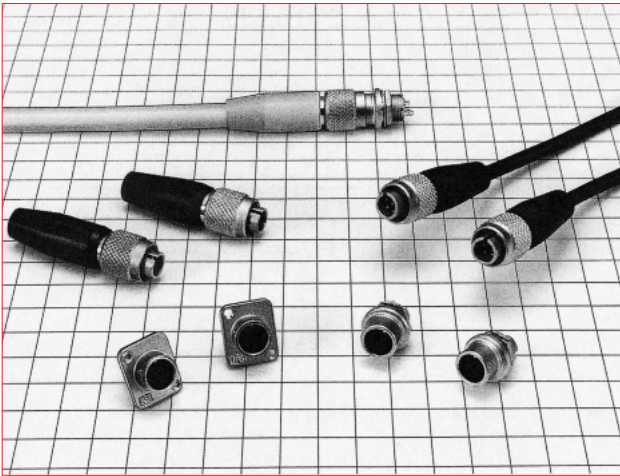


# Miniature push-pull connectors with ground function

## MXR Series



### ■ Features

#### 1. User friendly lock mechanism

The single action push-pull lock function allows quick connections and disconnections as well as high density mounting.

#### 2. Grounding function for FCC compliance

Metal, outer shell provides stable contact for grounding.

#### 3. Sequential contact structure

A sequential mating type is available. This version allows for the contacts to mate in a sequenced order.

### ■ Product Specifications

Ratings	Rated current	Number of contacts	Rated current
		3	2A
		4	
		6	
	8		
Rated voltage	Number of contacts	Rated voltage	
	3	AC 100, DC 140V	
	4		
	6		
8			
Operating temperature range	-25 to +85°C		
Storage temperature range	-10 to +60°C		

Items	Specifications	Conditions
1. Contact resistance	A maximum of 20mΩ	Measured at DC 1A
2. Insulation resistance	A minimum of 1,000MΩ	Measured at DC 100V
3. Withstanding voltage	No flashover or dielectric breakdown.	AC 300V for 1minute
4. Vibration resistance	No electrical discontinuity for 10μs or greater.	10 to 55Hz/cycle, amplitude : 0.75mm, 3 axis directions, 2 hours each
5. Shock resistance	No electrical discontinuity for 10μs or greater.	Acceleration : 490m/s <sup>2</sup> , duration : 11ms, 3 axis directions, 3 times each
6. Mating cycles	Contact resistance : a maximum of 40mΩ	1,000 times
7. Temperature cycle	Insulation resistance : a minimum of 1,000MΩ	-55°C : 30 minutes → Normal temperature : 10 to 15 minutes → 85°C : 30 minutes → Normal temperature : 10 to 15 minutes, left for 5 cycles
8. Moisture resistance	Insulation resistance : a minimum of 10MΩ (at high humidities) a minimum of 100MΩ (when dry)	Temperature : 40°C, relative humidity : 90 to 95%, left for 96 hours

### ■ Materials / Finish

Part	Material	Finish	Remarks
Shell	Aluminum alloy	Nickel plating	————
Insulator	PBT resin	————	UL94V-0
Contact	Copper alloy	Gold plating, partial gold plating	————

## Product Number Structure

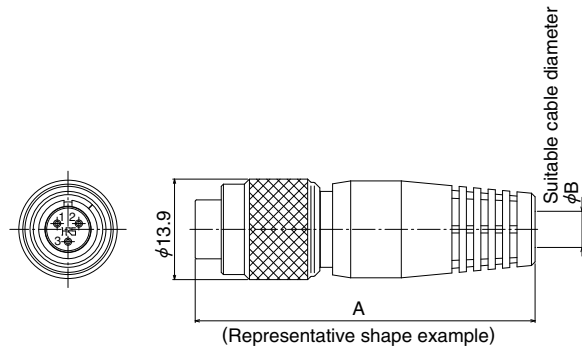
Refer to the chart below when determining the product specifications from the product number.  
Please select from the product numbers listed in this catalog when placing orders.

**MXR - 8 P A - 3 P B (\*\*)**

①      ②   ③   ④      ⑤   ⑥   ⑦      ⑧

① Series name : MXR Series
② Shell size : Indicates the outer shell diameter at the mating end.
③ Shell classification : Classified as follows P : Plug R : Receptacle
④ Shell modification : The letters A, B, C, D, E, etc. indicate modifications of the shell form.
⑤ Pin arrangement : Indicated by the number of pins
⑥ Pin form : Classified as follows P : Male contacts S : Female contacts
⑦ Pin modification : The letters A, B, C, D, E, etc. indicate modifications of the pin form.
⑧ Special specifications : A two-digit number is added to indicate other specifications, such as (01), (02), (03)...

## Plug

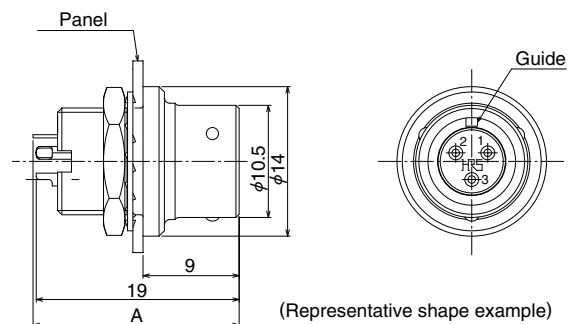


Part No	HRS No.	A	φB	Weight	Bushing	Remarks
MXR-8PA-3PB(71)	127-0003-6 71	47	5	8g	Black	Sequenced construction
MXR-8PA-4PB(71)	127-0004-9 71					
MXR-8PA-6PB(71)	127-0005-1 71					
MXR-8P-8P(31)	127-0002-3 31	50	8	9g	White	_____
MXR-8P-8P(72)	127-0002-3 72					_____

Note : Cable pull force, twisting strength and other characteristics may differ, depending on cable specifications and structure.  
Please evaluate under the actual conditions prior the use.

## Receptacle (Secured with hex nut for mounting)

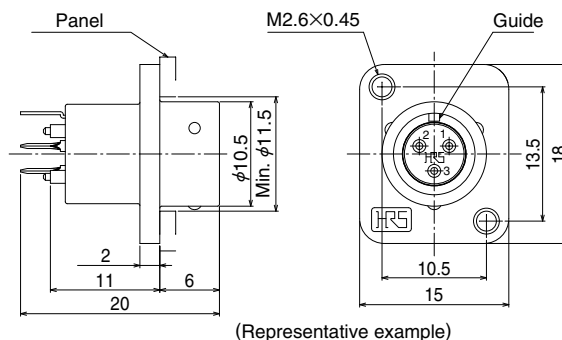
### ● Solder termination



Part No.	HRS No.	Weight	A	Remarks
MXR-8RA-3S(71)	127-0121-2 71	3.5g	19.3	_____
MXR-8RA-4S(71)	127-0122-5 71			_____
MXR-8RA-6S(71)	127-0123-8 71			_____
MXR-8RA-8S(71)	127-0124-0 71		20.4	_____

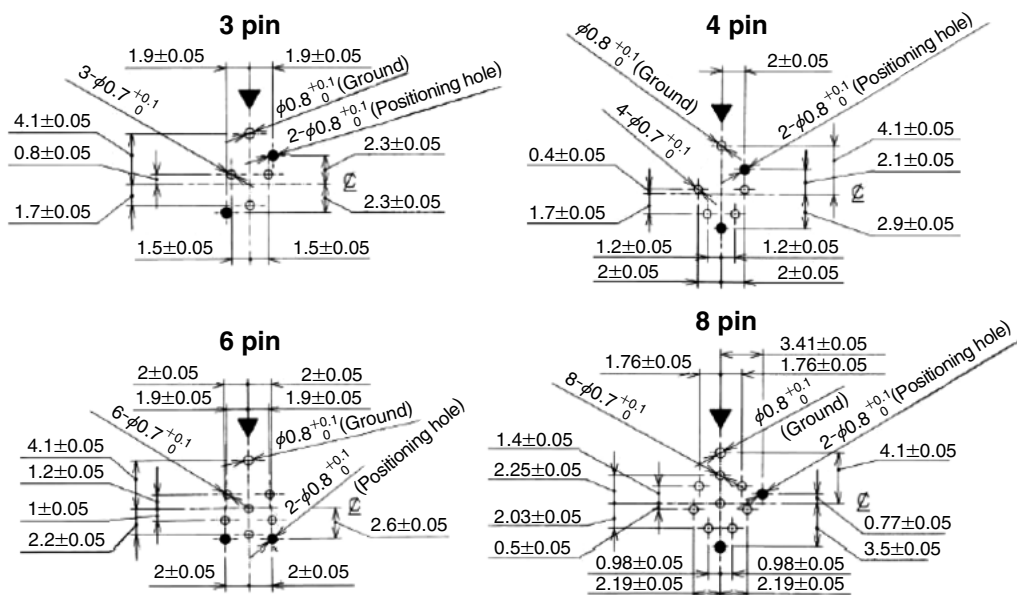
## ■ Receptacle (Flange type)

### ● Dip termination



Part No.	HRS No.	Weight	Remarks
MXR-8R-3SA(71)	127-0101-5 71	3.5g	with gold-plated contacts
MXR-8R-4SA(71)	127-0103-0 71		
MXR-8R-6SA(71)	127-0104-3 71		
MXR-8R-8SA(71)	127-0102-8 71		

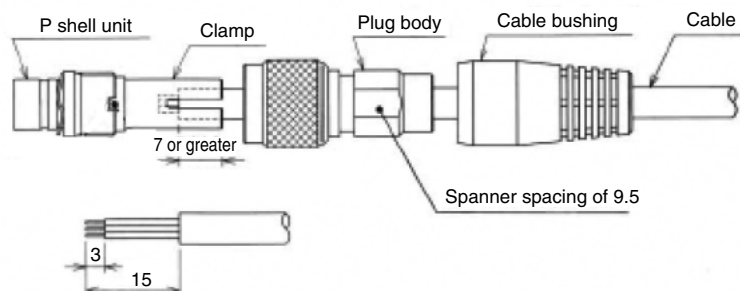
## ◆ Layout dimensions for dip post contacts



Remarks : Figures are views from the mating side of the receptacle.  
 Marks ▼ show the position of the guide.

## ◆ Wiring and Assembly Procedure

### ● MXR-8PA-3PB(71), MXR-8PA-4PB(71), MXR-8PA-6PB(71)



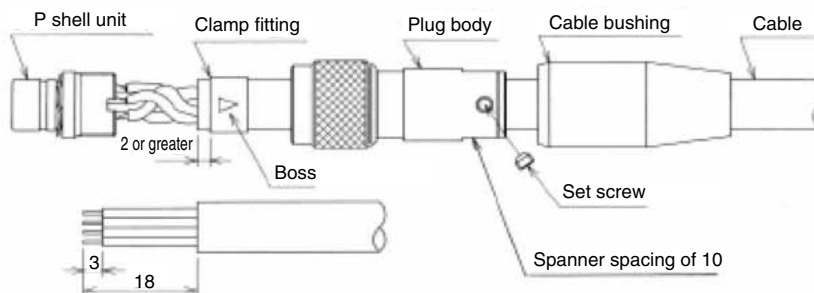
#### ○ Work Procedure

1. Pass the cable through the components in this order : 1. cable bushing, 2. plug body, 3. clamp fitting. Then perform the cable end processing.
2. Solder the wires to the P shell unit.
3. Align the protruding portion of the clamp with the recessed portion of the P shell unit and mount.
4. Align the plug and cable sheath strip position, then tighten the plug body to the screw portion of the P shell unit with a torque of 1 N·m.

Note that to prevent loosening, an application of Locktight 263 manufactured by HENKEL JAPAN LTD. is recommended.

5. Put the cable bushing over the clamp body to complete the job.

### ● MXR-8P-8P(\*\*)



#### ○ Work Procedure

1. Pass the cable through the components in this order : 1. cable bushing, 2. plug body. Then perform the cable end processing.
2. Solder the wires to the P shell unit.
3. Fasten the clamp fitting to the cable with the cable crimping tool (HR10A-TC-04).
4. Tighten the clamp body to the screw portion of the P shell unit with a torque of 1 N·m.

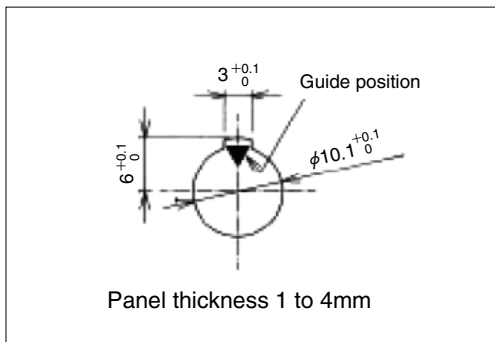
Note that to prevent loosening, an application of Locktight 263 manufactured by HENKEL JAPAN LTD. is recommended.

5. Tighten the set screw so that the tip falls into one of the two bosses of the clamp fitting.

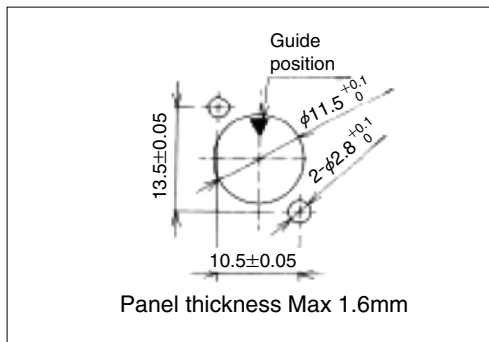
Note that a tightening torque of 0.3 N·m. is specified.

6. Put the cable bushing over the clamp body to complete the job.

### ◆ Dimensions for receptacle mounting holes



**(Jam Nut Type)**



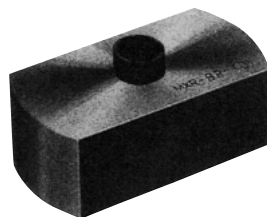
**(Flange Type)**

**NOTES :**

- Above figures are views from the mating side of the receptacle.  
Also note that the ▼ symbol indicates the guide position.

### ◆ Applicable Tools

Type	Part No.	HRS No.	Applicable Connectors
Tightening jig	MXR-8P-T01	150-0092-3	All plug products
Cable crimping tool	HR10A-TC-04	150-0058-5	MXR-8P-8P (**)



**MXR-8P-T01**



**HR10A-TC-04**

### ◆ Pin arrangement and electrical specifications

Number of contacts	3	4	6	8
Pin arrangement				
Withstanding voltage	300V AC for 1minute			
Current capacity	2A			
Insulation resistance	1,000MΩ or greater at 100V DC			
Contact resistance	20mΩ or less at 1A DC			
Solder pot diameter	0.9mm dia.			

**NOTES :**

- Above figures are views from the mating side of the receptacle.  
Also note that the ▼ symbol indicates the guide position.
- The withstand voltage value indicates the test voltage.  
The connector should normally be used at less than 100V AC or 140V DC.

**USA:**

**HIROSE ELECTRIC (U.S.A.), INC. HEADQUARTERS CHICAGO OFFICE**  
2300 Warrenville Road, Suite 150,  
Downers Grove, IL 60515  
Phone : +1-630-282-6700  
<http://www.hirose.com/us/>

**USA:**

**HIROSE ELECTRIC (U.S.A.), INC. SAN JOSE OFFICE**  
2841 Junction Ave, Suite 200  
San Jose, CA. 95134  
Phone : +1-408-253-9640  
Fax : +1-408-253-9641  
<http://www.hirose.com/us/>

**USA:**

**HIROSE ELECTRIC (U.S.A.), INC. DETROIT OFFICE (AUTOMOTIVE)**  
17197 N. Laurel Park Drive, Suite 253,  
Livonia, MI 48152  
Phone : +1-734-542-9963  
Fax : +1-734-542-9964  
<http://www.hirose.com/us/>

**USA:**

**HIROSE ELECTRIC (U.S.A.), INC. BOSTON OFFICE**  
300 Brickstone Square Suite 201,  
Andover, MA 01810  
Phone : +1-978-662-5255

**THE NETHERLANDS:**

**HIROSE ELECTRIC EUROPE B.V.**  
Hogehillweg #8 1101 CC Amsterdam Z-0  
Phone : +31-20-6557460  
Fax : +31-20-6557469  
<http://www.hirose.com/eu/>

**GERMANY:**

**HIROSE ELECTRIC EUROPE B.V. GERMAN BRANCH**  
Schoenbergstr. 20, 73760 ostfildern  
Phone : +49-711-456002-1  
Fax : +49-711-456002-299  
<http://www.hirose.com/eu/>

**GERMANY:**

**HIROSE ELECTRIC EUROPE B.V. NUREMBERG OFFICE**  
Neumeyerstrasse 22-26, 90411 Nurnberg  
Phone : +49-911 32 68 89 63  
Fax : +49-911 32 68 89 69  
<http://www.hirose.com/eu/>

**GERMANY:**

**HIROSE ELECTRIC EUROPE B.V. HANOVER OFFICE**  
Bayernstr. 3, Haus C 30855 Langenhagen, Germany  
Phone : +49-511 97 82 61 30  
Fax : +49-511 97 82 61 35  
<http://www.hirose.com/eu/>

**FRANCE:**

**HIROSE ELECTRIC EUROPE B.V. PARIS OFFICE**  
130 Avenue Joseph Kessel, Bat E, 78960  
Voisins le Bretonneux, France  
Phone : +33-1-85764886  
Fax : +33-1-85764823  
<http://www.hirose.com/eu/>

**UNITED KINGDOM:**

**HIROSE ELECTRIC EUROPE BV (UK BRANCH)**  
4 Newton Court, Kelvin Drive, Knowlhill,  
Milton Keynes, MK5 8NH  
Phone : +44-1908 202050  
Fax : +44-1908 202058  
<http://www.hirose.com/eu/>

**CHINA:**

**HIROSE ELECTRIC (CHINA) CO., LTD. (SHANGHAI, HEADQUARTERS)**  
18, Enterprise Center Tower 2, 209# Gong He  
Road, Jing'an District, Shanghai, CHINA 200070  
Phone : +86-21-6391-3355  
Fax : +86-21-6391-3335  
<http://www.hirose.com/cn/>

**CHINA:**

**HIROSE ELECTRIC (CHINA) CO.,LTD. BEIJING BRANCH**  
A1001, Ocean International Center, Building 56# East 4th  
Ring Middle Road, ChaoYang District, Beijing, 100025  
Phone : +86-10-5165-9332  
Fax : +86-10-5908-1381  
<http://www.hirose.com/cn/>

**CHINA:**

**HIROSE ELECTRIC (CHINA) CO., LTD. SHENZHEN BRANCH**  
Room 09-13, 19/F, Office Tower Shun Hing Square, Di Wang Commercial Centre,  
5002 Shen Nan Dong Road, Shenzhen City, Guangdong Province, 518008  
Phone : +86-755-8207-0851  
Fax : +86-755-8207-0873  
<http://www.hirose.com/cn/>

**HONG KONG:**

**HIROSE ELECTRIC HONGKONG TRADING CO., LTD.**  
Room 1001, West Wing, Tsim Sha Tsui Centre, 66  
Mody Road, Tsim Sha Tsui East, Kowloon, Hong Kong  
Phone : +852-2803-5338  
Fax : +852-2591-6560  
<http://www.hirose.com/hk/>

**TAIWAN:**

**HIROSE ELECTRIC TAIWAN CO., LTD.**  
103 8F, No.87, Zhengzhou Rd., Taipei  
Phone : +886-2-2555-7377  
Fax : +886-2-2555-7355  
<http://www.hirose.com/tw/>

**KOREA:**

**HIROSE KOREA CO.,LTD.**  
143, Gongdan 1-daero, Siheung-si,  
Gyeonggi-do, 15084, Korea  
Phone : +82-31-496-7000  
Fax : +82-31-496-7100  
<http://www.hirose.co.kr/>

**SINGAPORE:**

**HIROSE ELECTRIC SINGAPORE PTE. LTD.**  
03, Anson Road, #20-01, Springleaf Tower,  
Singapore 079909  
Phone : +65-6324-6113  
Fax : +65-6324-6123  
<http://www.hirose.com/sg/>

**INDIA:**

**HIROSE ELECTRIC SINGAPORE PTE. LTD. DELHI LIAISON OFFICE**  
Office NO.552, Regus-Green Boulevard, Level5, Tower C,  
Sec62, Plot B-9A, Block B, Noida, 201301, Uttar Pradesh, India  
Phone : +91-12-660-8018  
Fax : +91-120-4804949  
<http://www.hirose.com/sg/>

**INDIA:**

**HIROSE ELECTRIC SINGAPORE PTE. LTD. BANGALORE LIAISON OFFICE**  
Unit No-403, 4th Floor, No-84, Barton Centre, Mahatma  
Gandhi (MG) Road, Bangalore 560 001, Karnataka, India  
Phone : +91-80-4120 1907  
Fax : +91-80-4120 9908  
<http://www.hirose.com/sg/>

**MALAYSIA:**

**PENANG REPRESENTATIVE OFFICE**  
73-3-1, Ideal@The One, Jalan Mahsuri, Bayan  
Lepas Penang, 11950, Malaysia  
Phone : +604-648-5536  
<http://www.hirose.com/sg/>

**THAILAND:**

**BANGKOK OFFICE (REPRESENTATIVE OFFICE)**  
Unit 4703, 47th FL., 1 Empire Tower, South Sathorn  
Road, Yannawa, Sathorn, Bangkok 10120 Thailand  
Phone : +66-2-686-1255  
Fax : +66-2-686-3433  
<http://www.hirose.com/sg/>



**HIROSE ELECTRIC CO.,LTD.**

2-6-3,Nakagawa Chuoh,Tsuzuki-Ku,Yokohama-Shi 224-8540,JAPAN  
TEL: +81-45-620-3526 Fax: +81-45-591-3726  
<http://www.hirose.com>  
<http://www.hirose-connectors.com>