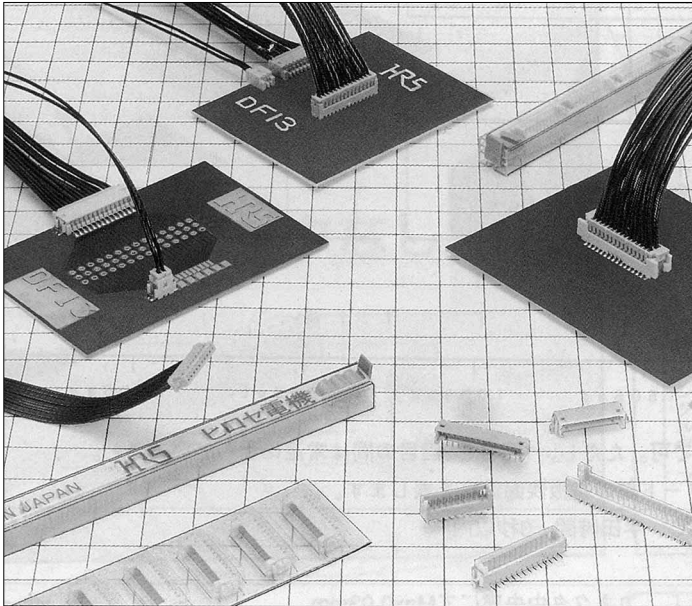
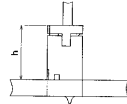
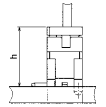
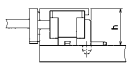


# 1.25mm Pitch Miniature Crimping Connector

## DF13 Series



|                  | Type | Mounting Type                                                                       | Mounting Height(h) |
|------------------|------|-------------------------------------------------------------------------------------|--------------------|
| Straight Type    | DIP  |  | 5.3mm              |
|                  | SMT  |  | 5.8mm              |
| Right Angle Type | DIP  |  | 3.6mm              |
|                  | SMT  |  |                    |

### ■Features

#### 1. Miniature Size

Designed in the low profile at mounting height 5.8mm.  
(SMT mounting straight type)  
(For DIP type, the mounting height is to 5.3mm to the straight and 3.6mm at the right angle)

#### 2. Multi-contact

The double row type achieves the multi-contact up to 40 contacts, and secures 30% higher density in the mounting area, compared with the single row type.

#### 3. Correspond to Automatic Mounting

The header provides the grade with the vacuum absorption area, and secures automatic mounting by the embossed tape packaging.  
In addition, the tube packaging can be selected.

#### 4. Integral Basic Function Despite Miniature Size

The header is designed in a scoop-proof box structure, and completely prevents mis-insertion.  
In addition, the surface mounting (SMT) header is equipped with the metal fitting to prevent solder peeling.

### ■Applications

Note PC, mobile terminal, miniature type business equipment, and other various consumer equipment, including video camera

Correspond to Automatic Mounting  
Secure the automatic plain area for the absorption type automatic mounting machine.

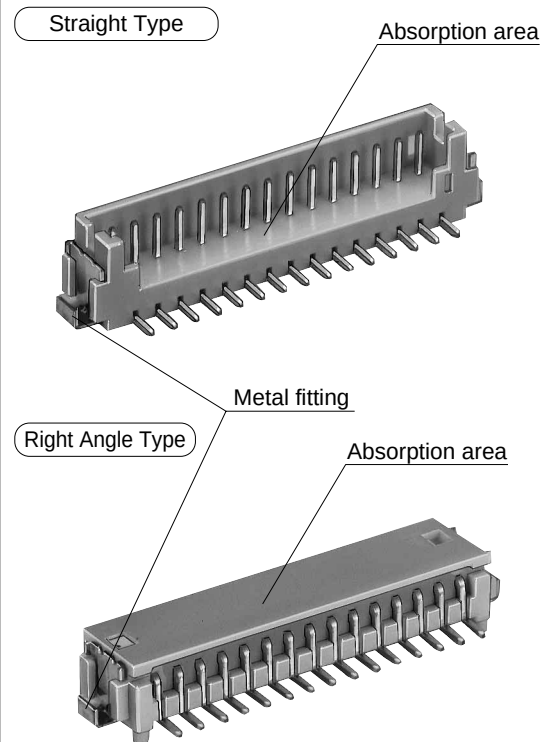


Figure 1

## ■Product Specifications

| Rating                              | Current rating 1A<br>Voltage rating 150V AC                             | Operating Temperature Range: -35 to +85°C (Note 1)<br>Operating Moisture Range: 20 to 80%    | Storage Temperature Range: -10 to +60°C (Note 2)<br>Storage Moisture Range: 40 to 70% (Note 2) |
|-------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Item                                | Specification                                                           | Condition                                                                                    |                                                                                                |
| 1.Insulation Resistance             | 500M ohms min.                                                          | 100V DC                                                                                      |                                                                                                |
| 2.Withstanding voltage              | No flashover or insulation breakdown.                                   | 500V AC/1 minute                                                                             |                                                                                                |
| 3.Contact Resistance                | 30m ohms max.                                                           | 100mA                                                                                        |                                                                                                |
| 4.Single Insertion/Extraction Force | 0.3N (30gf) min., 3N (300gf) max.                                       | Measured at the square steel pin of 0.35±0.002mm                                             |                                                                                                |
| 5.Vibration                         | No electrical discontinuity of 1μs or more                              | Frequency: 10 to 55 Hz, single amplitude of 0.75 mm, 2 hours in each of the 3 directions.    |                                                                                                |
| 6.Humidity (Steady state)           | Contact resistance: 30m ohms max. Insulation resistance: 500M ohms min. | 96 hours at temperature of 40°C and humidity of 90% to 95%                                   |                                                                                                |
| 7.Temperature Cycle                 | Contact resistance: 30m ohms max. Insulation resistance: 500M ohms min. | (-55°C: 30 minutes→ 5 to 35°C: 10 minutes→ 85°C: 30 minutes→ 5 to 35°C: 10 minutes) 5 cycles |                                                                                                |
| 8.Durability (Mating/un-mating)     | Contact resistance: 30m ohms max.                                       | Tin plating: 30 cycles<br>Gold plating: 50 cycles                                            |                                                                                                |
| 9.Resistance to Soldering heat      | No deformation of components affecting performance.                     | Flow: 250°C for 10 seconds                                                                   |                                                                                                |
|                                     |                                                                         | Manual soldering: 300°C for 3 seconds                                                        |                                                                                                |
|                                     |                                                                         | Reflow: At the recommended temperature profile                                               |                                                                                                |
|                                     |                                                                         | Manual soldering: 300°C for 3 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.

## ■Material

| Product                     | Part          | Material        | Finish                           | Remarks |
|-----------------------------|---------------|-----------------|----------------------------------|---------|
| Crimping Socket             | Insulator     | Polyamide       | Beige                            | UL94V-0 |
| Crimping Contact for Socket | Contact       | Phosphor copper | Tin plated or gold plated        | ———     |
| Pin Header (Through hole)   | Insulator     | Polyamide       | Beige                            | UL94V-0 |
|                             | Contact       | Brass           | Tin plated                       | ———     |
| Pin Header (SMT Single row) | Insulator     | Polyamide       | Beige                            | UL94V-0 |
|                             | Contact       | Brass           | Tin plated or gold plated        | ———     |
|                             | Metal Fitting | Phosphor copper | Tin plated                       | ———     |
| Pin Header (SMT Double row) | Insulator     | Polyamide       | Beige                            | UL94V-0 |
|                             | Contact       | Brass           | Tin-copper plated or gold plated | ———     |
|                             | Metal Fitting | Phosphor copper | Tin plated                       | ———     |

## ■Ordering Information

### ●Connector

**DF13** # - \* S - 1.25 C

① ② ③ ④ ⑤ ⑥

|                                                                                                                                          |                                                                                                                          |                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ① Series Name : DF13                                                                                                                     | ③ Number of Contacts<br>Single row: 2 to 12, 14, 15<br>Double row: 10, 20, 30, 40                                        | ⑤ Contact Pitch: 1.25mm                                                                                                                                            |
| ② Style Symbol : Blank: With boss<br>A: Without boss<br>V Type — B: With boss, embossed tape type<br>C: Without boss, embossed tape type | ④ Connector Type<br>S: Single row socket / P: Single row pin header<br>DS: Double row socket / DP: Double row pin header | ⑥ Connection Form / Contact Style.<br>C : Crimping socket / DSA : Straight through hole<br>DS : Right angle through hole / V : Straight SMT<br>H : Right angle SMT |

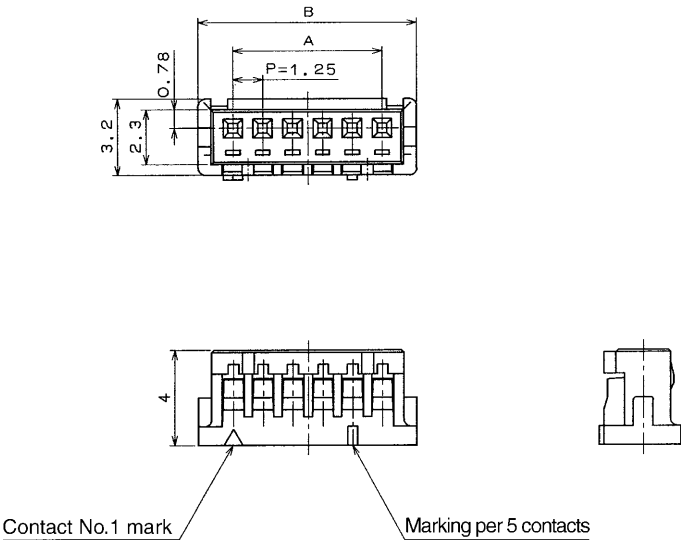
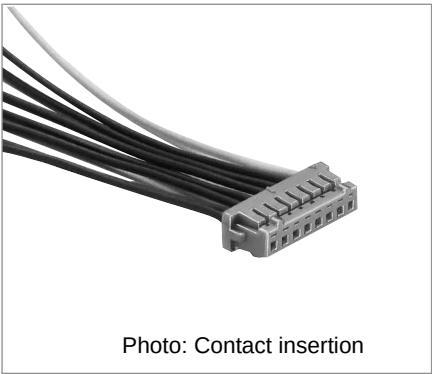
### ●Contact

**DF13** # - 2630 SCF A

① ② ③ ④

|                                                                 |                                                     |
|-----------------------------------------------------------------|-----------------------------------------------------|
| ① Style Symbol Blank: Standard<br>G: Low insertion / extraction | ③ Packaging Type SCF: Socket Contact/Reel           |
| ② Applicable Cable Size 2630: AWG26 to 30<br>3032: AWG30 to 32  | ④ Plating Type Blank: Tin plated<br>A : Gold plated |

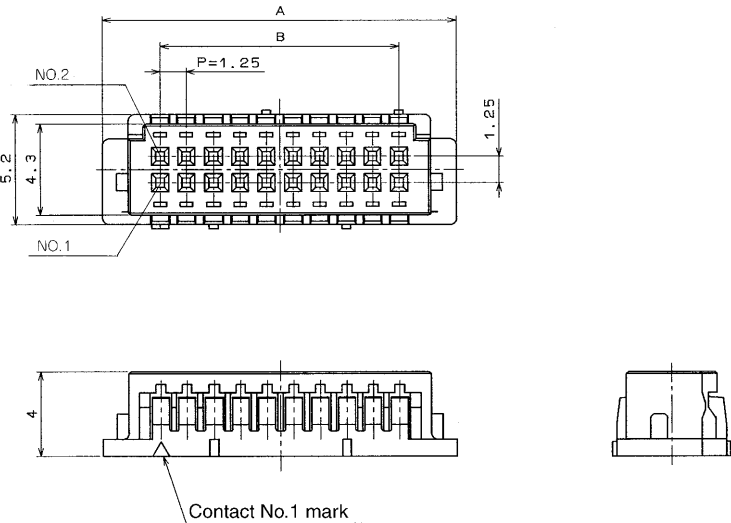
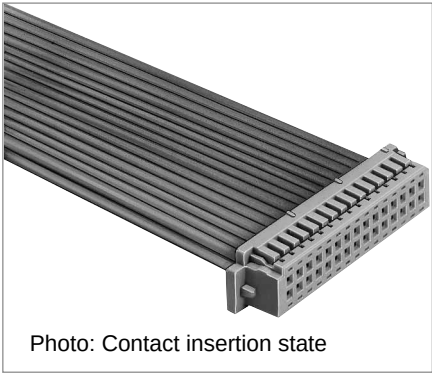
Single Row Socket



| Unit: mm      |            |                    |      |       |      |                |            |                    |       |       |      |
|---------------|------------|--------------------|------|-------|------|----------------|------------|--------------------|-------|-------|------|
| Part Number   | CL No.     | Number of Contacts | A    | B     | RoHS | Part Number    | CL No.     | Number of Contacts | A     | B     | RoHS |
| DF13-2S-1.25C | 536-0001-4 | 2                  | 1.25 | 4.15  | Yes  | DF13- 9S-1.25C | 536-0008-3 | 9                  | 10.00 | 12.90 | Yes  |
| DF13-3S-1.25C | 536-0002-7 | 3                  | 2.50 | 5.40  |      | DF13-10S-1.25C | 536-0009-6 | 10                 | 11.25 | 14.15 |      |
| DF13-4S-1.25C | 536-0003-0 | 4                  | 3.75 | 6.65  |      | DF13-11S-1.25C | 536-0010-5 | 11                 | 12.50 | 15.40 |      |
| DF13-5S-1.25C | 536-0004-2 | 5                  | 5.00 | 7.90  |      | DF13-12S-1.25C | 536-0011-8 | 12                 | 13.75 | 16.65 |      |
| DF13-6S-1.25C | 536-0005-5 | 6                  | 6.25 | 9.15  |      | DF13-13S-1.25C | 536-0012-0 | 13                 | 15.00 | 17.90 |      |
| DF13-7S-1.25C | 536-0006-8 | 7                  | 7.50 | 10.40 |      | DF13-14S-1.25C | 536-0013-3 | 14                 | 16.25 | 19.15 |      |
| DF13-8S-1.25C | 536-0007-0 | 8                  | 8.75 | 11.65 |      | DF13-15S-1.25C | 536-0014-6 | 15                 | 17.50 | 20.40 |      |

Note 1.The quantity is delivered per bag (100 pcs.). If needed, please select and order the products per bag.

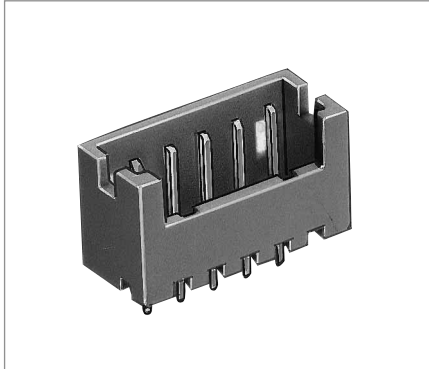
Double Row Socket



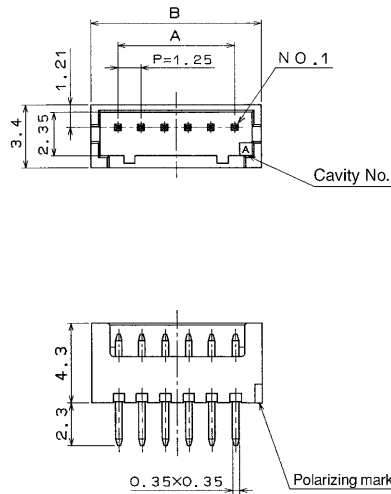
| Part Number     | CL No.     | Number of Contacts | A     | B     | RoHS |
|-----------------|------------|--------------------|-------|-------|------|
| DF13-10DS-1.25C | 536-0550-2 | 10                 | 10.40 | 5.00  | Yes  |
| DF13-20DS-1.25C | 536-0555-6 | 20                 | 16.65 | 11.25 |      |
| DF13-30DS-1.25C | 536-0560-6 | 30                 | 22.90 | 17.50 |      |
| DF13-40DS-1.25C | 536-0565-0 | 40                 | 29.15 | 23.75 |      |

Note:The quantity is delivered per bag (100pcs). If needed, please select and order the products per bag.

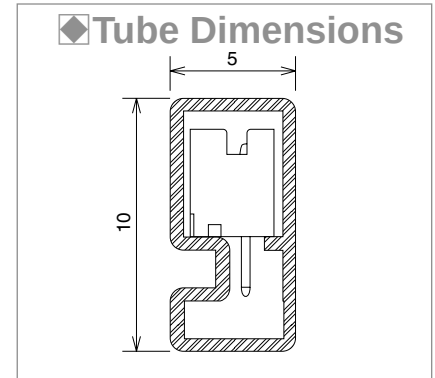
## ■Single Row Straight Pin Header (Through hole)



●Board Through-hole Diameter:  $\phi 0.6 \pm 0.03$



[Specific No.] – \*\*, (\*\*)  
Blank: Tin plated  
20: Tin plated, tube packaging



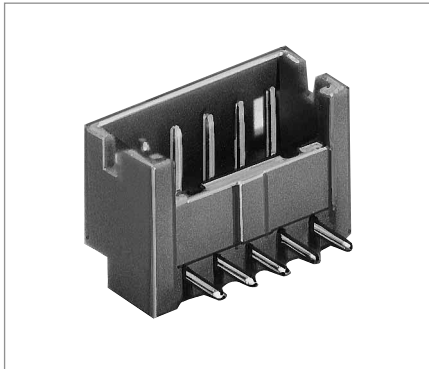
Unit: mm

| Part Number         | CL No.         | Number of Contacts | A    | B     | Tube Packaging Quantity | RoHS | Part Number          | CL No.         | Number of Contacts | A     | B     | Tube Packaging Quantity | RoHS |
|---------------------|----------------|--------------------|------|-------|-------------------------|------|----------------------|----------------|--------------------|-------|-------|-------------------------|------|
| DF13-2P-1.25DSA(**) | 536-0101-9-**- | 2                  | 1.25 | 4.15  | 115                     | Yes  | DF13- 9P-1.25DSA(**) | 536-0108-8-**- | 9                  | 10.00 | 12.90 | 37                      | Yes  |
| DF13-3P-1.25DSA(**) | 536-0102-1-**- | 3                  | 2.50 | 5.40  | 89                      |      | DF13-10P-1.25DSA(**) | 536-0109-0-**- | 10                 | 11.25 | 14.15 | 34                      |      |
| DF13-4P-1.25DSA(**) | 536-0103-4-**- | 4                  | 3.75 | 6.65  | 72                      |      | DF13-11P-1.25DSA(**) | 536-0110-0-**- | 11                 | 12.50 | 15.40 | 31                      |      |
| DF13-5P-1.25DSA(**) | 536-0104-7-**- | 5                  | 5.00 | 7.90  | 61                      |      | DF13-12P-1.25DSA(**) | 536-0111-2-**- | 12                 | 13.75 | 16.65 | 29                      |      |
| DF13-6P-1.25DSA(**) | 536-0105-0-**- | 6                  | 6.25 | 9.15  | 52                      |      | DF13-13P-1.25DSA(**) | 536-0112-5-**- | 13                 | 15.00 | 17.90 | 27                      |      |
| DF13-7P-1.25DSA(**) | 536-0106-2-**- | 7                  | 7.50 | 10.40 | 46                      |      | DF13-14P-1.25DSA(**) | 536-0113-8-**- | 14                 | 16.25 | 19.15 | 25                      |      |
| DF13-8P-1.25DSA(**) | 536-0107-5-**- | 8                  | 8.75 | 11.65 | 41                      |      | DF13-15P-1.25DSA(**) | 536-0114-0-**- | 15                 | 17.50 | 20.40 | 23                      |      |

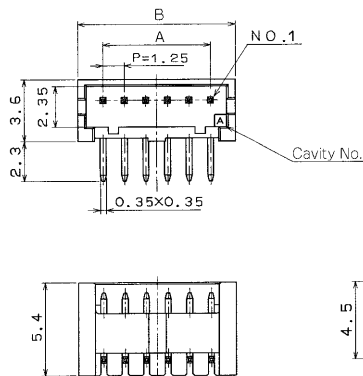
Note 1. The quantity at the specific No. "None" is delivered per bag (100 pcs.). If needed, please select and order the products per bag.

Note 2. Order the tube packaging product, multiplying the tube packaging quantity.

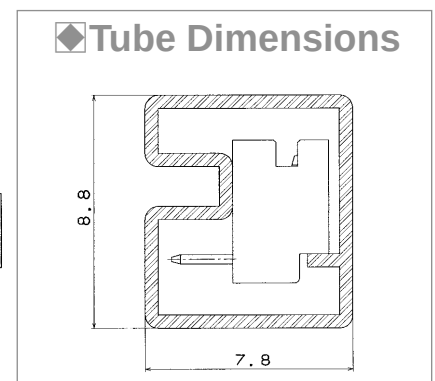
## ■Single Row Right Angle Pin Header (Through hole)



●Board Through-hole Diameter:  $\phi 0.6 \pm 0.03$



[Specific No.] – \*\*, (\*\*\*)  
(20): Tin plated tube packaging

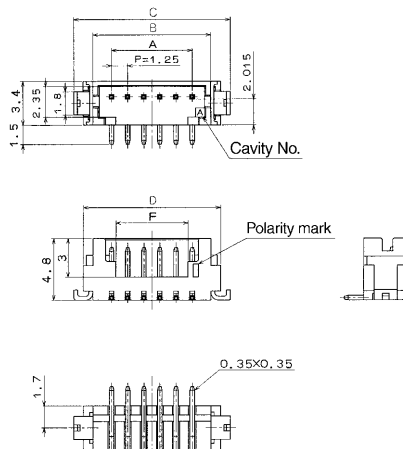
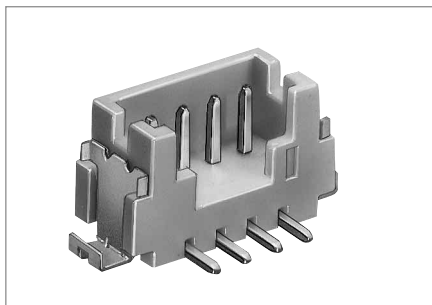


Unit: mm

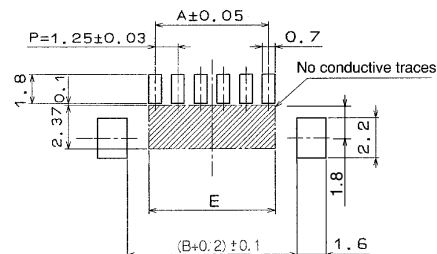
| Part Number        | CL No.        | Number of Contacts | A    | B     | Tube Packaging Quantity | RoHS | Part Number         | CL No.        | Number of Contacts | A     | B     | Tube Packaging Quantity | RoHS |
|--------------------|---------------|--------------------|------|-------|-------------------------|------|---------------------|---------------|--------------------|-------|-------|-------------------------|------|
| DF13-2P-1.25DS(20) | 536-0151-7-20 | 2                  | 1.25 | 4.15  | 115                     | Yes  | DF13- 9P-1.25DS(20) | 536-0158-6-20 | 9                  | 10.00 | 12.90 | 37                      | Yes  |
| DF13-3P-1.25DS(20) | 536-0152-0-20 | 3                  | 2.50 | 5.40  | 89                      |      | DF13-10P-1.25DS(20) | 536-0159-9-20 | 10                 | 11.25 | 14.15 | 34                      |      |
| DF13-4P-1.25DS(20) | 536-0153-2-20 | 4                  | 3.75 | 6.65  | 72                      |      | DF13-11P-1.25DS(20) | 536-0160-8-20 | 11                 | 12.50 | 15.40 | 31                      |      |
| DF13-5P-1.25DS(20) | 536-0154-5-20 | 5                  | 5.00 | 7.90  | 61                      |      | DF13-12P-1.25DS(20) | 536-0161-0-20 | 12                 | 13.75 | 16.65 | 29                      |      |
| DF13-6P-1.25DS(20) | 536-0155-8-20 | 6                  | 6.25 | 9.15  | 52                      |      | DF13-14P-1.25DS(20) | 536-0163-6-20 | 14                 | 16.25 | 19.15 | 25                      |      |
| DF13-7P-1.25DS(20) | 536-0156-0-20 | 7                  | 7.50 | 10.40 | 46                      |      | DF13-15P-1.25DS(20) | 536-0164-9-20 | 15                 | 17.50 | 20.40 | 23                      |      |
| DF13-8P-1.25DS(20) | 536-0157-3-20 | 8                  | 8.75 | 11.65 | 41                      |      |                     |               |                    |       |       |                         |      |

Note 1. Order the tube packaging product, multiplying the tube packaging quantity.

■Single Row Straight Pin Header (SMT)  
(Three-Wall/Correspond to Vacuum Absorption)



## PCB mounting pattern



Note 1. Shaded area must be free of any electrically conductive traces to avoid contact with soldered pin header terminations.

This pin header is a three-wall type, header has sufficiently large flat areas to allow pick-up with vacuum nozzles of automatic placement equipment.

[Specific No.] – \*\*, (\*\*)  
(21): Tin plated embossed tape packaging  
(51): Gold plated embossed tape packaging

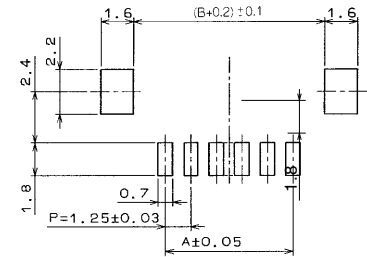
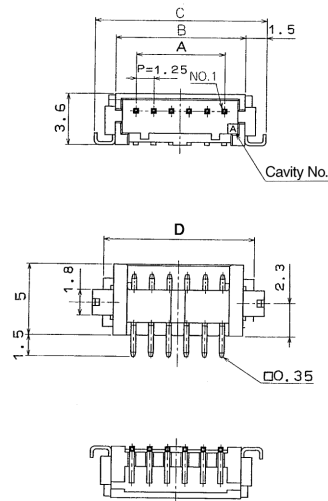
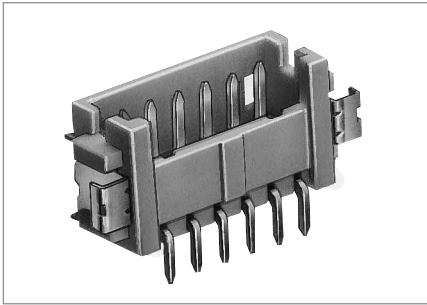
Unit: mm

| Part Number         | CL No.         | Number of<br>Contacts | A     | B     | C     | D     | E     | F     | Emboss<br>Width | RoHS |
|---------------------|----------------|-----------------------|-------|-------|-------|-------|-------|-------|-----------------|------|
| DF13C- 2P-1.25V(**) | 536-0401-2-**- | 2                     | 1.25  | 4.15  | 7.15  | 5.65  | 1.95  | 2.20  | 16              | Yes  |
| DF13C- 3P-1.25V(**) | 536-0402-5-**- | 3                     | 2.50  | 5.40  | 8.40  | 6.90  | 3.20  | 3.45  | 16              |      |
| DF13C- 4P-1.25V(**) | 536-0403-8-**- | 4                     | 3.75  | 6.65  | 9.65  | 8.15  | 4.45  | 3.10  | 24              |      |
| DF13C- 5P-1.25V(**) | 536-0404-0-**- | 5                     | 5.00  | 7.90  | 10.90 | 9.40  | 5.70  | 4.35  | 24              |      |
| DF13C- 6P-1.25V(**) | 536-0405-3-**- | 6                     | 6.25  | 9.15  | 12.15 | 10.65 | 6.95  | 5.60  | 24              |      |
| DF13C- 7P-1.25V(**) | 536-0406-6-**- | 7                     | 7.50  | 10.40 | 13.40 | 11.90 | 8.20  | 6.85  | 24              |      |
| DF13C- 8P-1.25V(**) | 536-0407-9-**- | 8                     | 8.75  | 11.65 | 14.65 | 13.15 | 9.45  | 8.10  | 24              |      |
| DF13C- 9P-1.25V(**) | 536-0408-1-**- | 9                     | 10.00 | 12.90 | 15.90 | 14.40 | 10.70 | 9.35  | 24              |      |
| DF13C-10P-1.25V(**) | 536-0409-4-**- | 10                    | 11.25 | 14.15 | 17.15 | 15.65 | 11.95 | 10.60 | 24              |      |
| DF13C-11P-1.25V(**) | 536-0410-3-**- | 11                    | 12.50 | 15.40 | 18.40 | 16.90 | 13.20 | 11.85 | 32              |      |
| DF13C-12P-1.25V(**) | 536-0411-6-**- | 12                    | 13.75 | 16.65 | 19.65 | 18.15 | 14.45 | 13.10 | 32              |      |
| DF13C-14P-1.25V(**) | 536-0413-1-**- | 14                    | 16.25 | 19.15 | 22.15 | 20.65 | 16.95 | 15.60 | 32              |      |
| DF13C-15P-1.25V(**) | 536-0414-4-**- | 15                    | 17.50 | 20.40 | 23.40 | 21.90 | 18.20 | 16.85 | 44              |      |

Note 1. Please order the embossed tape packaging product according to reel number. (1000 pcs. per reel)

## Single Row Straight Pin Header (SMT) (Four-Wall/Correspond to Vacuum Absorption)

### PCB mounting pattern



[Specific No.] – \*\*, (\*\*)  
(21): Tin plated embossed tape packaging  
(51): Gold plated embossed tape packaging

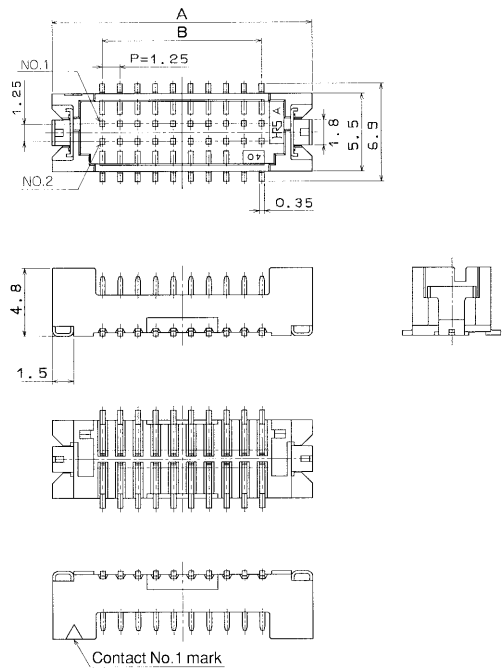
Unit: mm

| Part Number         | CL No.           | Number of Contacts | A     | B     | C     | D     | Emboss Width | RoHS |
|---------------------|------------------|--------------------|-------|-------|-------|-------|--------------|------|
| DF13A- 2P-1.25H(**) | CL536-0301-8-**- | 2                  | 1.25  | 4.15  | 7.15  | 5.65  | 16           | Yes  |
| DF13A- 3P-1.25H(**) | CL536-0302-0-**- | 3                  | 2.50  | 5.40  | 8.40  | 6.90  | 16           |      |
| DF13A- 4P-1.25H(**) | CL536-0303-3-**- | 4                  | 3.75  | 6.65  | 9.65  | 8.15  | 24           |      |
| DF13A- 5P-1.25H(**) | CL536-0304-6-**- | 5                  | 5.00  | 7.90  | 10.90 | 9.40  | 24           |      |
| DF13A- 6P-1.25H(**) | CL536-0305-9-**- | 6                  | 6.25  | 9.15  | 12.15 | 10.65 | 24           |      |
| DF13A- 7P-1.25H(**) | CL536-0306-1-**- | 7                  | 7.50  | 10.40 | 13.40 | 11.90 | 24           |      |
| DF13A- 8P-1.25H(**) | CL536-0307-4-**- | 8                  | 8.75  | 11.65 | 14.65 | 13.15 | 24           |      |
| DF13A- 9P-1.25H(**) | CL536-0308-7-**- | 9                  | 10.00 | 12.90 | 15.90 | 14.40 | 24           |      |
| DF13A-10P-1.25H(**) | CL536-0309-0-**- | 10                 | 11.25 | 14.15 | 17.15 | 15.65 | 24           |      |
| DF13A-11P-1.25H(**) | CL536-0310-9-**- | 11                 | 12.50 | 15.40 | 18.40 | 16.90 | 32           |      |
| DF13A-12P-1.25H(**) | CL536-0311-1-**- | 12                 | 13.75 | 16.65 | 19.65 | 18.15 | 32           |      |
| DF13A-14P-1.25H(**) | CL536-0313-7-**- | 14                 | 16.25 | 19.15 | 22.15 | 20.65 | 32           |      |
| DF13A-15P-1.25H(**) | CL536-0314-0-**- | 15                 | 17.50 | 20.40 | 23.40 | 21.90 | 44           |      |

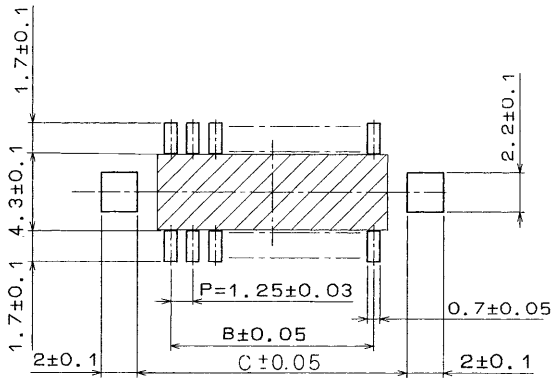
Note 1. Please order the embossed tape packaging product according to reel number. (1000 pcs. per reel)



■Double Row Straight Pin Header (SMT)  
(Four-Wall/Correspond to Vacuum Absorption)



◆PCB mounting pattern



Note 1.Shaded area must be free of any electrically conductive traces to avoid contact with soldered pin header terminations.

[Specific No.] - \*\*, (\*\*)  
(95): Tin-copper plated embossed tape packaging  
(91): Gold plated embossed tape packaging

Unit: mm

| Part Number          | CL No.         | Number of Contacts | A     | B     | C     | Spec No. (26) | Spec No. (56) | Emboss Width | RoHS |
|----------------------|----------------|--------------------|-------|-------|-------|---------------|---------------|--------------|------|
| DF13A-10DP-1.25V(**) | 536-0600-9-**- | 10                 | 12.10 | 5.00  | 8.70  | ○             | ○             | 24           | Yes  |
| DF13A-20DP-1.25V(**) | 536-0605-2-**- | 20                 | 18.35 | 11.25 | 14.95 | ○             | ○             | 32           |      |
| DF13A-30DP-1.25V(**) | 536-0610-2-**- | 30                 | 24.60 | 17.50 | 21.20 | -             | ○             | 44           |      |
| DF13A-40DP-1.25V(**) | 536-0615-6-**- | 40                 | 30.85 | 23.75 | 27.45 | -             | ○             | 44           |      |

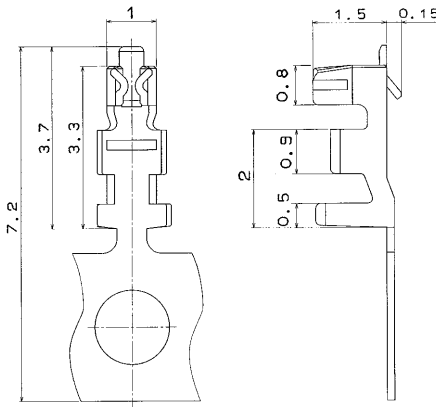
Note 1.Please order the tube packaging product, multiplying the tube packaging quantity.

Note 2.Please order the embossed tape packaging product according to reel number. (1 reel: 1000 pcs.)

Note 3.The absorption cap is attached to the embossed tape packaging product.

## ■Crimping Contact

### ●DF13



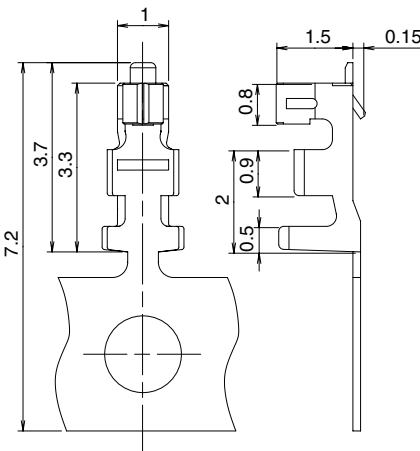
| Part Number       | CL No.        | Packaging Type                     | Quantity | Finish       |
|-------------------|---------------|------------------------------------|----------|--------------|
| DF13-3032SCF      | 536-0299-8    | Reel                               | 10,000   | Tin plating  |
| DF13-3032SCFA(04) | 536-0641-6-04 |                                    |          | Gold plating |
| DF13-2630SCF      | 536-0300-5    |                                    |          | Tin plating  |
| DF13-2630SCFA(04) | 536-0298-5-04 | Reel<br>(Low insertion/extraction) | 10,000   | Gold plating |
| DF13G-2630SCF     | 536-0643-1    |                                    |          | Tin plating  |
| DF13G-2630SCFA    | 536-0642-9    |                                    |          | Gold plating |

### ●Applicable Cable (Tin Plating Annealed Copper Wire)

| Conductor Size (Wire construction) | Jacket Diameter |
|------------------------------------|-----------------|
| AWG26(7 cores./0.16mm)             | φ0.65 to φ1.0mm |
| AWG28(7 cores./0.127mm)            |                 |
| AWG30(7 cores./0.1mm)              |                 |
| AWG32(7 cores./0.08mm)             |                 |

Note: If other cables are used instead of the applicable cable, please contact the Hirose sales department.

### ●DF13G



### ●Recommended Cable

UL1571, UL1061

### ●Strip Length

1.2 to 1.9mm

### ◆Applicable Crimping Tool

| Type                 | Part Number      | CL No.     | Applicable Contact                      |
|----------------------|------------------|------------|-----------------------------------------|
| Applicator           | AP105-DF13-2630S | 901-4531-9 | DF13-2630SCF/SCFA                       |
|                      | AP105-DF13-3032S | 901-4552-9 | DF13-3032SCF/SCFA                       |
| Press Main Unit      | CM-105           | 901-0005-4 | _____                                   |
| Manual Crimping Tool | DF13-TB2630HC    | 550-0256-1 | DF13-2630SCF                            |
| Extraction Tool      | DF-C-PO(B)       | 550-0179-2 | DF13-2630SCF/SCFA                       |
|                      |                  |            | DF13G-2630SCF/SCFA<br>DF13-3032SCF/SCFA |

Note 1. If a trouble has occurred due to other tools, which are not designated by Hirose, Hirose won't guarantee any product.

Note 2. The manual crimping tool is used to sequentially cut the reel contact with carrier.

### ◆Application Pattern

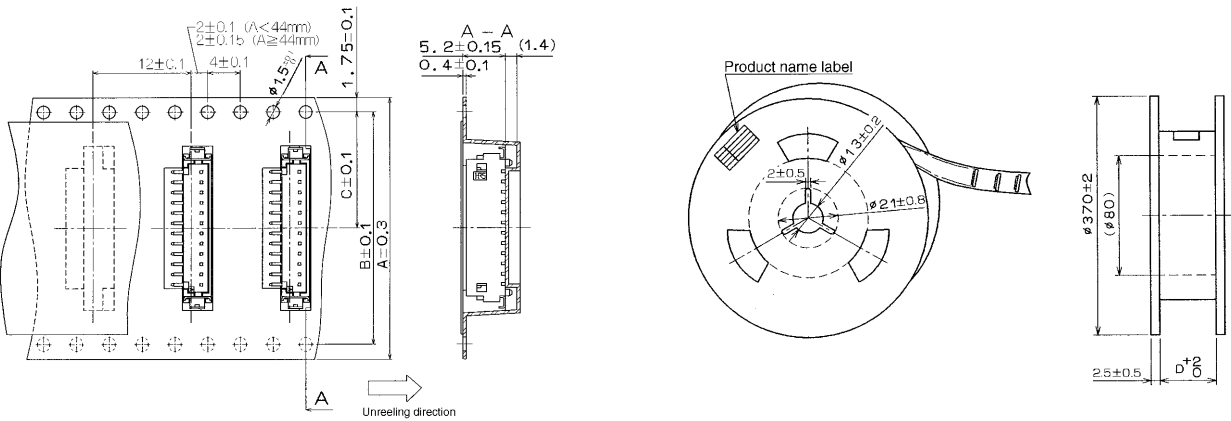
|             | SMT<br>(Single Row Product) | Through hole<br>(Single Row Product) | SMT<br>(Double Row Product) |
|-------------|-----------------------------|--------------------------------------|-----------------------------|
| Right Angle |                             |                                      |                             |
| Straight    |                             |                                      |                             |



◆Embossed Carrier Tape Dimensions

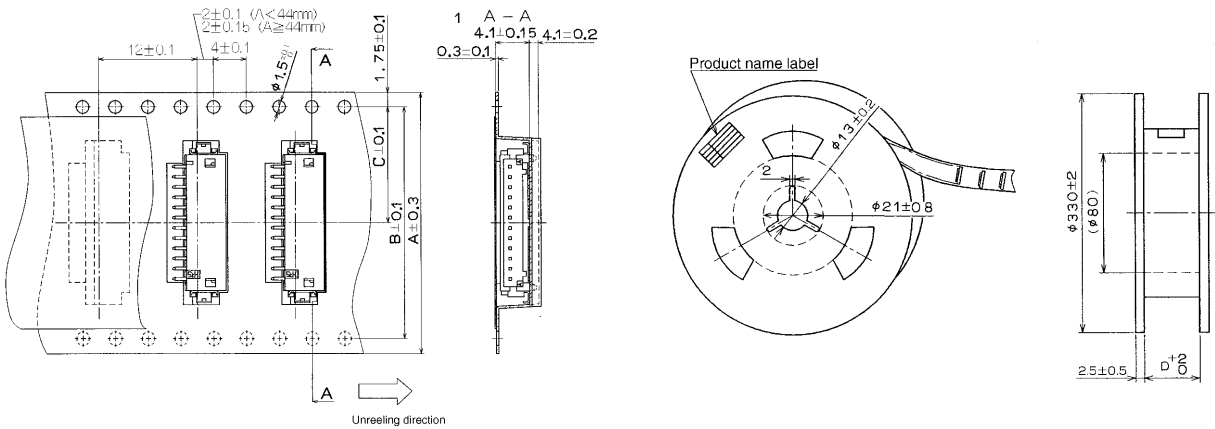
●DF13B-*\*P*-1.25V With boss

●DF13C-*\*P*-1.25V Without boss



●DF13-*\*P*-1.25H

●DF13A-*\*P*-1.25H

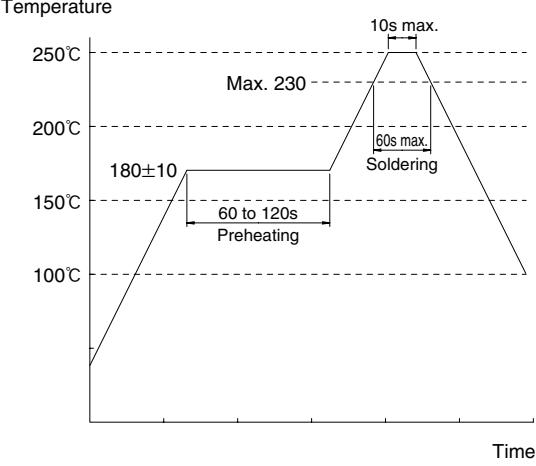
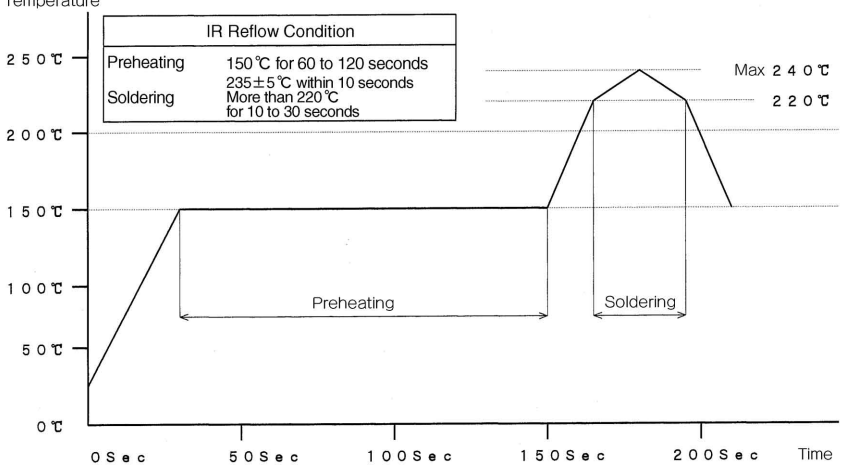


Unit: mm

| Product Type            | Number of Contacts | A  | B    | C    | D    |
|-------------------------|--------------------|----|------|------|------|
| DF13B- <i>*P</i> -1.25V | 2, 3               | 16 | —    | 7.5  | 16.4 |
| DF13C- <i>*P</i> -1.25V | 4 to 10            | 24 | —    | 11.5 | 24.4 |
| DF13- <i>*P</i> -1.25H  | 11 to 14           | 32 | 28.4 | 14.2 | 32.4 |
| DF13A- <i>*P</i> -1.25H | 15                 | 44 | 40.4 | 20.2 | 44.4 |

Note:The 13 contacts is not serialized.

## ◆Precautions

|                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |            |                              |           |                                                                     |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------------------|-----------|---------------------------------------------------------------------|
| <p>1. Recommended Temperature Profile (SMT)</p>          | <p>■ DF13A-*P-1.25H<br/>■ DF13C-*P-1.25V</p> <p>Temperature</p>  <p>Time</p> <p>■ DF13A-*DP-1.25V</p> <p>Temperature</p>  <p>Time</p> <p>IR Reflow Condition</p> <table border="1"> <tr> <td>Preheating</td> <td>150 °C for 60 to 120 seconds</td> </tr> <tr> <td>Soldering</td> <td>235±5 °C within 10 seconds<br/>More than 220 °C for 10 to 30 seconds</td> </tr> </table> <p>Note 1.Up to 2 cycles of Reflow soldering are possible under the same conditions, provided that there is a return to normal temperature between the first and second cycle.</p> <p>Note 2.The temperature profile indicates the board surface temperature at the point of contacts with the connector terminals.</p> <p>Note 3.Slight variations in color of the plastic compounds do not affect form, fit or function of the connector.</p> | Preheating | 150 °C for 60 to 120 seconds | Soldering | 235±5 °C within 10 seconds<br>More than 220 °C for 10 to 30 seconds |
| Preheating                                               | 150 °C for 60 to 120 seconds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |            |                              |           |                                                                     |
| Soldering                                                | 235±5 °C within 10 seconds<br>More than 220 °C for 10 to 30 seconds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            |                              |           |                                                                     |
| <p>2. Recommended Soldering Condition (SMT)</p>          | <p>Manual soldering: 290±10°C for 2 seconds max.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                              |           |                                                                     |
| <p>3. Recommended Screen Thickness (SMT)</p>             | <p>0.15 to 0.2mm</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                              |           |                                                                     |
| <p>4. Board Warpage (SMT)</p>                            | <p>Max 0.03mm in the connector center area, based on both connector edges</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                              |           |                                                                     |
| <p>5. Recommended Soldering Condition (Through hole)</p> | <p>Flow: 250±5°C for 3 seconds<br/>Manual soldering: 290±10°C for 2 seconds</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |            |                              |           |                                                                     |
| <p>6. Cleaning Condition</p>                             | <p>Refer to Nylon Connector Use Hand book.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |            |                              |           |                                                                     |
| <p>7. Connection Condition</p>                           | <p>Refer to Nylon Connector Use Hand book.</p> <p>■Carefully carry out the crimping operation according to "Crimping Condition Sheet" and "Crimping Quality Standard", because the crimping contact is an extremely small style.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |                              |           |                                                                     |
| <p>8. Cautions</p>                                       | <p>■Be careful for the excessive scoop insertion/extraction, which will cause damage to the product.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |            |                              |           |                                                                     |
| <p>9. Precautions</p>                                    | <p>Refer to Nylon Connector Use Hand book.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |            |                              |           |                                                                     |

## ◆Precautions

### <Precautions at Time of Insertion>

Align with the connector form and press down  
continue pressing until there is a tactile click.

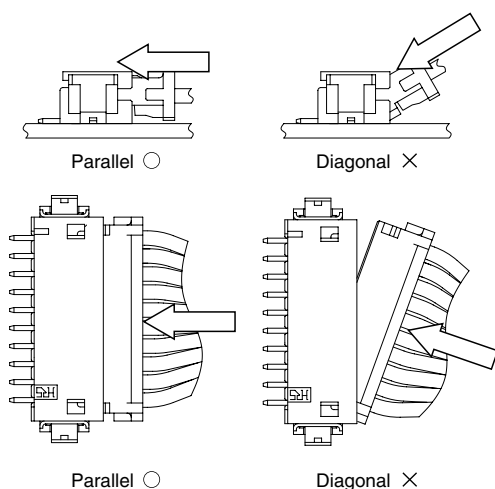
#### Handling

Method: Lightly grasping the base the cable, press the  
connector with your finger and insert it.

#### Insertion Angle

Caution: Do not insert at an angle of 30° or greater.  
Doing so will cause contact deformation or  
case damage.

Method: Insert with the connector parallel.



### <Precautions at Time of Disconnection>

Align with the connector form and press down  
continue pressing until there is a tactile click.

#### Handling

Method: Grasp the cable so that the entire cable is  
pulled evenly and it out.

#### Angle of Removal

Caution: Do not remove at an angle of 30° or greater.  
Doing so will cause contact deformation or  
case damage.

Method: Remove with the connector parallel.

