RM SERIES SHELL SIZE 12 – 31mm CIRCULAR CONNECTORS

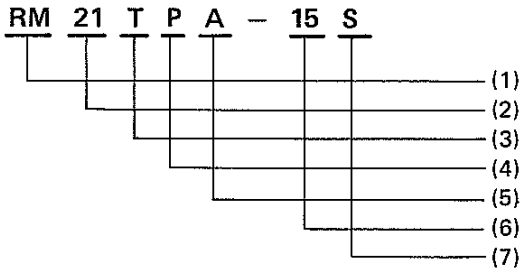
Introduction

RM Series are compact, circular connectors HIROSE has developed as the result of many years of research and proven experience to meet the most stringent demands of communication equipment as well as electronic equipment. RM Series is available in 5 shell sizes: 12, 15, 21, 24, and 31. There are also 16 kinds of contacts: 2, 3, 4, 5, 6, 7, 8, 10, 12, 15, 20, 31, 40, and 55 (contacts 2 and 4 are available in two types). And also available water proof type in special series. The lock mechanisms with thread coupling type, bayonet sleeve type or quick detachable type are easy to use.
Various kinds of accessories are available.
RM Series are miniaturized in size, rugged and excellent in mechanical and electrical performance thus making it possible to meet the most stringent demands of users.
Refer to the contact arrangements of RM series connectors on page 60~61.

Main materials (Note that the above may not apply depending on type.)

Part	Material	Finish
Shell	Brass and Zinc alloy	Nickel plated
Insulator	Synthetic resin	
Male contact	Copper alloy	Silver plated
Female contact	Copper alloy	Silver plated

Ordering Information



Product identification

(1) RM: Round Miniature series name
(2) 21: The shell size is figured by outer diameter of fitting section of plug and available in 5 types, 12, 15, 21, 24, 31.
(3) T: Type of lock mechanism as follows;
T: Thread coupling type
B: Bayonet sleeve type
Q: Quick detachable type
(4) P: Type of connector
P: Plug
R: Receptacle:
J: Jack
WP: Waterproof
WR: Waterproof receptacle
P-CP*: Cord clamp for plug
(* is shown applicable diameter of cable)
R—C: Cap of receptacle
R—F: Square flange for receptacle
P—B: Cord bushing
(5) A: Shell model change mark
Each time the shell undergoes a change in enclosure or the like, it is marked as A, B, D, E.
Do not use the letter for C, J, P, R avoiding confusion.
(6) 15: Number of pins
(7) S: Shape of contact
P: Pin
S: Socket
However, connecting method of contact or type shall be classified adding with alphabetical letter.

Standard RM Series

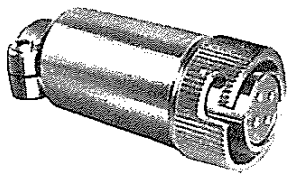
Standard RM series are more compact and higher in performance than our former models. Mechanically stable thanks to its rigid and simple construction. Used widely for all types of equipment, although no special measures are taken for resistance to harsh conditions such as dustproof or waterproof design.

RM12B Connectors

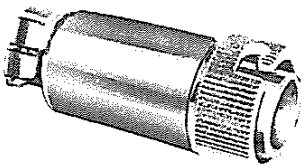
(Bayonet sleeve type)

RM12B connectors (bayonet sleeve type) are provided with a bayonet sleeve locking mechanism, the most compact in the series.

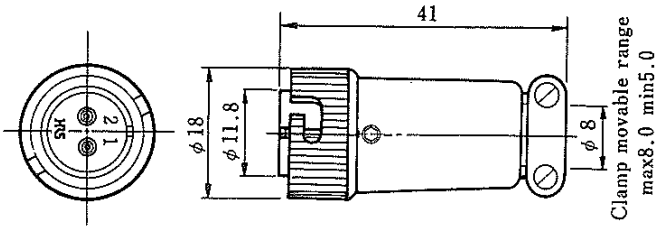
Plug



RM12BPE-4S(71)



RM12BPE-4PH(71)



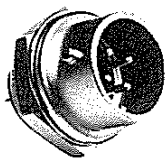
(An example in shape)

HRS No.	Part No.	No. of pins	RoHS
109-0423-0-71	RM12BPE-2S(71)	2	○
109-0424-2-71	RM12BPE-3S(71)	3	
109-0425-5-71	RM12BPE-4S(71)	4	
109-0426-8-71	RM12BPE-5S(71)	5	
109-0427-0-71	RM12BPE-6S(71)	6	
109-0428-3-71	RM12BPE-7S(71)	7	

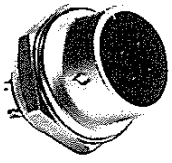
HRS No.	Part No.	No. of pins	RoHS
109-0417-7-71	RM12BPE-2PH(71)	2	○
109-0418-0-71	RM12BPE-3PH(71)	3	
109-0419-2-71	RM12BPE-4PH(71)	4	
109-0420-1-71	RM12BPE-5PH(71)	5	
109-0421-4-71	RM12BPE-6PH(71)	6	
109-0422-7-71	RM12BPE-7PH(71)	7	

Receptacle

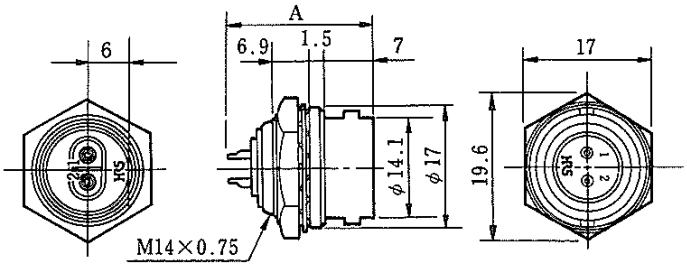
Receptacle(Jam Nut to be fastened)



RM12BRD-4PH(71)



RM12BRD-4S(71)



(An example in shape)

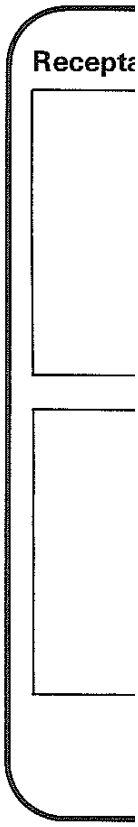
HRS No.	Part No.	No. of pins	A	RoHS
109-0823-8-71	RM12BRD-2PH(71)	2	20.5	○
109-0824-0-71	RM12BRD-3PH(71)	3	20.5	
109-0825-3-71	RM12BRD-4PH(71)	4	20.5	
109-0826-6-71	RM12BRD-5PH(71)	5	20.5	
109-0827-9-71	RM12BRD-6PH(71)	6	20.5	
109-0828-1-71	RM12BRD-7PH(71)	7	20.5	

HRS No.	Part No.	No. of pins	A	RoHS
109-0609-8-71	RM12BRD-2S(71)	2	21.6	○
109-0610-7-71	RM12BRD-3S(71)	3	21.6	
109-0611-0-71	RM12BRD-4S(71)	4	21.6	
109-0612-2-71	RM12BRD-5S(71)	5	21.6	
109-0613-5-71	RM12BRD-6S(71)	6	21.6	
109-0619-1-71	RM12BRD-7S(71)	7	21.6	

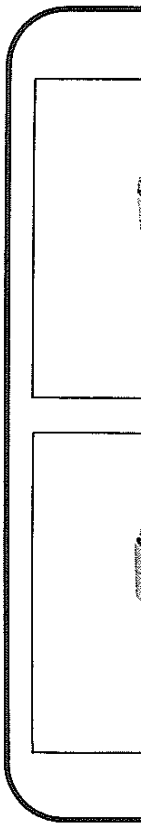
Remark: For mounting holes, see page 60.

Rece

Recepta



Jack



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-RoHS products have been discontinued, or will be discontinued soon. Please check the products status on the Hirose website RoHS search at www.hirose-connectors.com, or contact your Hirose sales representative.

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-RoHS products have been discontinued, or will be discontinued soon. Please check the products status on the Hirose website RoHS search at www.hirose-connectors.com, or contact your Hirose sales representative.

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-RoHS products have been discontinued, or will be discontinued soon. Please check the products status on the Hirose website RoHS search at www.hirose-connectors.com, or contact your Hirose sales representative.

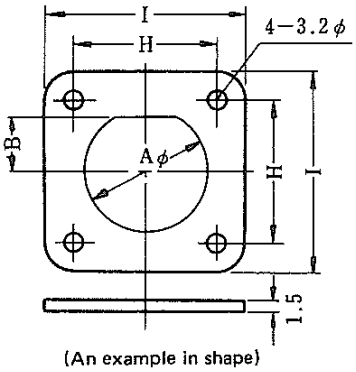
The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information.
All non-RoHS products have been discontinued, or will be discontinued soon. Please check the products status on the Hirose website RoHS search at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

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-RoHS products have been discontinued, or will be discontinued soon. Please check the products status on the Hirose website RoHS search at www.hirose-connectors.com, or contact your Hirose sales representative.

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-RoHS products have been discontinued, or will be discontinued soon. Please check the products status on the Hirose website RoHS search at www.hirose-connectors.com, or contact your Hirose sales representative.

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-RoHS products have been discontinued, or will be discontinued soon. Please check the products status on the Hirose website RoHS search at www.hirose-connectors.com, or contact your Hirose sales representative.

Square Flange

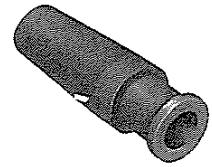


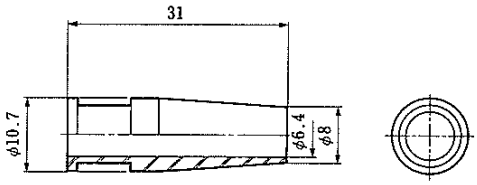
(An example in shape)

Square Flange is used with Bayonet Lock type receptacle.

HRS No.	Part No.	φA	B	H	I	RoHS
109-0154-0-71	RM12BR-F(71)	14.1	6	18	26	○
109-0319-8-71	RM15TR-F(71)	17.1	7.6	20.6	28	

Cord Bushing


RM12BPG-B(71)

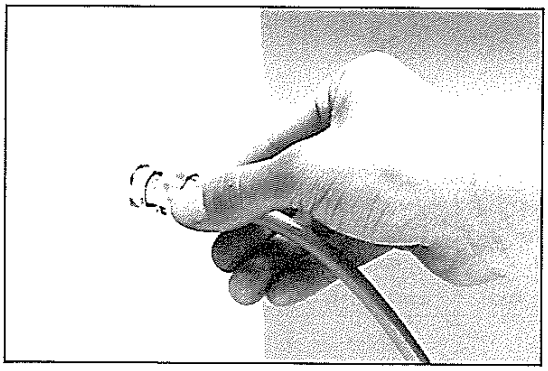


HRS No.	Part No.	Remark	RoHS
109-0776-0-71	RM12BPG-B(71)		○

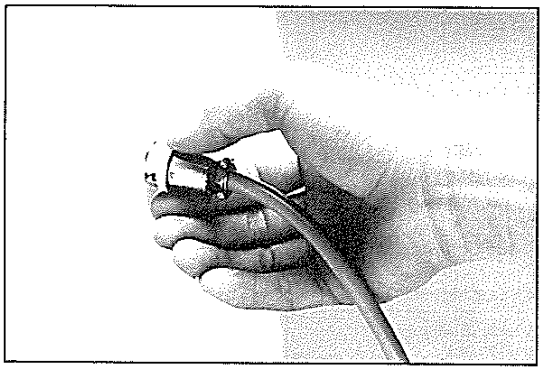
How to use the RM15Q Connectors

(Quick insertion and extraction system)

1. Insertion


Holding the plug body, match the key with the key-way on the receptacle and push straight in. Turn plug 30° to the right, coupling is completed.

2. Extraction

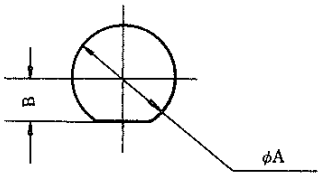

Holding plug sleeve, twist it 30 degrees to the left. Then, pull it straight for easy releasing.

Dimensions of mounting holes

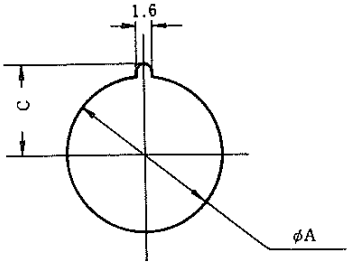
For your reference, the dimensions of receptacle mounting holes are given below for different shell sizes for the nut-tightening type and square-flange type.
In the case of the nut-tightening type, the dimensions of a standard connector are the same as those of a waterproof connector. The dimensions of square flanges are those when the flanges are installed on the front surface of a panel.
For details, contact our sales or engineering department.

Nut tightening type

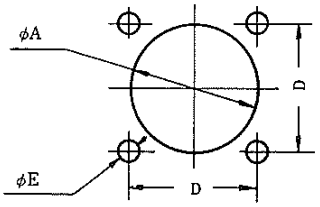
Mounting holes, for shell sizes 12, 15



Mounting holes, for shell sizes 21, 24, 31



Square flange type



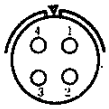
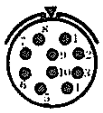
Remark: Use a 0.5 ~ 2 mm thickness panel for all shell sizes.

Mounting method / Shell size / Locking mechanism / Sign	Nut tightening						Square flange
Shell size	12	15		21	24	31	12
Locking mechanism / Sign	BRD•WBR	QRD	TRH•TRD•WTR	TR•WTR			BRB
φA	14.1	17.1	17.1	22.1	26.1	32.1	14.5
B	6.1	7.6	7.6	—	—	—	—
C	—	—	—	13.3	14.6	18.3	—
D	—	—	—	—	—	—	16
φE	—	—	—	—	—	—	2.9

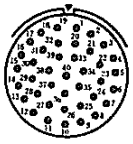
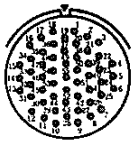
RM Series contact arrangement

Shell size	12					
						
Contact arrangement number	2	3	4	5	6	7
Withstanding voltage	AC1800V for a minute	AC1500V for a minute	AC1500V for a minute	AC1000V for a minute	AC1000V for a minute	AC1000V for a minute
Current rating	5A	5A	5A	5A	5A	5A
Insulation resistance	1000MΩ or more	1000MΩ or more	1000MΩ or more	1000MΩ or more	1000MΩ or more	1000MΩ or more
Contact resistance	4mΩ or less	4mΩ or less	4mΩ or less	4mΩ or less	4mΩ or less	4mΩ or less
Inside diameter of solder pot	φ1.1	φ1.1	φ1.1	φ1.1	φ1.1	φ1.1

Contact arrangement

Shell size	15				
					
Contact arrangement number	2	4	8	10	12
Withstanding voltage	AC1800V for a minute	AC1500V for a minute	AC1500V for a minute	AC1000V for a minute	AC1000V for a minute
Current rating	10A	10A	5A	5A	5A
Insulation resistance	1000MΩ or more	1000MΩ or more	1000MΩ or more	1000MΩ or more	1000MΩ or more
Contact resistance	2mΩ or less	2mΩ or less	4mΩ or less	4mΩ or less	4mΩ or less
Inside diameter of solder pot	φ1.7	φ1.7	φ1.1	φ1.1	φ1.1

Shell size	21		Shell size	24
				
Contact arrangement number	15	20	Contact arrangement number	31
Withstanding voltage	AC1500V for a minute	AC1000V for a minute	Withstanding voltage	AC1500V for a minute
Current rating	5A	5A	Current rating	5A
Insulation resistance	1000MΩ or more	1000MΩ or more	Insulation resistance	1000MΩ or more
Contact resistance	4mΩ or less	4mΩ or less	Contact resistance	4mΩ or less
Inside diameter of solder pot	φ1.1	φ1.1	Inside diameter of solder pot	φ1.1

Shell size	31	
		
Contact arrangement number	40	55
Withstanding voltage	AC1800V for a minute	AC1500V for a minute
Current rating	5A	5A
Insulation resistance	1000MΩ or more	1000MΩ or more
Contact resistance	4mΩ or less	4mΩ or less
Inside diameter of solder pot	φ1.1	φ1.1

Remarks:

1. Figures show contact arrangements viewed from the fitting side of socket inserts (connecting side of pin inserts).
2. Withstanding voltage is shown in test voltage. In ordinary case, use connectors at about 1/3 of test voltage.
3. Insulator resistance is a value measured at DC 500V.
4. Contact resistance is a value measured at DC 1A.