

# Ribbon Cable Connector

## HIF4 Series



### ■Features

#### 1. Current Capacity

The HIF4 series connector is capable of 3 A current capacity used for wider applications, while the HIF3 series uses 1 A capacity.

#### 2. Full Lock Mechanism

This connector is equipped with a Hirose original locking mechanism, and guarantees excellent reliability for vibration and shock.

#### 3. One-touch Insertion and Extraction Mechanism

This connector is equipped with levers for automatic insertion and extraction, as soon as lock is reset. Insertion and extraction tools are not required.

#### 4. Applicable Cable

The applicable cable is UL2651 AWG#24 flat cable (7 cores./0.203mm, jacket dia :1.0 to 1.2mm).

### ■Applications

Computers, terminal equipment, various kinds of electronic equipment, and office automation machines

### ■Product Specifications

|        |                          |                                                     |                                                   |
|--------|--------------------------|-----------------------------------------------------|---------------------------------------------------|
| Rating | Current rating : 3A      | Operating Temperature Range : -55 to +85°C (Note 1) | Storage Temperature Range : -10 to +60°C (Note 2) |
|        | Voltage rating : 300V AC | Operating Moisture Range : 40 to 80%                | Storage Humidity Range : 40 to 70% (Note 2)       |

| Item                            | Specification                                       | Condition                                                                                                   |
|---------------------------------|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 1. Insulation Resistance        | 1000M ohms min                                      | 500V DC                                                                                                     |
| 2. Withstanding voltage         | No flashover or insulation breakdown.               | 1000V AC/1 minute                                                                                           |
| 3. Contact Resistance           | 15m ohms max                                        | 0.1A                                                                                                        |
| 4. Vibration                    | No electrical discontinuity of 1 $\mu$ s or more    | Frequency: 10 to 55 Hz, single amplitude of 0.75 mm, 2 hours in each of the 3 directions.                   |
| 5. Humidity (Steady state)      | Insulation resistance: 1000M ohms min.              | 96 hours at temperature of 40°C and humidity of 90% to 95%                                                  |
| 6. Temperature Cycle            | No damage, cracks, or parts looseness.              | (-65°C: 30 minutes → 15 to 35°C: 5 minutes max.<br>125°C: 30 minutes → 15 to 35°C: 5 minutes max.) 5 cycles |
| 7. Operating Life               | Contact resistance: 15m ohms max.                   | 500 cycles                                                                                                  |
| 8. Resistance to Soldering heat | No deformation of components affecting performance. | Solder bath: 260°C for 10 seconds                                                                           |
|                                 |                                                     | Manual soldering: 360°C for 5 seconds                                                                       |

Note 1: Includes temperature rise caused by 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.

Note 3: Information contained in this catalog represents general requirements for this Series. Contact us for the drawings and specifications for a specific part number shown.

Note 4: Please note that there is a risk of deforming the lock when an excessive load is applied to the inside.

### ■Material

| Part      |            | Material         | Finish                               | Remarks |
|-----------|------------|------------------|--------------------------------------|---------|
| Insulator |            | PBT              | Black                                | UL94V-0 |
| Contact   | Socket     | Beryllium copper | Gold plated over nickel underplating | —       |
|           | Pin header | Phosphor bronze  | Gold plated over nickel underplating |         |

■Ordering Information

●Pin Header

HIF4 - \* P - 3.18 DS  
①                      ②                      ③                      ④                      ⑤

|                      |                        |
|----------------------|------------------------|
| ① Series Name        | : HIF4                 |
| ② Number of Contacts | : 16, 20, 26, 34, 40   |
| ③ Contact alignment  | : P : Pin header       |
| ④ Contact Pitch      | : 3.18mm               |
| ⑤ Contact Type       |                        |
|                      | DS : Right angle type  |
|                      | SA : Straight dip type |
|                      | W : Wrapping type      |

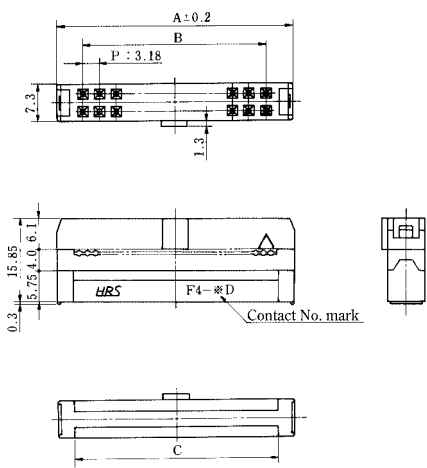
●Socket

HIF4 - \* D - 3.18 R  
①                      ②                      ③                      ④                      ⑤

|                      |                      |
|----------------------|----------------------|
| ① Series Name        | : HIF4               |
| ② Number of Contacts | : 16, 20, 26, 34, 40 |
| ③ Contact alignment  | : D : Double         |
| ④ Contact Pitch      | : 3.18mm             |
| ⑤ Connection type    | : Ribbon cable       |

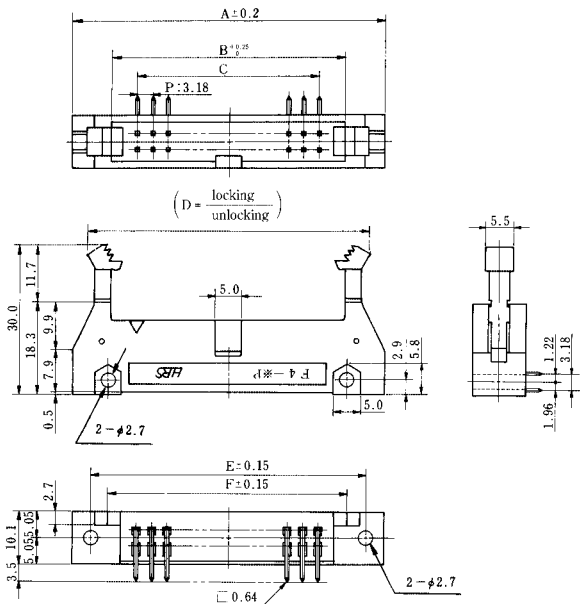
May.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.

■Socket



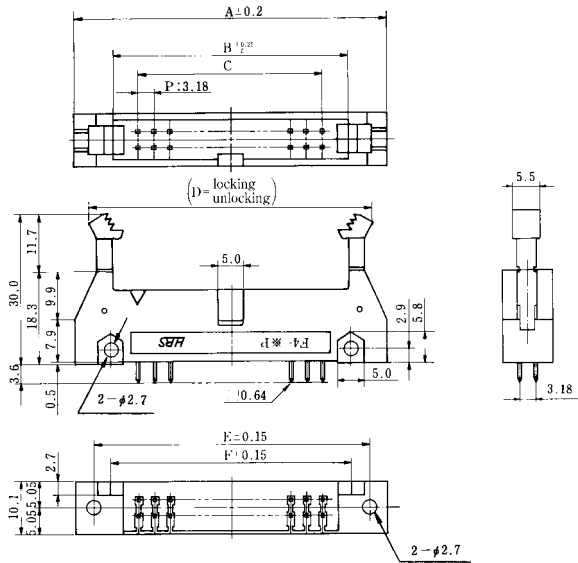
| Unit:mm        |            |                    |       |       |       |      |
|----------------|------------|--------------------|-------|-------|-------|------|
| Part Number    | CL No.     | Number of Contacts | A     | B     | C     | RoHS |
| HIF4-16D-3.18R | 563-0025-5 | 16                 | 31.98 | 22.26 | 26.28 | YES  |
| HIF4-20D-3.18R | 563-0010-8 | 20                 | 38.34 | 28.62 | 32.64 |      |
| HIF4-26D-3.18R | 563-0011-0 | 26                 | 47.88 | 38.16 | 42.18 |      |
| HIF4-34D-3.18R | 563-0012-3 | 34                 | 60.6  | 50.88 | 54.9  |      |
| HIF4-40D-3.18R | 563-0029-6 | 40                 | 70.14 | 60.42 | 64.44 |      |

■Pin Header Right Angle Type



| Unit:mm         |            |                    |       |       |       |                 |       |       |      |
|-----------------|------------|--------------------|-------|-------|-------|-----------------|-------|-------|------|
| Part Number     | CL No.     | Number of Contacts | A     | B     | C     | D               | E     | F     | RoHS |
| HIF4-16P-3.18DS | 563-0026-8 | 16                 | 46.68 | 32.18 | 22.26 | 42.82<br>63.28  | 39.98 | 33.58 | YES  |
| HIF4-20P-3.18DS | 563-0001-7 | 20                 | 53.04 | 38.54 | 28.62 | 49.18<br>69.64  | 46.34 | 39.94 |      |
| HIF4-26P-3.18DS | 563-0002-0 | 26                 | 62.58 | 48.08 | 38.16 | 58.72<br>79.18  | 55.88 | 49.48 |      |
| HIF4-34P-3.18DS | 563-0003-2 | 34                 | 75.3  | 60.8  | 50.88 | 71.44<br>91.90  | 68.6  | 62.2  |      |
| HIF4-40P-3.18DS | 563-0030-5 | 40                 | 84.84 | 70.34 | 60.42 | 80.89<br>101.44 | 78.14 | 71.74 |      |

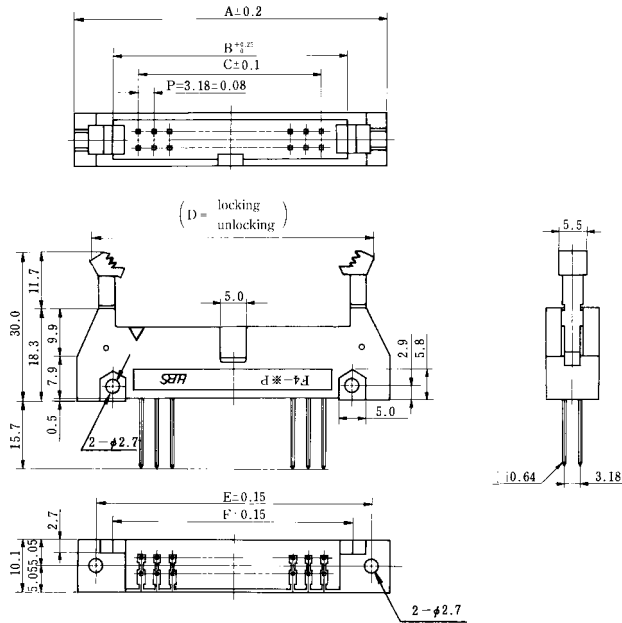
■Pin Header Straight Through hole Type



Unit:mm

| Part Number      | CL No.     | Number of Contacts | A     | B     | C     | D                                    | E     | F     | RoHS |
|------------------|------------|--------------------|-------|-------|-------|--------------------------------------|-------|-------|------|
| HIF4-16P-3.18DSA | 563-0027-0 | 16                 | 46.68 | 32.18 | 22.26 | <sup>42.82</sup> / <sub>63.28</sub>  | 39.98 | 33.58 | YES  |
| HIF4-20P-3.18DSA | 563-0004-5 | 20                 | 53.04 | 38.54 | 28.62 | <sup>49.18</sup> / <sub>69.64</sub>  | 46.34 | 39.94 |      |
| HIF4-26P-3.18DSA | 563-0005-8 | 26                 | 62.58 | 48.08 | 38.16 | <sup>58.72</sup> / <sub>79.18</sub>  | 55.88 | 49.48 |      |
| HIF4-34P-3.18DSA | 563-0006-0 | 34                 | 75.3  | 60.8  | 50.88 | <sup>71.44</sup> / <sub>91.90</sub>  | 68.6  | 62.2  |      |
| HIF4-40P-3.18DSA | 563-0031-8 | 40                 | 84.84 | 70.34 | 60.42 | <sup>80.98</sup> / <sub>101.44</sub> | 78.14 | 71.74 |      |

■Pin Header Wrapping Type

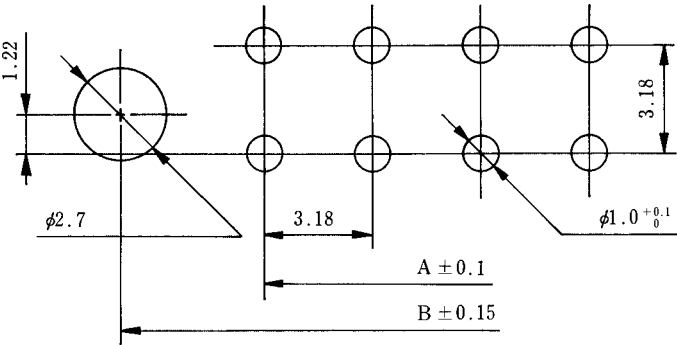


Unit:mm

| Part Number    | CL No.     | Number of Contacts | A     | B     | C     | D                                    | E     | F     | RoHS |
|----------------|------------|--------------------|-------|-------|-------|--------------------------------------|-------|-------|------|
| HIF4-16P-3.18W | 563-0028-3 | 16                 | 46.68 | 32.18 | 22.26 | <sup>42.82</sup> / <sub>63.28</sub>  | 39.98 | 33.58 | YES  |
| HIF4-20P-3.18W | 563-0007-3 | 20                 | 53.04 | 38.54 | 28.62 | <sup>49.18</sup> / <sub>69.64</sub>  | 46.34 | 39.94 |      |
| HIF4-26P-3.18W | 563-0008-6 | 26                 | 62.58 | 48.04 | 38.16 | <sup>58.72</sup> / <sub>79.18</sub>  | 55.88 | 49.48 |      |
| HIF4-34P-3.18W | 563-0009-9 | 34                 | 75.3  | 60.8  | 50.88 | <sup>71.44</sup> / <sub>91.90</sub>  | 68.6  | 62.2  |      |
| HIF4-40P-3.18W | 563-0032-0 | 40                 | 84.84 | 70.34 | 60.42 | <sup>80.98</sup> / <sub>101.44</sub> | 78.14 | 71.74 |      |

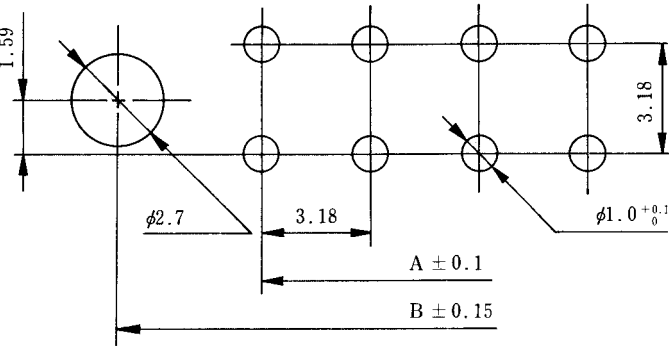
◆PCB mounting pattern

●Pin Header Right Angle Type



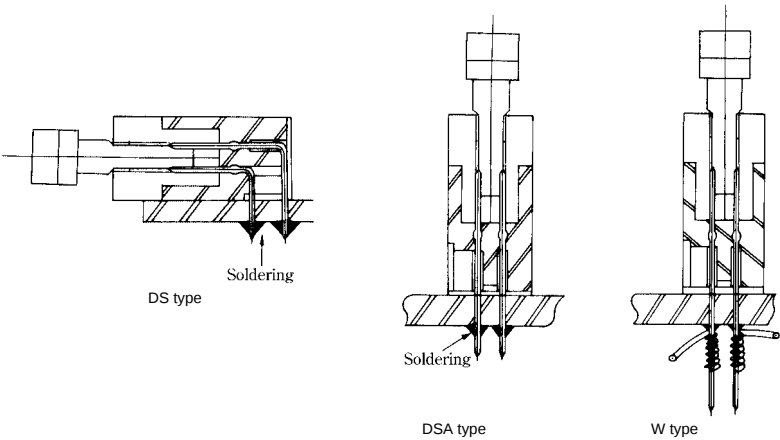
| Number of Contacts | A     | B     |
|--------------------|-------|-------|
| 16                 | 22.26 | 33.58 |
| 20                 | 28.62 | 39.94 |
| 26                 | 38.16 | 49.48 |
| 34                 | 50.88 | 62.20 |
| 40                 | 60.42 | 71.74 |

●Pin Header Straight Through hole Type or Pin Header Wrapping Type



| Number of Contacts | A     | B     |
|--------------------|-------|-------|
| 16                 | 22.26 | 39.98 |
| 20                 | 28.62 | 46.34 |
| 26                 | 38.16 | 55.88 |
| 34                 | 50.88 | 68.60 |
| 40                 | 60.42 | 78.14 |

●Type Shape

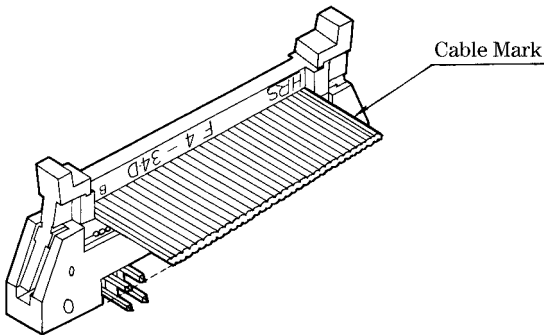


◆HIF4 Basic Connection Method

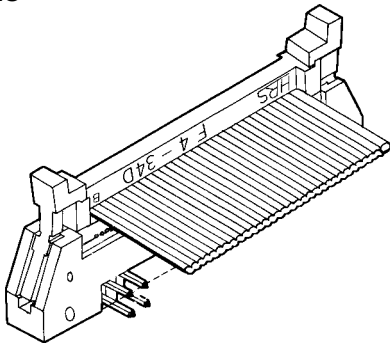
Fig.1

As shown below in Figure 1, contact positions are indicated by marks (○●◆◇).

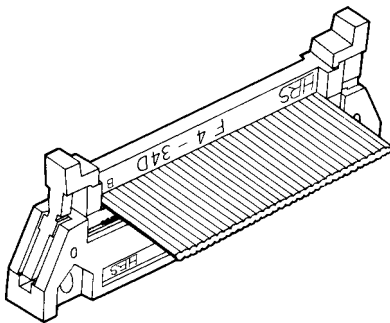
The connected contact is indicated with a symbol next to the individual type name. However, the contact symbol connected to the cable mark is indicated at the mark \*.



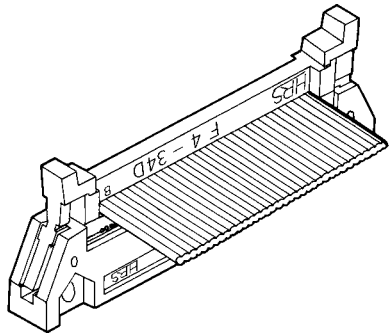
Type AO



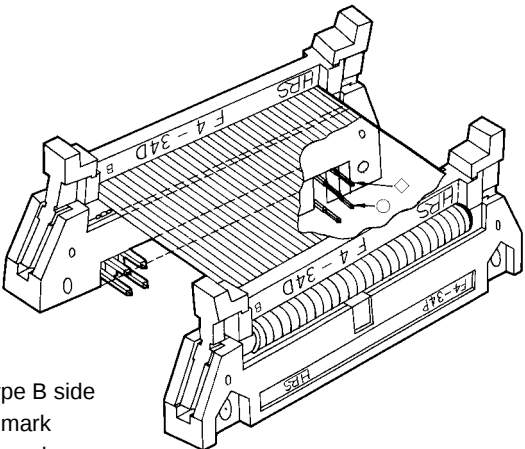
Type BO



Type CO

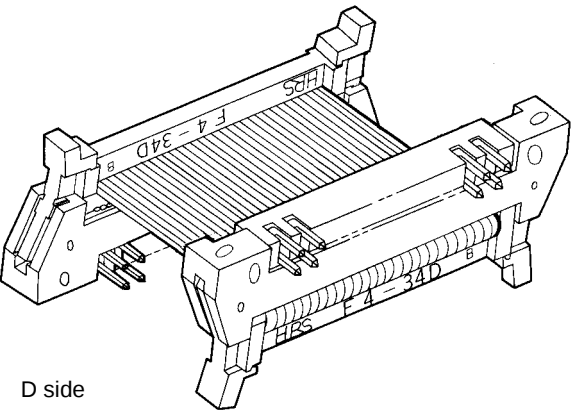


Type DO



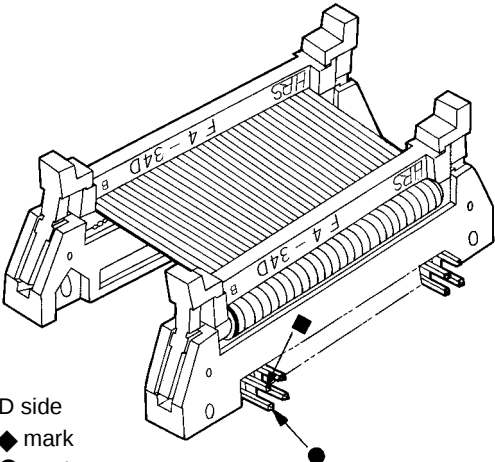
Type AB

- Type A side    Type B side  
\* ○ mark and    ◆ mark  
◇ mark and    ● mark



Type AD

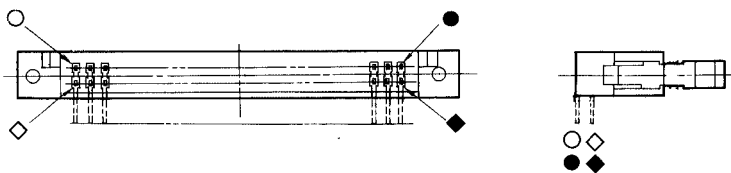
- A side    D side  
\* ○ mark and    ◆ mark  
◇ mark and    ● mark



Type CD

- C side    D side  
\* ○ mark and    ◆ mark  
◇ mark and    ● mark

Contact positions are designated with marks as shown below.



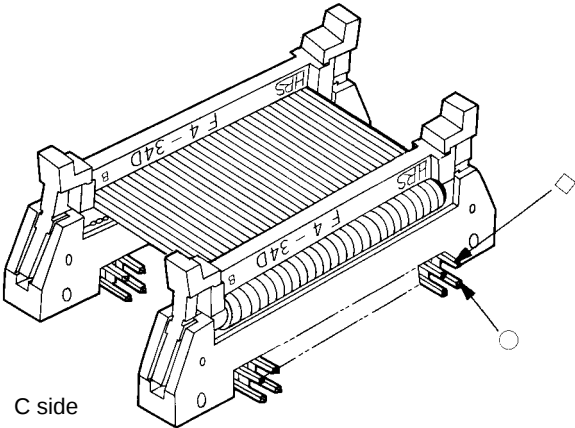
According to the illustration on the left, the illustration 1 indicates these positions on the right.

Note 1: Cable length tolerance  
500 +10, 0 max. (mm)  
500 +3%, 0% min.

Note 2: When a twist cable or a slit (like a roller screen) cable is used, the cable pitch will change according to cable manufacturers. If connection failure has occurred, consult HRS Sales Department.

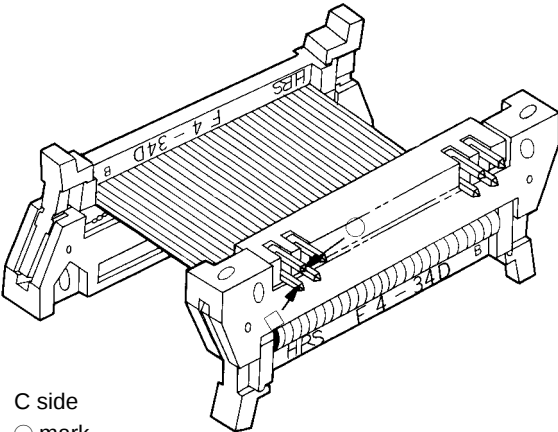
**Type AC**

- A side      C side  
\* ○ mark and ○ mark  
◇ mark and ◇ mark



**Type CC**

- C side      C side  
\* ○ mark and ○ mark  
◇ mark and ◇ mark



**Type AA**

- A side      A side  
\* ○ mark and ○ mark  
◇ mark and ◇ mark

