

# Circular connectors for small electronic devices

## SR30 Series



### ■ Features

#### 1. Compact and light weight design

Optimally suited for use in small electronic devices such as radio equipment, the SR30 has a maximum outer shell diameter of  $\phi 15$ .

#### 2. Robustness

The metal construction provides for a small but robust connector.

#### 3. Smart design

The flexible strain relief is strong enough to maintain its shape and resist bending stresses.

#### 4. Variation

Items	
No. of Contacts	4 contacts, 6 contacts, 7 contacts
Connector type	Plug and jack : Straight Receptacle : Straight
Termination version	Plug and jack : Soldering Receptacle : Soldering
Receptacle mounting method	Tightened with nuts on either of the front or back of the panel (6-contact only)

### ■ Product Specifications

Ratings	Rated current	1A	Operation temperature range	-10 to +60°C
	Rated voltage	100V AC, 140V DC	Storage temperature range	-10 to +60°C

Items	Specifications	Conditions
1. Contact resistance	10m $\Omega$ max	Measured at 1A DC
2. Insulation resistance	200M $\Omega$ min	Measured at 100V DC
3. Withstanding voltage	No flashover or dielectric breakdown.	300V AC for 1 minute
4. Vibration resistance	No electrical discontinuity for 10 $\mu$ s or greater.	10 to 55Hz/cycle, amplitude : 0.75mm, 3 axis directions, 2 hours each
5. Shock resistance	No electrical discontinuity for 10 $\mu$ s or greater.	Acceleration : 490m/s <sup>2</sup> , duration : 11ms, 3 axis directions, 3 cycles each
6. Mating cycle	Contact resistance : 15m $\Omega$ max	1,000 times
7. Temperature cycle	Insulation resistance : 200M $\Omega$ min	-30°C : 30 minutes → Normal temperature : 10 to 15 minutes → 85°C : 30 minutes → Normal Temperature : 10 to 15 minutes, left for 5 cycles
8. Humidity resistance	Insulation resistance : 10M $\Omega$ min (at high humidities) 100M $\Omega$ min (when dry)	Temperature : 40°C, relative humidity : 90 to 95%, left for 96 hours

### ■ Materials / Finish

Items	Material	Finish	Remarks
Plug Jack	Insulator	Polyacetal resin	—
	Contact	Brass or phosphor bronze	Gold plating
	Shell	Brass or zinc die-cast	Nickel or Chromium plating
	Hood	Chloroprene rubber	—
	Clamp	Brass	—
	Screw	Steel	Nickel plating
Receptacle	Insulator	Polyacetal resin	—
	Contact	Phosphor bronze	Gold plating
	Shell	Brass	Chromium plating
	Gasket	Polyamide resin	—
	Nut	Steel	Nickel 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.

### ● Connector

#### SR30 - 10 W P A - 6 P A (\*\*)

①      ②      ③      ④      ⑤      ⑥      ⑦      ⑧      ⑨

① Model name : SR30 Series
② Shell size : Shell size is the outer diameter of the mating end of the plug.
③ Particularity : No indication : Standard W : Waterproof
④ Shell type P : Plug R : Receptacle J : Jack
⑤ Shell variation : Connectors are distinguished by A, B, or C if another variation is applied in the same form.
⑥ Number of contacts : Indicates the number of contacts.
⑦ Contact form P : Male contact S : Female contact
⑧ Variation of insulator A : Insulator material : Fluorinated synthetic resin
⑨ Other specifications : 2 numerical digits will be added when there is a specification change other than shown in positions ①~⑧

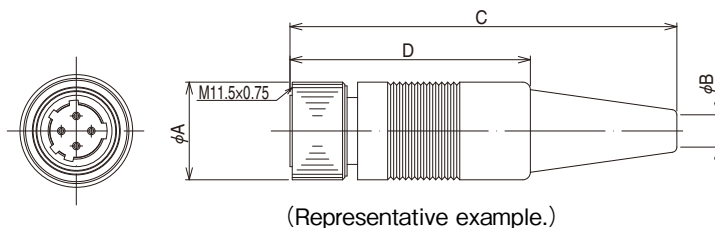
### ● Accessory

#### SR30 - 10 RC 1 (\*\*)

①      ②      ③      ④      ⑤

① Model name : SR30 Series
② Shell size : Shell size is the outer diameter of the mating end of the plug.
③ Accessory name : RC : Receptacle cap
④ Form type : A number is added if there are some variations.
⑤ Other specifications : 2 numerical digits will be added when there is a specification change other than shown in positions ①~④

■ Plug



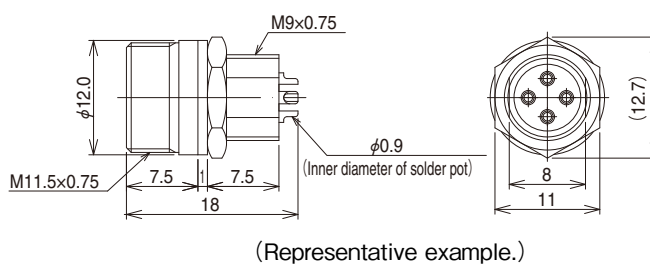
Part No.	HRS No.	No. of contacts	φA	φB	C	D	Remarks
SR30-10PE-4P(71)	103-0265-2 71	4	13	4.3	51.5	32	—
SR30-10PE-6P(74)	103-0258-7 74	6		5.2	49.0	31	See Note 1
SR30-10PG-6P(31)	103-0273-0 31		6	5.7	—	—	See Note 1
SR30-10PX-6P(31)	103-0336-9 31	7		5.5	55.0	—	Silver plated contacts only
SR30-10PF-6P(71)	103-0319-0 71		4	5.7	49.0	—	—
SR30-10PF-7P(71)	103-0316-1 71	4		5.7	49.0	—	—
SR30-10PM-4P(31)	103-0341-9 31		6	4.3	57.5	38	Screw attached
SR30-10PM-6P(31)	103-0288-8 31	6		5.1	51.5	32	Waterproof
SR30-10PQ-6P(71)	103-0313-3 71		6	5.1	51.5	32	Waterproof
SR30-10WP-6PA(71)	103-0350-0 71	6		5.1	51.5	32	Waterproof
SR30-P	103-0266-5		Metal fitting for clamping				—

Note 1 : When ordering the SR30-10PE-6P or SR30-10PX-6P, order SR30-P cable clamps separately, because such plugs have no cable clamps.

Note 2 : The inner diameter of solder pot for male contact is φ0.8.

Note 3 : Cable clamping force, cable rotation force, and other aspects may differ depending on the cable construction. We recommend that you verify the suitability of the cable assembly before use or production.

■ Receptacle (Jam nut to be fastened)



Part No.	HRS No.	No. of contacts	Remarks
SR30-10R-4S(71)	103-0264-0 71	4	—
SR30-10R-6S(71)	103-0239-2 71	6	—
SR30-10R-7S(71)	103-0317-4 71	7	Silver plated contacts
SR30-10WR-6SA(71)	103-0349-0 71	6	Waterproof

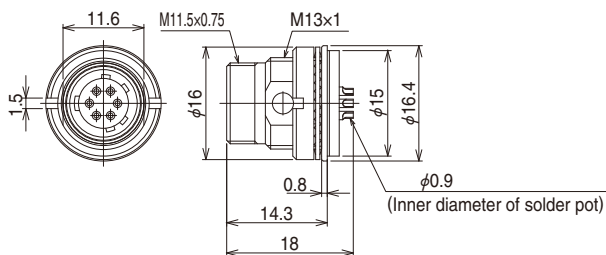
(Remarks) The mounting panel thickness should be 5mm or less.

Note 1 : Some dimensions on the waterproof types differ from those given below.

■ Receptacle (Jam nut to be fastened from front panel)



SR30-10RD-6S(71)



(Representative example.)

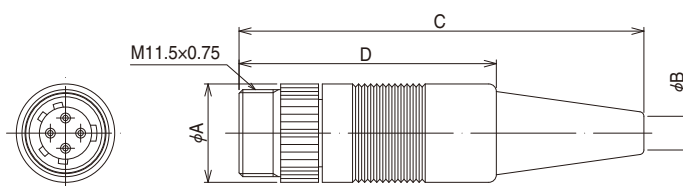
Part No.	HRS No.	No. of contacts
SR30-10RD-6S(71)	103-0302-7 71	6

(Remarks) The mounting panel thickness should be 3 mm or less.

■ Jack



SR30-10JE-6S(72)



(Representative example.)

Part No.	HRS No.	No. of contacts	φA	φB	C	D	Remarks
SR30-10JE-4S(71)	103-0301-4 71	4	13	4.3	53.5	34	Note 1)
SR30-10JE-6S(72)	103-0259-0 72	6		5.7	51	—	
SR30-10JM-6S(71)	103-0292-5 71	6		5.5	57	—	Silver plated contacts
SR30-10JF-7S(71)	103-0330-2 71	7		—	—	—	—

Note 1 : When ordering the SR30-10JE-6S receptacles, order SR30-P (103-0266-5) cable clamps separately, because they have no cable clamps.

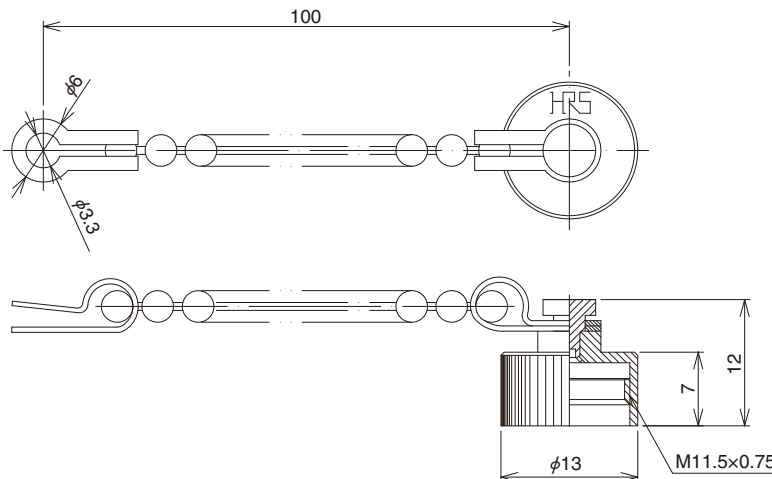
Note 2 : The inner diameter of solder pot for male contact is φ0.9.

Note 3 : Cable clamping force, cable rotation force, and other aspects may differ depending on the cable construction. We recommend that you verify the suitability of the cable assembly before use or production.

■ Cap



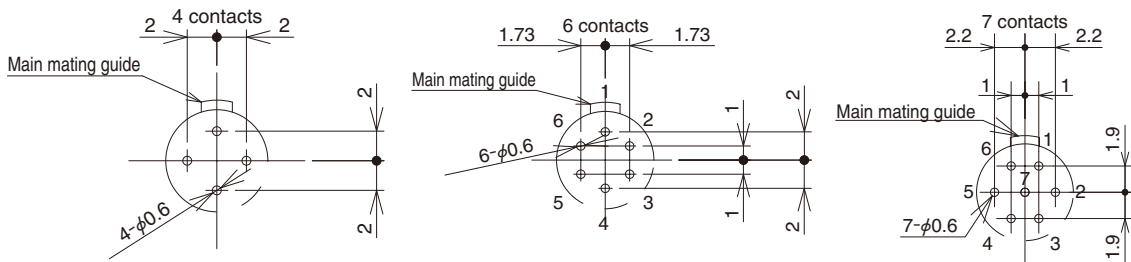
SR30-10RC1(71)



Part No.	HRS No.	Remarks
SR30-10RC1(71)	103-0344-7 71	—

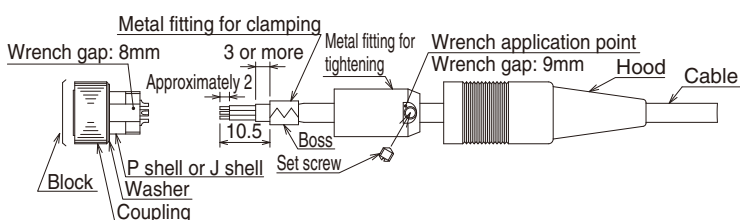
May.1.2020 Copyright 2020 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

## ◆ Dip post arrangement sizes for receptacles



- (Remarks) 1. Figures are views from the mating side of the receptacle.  
 2. A machining tolerance of  $\pm 0.05\text{mm}$  is recommended for the PCB layout dimensions.

## ◆ Reference termination procedure (plug and jack sides)



For details on usage, please contact our Engineering Dept. or Sales Dept.



**Jig for termination**

### Crimping Tool

(for use with cable diameters between  $\phi 4.2\text{mm}$  and  $4.8\text{mm}$ )



(handle shape is shown as an example.)

### ○ Assembly procedure

1. Please use the cables with a finished outer diameter of between  $\phi 4.2$  and  $4.8$  and the nominal conductor cross section of  $0.3\text{mm}^2$ .
2. Pass the cable through the hood and metal fitting for tightening in order. Cut the cable end at an approximate length as shown in the figure on the left.
3. Insert the block into the jig for termination and terminate the cable by soldering.
4. Crimp the cable onto the metal fitting for clamping (SR30-P) several times with using the crimping tool (SR30-10PE-T), in such a way that the outer diameter becomes approximately  $\phi 5.2$ .
5. After termination, tighten the metal fitting for tightening into the threaded section on the block (P shell, J shell) to a torque of approximately  $2 \text{ N}\cdot\text{m}$  ( $20 \text{ kg}\cdot\text{cm}$ ), using a single-acting torque wrench. When performing tightening on the jack side, be sure to fix the wrench application point on the J shell.
6. Secure the metal fitting for clamping by tightening a set screw on either side of the two bosses on the metal fitting for clamping to a torque of approximately  $0.1 \text{ N}\cdot\text{m}$  ( $1 \text{ kg}\cdot\text{cm}$ ) in such a way that the tip of the set screw slightly sinks.
7. Place the hood over the metal fitting for tightening. The procedure has been completed. Please be sure to apply a small amount of thread adhesive to prevent loosening.

**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>