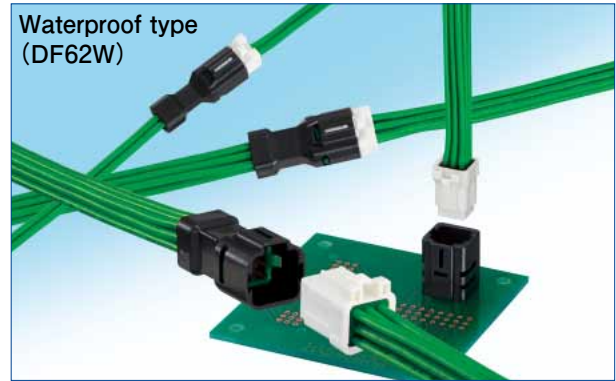
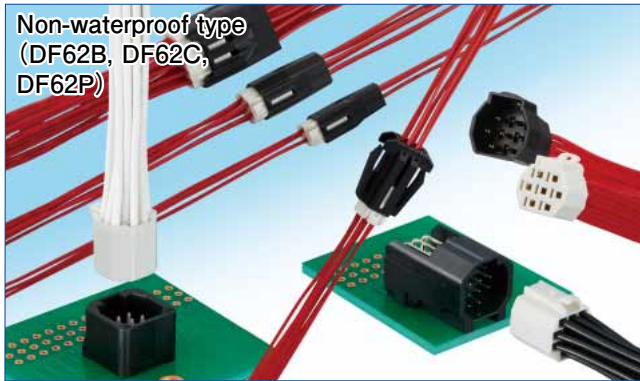


# 2 x 2.2mm Pitch, Wire-to-Wire Connectors for Small Spaces

DF62 Series / DF62W Series

(UL, C-UL Listed)



## Features

### 1. The slim, sleek design and smooth contour combine to complete connections in tight spaces.

These connectors were designed to take full advantage of small/narrow spaces. The contacts are arranged in a grid pattern which shortens the diagonal distances and the body was slimmed down by creating smooth outer surfaces. This design helps to save precious space and makes these connectors virtually tangle free. There is no visible or exposed metal which would eliminate the possibility of electrical arcing between the connector and the inside of a metal conduit. (Please refer to Fig. 1 and 2)

### 2. Secure lock mechanism

The locking structure emits a clear tactile click upon lock completion. After completion, a second indicator can be utilized. The socket lock can be visually checked through the plug window after mating. These indicators function together to prevent incomplete mating. (Please refer to Fig. 3)

### 3. Reliable contact structure

The structure utilizes two contact points to provide a reliable contact that resists damage from vibration and rough operation.

### 4. Robust contact structure

The unique structure provides protection to the contacts and lance areas, it prevents any bending or deformity that might occur during mating, the assembly procedure or while in transportation. (Please refer to Fig. 4)

### 5. Multiple variations available

There are several different wire counts available, giving the designer the variety needed to complete the application. Protected lock type, panel mount type and pin header type are also available.

### 6. Applicator sharing

The applicators for the DF11 and DF59 series (existing products) can be adapted to accommodate the DF62 series applicators. \*Some modifications are required. Please contact Hirose for additional details.

### 7. Condensation prevention measure (Water-resistant type DF62W)

IP67 level water-resistance in mated condition. (Fig. 5)

### Compact shape due to 2 x 2.2 grid layout of pins

\*Both are 7 contacts with 3A current rating

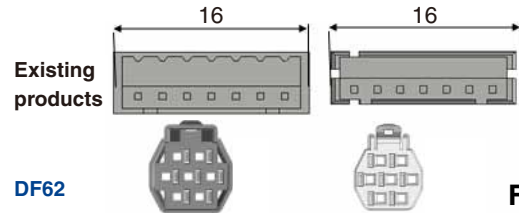


Fig.1

Grid Arrangement    Smooth external shape    No exposed metal



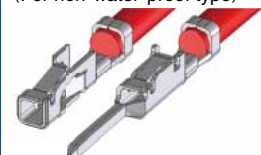
Fig.2

Visual check for complete mating



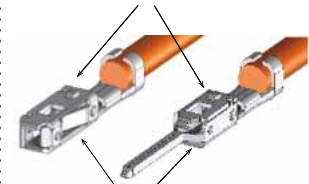
Fig.3

Image of the outward appearance of the contact (For non-water-proof type)



(Non-water-resistant type (DF62) contacts)

(Water-resistant type (DF62W)) Robust box-shaped contact structure



Designed for easy contact insertion.

Fig.4

Condensation prevention measure (IP67 level Water-resistance)

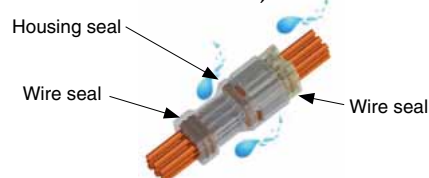


Fig.5

## Product Specifications

Ratings	DF62	Current Rating (Note 1)	22 AWG : 4A/pin (2 pos.) 3A/pin (3 to 13 pos.) 2.5A/pin (24 pos.)			Operating Temperature Range	-35 to 105°C (Note 2) UL/C-UL -35 to 75°C (Note 2)
			24 AWG : 2A/pin 26 to 30 AWG : 1A/pin			Operating Humidity Range	20 ~ 80% (Note 3)
	DF62W	Current Rating (Note 1)	20 AWG : 5A (2 pos.), 3.5A/pin (3 to 9 pos) 22 AWG : 4A (2 pos.), 3A/pin (3 to 9 pos) 24 AWG : 3.5A (2 pos.), 2A/pin (3 to 9 pos) 26 AWG : 3A (2 pos.), 1A/pin (3 to 9 pos)			Operating Temperature Range	-40 to 105°C (Note 2) UL/C-UL -40 to 75°C (Note 2)
						Operating Humidity Range	20 to 80% (Note 3)
	Common	Voltage Rating	Specifications	AC/DC 250V	UL File name UL : E52653 C-UL : E52653	Storage Temperature Range	-10 to 60°C (Note 4)
			UL/C-UL	AC/DC 29.9V		Storage Humidity Range	40 to 70% (Note 4)

Items	Specifications	Conditions
1. Insulation Resistance	Minimum of 1,000MΩ	Measured with DC 500V
2. Withstanding Voltage	No flashover or breakdown	Apply AC 650V for 1minute
3. Contact Resistance	Maximum of 30mΩ	Measured at a maximum of 20mV and 100mA (DC or 1000Hz)
4. Vibration Resistance	No electrical discontinuity of 1μs or longer	10 cycles in each of three directions at frequency 10-55Hz, half amplitude 0.75mm
5. Shock Resistance	No electrical discontinuity of 1μs or longer	Acceleration : 490m/s <sup>2</sup> , 11ms, Semi-sinusoidal 3 axle direction 3 times each.
6. Humidity Resistance	Contact Resistance Maximum of 30mΩ Insulation Resistance : Minimum of 1,000MΩ	Left at temperature 40 ±2°C, humidity 90 to 95%, 96 hours
7. Temperature Cycles	Contact Resistance : Maximum of 30mΩ Insulation Resistance : Minimum of 1,000MΩ	-55°C : 30 minutes → 5 to 35°C : 2 to 3 minutes → 85°C : 30 minutes → 5 to 35°C : 2 to 3 minutes, 5 cycles
8. Durability	Contact Resistance : Maximum of 30mΩ	Mating/unmating : 30 mating cycles
9. Solder heat resistnace	There should be no melting of the resin part which will influence the performance.	Flow : 260°C, 10sec Hand soldering : temperature of soldering iron at 300°C for 3sec.

Note 1 : This is the maximum current rating while all pins are powered or used as all power lines. When isolating power lines into multiple circuits, current ratings may go above the stated current ratings. Please consult Hirose for specific details before doing this.

Note 2 : Includes the temperature rise of power lines

Note 3 : The connector should be completely dry (no condensation present)

Note 4 : The term "storage" refers to the long-term storage condition of unused products before PCB mounting. The operating temperature and humidity ranges are applied while in a non-energized state, while in transport or after PCB mounting.

## Materials / Finish

Item	Component	Material	Finish	UL Flammability rating	
Socket crimping contact	Contact	Phosphorous bronze	Gold plating or tin plating	-	
Plug crimping contact	Contact	Phosphorous bronze	Gold plating or tin plating	-	
Crimping socket	Insulator	PBT	White	UL94V-0	
Crimping plug	Insulator	PBT	Black	UL94V-0	
Crimping socket *	Seal	Silicone rubber	Bengala	-	
Crimping plug *					
Header	Insulator	DF62	Straight pin header : Polyamide	Black	UL94V-0
			Right angle pin header : PBT		
		DF62W	PBT		
	Contact		Copper alloy	Gold plating or tin plating	-
	Metal fitting		Brass	Tin plating	-
	Seal *		Silicone rubber	Bengala	-

\*Waterproof type (DF62W) only

## 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.

Note : The water-proof type and a non-water-proof type are not intermateable.

### ◆ Non-water-resistant type

#### ● Connector

### DF 62B - \* S - 2.2 C (\*\*)

① ② ③ ④ ⑤ ⑥ ⑦

① Series Name : DF	⑥ Connection part shape C : Crimping housing
② Series No. : 62B (regular type) 62C (Protected lock type) 62P (Panel mount type)	⑦ Color Socket                      Extension plug None : White              None : Black 11 : Black                  10 : White 18 : Red                    18 : Red
③ No. of Contacts : 2, 3, 4, 5, 6, 7, 13, 24	
④ Connector type S : Socket, EP : Extension plug	
⑤ Contact pitch : 2.2mm	

#### ● Contact

### DF 62 - EP 2428 PCF A

① ② ③ ④ ⑤ ⑥

① Series Name : DF	⑤ Contact type /packaging type SCF : Socket crimping contact, reel SC : Socket crimping contact, pieces PCF : Plug crimping contact, reel PC : Plug crimping contact, pieces
② Series No. : 62	
③ Terminal type EP : Extension plug	⑥ Plating type A : Gold plating None : Tin plating
④ Applicable wire size 22 : 22 AWG 2428 : 24 to 28 AWG 30 : 30 AWG	

#### ● Connector

### DF 62 - \* P - 2.2 DSA (\*\*)

① ② ③ ④ ⑤ ⑥ ⑦

① Series Name : DF	⑥ Connection part shape DSA : Straight pin header DS : Right angle pin header
② Series No. : 62	
③ No. of Contacts : 13, 24	⑦ Plating type None : Tin plating 01 : Gold plating
④ Connector type P : Header	
⑤ Contact pitch : 2.2mm	

◆IP67 Water-resistant type

●Connector

**DF 62W - \* S - 2.2 C**

① ② ③ ④ ⑤ ⑥

① Series Name : DF	⑤ Contact pitch : 2.2mm
② Series No. : 62W	
③ No. of Contacts : 2, 3, 4, 6, 9	⑥ Connection part shape C : Crimping housing
④ Connector type S : Socket, EP : Extension plug	

●Contact

**DF 62W - EP 2226 PCF A**

① ② ③ ④ ⑤ ⑥

① Series Name : DF	⑤ Contact type /packaging type SCF : Socket crimping contact, reel SC : Socket crimping contact, pieces PCF : Plug crimping contact, reel PC : Plug crimping contact, pieces
② Series No. : 62W	
③ Terminal type EP : Extension plug	⑥ Plating type A : Gold plating None : Tin plating
④ Applicable wire size 2022 : 20 to 22 AWG 2226 : 22 to 26 AWG	

●Water-proof pin

**DF 62W - WP**

① ② ③

① Series Name : DF	③ For each use type WP : ◆IP67 Water-resistant type
② Series No. : 62W	

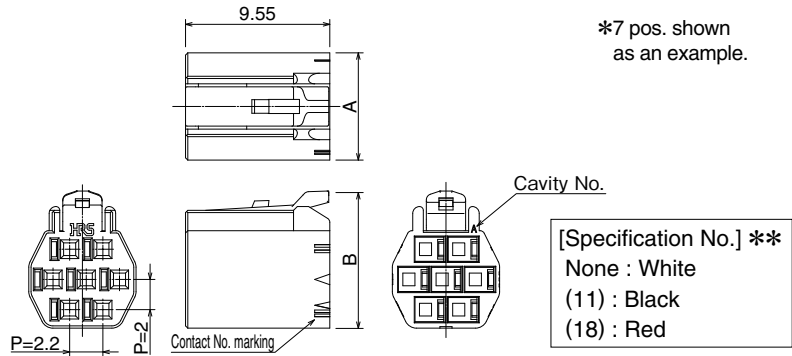
●Connector

**DF 62WZ - \* P - 2.2 DSA (\*\*)**

① ② ③ ④ ⑤ ⑥ ⑦

① Series Name : DF	⑥ Connection part shape DSA : Straight pin header
② Series No. : 62WZ	
③ No. of Contacts : 9	⑦ Plating type 20 : Tin plating 50 : Gold plating
④ Connector type P : Header	
⑤ Contact pitch : 2.2mm	

### Socket (standard type)

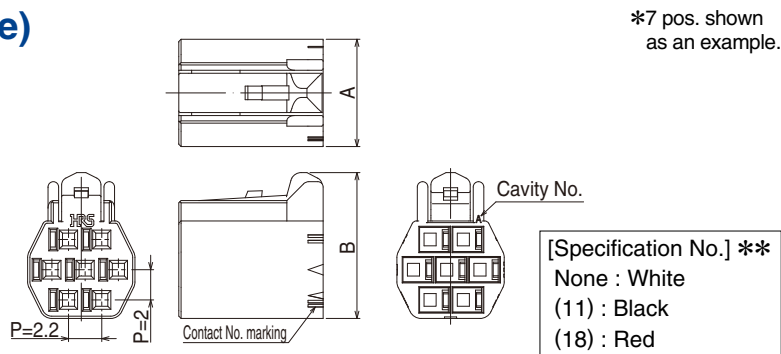


Unit : mm

Part No.	HRS No.	No. of Contacts	A	B	Part No.	HRS No.	No. of Contacts	A	B
DF62B-2S-2.2C(**)	544-0551-0 **	2	4.9	5.08	DF62B-6S-2.2C(**)	544-0555-0 **	6	7.1	7.08
DF62B-3S-2.2C(**)	544-0552-2 **	3		7.08	DF62B-7S-2.2C(**)	544-0556-3 **	7		9.08
DF62B-4S-2.2C(**)	544-0553-5 **	4	7.1	7.08	DF62B-13S-2.2C(**)	544-0557-6 **	13	9.3	11.08
DF62B-5S-2.2C(**)	544-0554-8 **	5			12.3	13.08			

Note 1 : This product is sold per pack (100pcs/pack), please place orders in full pack increments.

### Socket (Protected lock type)

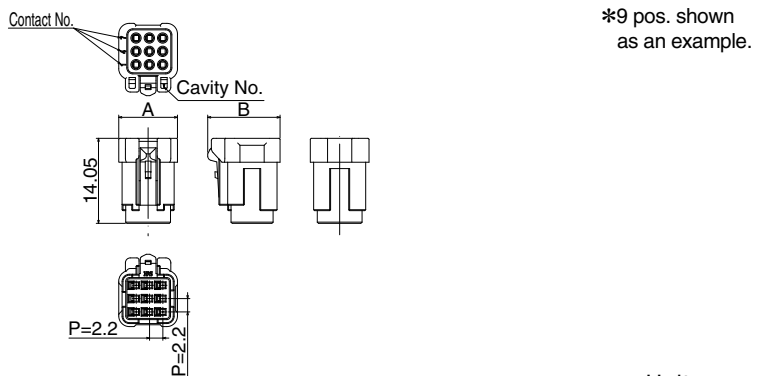


Unit : mm

Part No.	HRS No.	No. of Contacts	A	B	Part No.	HRS No.	No. of Contacts	A	B
DF62C-2S-2.2C(**)	544-0565-4 **	2	4.9	5.65	DF62C-6S-2.2C(**)	544-0569-5 **	6	7.1	7.65
DF62C-3S-2.2C(**)	544-0566-7 **	3		7.65	DF62C-7S-2.2C(**)	544-0570-4 **	7		9.65
DF62C-4S-2.2C(**)	544-0567-0 **	4	7.1	7.65	DF62C-13S-2.2C(**)	544-0571-7 **	13	9.3	11.65
DF62C-5S-2.2C(**)	544-0568-2 **	5			12.3	13.65			

Note 1 : This product is sold per pack (100pcs/pack), please place orders in full pack increments.

### Socket (Water proof type)



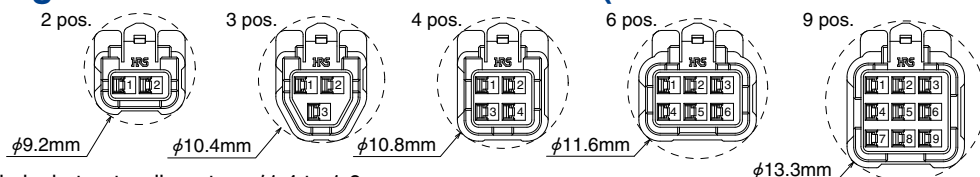
Unit : mm

Part No.	HRS No.	No. of Contacts	A	B	Part No.	HRS No.	No. of Contacts	A	B
DF62W-2S-2.2C	544-1002-7	2	7.5	7.55	DF62W-6S-2.2C	544-1008-3	6	9.7	9.75
DF62W-3S-2.2C	544-1004-2	3		9.75	DF62W-9S-2.2C	544-1010-5	9		11.95
DF62W-4S-2.2C	544-1006-8	4							

Note 1 : This product is sold per pack (100pcs/pack), please place orders in full pack increments.

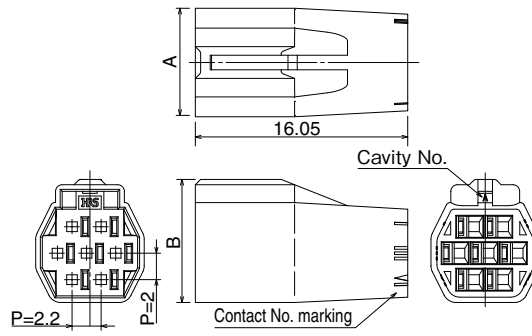
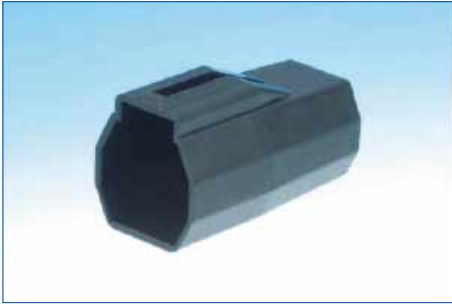
Note 2 : The Water-proof type and a non-water-proof type are not intermateable.

### Pin configuration of the contact numbers. (Shown from the mating side.)



Note : Applicable jacket outer diameter : φ1.4 to 1.6mm

### ■ Plug (standard type)



\*7 pos. shown as an example.

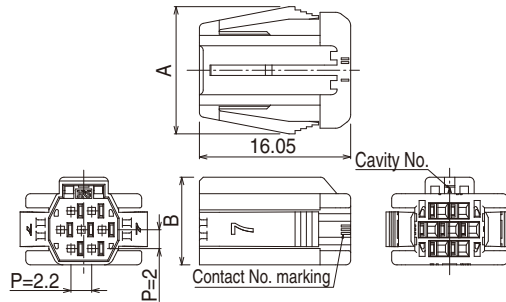
[Specification No.] \*\*  
None : Black  
(10) : White  
(18) : Red

Unit : mm

Part No.	HRS No.	No. of Contacts	A	B	Part No.	HRS No.	No. of Contacts	A	B
DF62B-2EP-2.2C(**)	544-0558-9 **	2	6.0	5.3	DF62B-6EP-2.2C(**)	544-0562-6 **	6	8.2	7.3
DF62B-3EP-2.2C(**)	544-0559-1 **	3		7.3	DF62B-7EP-2.2C(**)	544-0563-9 **	7		9.3
DF62B-4EP-2.2C(**)	544-0560-0 **	4	8.2	7.3	DF62B-13EP-2.2C(**)	544-0564-1 **	13	10.4	11.3
DF62B-5EP-2.2C(**)	544-0561-3 **	5			13.4	13.3			

Note 1 : This product is sold per pack (100pcs/pack), please place orders in full pack increments.

### ■ Plug (Panel mount type)



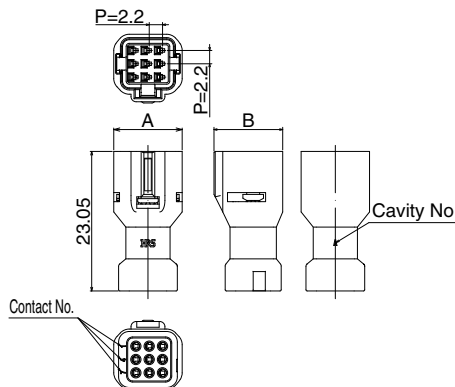
[Specification No.] \*\*  
None : Black  
(10) : White  
(18) : Red

Unit : mm

Part No.	HRS No.	No. of Contacts	A	B	Part No.	HRS No.	No. of Contacts	A	B
DF62P-2EP-2.2C(**)	544-0543-1 **	2	11.3	5.3	DF62P-6EP-2.2C(**)	544-0547-2 **	6	13.5	7.3
DF62P-3EP-2.2C(**)	544-0544-4 **	3		7.3	DF62P-7EP-2.2C(**)	544-0548-5 **	7		9.3
DF62P-4EP-2.2C(**)	544-0545-7 **	4	13.5	7.3	DF62P-13EP-2.2C(**)	544-0549-8 **	13	15.7	11.3
DF62P-5EP-2.2C(**)	544-0546-0 **	5			18.7	13.3			

Note 1 : This product is sold per pack (100pcs/pack), please place orders in full pack increments.

### ■ Plug (Water proof type)



\*9 pos. shown as an example.

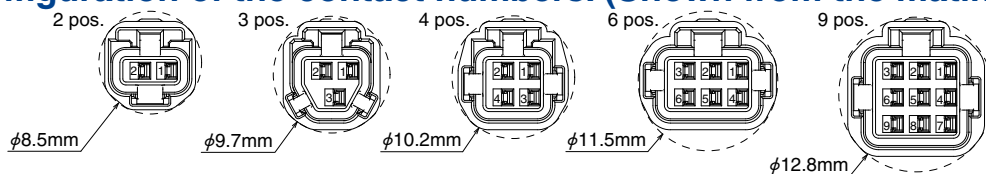
Unit : mm

Part No.	HRS No.	No. of Contacts	A	B	Part No.	HRS No.	No. of Contacts	A	B
DF62W-2EP-2.2C	544-1003-0	2	7.5	6.7	DF62W-6EP-2.2C	544-1009-6	6	11.3	9.15
DF62W-3EP-2.2C	544-1005-5	3	8.0	9.15	DF62W-9EP-2.2C	544-1011-8	9		11.35
DF62W-4EP-2.2C	544-1007-0	4	9.1						

Note 1 : This product is sold per pack (100pcs/pack), please place orders in full pack increments.

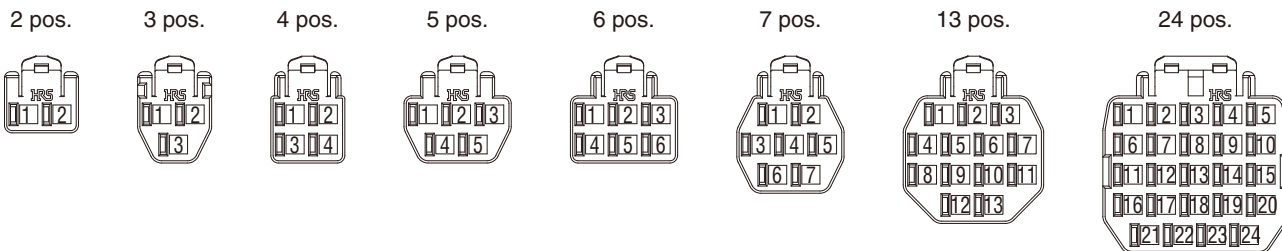
Note 2 : The Water-proof type and a non-water-proof type are not intermateable.

### ◆ Pin configuration of the contact numbers. (Shown from the mating side.)

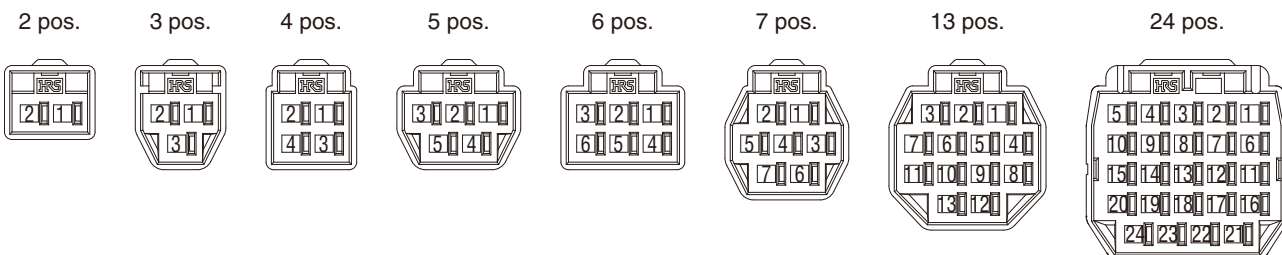


Note : Applicable jacket outer diameter : φ1.4 to 1.6mm

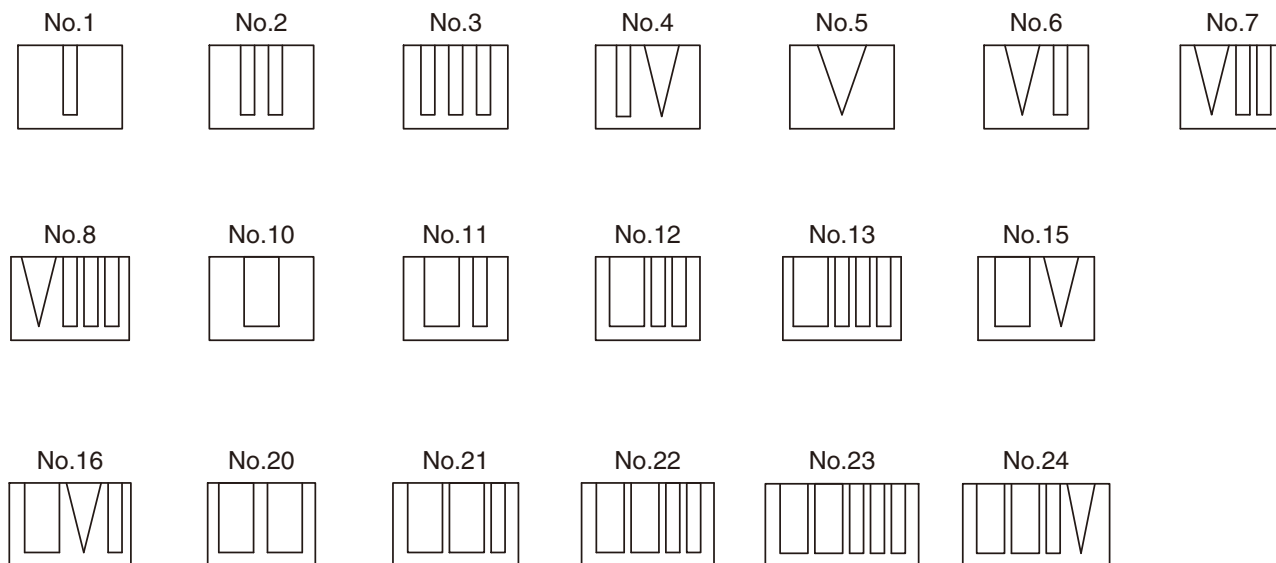
◆ Socket contact No. Summary diagram (from the mating section side)



◆ Plug contact No. Summary diagram (from the mating section side)

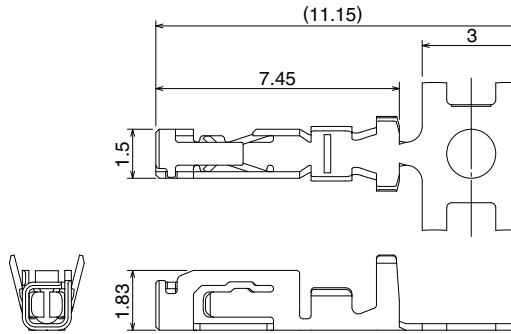


◆ Contact No. diagram



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### Socket crimping contact



**●Reel Contact (1Reel, 15,000 reel contacts) \*Applicable tool : Applicator**

Part No.	HRS No.	Finish	Applicable wire (tin plated annealed copper) (Note 1)				
			UL	Wire size	Stranded wire structure	Calculated cross-section	Jacket Diameter
DF62-22SCF DF62-22SCFA	544-0520-6 544-0506-5	Tin plated Gold plated	1061	22 AWG	17/0.16mm	0.342mm <sup>2</sup>	φ1.2 to φ1.45mm
DF62-2428SCF DF62-2428SCFA	544-0521-9 544-0500-9	Tin plated Gold plated	1007	24 AWG 26 AWG 28 AWG	11/0.16mm 7/0.16mm 7/0.127mm	0.221mm <sup>2</sup> 0.141mm <sup>2</sup> 0.089mm <sup>2</sup>	φ0.9 to φ1.45mm
DF62-30SCF DF62-30SCFA	544-0522-1 544-0508-0	Tin plated Gold plated	1007	30 AWG	7/0.1mm	0.055mm <sup>2</sup>	φ0.75 to φ1.2mm

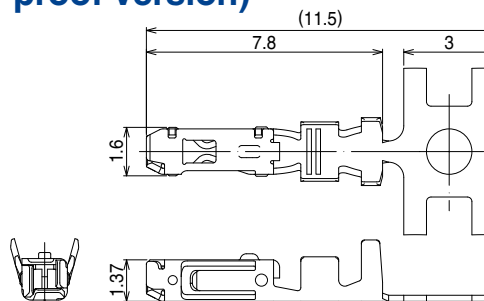
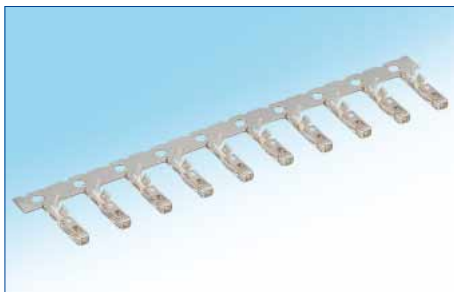
Note 1 : When using wires that are not recommended by Hirose, please contact one of our sales representatives for clarification.

**●Loose piece (1pack, 100) \*Applicable tool : hand crimping tool**

Part No.	HRS No.	Finish	Applicable wire (tin plated annealed copper) (Note 2)				
			UL	Wire size	Stranded wire structure	Calculated cross-section	Jacket Diameter
DF62-22SC DF62-22SCA	544-0572-0 544-0526-2	Tin plated Gold plated	1061	22 AWG	17/0.16mm	0.342mm <sup>2</sup>	φ1.26mm
DF62-2428SC DF62-2428SCA	544-0573-2 544-0527-5	Tin plated Gold plated	1007	24 AWG 26 AWG 28 AWG	11/0.16mm 7/0.16mm 7/0.127mm	0.221mm <sup>2</sup> 0.141mm <sup>2</sup> 0.089mm <sup>2</sup>	φ1.42mm φ1.28mm φ1.18mm
DF62-30SC DF62-30SCA	544-0574-5 544-0528-8	Tin plated Gold plated	1007	30 AWG	7/0.1mm	0.055mm <sup>2</sup>	φ0.82mm

Note 2 : The applicable cables include only those listed above.

### Socket crimp contact (for water-proof version)



**●Reel Contact (1Reel, 15,000 reel contacts) \*Applicable tool : Applicator**

Part No.	HRS No.	Finish	Applicable wire (tin plated annealed copper) (Note 1)				
			UL	Wire size	Stranded wire structure	Calculated cross-section	Jacket Diameter
DF62W-2022SCF DF62W-2022SCFA	544-1015-9 544-1027-0	Tin plated Gold plated	3443 1007	20 AWG 22 AWG	7/0.32mm 17/0.16mm	0.563mm <sup>2</sup> 0.342mm <sup>2</sup>	φ1.4 to φ1.6mm
DF62W-2226SCF DF62W-2226SCFA	544-1000-1 544-1025-0	Tin plated Gold plated	1007	22 AWG 24 AWG	17/0.16mm 11/0.16mm	0.342mm <sup>2</sup> 0.221mm <sup>2</sup>	
			1430	24 AWG 26 AWG	11/0.16mm 7/0.16mm	0.221mm <sup>2</sup> 0.141mm <sup>2</sup>	

Note 1 : When using wires that are not recommended by Hirose, please contact one of our sales representatives for clarification.

Note 2 : In case of hard to insert crimped contact to socket as like using low stiffness wire which consists of thinner stranded conductor or insulation with soft material, please contact to Hirose representative.

Note 3 : The Water-proof type and non-water-proof type are a not intermateable.

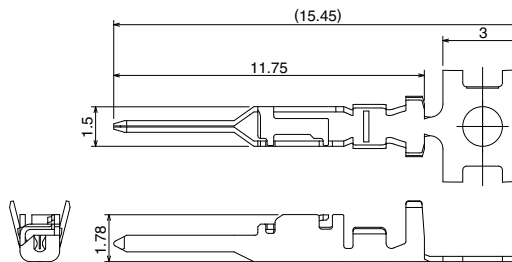
**●Loose piece (1pack, 100) \*Applicable tool : hand crimping tool**

Part No.	HRS No.	Finish	Applicable wire (tin plated annealed copper) (Note 4)				
			UL	Wire size	Stranded wire structure	Calculated cross-section	Jacket Diameter
DF62W-2022SC DF62W-2022SCA	544-1017-4 544-1045-0	Tin plated Gold plated	3443 1007	20 AWG 22 AWG	7/0.32mm 17/0.16mm	0.563mm <sup>2</sup> 0.342mm <sup>2</sup>	φ1.53mm φ1.58mm
DF62W-2226SC DF62W-2226SCA	544-1012-0 544-1044-0	Tin plated Gold plated	1007	22 AWG 24 AWG	17/0.16mm 11/0.16mm	0.342mm <sup>2</sup> 0.221mm <sup>2</sup>	φ1.58mm φ1.42mm
			1430	26 AWG	7/0.16mm	0.141mm <sup>2</sup>	φ1.48mm

Note 4 : The applicable cables include only those listed above.



## ■ Plug crimping contact



### ● Reel Contact (1Reel, 15,000 reel contacts) \*Applicable tool : Applicator

Part No.	HRS No.	Finish	Applicable wire (tin plated annealed copper) (Note 1)				
			UL	Wire size	Stranded wire structure	Calculated cross-section	Jacket Diameter
DF62-EP22PCF DF62-EP22PCFA	544-0523-4 544-0507-8	Tin plated Gold plated	1061	22 AWG	17/0.16mm	0.342mm <sup>2</sup>	φ1.2 to φ1.45mm
DF62-EP2428PCF DF62-EP2428PCFA	544-0524-7 544-0501-1	Tin plated Gold plated	1007	24 AWG 26 AWG 28 AWG	11/0.16mm 7/0.16mm 7/0.127mm	0.221mm <sup>2</sup> 0.141mm <sup>2</sup> 0.089mm <sup>2</sup>	φ0.9 to φ1.45mm
DF62-EP30PCF DF62-EP30PCFA	544-0525-0 544-0509-3	Tin plated Gold plated	1007	30 AWG	7/0.1mm	0.055mm <sup>2</sup>	φ0.75 to φ1.2mm

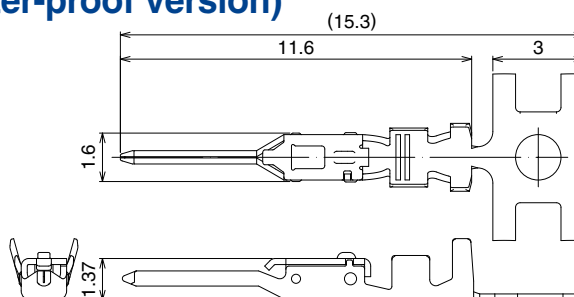
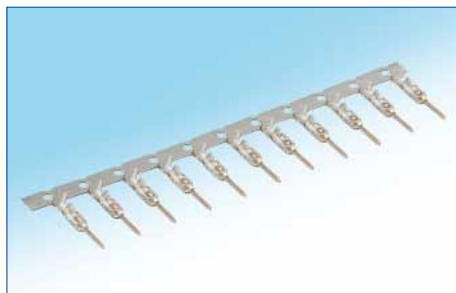
Note 1 : When using wires that are not recommended by Hirose, please contact one of our sales representatives for clarification.

### ● Loose piece (1pack, 100) \*Applicable tool : hand crimping tool

Part No.	HRS No.	Finish	Applicable wire (tin plated annealed copper) (Note 2)				
			UL	Wire size	Stranded wire structure	Calculated cross-section	Jacket Diameter
DF62-EP22PC DF62-EP22PCA	544-0575-8 544-0529-0	Tin plated Gold plated	1061	22 AWG	17/0.16mm	0.342mm <sup>2</sup>	φ1.26mm
DF62-EP2428PC DF62-EP2428PCA	544-0576-0 544-0530-0	Tin plated Gold plated	1007	24 AWG 26 AWG 28 AWG	11/0.16mm 7/0.16mm 7/0.127mm	0.221mm <sup>2</sup> 0.141mm <sup>2</sup> 0.089mm <sup>2</sup>	φ1.42mm φ1.28mm φ1.18mm
DF62-EP30PC DF62-EP30PCA	544-0577-3 544-0529-0	Tin plated Gold plated	1007	30 AWG	7/0.1mm	0.055mm <sup>2</sup>	φ0.82mm

Note 2 : The applicable cables include only those listed above.

## ■ Plug crimping contact (for water-proof version)



### ● Reel Contact (1Reel, 15,000 reel contacts) \*Applicable tool : Applicator

Part No.	HRS No.	Finish	Applicable wire (tin plated annealed copper) (Note 1)				
			UL	Wire size	Stranded wire structure	Calculated cross-section	Jacket Diameter
DF62W-EP2022PCF DF62W-EP2022PCFA	544-1016-1 544-1028-0	Tin plated Gold plated	3443 1007	20 AWG 22 AWG	7/0.32mm 17/0.16mm	0.563mm <sup>2</sup> 0.342mm <sup>2</sup>	φ1.4 to φ1.6mm
DF62W-EP2226PCF DF62W-EP2226PCFA	544-1001-4 544-1026-0	Tin plated Gold plated	1007	22 AWG 24 AWG	17/0.16mm 11/0.16mm	0.342mm <sup>2</sup> 0.221mm <sup>2</sup>	
			1430	24 AWG 26 AWG	11/0.16mm 7/0.16mm	0.221mm <sup>2</sup> 0.141mm <sup>2</sup>	

Note 1 : When using wires that are not recommended by Hirose, please contact one of our sales representatives for clarification.

Note 2 : In case of hard to insert crimped contact to socket as like using low stiffness wire which consists of thinner stranded conductor or insulation with soft material, please contact to Hirose representative.

Note 3 : The Water-proof type and non-water-proof type are a not intermateable.

### ● Loose piece (1pack, 100) \*Applicable tool : hand crimping tool

Part No.	HRS No.	Finish	Applicable wire (tin plated annealed copper) (Note 4)				
			UL	Wire size	Stranded wire structure	Calculated cross-section	Jacket Diameter
DF62W-EP2022PC DF62W-EP2022PCA	544-1018-7 544-1043-0	Tin plated Gold plated	3443 1007	20 AWG 22 AWG	7/0.32mm 17/0.16mm	0.563mm <sup>2</sup> 0.342mm <sup>2</sup>	φ1.53mm φ1.58mm
DF62W-EP2226PC DF62W-EP2226PCA	544-1013-3 544-1042-0	Tin plated Gold plated	1007	22 AWG 24 AWG	17/0.16mm 11/0.16mm	0.342mm <sup>2</sup> 0.221mm <sup>2</sup>	φ1.58mm φ1.42mm
			1430	26 AWG	7/0.16mm	0.141mm <sup>2</sup>	φ1.48mm

Note 4 : The applicable cables include only those listed above.

## ◆ Applicable Crimping Tool

### ● DF62

Type	Part No.	HRS No.	Applicable Contact
Applicator	AP105-DF62-22	901-4626-3	DF62-22SCFA/SCF DF62-EP22PCFA/PCF
	AP105-DF62-2428	901-4625-0	DF62-2428SCFA/SCF DF62-EP2428PCFA/PCF
	AP105-DF62-30	901-4627-6	DF62-30SCFA/SCF DF62-EP30PCFA/PCF
Press body	CM-105C	901-0001-0	-
Hand tool	HT801/DF62-22(10) (Note 3)	550-0401-9 10	DF62-22SCA/SC DF62-EP22PCA/PC
	HT801/DF62-2428(10) (Note 4)	550-0400-6 10	DF62-2428SCA/SC DF62-EP2428PCA/PC
	HT801/DF62-30(10) (Note 5)	550-0402-1 10	DF62-30SCA/SC DF62-EP30PCA/PC
Extraction tool	DF62/RE-MD	902-4645-4	DF62-**SCFA/SCF/SCA/SC DF62-EP**PCFA/PCF/PCA/PC

Note 1 : Hirose does not warranty problems that arise from the use of unapproved tools on Hirose products.

Note 2 : Please conduct crimping work according to the "Crimping quality control statement of standards (ETAD-H0642, ETAD-H0643)" and "Crimping condition table".

Note 3 : The compatible wire is limited to UL1061 (22 AWG).

Note 4 : The compatible wire is limited to UL1007 (24 to 28 AWG).

Note 5 : The compatible wire is limited to UL1061 (30 AWG).

### ● DF62W

Type	Part No.	HRS No.	Applicable Contact
Applicator	AP105-DF62W-2022	901-4500-0	DF62W-2022SCF(A)
	EHS899800H-UP (Note 2)	-	DF62W-EP2022PCF(A)
	AP105-DF62W-2226	901-4637-0	DF62W-2226SCF(A)
	EHS888400H-UP (Note 2)	-	DF62W-EP2226PCF(A)
Press body	CM-105C	901-0001-0	-
Hand tool	HT802/DF62W-2022 (Note 4)	550-0431-0	DF62W-2022SC(A) DF62W-EP2022PC(A)
	HT802/DF62W-2226 (Note 5)	550-0416-6	DF62W-2226SC(A) DF62W-EP2226PC(A)
Extraction tool	DF62W/RE-MD	902-4666-4	DF62W-2022SC(F)(A) DF62W-EP2022PC(F)(A) DF62W-2226SC(F)(A) DF62W-EP2226PC(F)(A)

Note 1 : Hirose does not warranty problems that arise from the use of unapproved tools on Hirose products.

Note 2 : Applicator manufactured by JAPAN AUTOMATIC MACHINE(J.A.M.). Please access to HP of J.A.M., if you make inquiries about the applicator or crimp defect. (URL : <http://www.jam-net.co.jp>)

Note 3 : Please conduct crimping work according to the "Crimping quality control statement of standards (ETAD-H0762-00, ETAD-H0763-00)" and "Crimping condition table".

Note 4 : The compatible wire is limited to UL3443 (20 AWG) or UL1007 (22 AWG).

Note 5 : The compatible wire is limited to UL1007 (22 to 24 AWG) or UL1430 (24 to 26 AWG).

## ◆ Crimping

### ■ Items required prior to start crimping

The work-related documents shown below are required before starting the harness connections.  
(The ● mark shows the document required.)

When the documents shown below are not available, ask our sales personnel to provide them.

Document Title	Description	Automatic Crimping Machine	Hand Crimping Tool	Remarks
(1) Main unit of crimping machine instruction manual	Explanation of main press machine unit	●	—	When purchasing main press machine unit, it is bundled.
(2) Applicator Spare Parts Identification	Explanation for Applicator installation	●	—	When purchasing Applicator, it is bundled.
(3) Crimp Conditions	Standard values of : Crimp height ; Tensile strength	●	—	
(4) Crimp Quality Standards	Various standards for crimping conditions	●	—	
(5) Operating Instructions for Hand Tool	Inspection items of : Crimp height ; Tensile strength ; and others	—	●	When purchasing Hand Tool, it is bundled.
(6) Harness Procedure Manual DF62 series : ETAD-H0593 DF62W series : ETAD-H0760	Harness procedure	●	●	Ask our sales personal to provide them.

### ■ Tools

When crimping work is applied to our contacts, the tool designated by Hirose should be used.

Crimping work by using tools other than as designated must not be done because it may result in contact failure, disconnection of cable, etc.

\*The operating instructions manual is available for the crimping machine and the applicator. Be sure to carefully read the operating instructions manual before implementing the work.

### ■ Applicable electric wires

Check that the electric wire to be used is in the range of application.

If you intend to use an electric wire other than the recommended one, ask our sales personnel.

#### [Precautions]

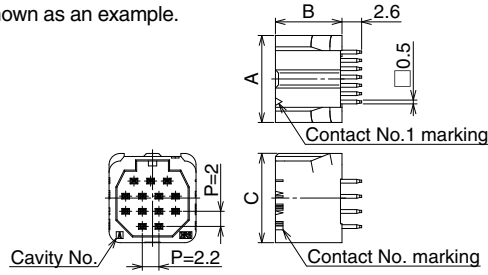
- Electric wires that are applicable for crimping connectors shall, principally, be the tin-plated stranded soft-copper wire.
- Crimping of electric wires wherein single wires, polyester yarns, etc., exist and crimping of tin-coated wires should be avoided.
- Avoid crimping two electric wires together.
- The setting values of crimp height (Note 1) may vary between tin-plated and gold-plated terminals even if the same electric wires are used.
- The setting values of crimp height (Note 1) may vary depending on the difference in the core wire configuration even if the computed cross-sectional area is the same.

Note 1 : The crimp height is an important item that determines crimping quality. We execute crimping tests for each electric wire to ensure the optimal value for the crimp height with high precision, thereby ensuring optimal setup values.

## ■Straight pin Header



\*13 pos. shown as an example.



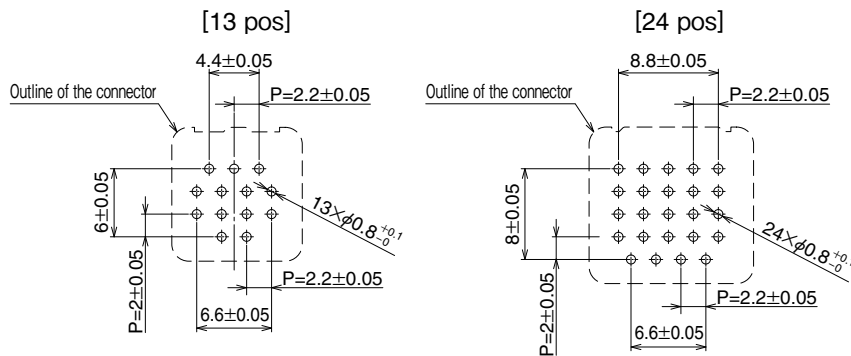
Unit : mm

Part No.	HRS No.	No. of Contacts	A	B	C	Tin plating	Gold plating
DF62-13P-2.2DSA(**)	544-0582-0 **	13	11.5	8.8	11.8	✓	—
DF62-24P-2.2DSA(**)	544-0584-0 **	24	14.5	10.8	13.8	✓	—

[Specification No.] \*\*  
None : Tin plating  
(01) : Gold plating

Note 1 : This product is sold per tray (13pos : 100pcs/tray, 24pos : 80pcs/tray), please place orders by tray unit.  
Note 2 : Please contact to Hirose representative if you have request for Gold plating type of unreleased pin-pos.

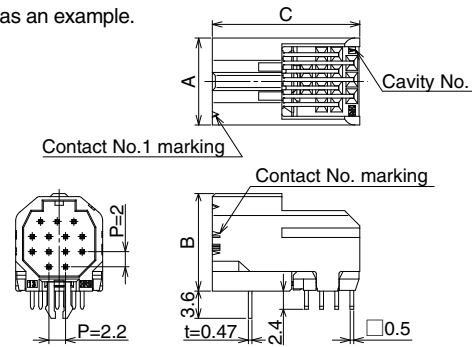
### ●Recommended PCB layout (Recommended thickness t=1.6mm)



## ■Right Angle pin Header



\*13 pos. shown as an example.



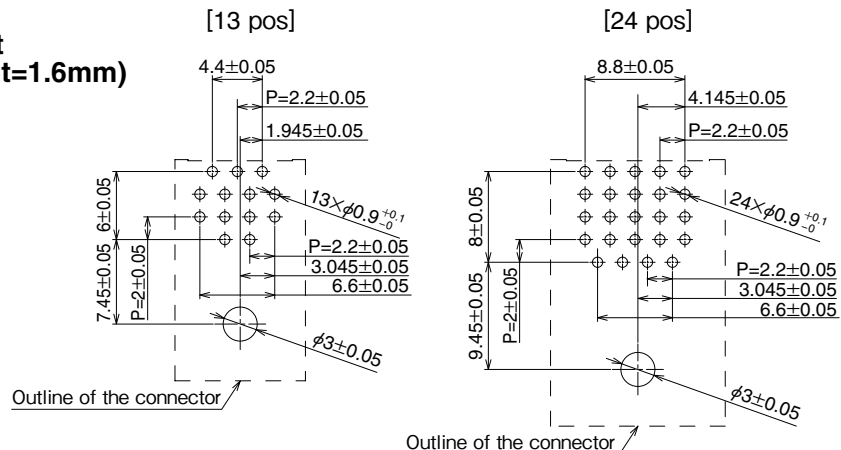
Unit : mm

Part No.	HRS No.	No. of Contacts	A	B	C	Tin plating	Gold plating
DF62-13P-2.2DS(**)	544-0581-0 **	13	11.5	12.9	19.5	✓	—
DF62-24P-2.2DS(**)	544-0583-0 **	24	15.4	14.9	23.5	✓	✓

[Specification No.] \*\*  
None : Tin plating  
(01) : Gold plating

Note 1 : This product is sold per tray (100pcs/tray), please place orders by tray unit.  
Note 2 : Please contact to Hirose representative if you have request for Gold plating type of unreleased pin-pos.

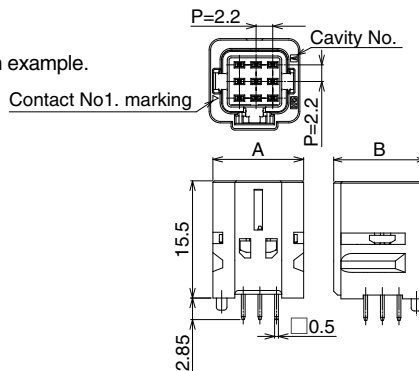
### ●Recommended PCB layout (Recommended thickness t=1.6mm)



### ■ Straight pin Header (Water proof type)



\*9 pos. shown as an example.



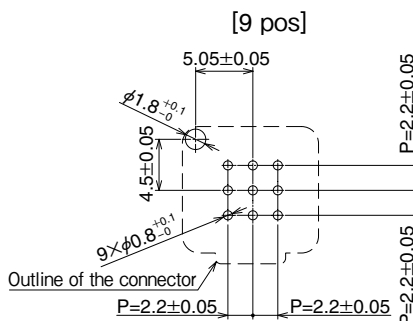
Unit : mm Unit : pcs

Part No.	HRS No.	No. of Contacts	A	B	Tray packaging	Tin plating	Gold plating
DF62WZ-9P-2.2DSA(**)	544-1050-0 **	9	12	12.1	200	✓	✓

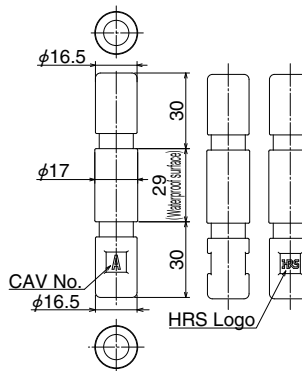
[Specification No.] \*\*  
 (20) : Tin plating  
 (50) : Gold plating

Note 1 : Please place orders by tray unit.

### ● Recommended PCB layout (Recommended thickness t=1.6mm)



### ■ Waterproof pin



Part No.	HRS No.
DF62W-WP	544-1014-6

Note 1 : This product is sold per pack (100pcs/pack), please place orders in full pack.

Note 2 : In case of using without inserting crimp contact, fill the terminal hole of socket and plug with a waterproof pin.

## ◆ Precautions

<p>1. Recommended soldering conditions</p>	<ul style="list-style-type: none"> <li>■ Soldering profile when using an automatic soldering device Soldering temperature : 260°C ; Soldering time: no more than 10 seconds</li> <li>■ Hand soldering conditions Temperature of soldering iron : 300°C , soldering time : no more than 3 seconds</li> </ul>
<p>2. Cleaning Conditions</p>	<p>Please refer to the "Wire-to-Board Connector Guide". Cleaning with IPA is allowed. (Other cleaning agents are not recommended due to the fact that it may change the push/pull feeling. Please contact us when you use other cleaning agents. )</p>
<p>3. Important notes</p>	<ol style="list-style-type: none"> <li>1. Caution is required for mating and un-mating the connector without it being mounting on a PCB. Doing so can damage or deform the contacts.</li> <li>2. During hand soldering, do not apply excess amounts flux which can migrate on to the connector.</li> <li>3. This product may have a slight differences in color depending on the production lot. This difference does not have any influence on the performance.</li> <li>4. Please refer to "DF62 Series mating and unmating Procedure Document (ETAD-H0599)" and "DF62W Series mating and unmating Procedure Document (ETAD-H0761)" for points in handling regarding mating operations.</li> </ol>
<p>4. Handling instructions</p>	<p>Please refer to the "Wire-to-Board Connector Guide".</p>



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