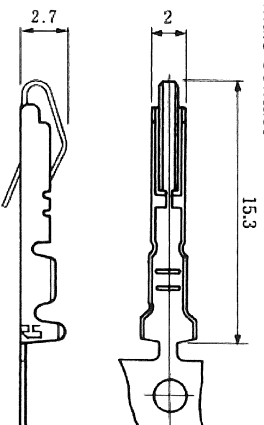
Applicable Wire	HRS No.	Part No.	Type	Packing	RoHS
AWG#14~16	CI221-01162-12	QR/P1-SC1B-121 (12)	Loose contact	100pin	
	CI221-01200-12	QR/P1-SC1B-122 (12)	Chain contact	3,000pin	
AWG#18~24	CI221-01043-12	QR/P1-SC1A-111 (12)	Loose contact	100pin	○
	CI221-01084-12	QR/P1-SC1A-211 (12)	Chain contact	5,000pin	

Crimp Contact (Signal Circuit)

Male Contact



Female Contact



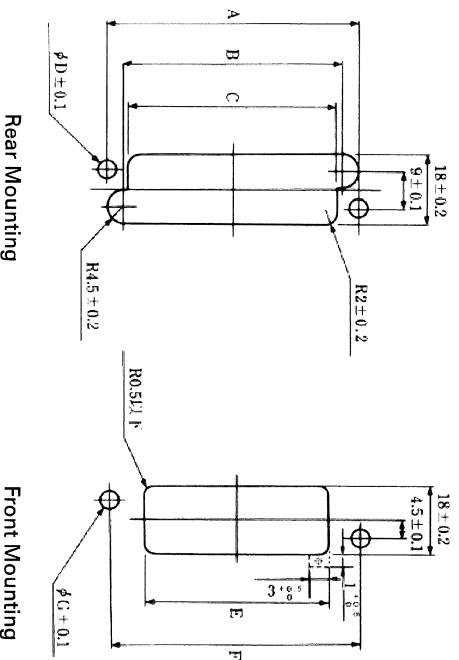
Plated: Gold plated over nickel plating

Applicable Wire	HMS No.	Part No.	Type	Packing	RoHS
AWG#20 ~ 24	CI.221-0115-0-12	QR/PI-PC2B-121 (12)	Loose contact	100pin	○
	CI.221-0119-0-12	QR/PI-PC2B-221 (12)	Chain contact	3,000pin	
AWG#24 ~ 28	CI.221-0103-0-12	QR/PI-PC2A-111 (12)	Loose contact	100pin	○
	CI.221-0107-1-12	QR/PI-PC2A-211 (12)	Chain contact	5,000pin	

Plated: Gold plated over nickel plating

Applicable Wire	HMS No.	Part No.	Type	Packing	RoHS
AWG#20 ~ 24	CI.221-0117-5-12	QR/PI-SC2B-121 (12)	Loose contact	100pin	○
	CI.221-0121-2-12	QR/PI-SC2B-122 (12)	Chain contact	3,000pin	
AWG#24 ~ 28	CI.221-0105-6-12	QR/PI-SC2A-111 (12)	Loose contact	100pin	○
	CI.221-0109-7-12	QR/PI-SC2A-211 (12)	Chain contact	5,000pin	

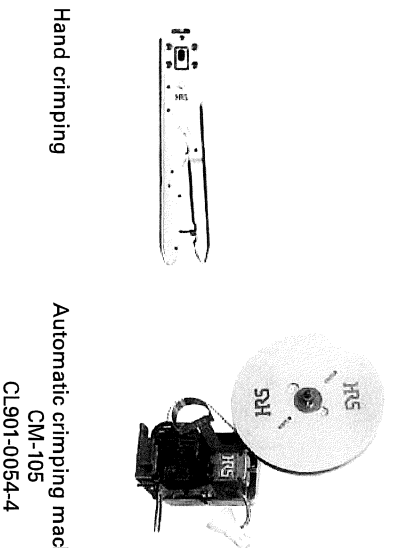
Recommended Mounting Hole



	No. of pin		A	B	C	D	E	F	G
	8 Pin	12 Pin							
Rear Mounting	A	36.9	42	48.1	59.3	76			
	B	29.4	34.5	40.6	51.8	68.5			
	C	28.4	33.5	39.6	50.8	67.5			
	D	4.3	3.3	4.3	4.3	4.3			
Front Mounting	E	22.4	27.5	33.6	44.8	61			
	F	36.9	42	48.1	59.3	76			
	G	4.3	3.3	4.3	4.3	4.3			
	H								

Note: Panel mounting dimensions for the P insulation case are symmetrical with request to the vertical axis, in relation to the S insulation case.

Applicable Tools



Type	HMS No.	Part No.	Applicator/termining	
Hand Crimp Tool	CI.250-0020-0	TC-QR/PI-PC1B	QR/PI-PC1B-121	
	CI.250-0015-0	TC-QR/PI-PC1A	QR/PI-PC1A-111	
	CI.250-0022-6	TC-QR/PI-SC1B	QR/PI-SC1B-121	
	CI.250-0017-6	TC-QR/PI-SC1A	QR/PI-SC1A-111	
	CI.250-0021-3	TC-QR/PI-PC2B	QR/PI-PC2B-121	
	CI.250-0016-3	TC-QR/PI-PC2A	QR/PI-PC2A-111	
	CI.250-0023-9	TC-QR/PI-SC2B	QR/PI-SC2B-121	
	CI.250-0018-9	TC-QR/PI-SC2A	QR/PI-SC2A-111	
	Auto Crimp Machine Applicator	CI.901-2529-06	AP105-QR/PI-1B-2	QR/PI-PC1B-221
		CI.901-2530-5	AP105-QR/PI-2B-2	QR/PI-SC1B-221
		CI.901-2527-0	AP105-QR/PI-1A-1	QR/PI-PC1A-211
		CI.901-2528-3	AP105-QR/PI-2A-1	QR/PI-SC2A-211
Hand Tool	CI.250-0019-1	TC-QR/PI-121	QR/PI-SC2A-211	