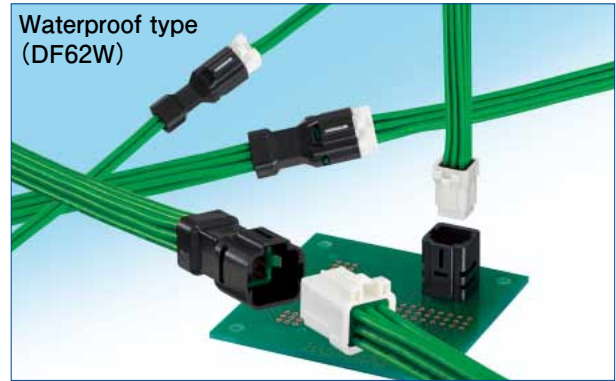
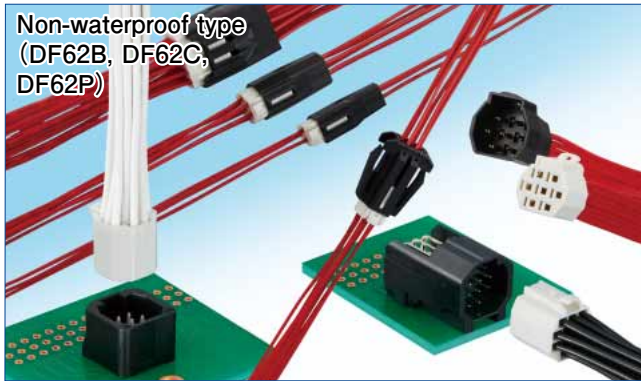


2 x 2.2mm Pitch, Wire-to-Wire Connectors for Small Spaces

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

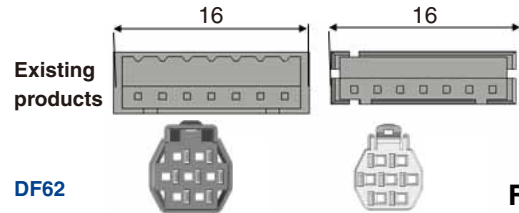


Fig.1

Grid Arrangement Smooth external shape No exposed metal



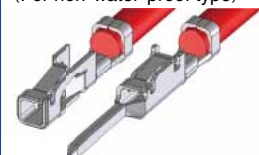
Fig.2

Visual check for complete mating



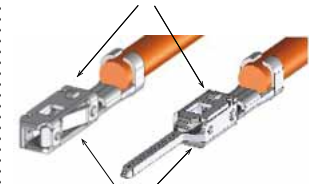
Fig.3

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)

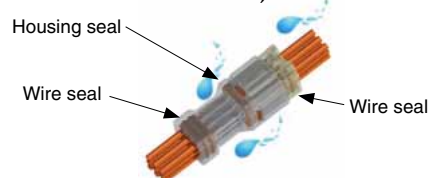


Fig.5

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 ² , 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 | |

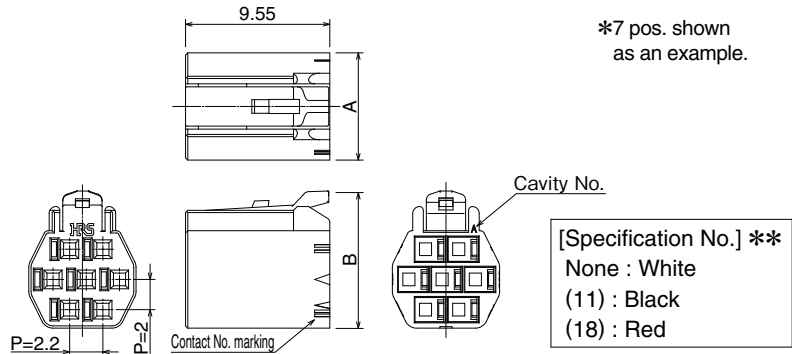
●Connector

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)



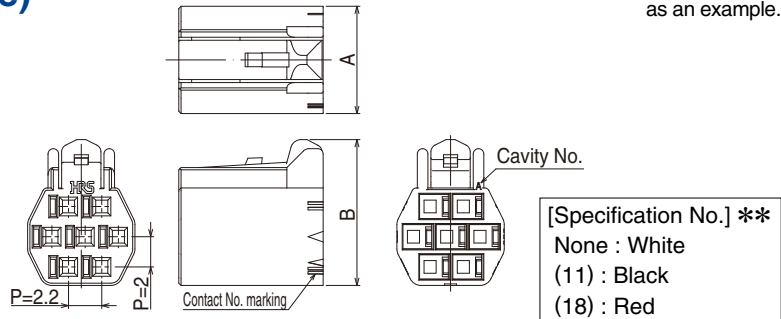
*7 pos. shown as an example.

Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B | Part No. | HRS No. | No. of Contacts | A | B |
|-------------------|---------------|-----------------|-----|------|--------------------|---------------|-----------------|-----|-------|
| 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)



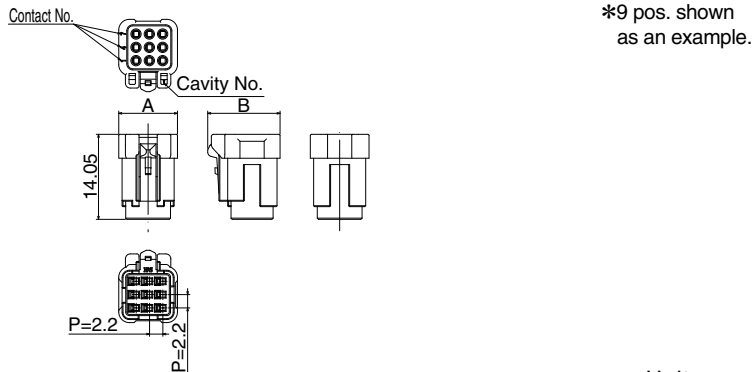
*7 pos. shown as an example.

Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B | Part No. | HRS No. | No. of Contacts | A | B |
|-------------------|---------------|-----------------|-----|------|--------------------|---------------|-----------------|-----|-------|
| 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)



*9 pos. shown as an example.

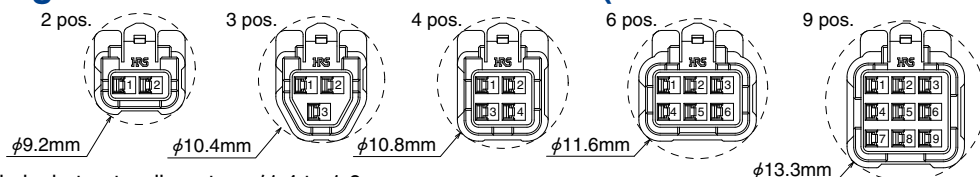
Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B | Part No. | HRS No. | No. of Contacts | A | B |
|---------------|------------|-----------------|-----|------|---------------|------------|-----------------|-----|-------|
| DF62W-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.

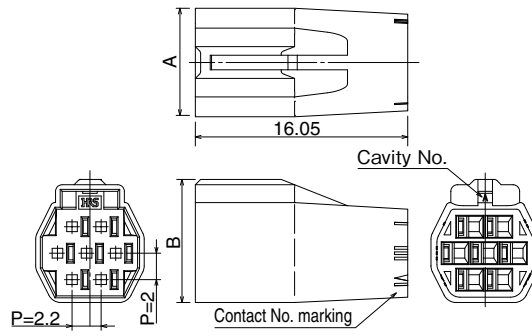
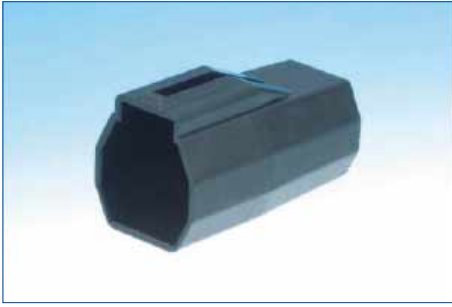
Note 2 : The Water-proof type and a non-water-proof type are not intermateable.

◆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

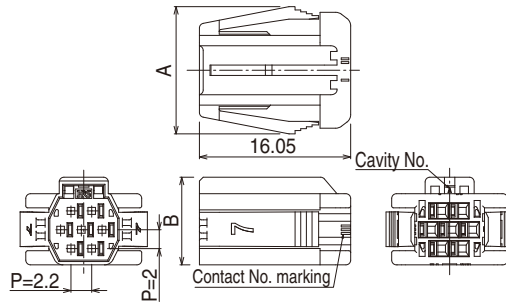
Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B |
|--------------------|---------------|-----------------|-----|-----|
| DF62B-2EP-2.2C(**) | 544-0558-9 ** | 2 | 6.0 | 5.3 |
| DF62B-3EP-2.2C(**) | 544-0559-1 ** | 3 | | 7.3 |
| DF62B-4EP-2.2C(**) | 544-0560-0 ** | 4 | 8.2 | 7.3 |
| DF62B-5EP-2.2C(**) | 544-0561-3 ** | 5 | | |

| Part No. | HRS No. | No. of Contacts | A | B |
|---------------------|---------------|-----------------|------|------|
| DF62B-6EP-2.2C(**) | 544-0562-6 ** | 6 | 8.2 | 7.3 |
| DF62B-7EP-2.2C(**) | 544-0563-9 ** | 7 | | 9.3 |
| DF62B-13EP-2.2C(**) | 544-0564-1 ** | 13 | 10.4 | 11.3 |
| DF62B-24EP-2.2C(**) | 544-0540-3 ** | 24 | 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

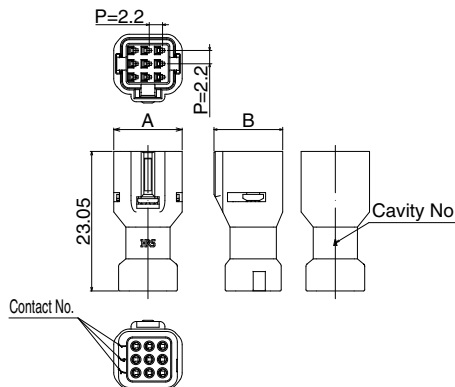
Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B |
|--------------------|---------------|-----------------|------|-----|
| DF62P-2EP-2.2C(**) | 544-0543-1 ** | 2 | 11.3 | 5.3 |
| DF62P-3EP-2.2C(**) | 544-0544-4 ** | 3 | | 7.3 |
| DF62P-4EP-2.2C(**) | 544-0545-7 ** | 4 | 13.5 | 7.3 |
| DF62P-5EP-2.2C(**) | 544-0546-0 ** | 5 | | |

| Part No. | HRS No. | No. of Contacts | A | B |
|---------------------|---------------|-----------------|------|------|
| DF62P-6EP-2.2C(**) | 544-0547-2 ** | 6 | 13.5 | 7.3 |
| DF62P-7EP-2.2C(**) | 544-0548-5 ** | 7 | | 9.3 |
| DF62P-13EP-2.2C(**) | 544-0549-8 ** | 13 | 15.7 | 11.3 |
| DF62P-24EP-2.2C(**) | 544-0550-7 ** | 24 | 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

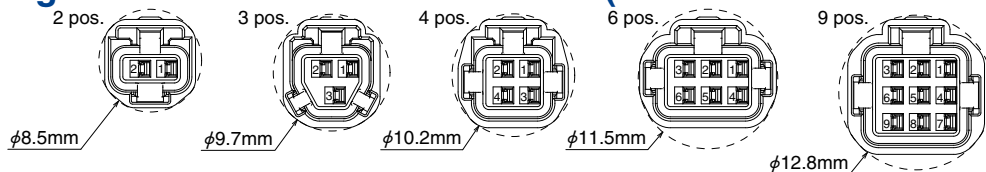
| Part No. | HRS No. | No. of Contacts | A | B |
|----------------|------------|-----------------|-----|------|
| DF62W-2EP-2.2C | 544-1003-0 | 2 | 7.5 | 6.7 |
| DF62W-3EP-2.2C | 544-1005-5 | 3 | 8.0 | 9.15 |
| DF62W-4EP-2.2C | 544-1007-0 | 4 | 9.1 | |

| Part No. | HRS No. | No. of Contacts | A | B |
|----------------|------------|-----------------|------|-------|
| DF62W-6EP-2.2C | 544-1009-6 | 6 | 11.3 | 9.15 |
| DF62W-9EP-2.2C | 544-1011-8 | 9 | | 11.35 |

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

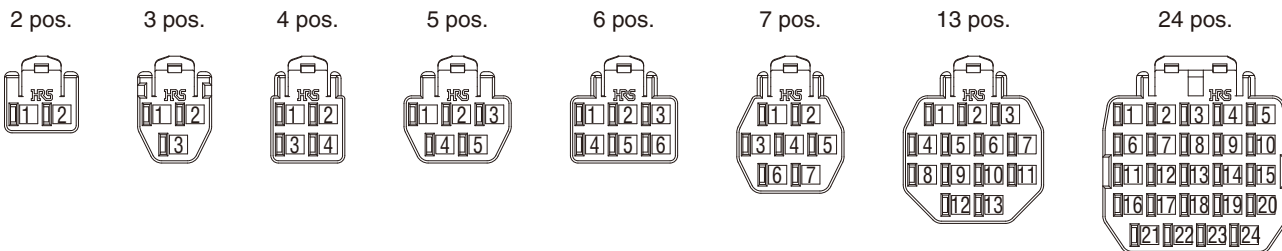
Note 2 : The Water-proof type and a non-water-proof type are not intermateable.

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

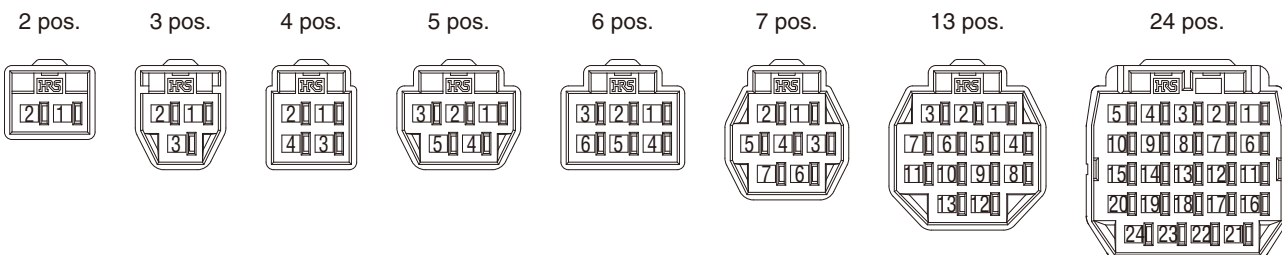


Note : Applicable jacket outer diameter : φ1.4 to 1.6mm

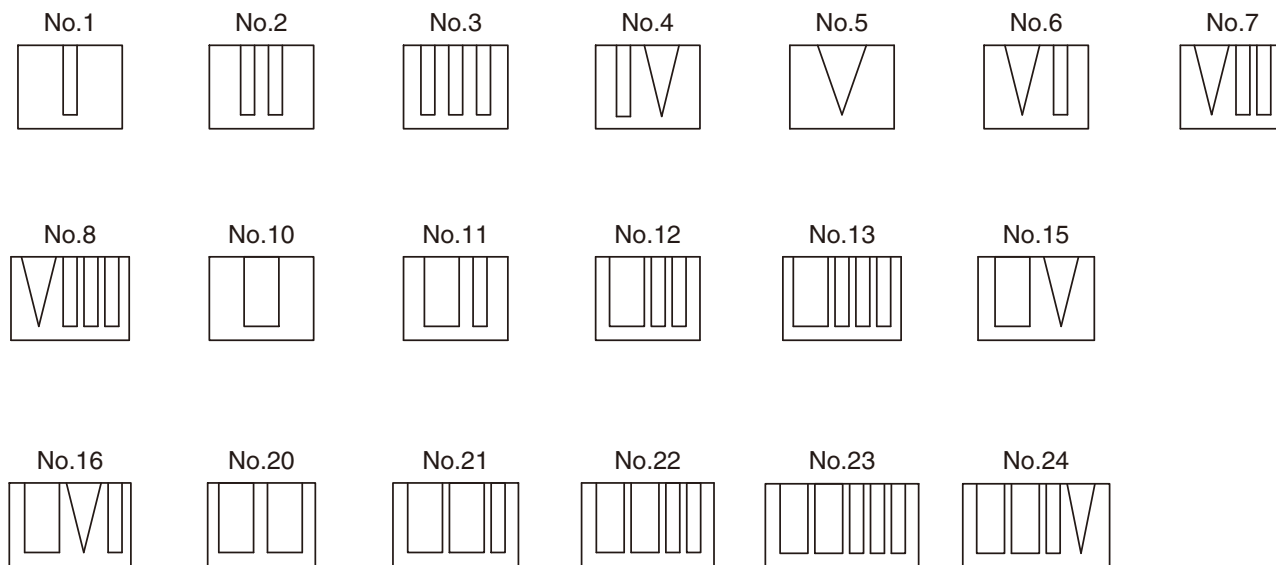
◆ Socket contact No. Summary diagram (from the mating section side)



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

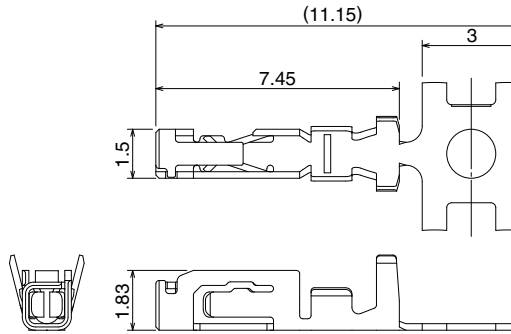


◆ Contact No. diagram



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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 ² | 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 ² 0.141mm ² 0.089mm ² | 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 ² | φ0.75 to φ1.2mm |

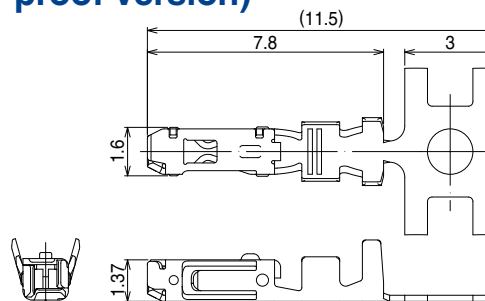
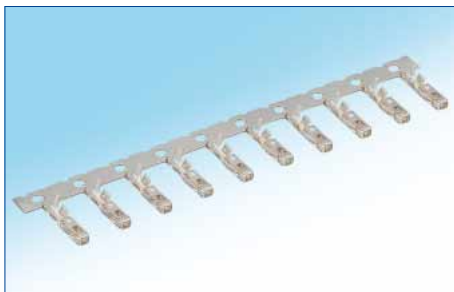
Note 1 : When using wires that are not recommended by Hirose, please contact one of our sales representatives for clarification.

● 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 ² | 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 ² 0.141mm ² 0.089mm ² | 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 ² | 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 ² 0.342mm ² | 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 ² 0.221mm ² | |
| | | | 1430 | 24 AWG 26 AWG | 11/0.16mm 7/0.16mm | 0.221mm ² 0.141mm ² | |

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.

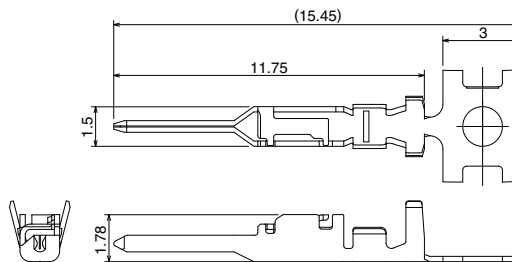
Note 3 : The Water-proof type and non-water-proof type are a not intermateable.

● 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 ² 0.342mm ² | 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 ² 0.221mm ² | φ1.58mm φ1.42mm |
| | | | 1430 | 26 AWG | 7/0.16mm | 0.141mm ² | 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 ² | 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 ² 0.141mm ² 0.089mm ² | 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 ² | φ0.75 to φ1.2mm |

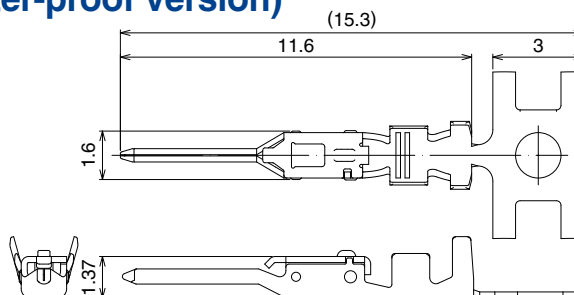
Note 1 : When using wires that are not recommended by Hirose, please contact one of our sales representatives for clarification.

● 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 ² | 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 ² 0.141mm ² 0.089mm ² | 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 ² | 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 ² 0.342mm ² | 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 ² 0.221mm ² | |
| | | | 1430 | 24 AWG 26 AWG | 11/0.16mm 7/0.16mm | 0.221mm ² 0.141mm ² | |

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 ² 0.342mm ² | 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 ² 0.221mm ² | φ1.58mm φ1.42mm |
| | | | 1430 | 26 AWG | 7/0.16mm | 0.141mm ² | φ1.48mm |

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

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◆ 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]

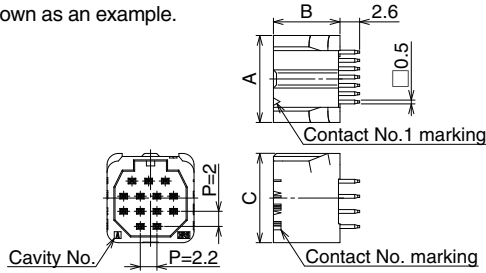
- Electric wires that are applicable for crimping connectors shall, principally, be the tin-plated stranded soft-copper wire.
- Crimping of electric wires wherein single wires, polyester yarns, etc., exist and crimping of tin-coated wires should be avoided.
- Avoid crimping two electric wires together.
- 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.



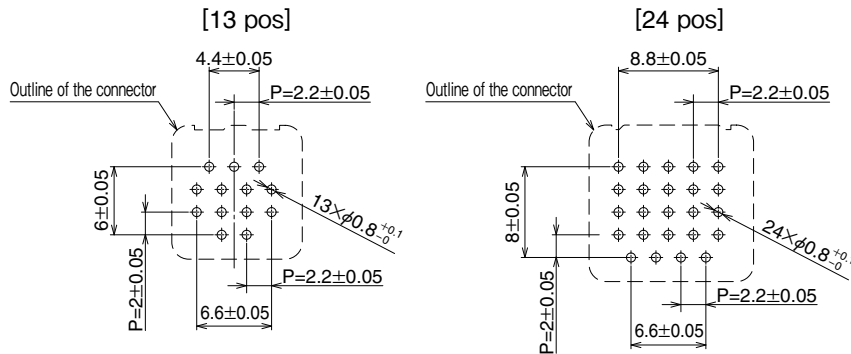
Unit : mm

| 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.

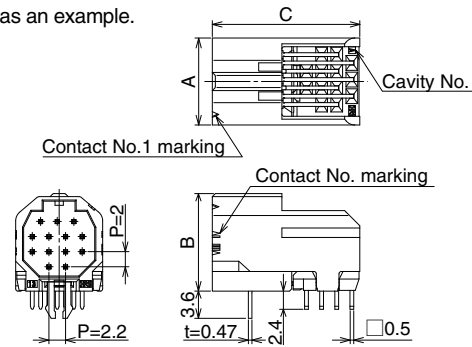
● Recommended PCB layout (Recommended thickness t=1.6mm)



■ Right Angle pin Header



*13 pos. shown as an example.



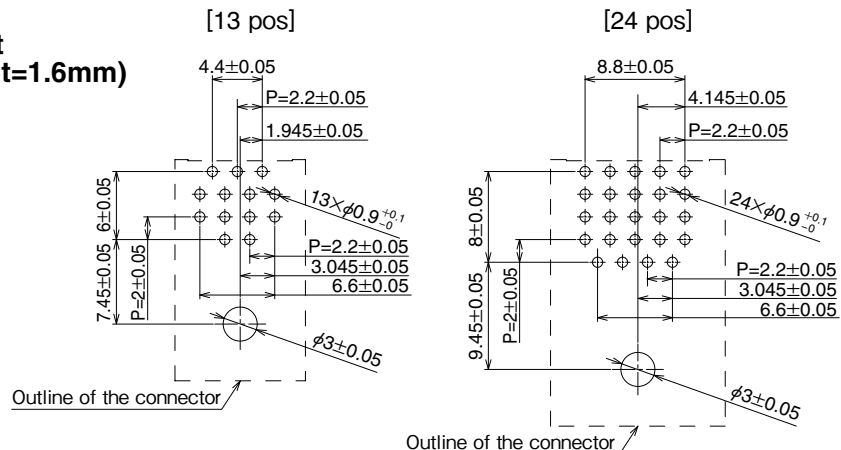
Unit : mm

| 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.

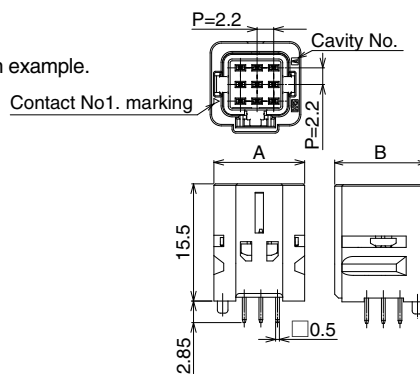
● Recommended PCB layout (Recommended thickness t=1.6mm)



■ Straight pin Header (Water proof type)



*9 pos. shown as an example.



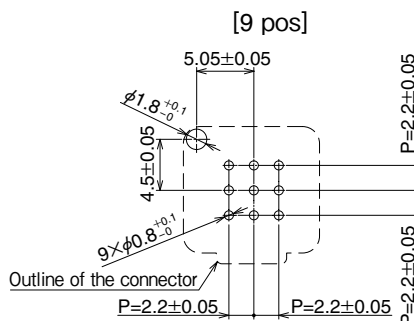
Unit : mm Unit : pcs

| 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 | ✓ | ✓ |

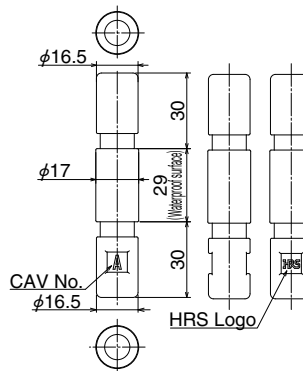
[Specification No.] **
 (20) : Tin plating
 (50) : Gold plating

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"> ■ Soldering profile when using an automatic soldering device Soldering temperature : 260°C ; Soldering time: no more than 10 seconds ■ Hand soldering conditions Temperature of soldering iron : 300°C , soldering time : no more than 3 seconds |
| <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"> 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. 2. During hand soldering, do not apply excess amounts flux which can migrate on to the connector. 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. 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. |
| <p>4. Handling instructions</p> | <p>Please refer to the "Wire-to-Board Connector Guide".</p> |

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