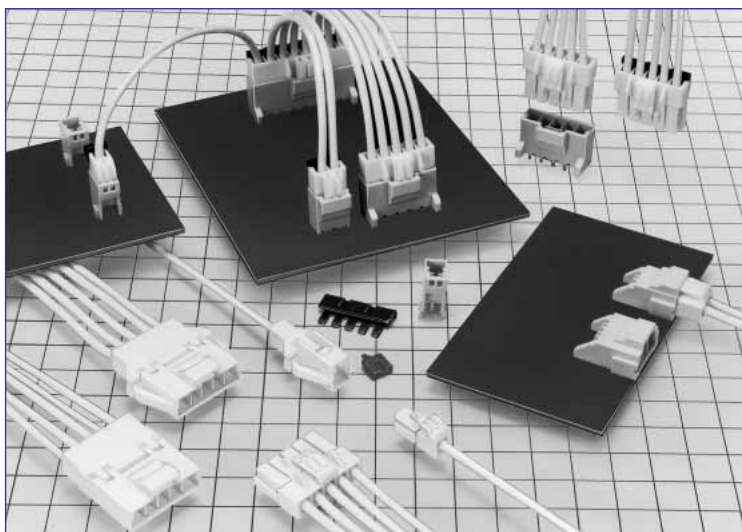
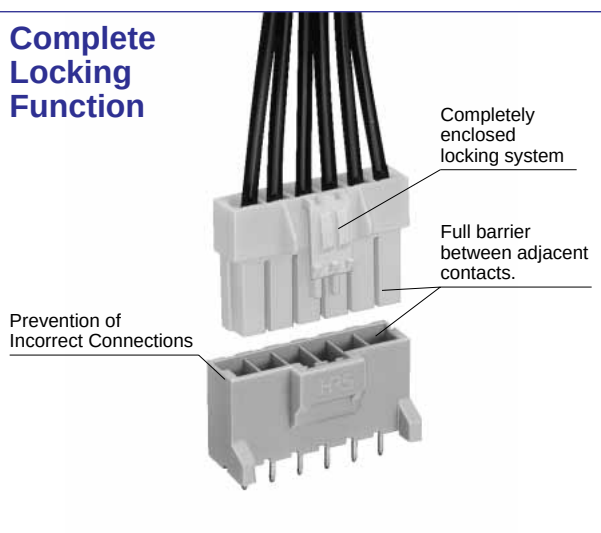


## 3.96 mm Pitch Miniature Connectors for Internal Power Supplies (UL,C-UL and TÜV Listed)

### DF7 Series



#### Complete Locking Function



#### ■ Features

##### 1. Complete Locking Function

Reliable interior lock protects mated connectors from accidental disconnection.

##### 2. Increased Contact Retention of Crimped Contacts and Prevention of Incomplete Insertion

Separate contact retainer increases the contact retention, assures and visually confirms the complete contact insertion.

##### 3. Molded-in Contact Retention Tabs

Handling of terminated contacts during the assembly and termination is easier and avoids entangling of wires, since there are no protruding metal tabs.

##### 4. Incorrect Insertion Prevention

Connectors are polarized to assure correct mating with corresponding parts.

##### 5. Solder Crack Prevention

Glass reinforced resin is used in the pin header bodies to prevent solder cracks caused by the heat shrinkage.

##### 6. Prevention of Incorrect Board Placement

Built-in locating posts assure correct connector placement and orientation on the board.(2-12 pos.)

##### 7. Supports Sealing after Installation.

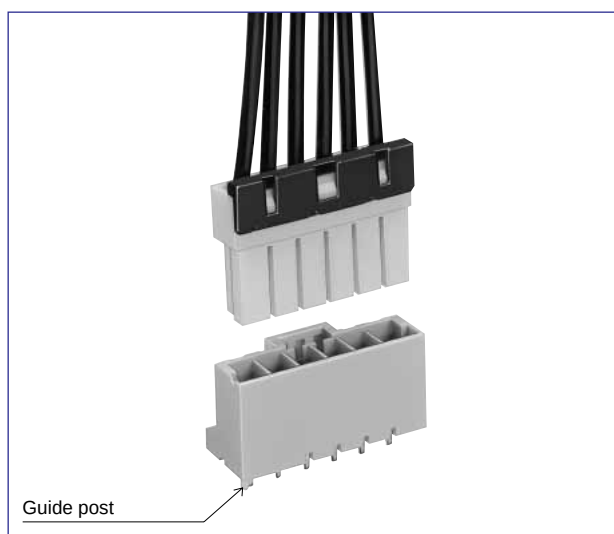
Sealing compound can be applied to the board installed connector for distance of 6 mm max. from the mounting surface (9 mm max. for single position).

##### 8. Cost Effective Tooling

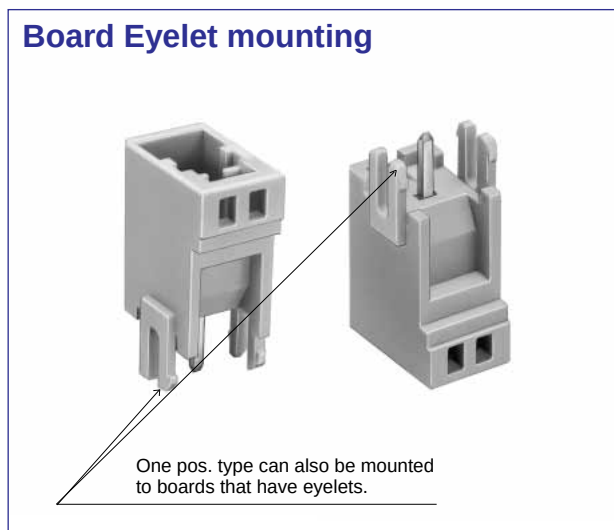
The same crimping tools are used to terminate socket and pin contacts.

##### 9. Prevention of Short Circuits between Adjacent Contacts

Each contact is completely surrounded by the insulator housing, electrically isolating it from adjacent contacts.



#### Board Eyelet mounting



☞ Continued.

10. 10 A maximum Current

Connector can carry current of 10 A per contact with #16 AWG conductor. Refer to page 3 for current ratings for multi-position connectors using other conductor sizes.

11. Color Variations

1 pos. is available in a standard 3 colors: natural, blue, and red.

12. Supports Eyelets

1 pos. can be mounted to boards which have eyelets attached.

Applications

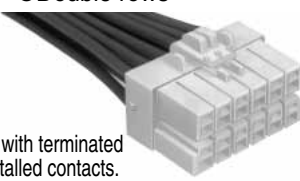
Office equipment, power supplies for industrial, medical and instrumentation applications, variety of consumer electronic and electrical applications.

●Single row



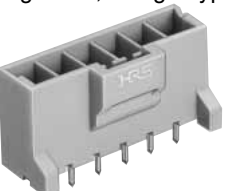
Shown with terminated and installed contacts. Refer to page 8 for details.

●Double rows



Shown with terminated and installed contacts. Refer to page 11 for details.

●Single row, straight type



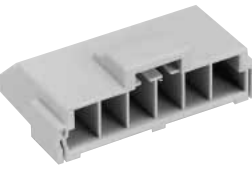
Refer to page 4 for details.

●Double rows, straight type



Refer to page 10 for details.

●Single row, right angle type



Refer to page 5 for details.

●Double row, right angle type



Refer to page 10 for details.

●Panel lock type



Shown with terminated and installed contacts. Refer to page 6 for details.



Shown with terminated and installed contacts. Refer to page 7 for details.

Retainer  
(optional, order separately)



Refer to page 10 for details.

Ordering information

●Socket, Header

DF7 - \* S - 3.96 C

1

2

3

4

5

●Contacts

DF7 - \*\* SCF

1

6

7

|   |                                |   |                             |
|---|--------------------------------|---|-----------------------------|
| 1 | Series name: DF7, DF7A         | 6 | Applicable Conductor        |
| 2 | Number of contacts: 1 to 12    |   | 1618: AWG 16 to AWG 18      |
| 3 | Connector type                 |   | 2022: AWG 20 to AWG 22      |
|   | S: Socket                      |   | 2426: AWG 24 to AWG 26      |
|   | DS: Double-row socket          | 7 | Packaging                   |
|   | P: Header                      |   | SCF: Socket contacts / Reel |
|   | DP: Double-row Header          |   | SC: Socket contacts / Bag   |
|   | EP: In-line plug               |   | PCF: Plug contacts / Reel   |
|   | RS/P: Retainer                 |   | PC: Plug contacts / Bag     |
| 4 | Contact pitch: 3.96mm(7.92 mm) |   |                             |
| 5 | Type of housing: header        |   |                             |
|   | C: Crimp housing               |   |                             |
|   | DSA: Straight header           |   |                             |
|   | DS: Right-angle header         |   |                             |
|   | Blank: Retainer                |   |                             |

## ■Product Specifications

| Ratings | Current rating | Row           | No. of contacts | AWG16 | AWG18                  | AWG20 | AWG22 |                             |                             |
|---------|----------------|---------------|-----------------|-------|------------------------|-------|-------|-----------------------------|-----------------------------|
|         |                | 1             | 1~10            | 10A   | 7A                     | 5A    | 4A    | Operating temperature range | -35°C to 85°C (Note 1)      |
|         |                | 2             | 4               | 10A   | 9A                     | 7A    | 6A    | Operating humidity range    | 20% to 80%                  |
|         |                |               | 6               | 9A    | 8A                     | 6A    | 5A    |                             |                             |
|         |                |               | 8               | 9A    | 8A                     | 6A    | 5A    | Storage temperature range   | -10°C to 60°C (Note 2)      |
|         |                |               | 10              | 8A    | 7A                     | 5A    | 4A    | Storage humidity range      | 40% to 70% (Note 2)         |
|         |                |               | 12              | 8A    | 7A                     | 5A    | 4A    |                             |                             |
|         | Voltage rating | Specification |                 |       | AC 630V                |       |       | UL/C-UL/TÜV                 | File No. and Recognition No |
|         |                | UL/C-UL       |                 |       | AC 600V                |       |       | UL                          | :E52653                     |
|         |                | TÜV           |                 |       | AC 600V(7.92mm pitch)  |       |       | C-UL                        | :E52653                     |
|         |                |               |                 |       | AC 300V (3.96mm pitch) |       |       | TÜV                         | :R9750437                   |

| Item                                        | Specification                                               | Condition                                                                                                       |
|---------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| 1. Contact resistance                       | Contact resistance (Initial value)                          | 10 m ohms max. 20mV max., 1mA                                                                                   |
| 2. Insulator resistance                     | 1000 M ohms min.                                            | 500 V DC                                                                                                        |
| 3. Withstanding voltage                     | No flashover or Insulator breakdown                         | 1500 V AC for 1 minute                                                                                          |
| 4. Insertion-Extraction force (per contact) | 0.3N min., 4.5N max.                                        | Measured with a steel pin of 0.64 x 1.2 ± 0.002 mm                                                              |
| 5. Durability (mating/unmating)             | 30 cycles                                                   | Contact resistance of 20 m ohms max.                                                                            |
| 6. Vibration                                | No momentary disconnections of 1 μs min.                    | Frequency 10 to 55 Hz, single amplitude of 0.75 mm, 3 axis, 2 hours                                             |
| 7. Shock                                    | No electrical discontinuity of 1 μs. min.                   | Acceleration of 490 m/s <sup>2</sup> , 11 ms duration, sine half-wave waveform, 3 cycles in each of the 3 axis. |
| 8. Humidity                                 | Contact resistance 20 m ohms max.                           | Temperature 40°C ± 2°C, 90% to 95% RH, 96 hours                                                                 |
| 9. Temperature cycle                        | Contact resistance of 20 m ohms max.                        | (-55°C: 30 minutes → 5 to 35°C: 5 minutes → 85°C: 30 minutes → 5 to 35°C: 5 minutes) for 5 cycles               |
| 10. Resistance to soldering heat            | No deformation of the insulator parts affecting performance | Flow solder temperature 250°C, 10 seconds<br>Manual soldering: Soldering iron temperature 300°C, 3 seconds      |

Note 1: Includes temperature rise caused by the current flow.

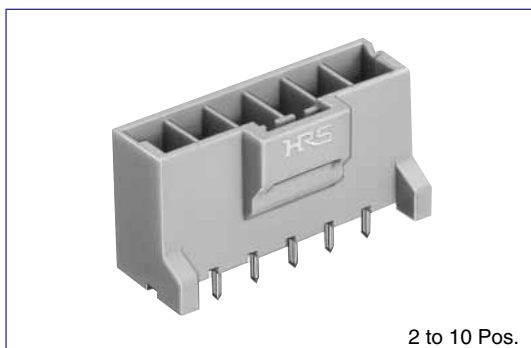
Note 2: The term "storage" refers to products stored for long period of time prior to mounting and use. Operating Temperature Range and Humidity range covers non- conducting condition of installed connectors in storage, shipment or during transportation.

## ■Materials

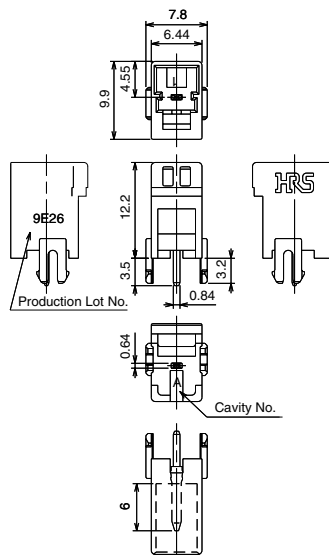
| Product        | Part      | Material                        | Finish                                                | Remarks |
|----------------|-----------|---------------------------------|-------------------------------------------------------|---------|
| Sockets        | Insulator | Polyamide                       | Color: White                                          | UL94V-0 |
| Headers        | Insulator | Polyamide<br>(Glass reinforced) | Color: Beige (Single row)<br>Color: Grey (Double row) | UL94V-0 |
|                | Contact   | High conductivity copper alloy  | Tin plating (Note)                                    | —       |
| In-line plug   | Insulator | Polyamide                       | Color: White                                          | UL94V-0 |
| Retainer       | Insulator | Polyamide                       | Color: Black                                          | UL94V-0 |
| Crimp contacts | Contacts  | High conductivity copper alloy  | Tin plating (Note)                                    | —       |

Note: Hirose Electric's plating incorporates anti-whisking compounds.

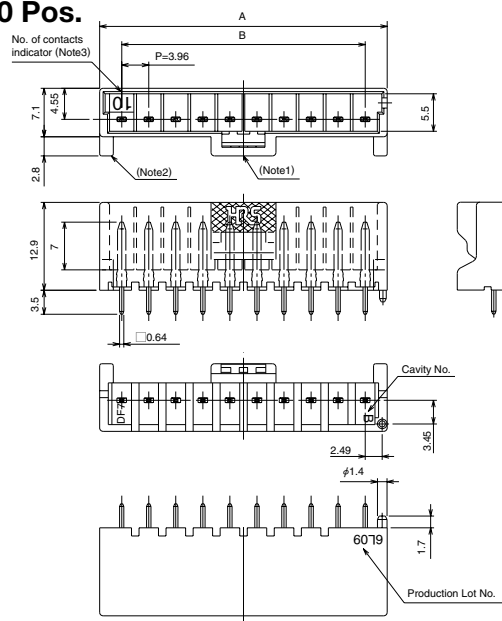
## ■ Straight header



1 Pos.

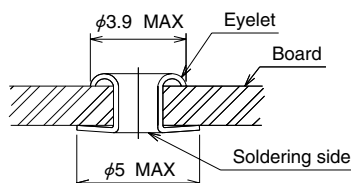


2 to 10 Pos.

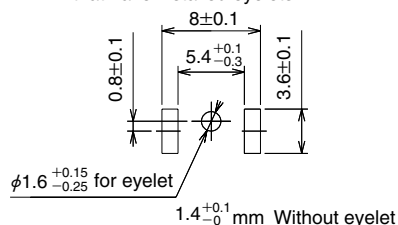


## ◆ PCB mounting pattern (Board thickness: $1.6 \pm 0.1$ )

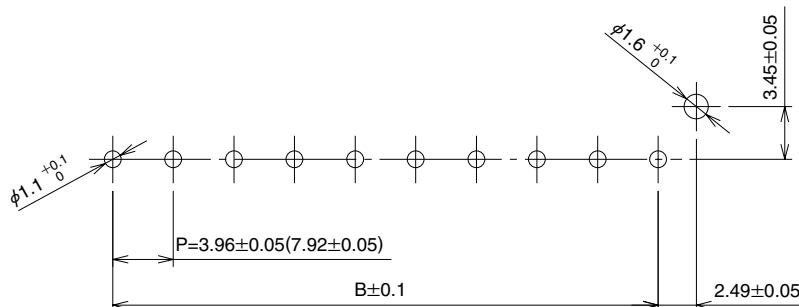
1 Pos.



Note 5: One pos. type can also be mounted to boards that have installed eyelets.



2 to 10 Pos.



| Part Number     | CL No.       | Number of contacts | A     | B     |
|-----------------|--------------|--------------------|-------|-------|
| DF7- 1P-3.96DSA | CL680-0133-1 | 1                  | —     | —     |
| DF7- 2P-3.96DSA | CL680-0036-5 | 2                  | 10.40 | 3.96  |
| DF7- 3P-3.96DSA | CL680-0037-8 | 3                  | 14.36 | 7.92  |
| DF7- 4P-3.96DSA | CL680-0038-0 | 4                  | 18.32 | 11.88 |
| DF7- 5P-3.96DSA | CL680-0039-3 | 5                  | 22.28 | 15.84 |
| DF7- 6P-3.96DSA | CL680-0040-2 | 6                  | 26.24 | 19.80 |
| DF7- 7P-3.96DSA | CL680-0041-5 | 7                  | 30.20 | 23.76 |
| DF7- 8P-3.96DSA | CL680-0042-8 | 8                  | 34.16 | 27.72 |
| DF7- 9P-3.96DSA | CL680-0043-0 | 9                  | 38.12 | 31.68 |
| DF7-10P-3.96DSA | CL680-0044-3 | 10                 | 42.08 | 35.64 |
| DF7- 2P-7.92DSA | CL680-0108-4 | 2                  | 14.36 | 7.92  |
| DF7- 3P-7.92DSA | CL680-0109-7 | 3                  | 22.28 | 15.84 |
| DF7- 4P-7.92DSA | CL680-0110-6 | 4                  | 30.20 | 23.76 |
| DF7- 5P-7.92DSA | CL680-0111-9 | 5                  | 38.12 | 31.68 |

Note 1) Bag packaging (100 pieces/bag). Order by number of bags.

Note 2) The 2 pos. type does not have walls on both sides.

Note 3) DF7-2P-7.92DSA plug has #2 contact positions of DF7-3P-3.96DSA without contacts inserted and the number of pos. indication is 2.

(Mating receptacle: DF7#-3S-3-96C)

DF7-3P-7.92DSA plug has #2 and #4 contact positions of DF7-5P-3.96DSA without contacts inserted and the number of pos. indication is 3.

(Mating receptacle: DF7#-5S-3-96C)

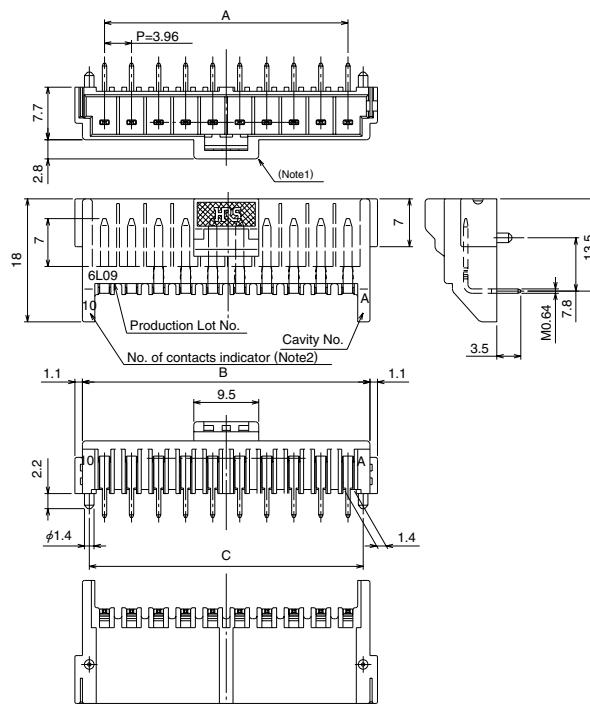
DF7-4P-7.92DSA plug has #2, #4 and #6 contact of DF7-7P-3.96DSA without contacts inserted and the number of pos. indication is 4.

(Mating receptacle: DF7#-7S-3-96C)

DF7-5P-7.92DSA plug has #2, #4, #6 and #8 contact positions of DF7-9P-3.96DSA without contacts inserted and the number of pos. indication is 5.

(Mating receptacle: DF7#-9S-3-96C)

## ■ Right angle header



| Part Number        | CL No.          | Number of contacts | A     | B     | C     | Quantity per tray |
|--------------------|-----------------|--------------------|-------|-------|-------|-------------------|
| DF7- 2P-3.96DS(24) | CL680-0081-0-24 | 2                  | 3.96  | 10.40 | 8.40  | 114               |
| DF7- 3P-3.96DS(24) | CL680-0082-2-24 | 3                  | 7.92  | 14.36 | 12.36 | 84                |
| DF7- 4P-3.96DS(24) | CL680-0083-5-24 | 4                  | 11.88 | 18.32 | 16.32 | 66                |
| DF7- 5P-3.96DS(24) | CL680-0084-8-24 | 5                  | 15.84 | 22.28 | 20.28 | 60                |
| DF7- 6P-3.96DS(24) | CL680-0085-0-24 | 6                  | 19.80 | 26.24 | 24.24 | 48                |
| DF7- 7P-3.96DS(24) | CL680-0086-3-24 | 7                  | 23.76 | 30.20 | 28.20 | 42                |
| DF7- 8P-3.96DS(24) | CL680-0087-6-24 | 8                  | 27.72 | 34.16 | 32.16 | 36                |
| DF7- 9P-3.96DS(24) | CL680-0088-9-24 | 9                  | 31.68 | 38.12 | 36.12 | 36                |
| DF7-10P-3.96DS(24) | CL680-0089-1-24 | 10                 | 35.64 | 42.08 | 40.08 | 30                |
| DF7- 2P-7.92DS(24) | CL680-0124-0-24 | 2                  | 7.92  | 14.36 | 12.36 | 84                |
| DF7- 3P-7.92DS(24) | CL680-0125-3-24 | 3                  | 15.84 | 22.28 | 20.28 | 60                |
| DF7- 4P-7.92DS(24) | CL680-0126-6-24 | 4                  | 23.76 | 30.20 | 28.20 | 42                |
| DF7- 5P-7.92DS(24) | CL680-0127-9-24 | 5                  | 31.68 | 38.12 | 36.12 | 36                |

Note 1) Tray packaging. Order by number of quantity in the tray.

Note 2) DF7-2P-7.92DS plug has #2 contact positions of DF7-3P-3.96DS without contacts inserted and the number of pos. indication is 2.

(Mating receptacle: DF7#-3S-3-96C)

DF7-3P-7.92DS plug has #2 and #4 contact positions of DF7-5P-3.96DS without contacts inserted and the number of pos. indication is 3.

(Mating receptacle: DF7#-5S-3-96C)

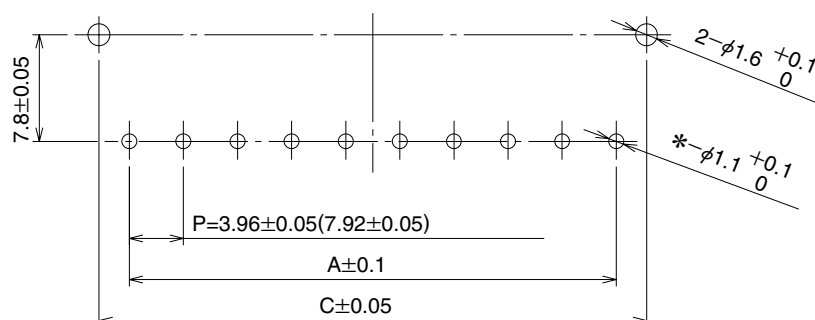
DF7-4P-7.92DS plug has #2, #4 and #6 contact of DF7-7P-3.96DS without contacts inserted and the number of pos. indication is 4.

(Mating receptacle: DF7#-7S-3-96C)

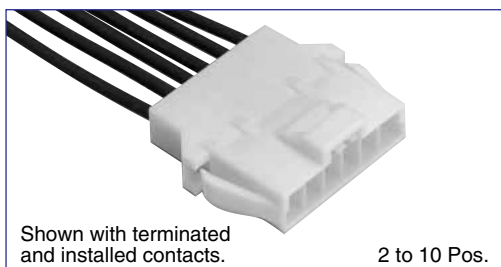
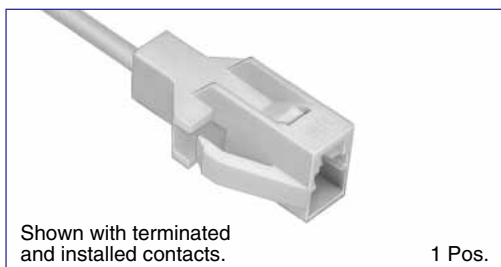
DF7-5P-7.92DS plug has #2, #4, #6 and #8 contact positions of DF7-9P-3.96DS without contacts inserted and the number of pos. indication is 5.

(Mating receptacle: DF7#-9S-3-96C)

## ◆ PCB mounting pattern (Board thickness: $1.6 \pm 0.1$ )



## ■ In-line plug (Panel lock type)

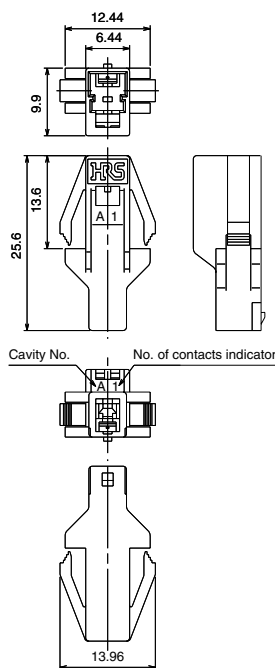


| Part Number    | CL No.       | Number of contacts | A     | B     | C     |
|----------------|--------------|--------------------|-------|-------|-------|
| DF7- 1EP-3.96C | CL680-0134-4 | 1                  | 6.44  | —     | 13.96 |
| DF7- 2EP-3.96C | CL680-0018-3 | 2                  | 10.40 | 3.96  | 17.40 |
| DF7- 3EP-3.96C | CL680-0019-6 | 3                  | 14.36 | 7.92  | 21.36 |
| DF7- 4EP-3.96C | CL680-0020-5 | 4                  | 18.32 | 11.88 | 25.32 |
| DF7- 5EP-3.96C | CL680-0021-8 | 5                  | 22.28 | 15.84 | 29.28 |
| DF7- 6EP-3.96C | CL680-0022-0 | 6                  | 26.24 | 19.80 | 33.24 |
| DF7- 7EP-3.96C | CL680-0023-3 | 7                  | 30.20 | 23.76 | 37.20 |
| DF7- 8EP-3.96C | CL680-0024-6 | 8                  | 34.16 | 27.72 | 41.16 |
| DF7- 9EP-3.96C | CL680-0025-9 | 9                  | 38.12 | 31.68 | 45.12 |
| DF7-10EP-3.96C | CL680-0026-1 | 10                 | 42.08 | 35.64 | 49.08 |

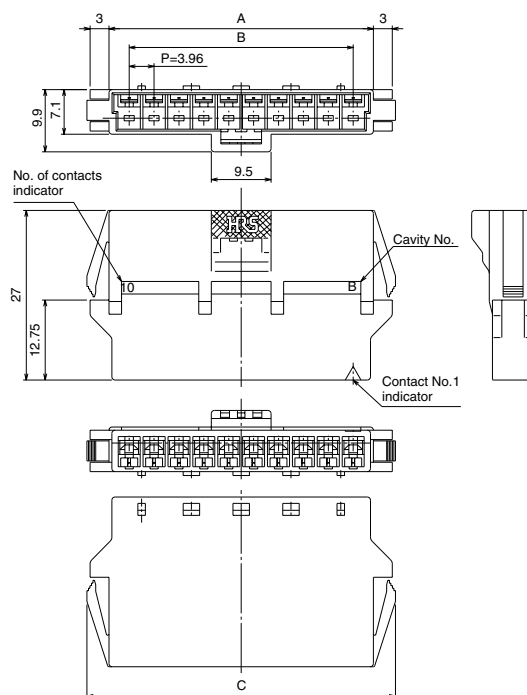
Note1: Bag packaging (100 pieces/bag). Order by number of bags.

Note2: Refer to page 10 for retainer.

### 1 Pos.

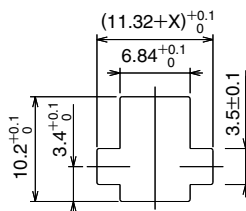


### 2 to 10 Pos.



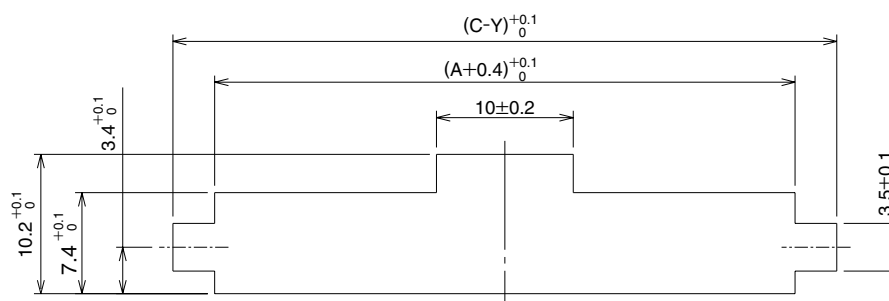
## ◆ Panel Cutout

### 1 Pos.

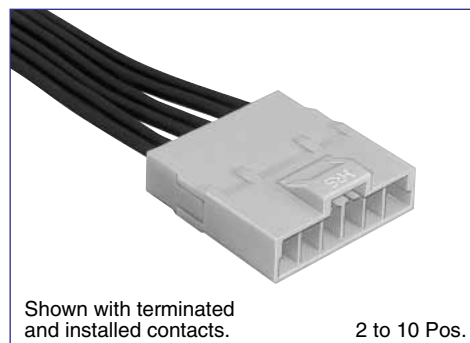
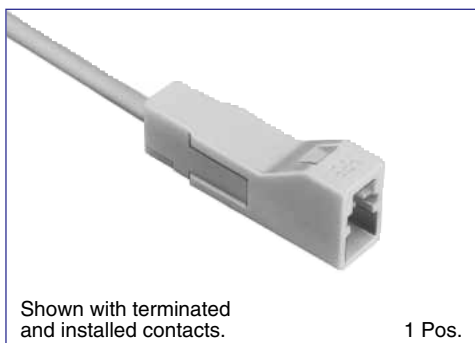


|     | X    | Y    |
|-----|------|------|
| 2.0 | 1.44 | 0.88 |
| 1.6 | 0.96 | 0.96 |
| 1.2 | 0.48 | 1.44 |
| 0.8 | 0    | 1.92 |

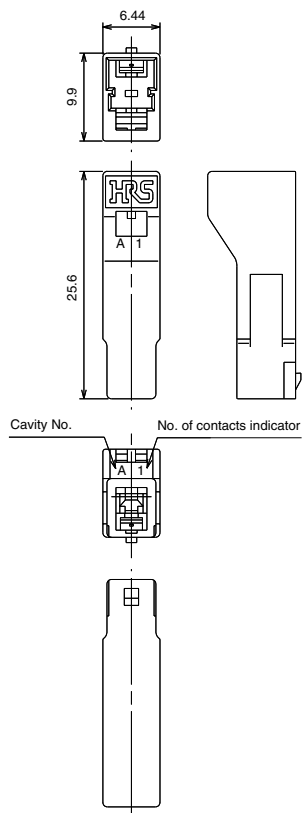
### 2 to 10 Pos.



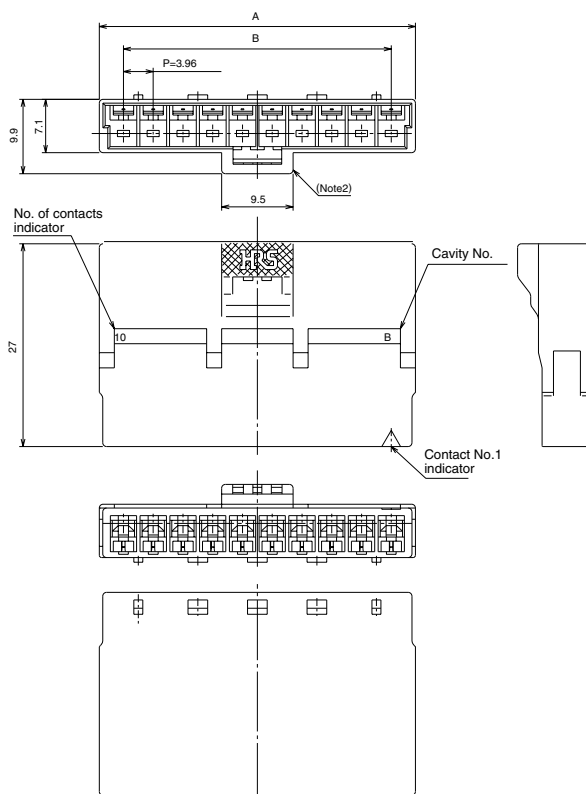
## ■ In-line Plug



### 1 Pos.



### 2 to 10 Pos.

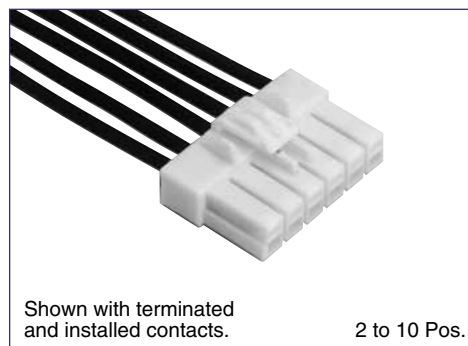
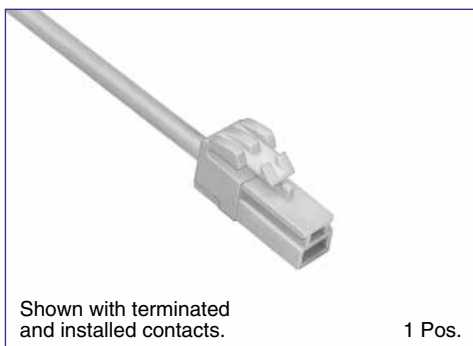


| Part Number     | CL No.       | Number of contacts | A     | B     |
|-----------------|--------------|--------------------|-------|-------|
| DF7A- 1EP-3.96C | CL680-0135-7 | 1                  | 6.44  | —     |
| DF7A- 2EP-3.96C | CL680-0072-9 | 2                  | 10.40 | 3.96  |
| DF7A- 3EP-3.96C | CL680-0073-1 | 3                  | 14.36 | 7.92  |
| DF7A- 4EP-3.96C | CL680-0074-4 | 4                  | 18.32 | 11.88 |
| DF7A- 5EP-3.96C | CL680-0075-7 | 5                  | 22.28 | 15.84 |
| DF7A- 6EP-3.96C | CL680-0076-0 | 6                  | 26.24 | 19.80 |
| DF7A- 7EP-3.96C | CL680-0077-2 | 7                  | 30.20 | 23.76 |
| DF7A- 8EP-3.96C | CL680-0078-5 | 8                  | 34.16 | 27.72 |
| DF7A- 9EP-3.96C | CL680-0079-8 | 9                  | 38.12 | 31.68 |
| DF7A-10EP-3.96C | CL680-0080-7 | 10                 | 42.08 | 35.64 |

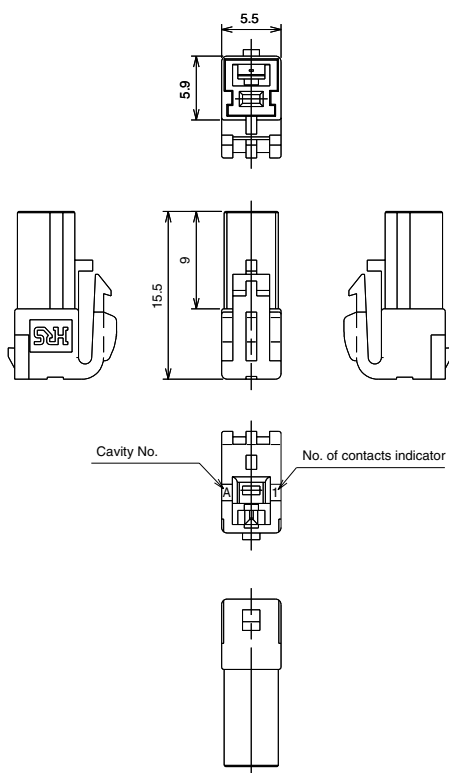
Note1: Bag packaging (100 pieces/bag). Order by number of bags.

Note2: Refer to page 10 for retainer.

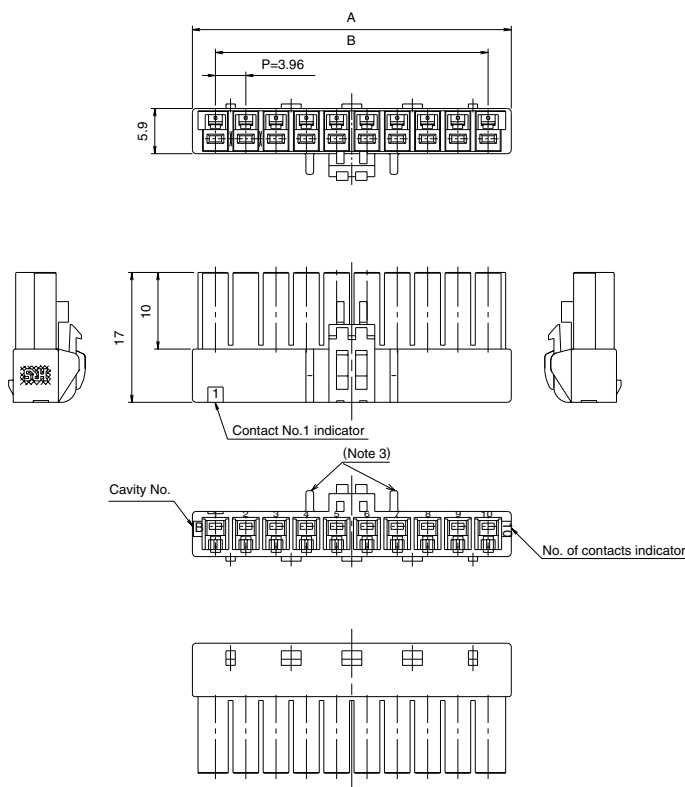
## ■ Crimp Sockets



### 1 Pos.



### 2 to 10 Pos.



| Part Number   | CL No.       | Number of contacts | A     | B     |
|---------------|--------------|--------------------|-------|-------|
| DF7- 1S-3.96C | CL680-0132-9 | 1                  | 5.50  | —     |
| DF7- 2S-3.96C | CL680-0009-2 | 2                  | 10.00 | 3.96  |
| DF7- 3S-3.96C | CL680-0010-1 | 3                  | 13.96 | 7.92  |
| DF7- 4S-3.96C | CL680-0011-4 | 4                  | 17.92 | 11.88 |
| DF7- 5S-3.96C | CL680-0012-7 | 5                  | 21.88 | 15.84 |
| DF7- 6S-3.96C | CL680-0013-0 | 6                  | 25.84 | 19.80 |
| DF7- 7S-3.96C | CL680-0014-2 | 7                  | 29.80 | 23.76 |
| DF7- 8S-3.96C | CL680-0015-5 | 8                  | 33.76 | 27.72 |
| DF7- 9S-3.96C | CL680-0016-8 | 9                  | 37.72 | 31.68 |
| DF7-10S-3.96C | CL680-0017-0 | 10                 | 41.68 | 35.64 |

Note1: Bag packaging (100 pieces/bag). Order by number of bags.

Note2: Refer to page 10 for retainer.

## ■ Retainer

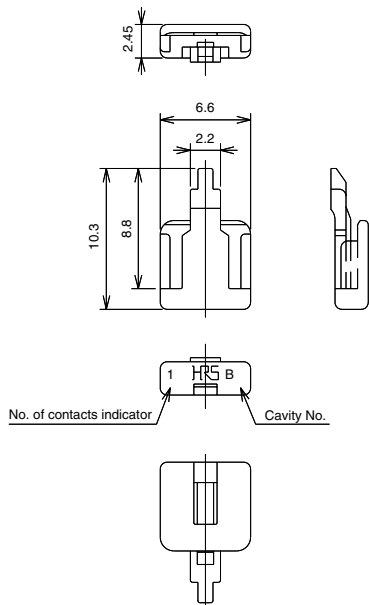


1 Pos.

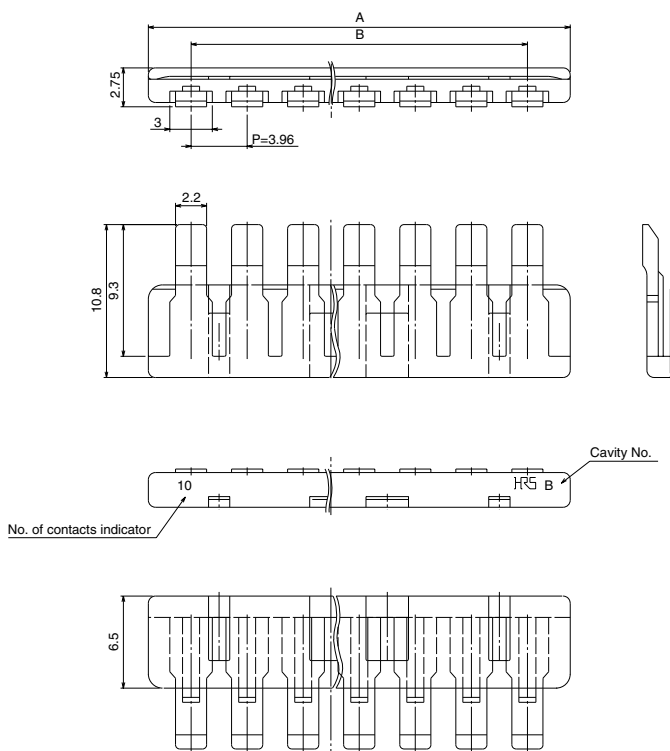


2 to 10 Pos.

### 1 Pos.



### 2 to 10 Pos.

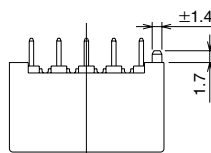
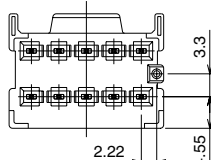
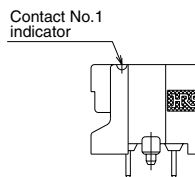
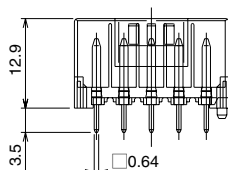
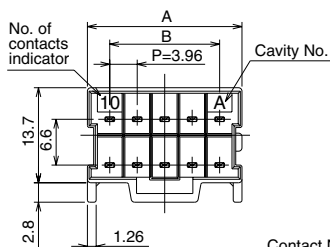
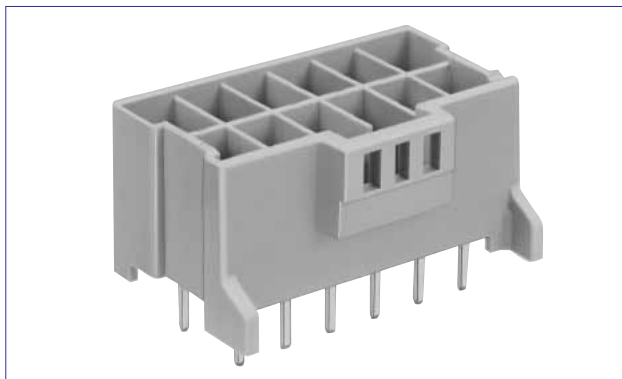


| Part Number     | CL No.       | Number of contacts | A     | B     |
|-----------------|--------------|--------------------|-------|-------|
| DF7- 1RS/P-3.96 | CL680-0136-0 | 1                  | —     | —     |
| DF7- 2RS/P-3.96 | CL680-0027-4 | 2                  | 10.00 | 3.96  |
| DF7- 3RS/P-3.96 | CL680-0028-7 | 3                  | 13.96 | 7.92  |
| DF7- 4RS/P-3.96 | CL680-0029-0 | 4                  | 17.92 | 11.88 |
| DF7- 5RS/P-3.96 | CL680-0030-9 | 5                  | 21.88 | 15.84 |
| DF7- 6RS/P-3.96 | CL680-0031-1 | 6                  | 25.84 | 19.80 |
| DF7- 7RS/P-3.96 | CL680-0032-4 | 7                  | 29.80 | 23.76 |
| DF7- 8RS/P-3.96 | CL680-0033-7 | 8                  | 33.76 | 27.72 |
| DF7- 9RS/P-3.96 | CL680-0034-0 | 9                  | 37.72 | 31.68 |
| DF7-10RS/P-3.96 | CL680-0035-2 | 10                 | 41.68 | 35.64 |

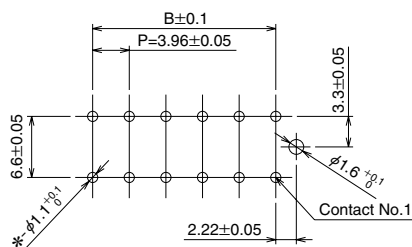
Note1: Bag packaging (100 pieces/bag). Order by number of bags.

Note2: Retainer is common to sockets, in-line plug.

## Double-row Straight Header



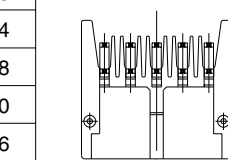
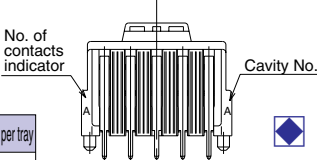
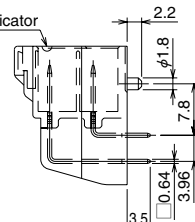
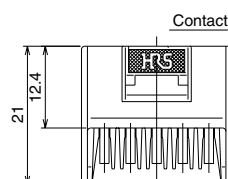
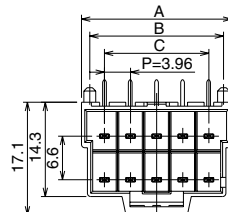
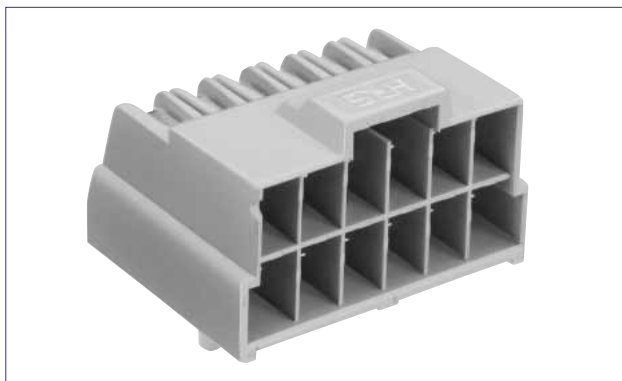
### PCB mounting pattern (Board thickness: 1.6±0.1)



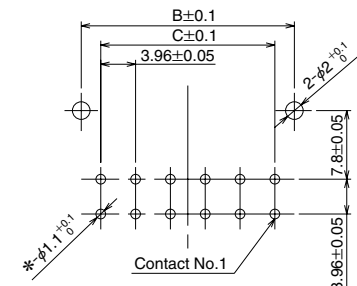
| Part Number          | CL No.          | Number of contacts | A     | B     | Quantity per tray |
|----------------------|-----------------|--------------------|-------|-------|-------------------|
| DF7- 4DP-3.96DSA(24) | CL680-0145-0-24 | 4                  | 10.40 | 3.96  | 132               |
| DF7- 6DP-3.96DSA(24) | CL680-0146-3-24 | 6                  | 14.36 | 7.92  | 96                |
| DF7- 8DP-3.96DSA(24) | CL680-0147-6-24 | 8                  | 18.32 | 11.88 | 72                |
| DF7-10DP-3.96DSA(24) | CL680-0148-9-24 | 10                 | 22.28 | 15.84 | 60                |
| DF7-12DP-3.96DSA(24) | CL680-0149-1-24 | 12                 | 26.24 | 19.80 | 54                |

Note: Tray packaging. Order by number of trays quantity.

## Double-row Right angle Header



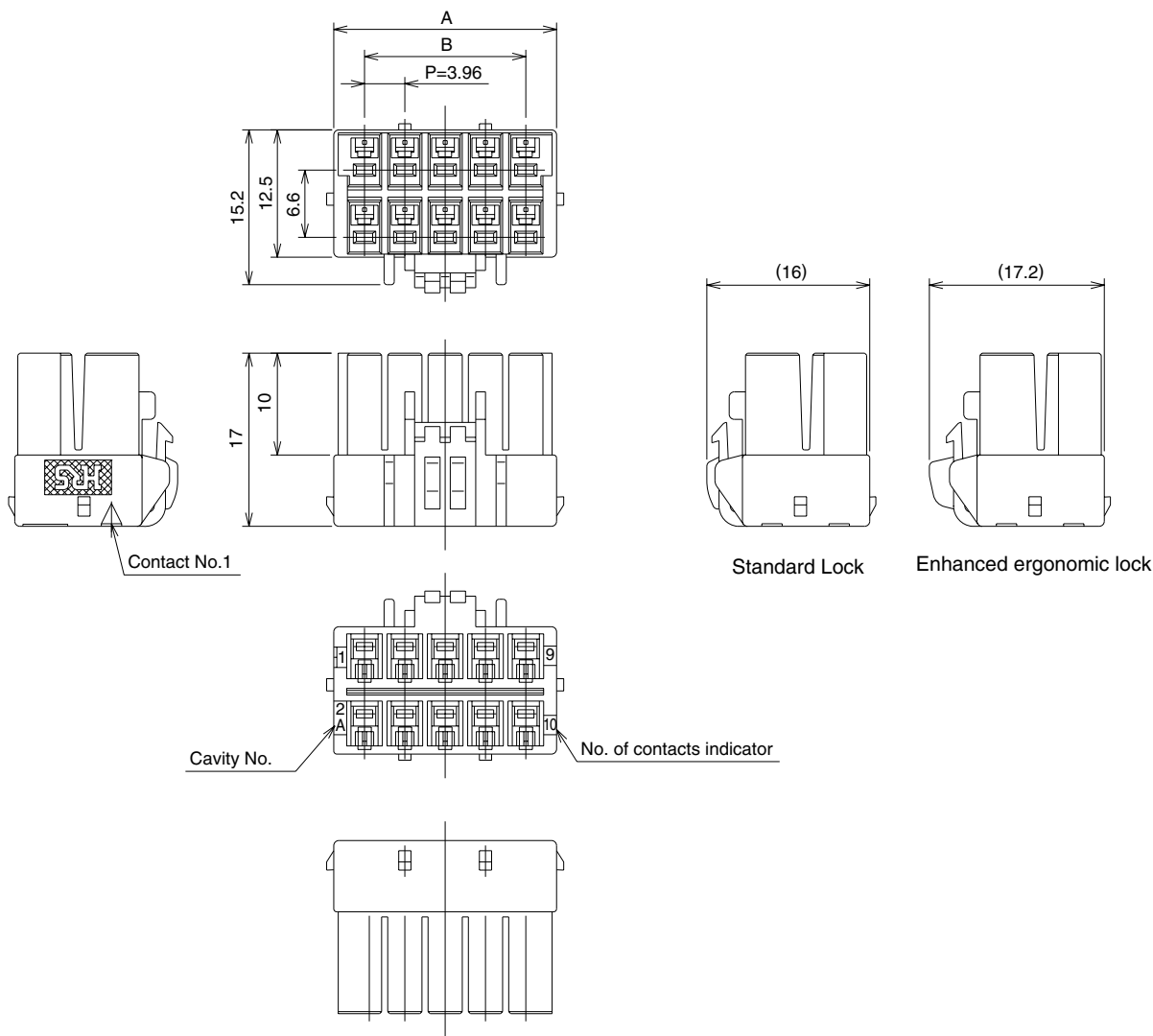
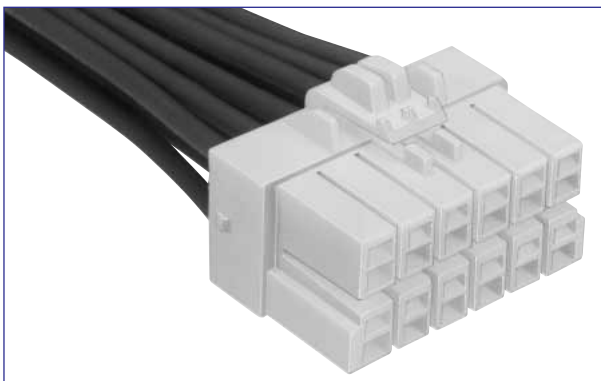
### PCB mounting pattern (Board thickness: 1.6±0.1)



| Part Number         | CL No.          | Number of contacts | A     | B     | C     | Quantity per tray |
|---------------------|-----------------|--------------------|-------|-------|-------|-------------------|
| DF7- 4DP-3.96DS(24) | CL680-0150-0-24 | 4                  | 10.40 | 8.40  | 3.96  | 88                |
| DF7- 6DP-3.96DS(24) | CL680-0151-3-24 | 6                  | 14.36 | 12.36 | 7.92  | 64                |
| DF7- 8DP-3.96DS(24) | CL680-0152-6-24 | 8                  | 18.32 | 16.32 | 11.88 | 48                |
| DF7-10DP-3.96DS(24) | CL680-0153-9-24 | 10                 | 22.28 | 20.28 | 15.84 | 40                |
| DF7-12DP-3.96DS(24) | CL680-0154-1-24 | 12                 | 26.24 | 24.24 | 19.80 | 36                |

Note: Tray packaging. Order by number of trays quantity.

## ■ Double-row Socket



### ■ Standard lock

| Part Number    | CL No.                               | Number of contacts | A     | B     |
|----------------|--------------------------------------|--------------------|-------|-------|
| DF7-4DS-3.96C  | Reserved For<br>product<br>expansion | 4                  | 10.00 | 3.96  |
| DF7-6DS-3.96C  |                                      | 6                  | 13.96 | 7.92  |
| DF7-8DS-3.96C  |                                      | 8                  | 17.92 | 11.88 |
| DF7-10DS-3.96C |                                      | 10                 | 21.88 | 15.84 |
| DF7-12DS-3.96C |                                      | 12                 | 25.84 | 19.80 |

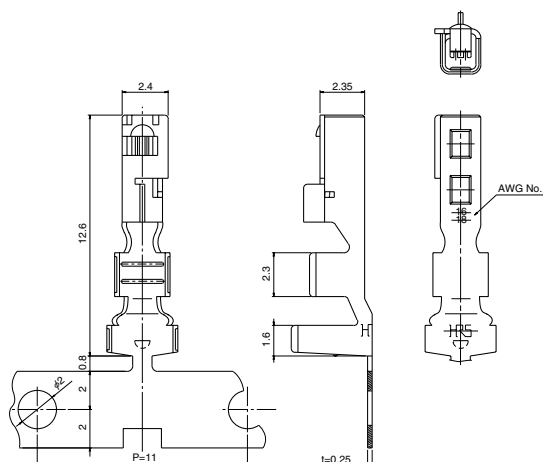
### ■ Enhanced ergonomic lock

| Part Number     | CL No.       | Number of contacts | A     | B     |
|-----------------|--------------|--------------------|-------|-------|
| DF7A-4DS-3.96C  | CL680-0160-4 | 4                  | 10.00 | 3.96  |
| DF7A-6DS-3.96C  | CL680-0161-7 | 6                  | 13.96 | 7.92  |
| DF7A-8DS-3.96C  | CL680-0162-0 | 8                  | 17.92 | 11.88 |
| DF7A-10DS-3.96C | CL680-0163-2 | 10                 | 21.88 | 15.84 |
| DF7A-12DS-3.96C | CL680-0164-5 | 12                 | 25.84 | 19.80 |

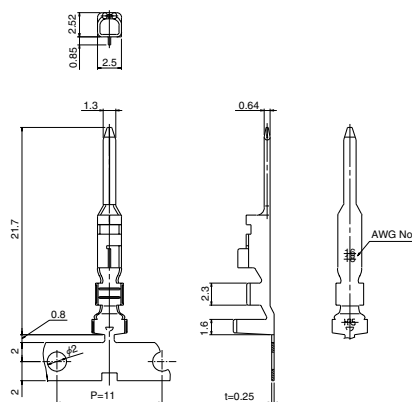
Note: Bag packaging (100 pieces/bag). Order by number of bags.

## ■ Crimp Contact

### ● Female Contact



### ● Male Contact



| Part Number | CL No.       | Packaging | Quantity | Finish      |
|-------------|--------------|-----------|----------|-------------|
| DF7-1618SCF | CL680-0001-0 | Reel      | 3,000    | Tin plating |
| DF7-1618SC  | CL680-0002-3 | Bag       | 100      |             |
| DF7-2022SCF | CL680-0003-6 | Reel      | 3,000    |             |
| DF7-2022SC  | CL680-0004-9 | Bag       | 100      |             |
| DF7-1618PCF | CL680-0005-1 | Reel      | 3,000    |             |
| DF7-1618PC  | CL680-0006-4 | Bag       | 100      |             |
| DF7-2022PCF | CL680-0007-7 | Reel      | 3,000    |             |
| DF7-2022PC  | CL680-0008-0 | Bag       | 100      |             |

## ● Applicable cable (Tin plated annealed copper wire)

| Wire size(Stranded wire conductor) | UL style | Jacket diameter |
|------------------------------------|----------|-----------------|
| AWG#16(26/0.254mm)                 | UL1007   | 2.1 to 2.5mm    |
| AWG#18(34/0.18mm)                  |          |                 |
| AWG#20(21/0.18mm)                  |          | 1.6 to 1.9mm    |
| AWG#22(17/0.16mm)                  |          |                 |
| AWG#16(26/0.254mm)                 | UL1015   | 2.9 to 3.2mm    |
| AWG#18(34/0.18mm)                  |          |                 |
| AWG#20(21/0.18mm)                  |          | 2.4 to 2.7mm    |
| AWG#22(17/0.16mm)                  |          |                 |

Note 1: Applicable wire with tin plated solid soft conductor.

Note 2: When using other than the recommended wire, contact your nearest Hirose representative.

Note 3: Strip length: 3.0 to 3.8mm.

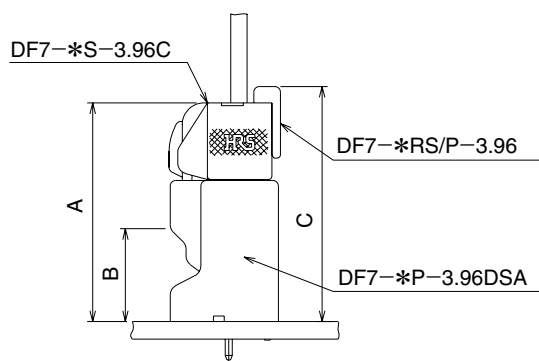
## ■ Tools

| Type      | Part Number | CL No.         | Applicable Contacts |
|-----------|-------------|----------------|---------------------|
| Automatic | Press unit  | CM-105         | CL901-0005-4        |
|           | Applicator  | AP105-DF7-1618 | CL901-4554-4        |
|           |             | AP105-DF7-2022 | CL901-4553-1        |
| Manual    | Crimp tools | HT104/DF7-1618 | CL550-0268-0        |
|           |             | HT104/DF7-2022 | CL550-0269-3        |

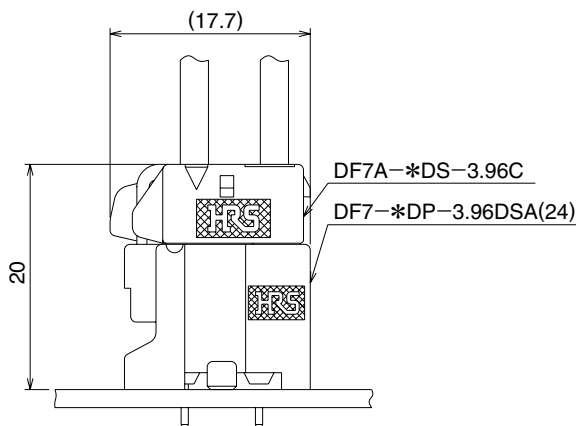
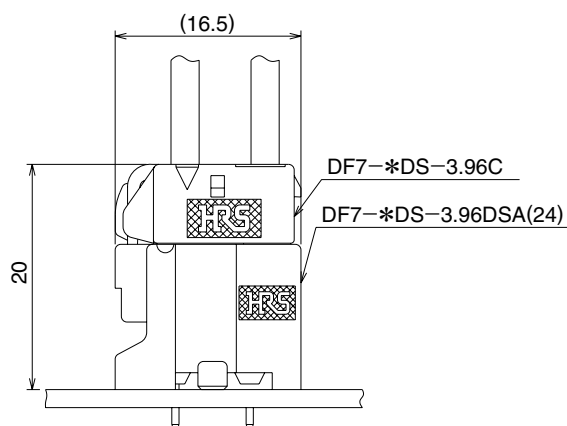
## ◆ Mating Dimensions

### ● Socket to Straight Header Connection

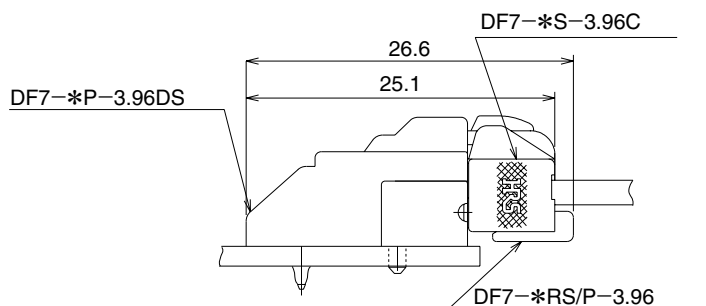
| DF7-*S-3.96C |        |              |
|--------------|--------|--------------|
|              | 1 pos. | 2 to 12 pos. |
| A            | 18.5   | 20.0         |
| B            | 9.0    | 8.5          |
| C            | 20.3   | 21.5         |



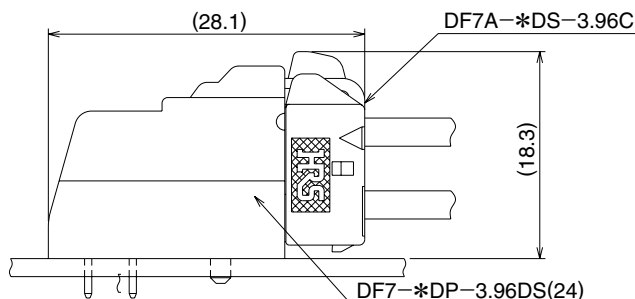
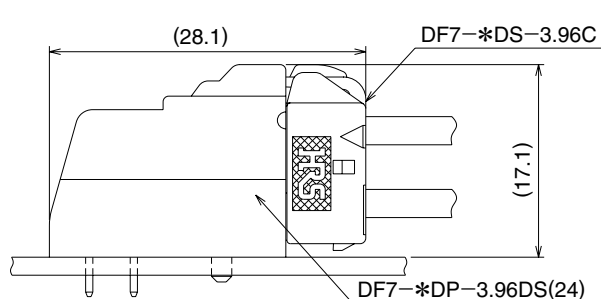
### ● Socket to Straight Header Connection (Double-row)



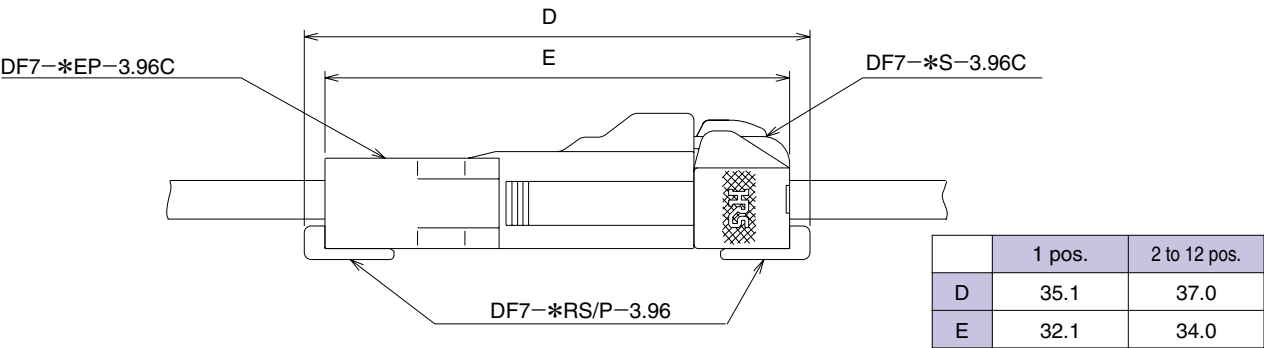
### ● Socket to Right angle Header Connection



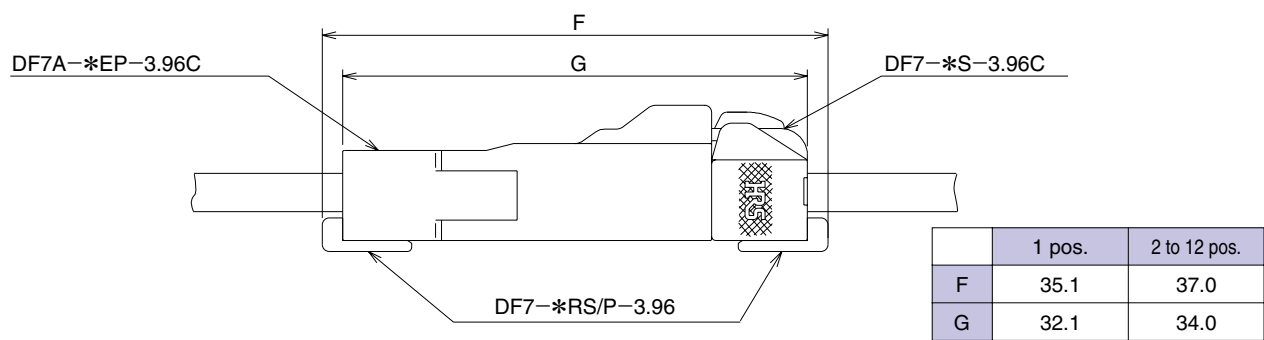
### ● Socket to Right angle Header Connection (Double-row)



● Socket to In-line Plug (Panel mount type) Connection



● Socket to In-line Plug Connection



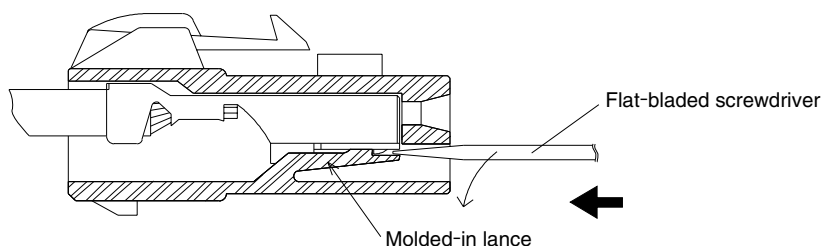
## ◆ Contact Extraction Procedure

■ Contact extraction tool: Flat-bladed screwdriver, 1.4 mm blade width

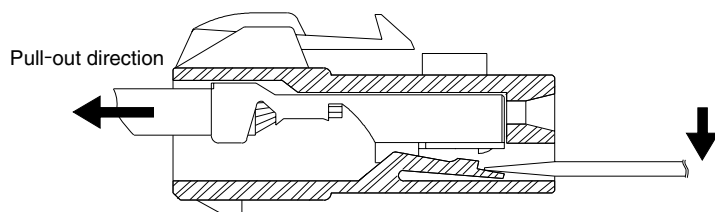
■ Use with crimp Contacts: DF7-1618SC(F), DF7-2022SC(F),  
DF7-1618PC(F), DF7-2022PC(F)

### ■ Work Method

#### Housing Cross-Section



1. Refer to the drawing No. 1. Insert correct size screwdriver in the insulator against the molded-in lance. Deflect the lance as shown.



2. Assure that the lance is deflected to release the contact and pull-out wire with the terminated contact.

## ◆ General Use Precautions

- Make sure that the lock is fully depressed before un-mating the connectors.
- Use correct size of the wires. Do NOT forcefully twist or deform wires, as this may affect the crimped contact connection.
- When the potting process is to be performed, please take into consideration the surface tension of the resin when filling.