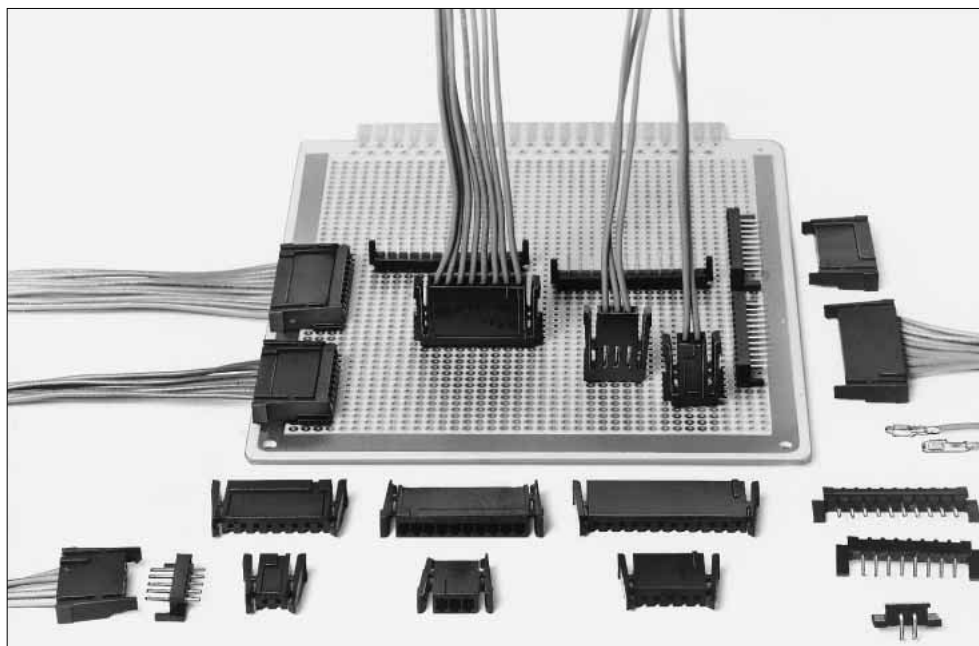


# 2.5mm Pitch Connector for Discrete Wire Connection

## HNC Series



### ■ Features

#### 1. Full Lock Mechanism

The connector is equipped with the full lock mechanism so as not to be removed, unless locks are reset on both sides. This mechanism is activated effectively to prevent extraction by cable hooking or other causes.

#### 2. Thin Type Connector

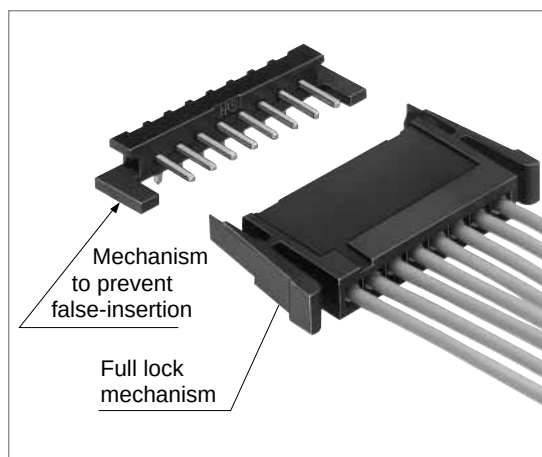
Mounting height when the connector is used at the right angle : **4.8mm**

#### 3. Mechanism to Prevent Mis-insertion

This thin type connector is equipped with the mechanism to prevent mis-insertion.

#### 4. Tin Plating and Gold Plating Variation

Two kinds of tin plating and gold plating types are available, and can be chosen according to application. The tin plating is also set to a light operating touch.



### ■ Applications

Various business equipment, financial terminals

## Product Specifications

|        |                            |                                                                           |                                                         |                                             |
|--------|----------------------------|---------------------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------|
| Rating | Current rating<br>(Note 1) | 22 AWG : 3A<br>24 AWG : 3A<br>26 AWG : 2A<br>28 AWG : 1A<br>30 AWG : 0.5A | Operating Temperature Range<br>Operating Humidity Range | -55 to +85°C (Note 2)<br>20 to 80%          |
|        | Voltage rating             | 250V AC                                                                   | Storage Temperature Range<br>Storage Humidity Range     | -10 to +60°C (Note 3)<br>40 to 70% (Note 3) |

| Item                             | Specification                                                                                 | Condition                                                                                                    |
|----------------------------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| 1. Insulation Resistance         | 1000MΩ min.                                                                                   | 500V DC                                                                                                      |
| 2. Withstanding voltage          | No flashover or insulation breakdown.                                                         | 1000V AC/1 minute                                                                                            |
| 3. Contact Resistance            | 10mΩ Max                                                                                      | Measured at a maximum of 20V, 1mA (DC or 1000Hz)                                                             |
| 4. Insertion/Extraction Force    | Insertion force : 4.4N max. Extraction force : 0.4N min.                                      | Measure at the square steel pin of 0.635±0.002mm                                                             |
| 5. Vibration                     | No electrical discontinuity of 10μs or more                                                   | 10 cycles in each of three axis at frequency 10-55Hz, half amplitude 0.75mm                                  |
| 6. Humidity (Steady state)       | Contact resistance : 10mΩ max. Insulation resistance : 1000MΩ min.                            | 96 hours at temperature of 40±2°C and humidity of 90% to 95%                                                 |
| 7. Temperature Cycle             | Contact resistance : 10mΩ max. Insulation resistance : 1000MΩ min.                            | (-55°C : 30 minutes → 5 to 35°C : 2 to 3 minutes<br>85°C : 30 minutes → 5 to 35°C : 2 to 3 minutes) 5 cycles |
| 8. Durability (Mating/un-mating) | Tin plating : Contact resistance : 30mΩ max.<br>Gold plating : Contact resistance : 20mΩ 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 5 seconds<br>Manual soldering : 300°C for 2 seconds                                         |

Note 1 : The rated current will be changed according to cable sizes for use. The header rating only is 3A.

Note 2 : Includes temperature rise caused by current flow.

Note 3 : 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 4 : Information contained in this catalog represents general requirements for this Series. Contact us for the drawings and specifications for a specific part number shown.

## Materials / Finish

| Product         | Part      | Material        | Finish                    | Remarks |
|-----------------|-----------|-----------------|---------------------------|---------|
| Crimping Socket | Insulator | Polyamide       | Black                     | UL94V-2 |
| Contact         | Contact   | Phosphor Bronze | Tin plated or gold plated | ——      |
| Pin Header      | Insulator | Polyamide       | Black                     | UL94V-2 |
|                 | Contact   | Brass           | Tin plated or gold plated | ——      |

## Product Number Structure

Refer to the chart below when determining the product specifications from the product number.

Please select from the product numbers listed in this catalog when placing orders.

### ●Crimping Plug

**HNC 2 - 2.5 P - \* DSL**

① ② ③ ④ ⑤ ⑥

|                                                  |                                                                                |
|--------------------------------------------------|--------------------------------------------------------------------------------|
| ① Series Name : HNC                              | ⑤ Number of Contacts : 2 to 8,10,12,15                                         |
| ② Series No. : 2, 1                              | ⑥ Contact Type<br>None : Crimping socket<br>DS : Straight<br>DSL : Right angle |
| ③ Contact Pitch : 2.5mm                          |                                                                                |
| ④ Connector Type<br>S : Socket<br>P : Pin Header |                                                                                |

### ●Contact

**HNC - 2.5S - C - A**

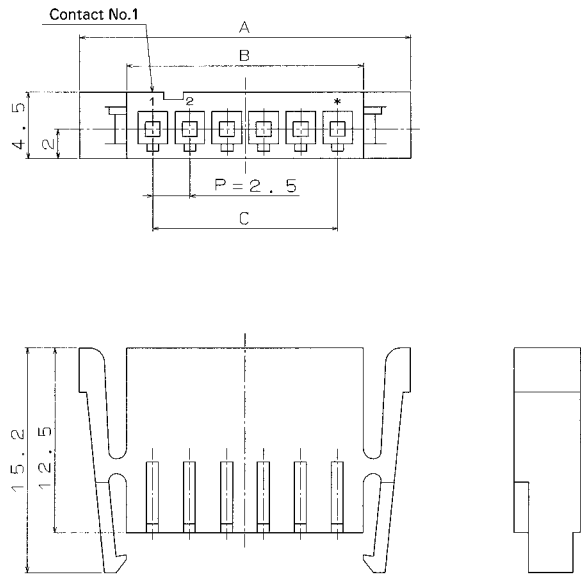
① ② ③

|                                         |                                                                 |
|-----------------------------------------|-----------------------------------------------------------------|
| ① Type: 2.5mm pitch socket              | ③ Applicable cable size<br>A : 22 to 26 AWG<br>B : 26 to 30 AWG |
| ② Packaging Type<br>C : Reel<br>D : Bag |                                                                 |
|                                         |                                                                 |

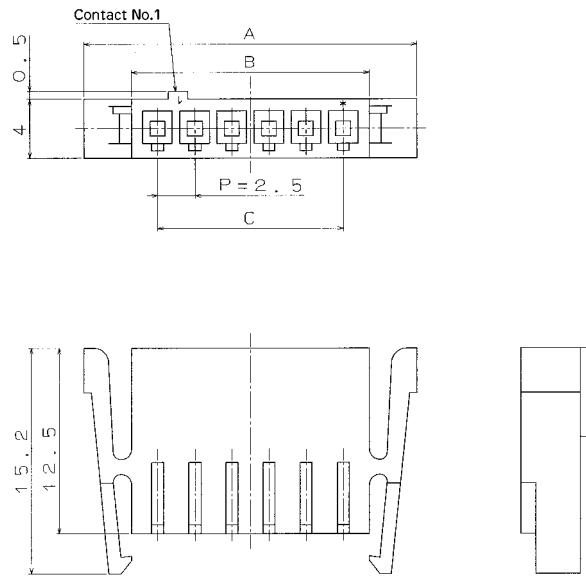
■Crimping Socket



[Fig.1]



[Fig.2]

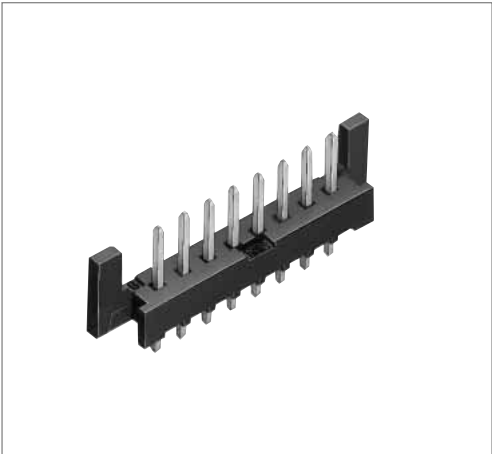


Unit : mm

| Part No.     | HRS No.    | No. of Contacts | A    | B    | C    | Dimensions | RoHS |
|--------------|------------|-----------------|------|------|------|------------|------|
| HNC2-2.5S- 2 | 218-0011-1 | 2               | 12.4 | 6.0  | 2.5  | Fig.1      | Yes  |
| HNC2-2.5S- 3 | 218-0022-8 | 3               | 14.9 | 8.5  | 5.0  |            |      |
| HNC2-2.5S- 4 | 218-0039-0 | 4               | 17.4 | 11.0 | 7.5  |            |      |
| HNC2-2.5S- 5 | 218-0027-1 | 5               | 19.9 | 13.5 | 10.0 |            |      |
| HNC2-2.5S- 6 | 218-0042-5 | 6               | 22.4 | 16.0 | 12.5 |            |      |
| HNC2-2.5S- 7 | 218-0030-6 | 7               | 24.9 | 18.5 | 15.0 |            |      |
| HNC2-2.5S- 8 | 218-0014-0 | 8               | 27.4 | 21.0 | 17.5 |            |      |
| HNC2-2.5S-10 | 218-0017-8 | 10              | 32.4 | 26.0 | 22.5 | Fig.1      | Yes  |
| HNC1-2.5S-12 | 218-0008-7 | 12              | 37.0 | 31.0 | 27.5 | Fig.2      |      |
| HNC2-2.5S-15 | 218-0045-3 | 15              | 44.9 | 38.5 | 35.0 | Fig.1      |      |

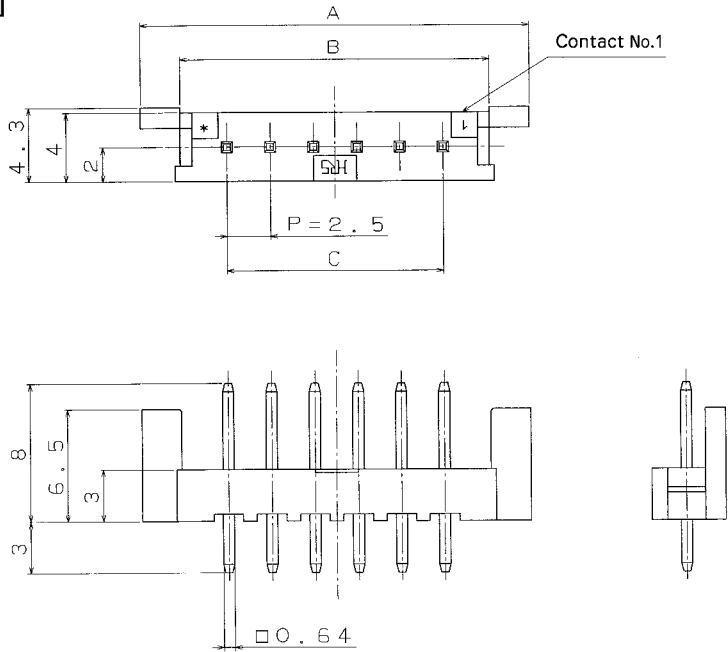
Note1 : Please order a quantity multiplied by 100 pcs. (Not per bag, but per pcs.)  
Note2 : The series name of 12 contacts connector is HNC1, and partially will be changed in the style.

■Straight Pin Header

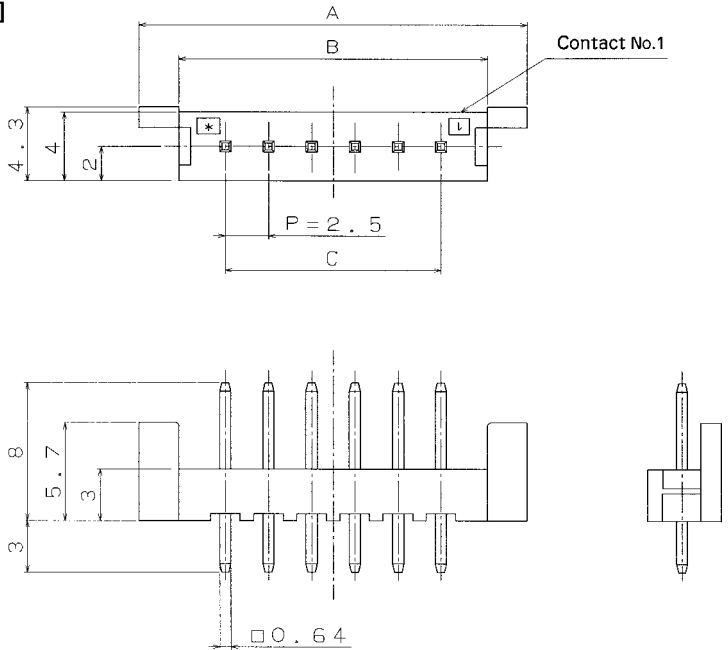


●Board Through-hole Diameter:  $\phi 1.1^{+0.1}_{-0}$

[Fig.3]



[Fig.4]



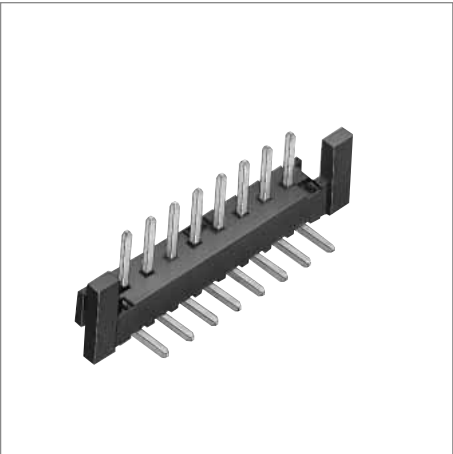
Unit : mm

| Part No.           | HRS No.        | No. of Contacts | A    | B    | C    | Specific No. |              | Dimensions | RoHS |
|--------------------|----------------|-----------------|------|------|------|--------------|--------------|------------|------|
|                    |                |                 |      |      |      | Tin plating  | Gold plating |            |      |
| HNC2-2.5P- 2DS(**) | 218-0012-4-**- | 2               | 12.5 | 7.8  | 2.5  | 55           | 02           | Fig.3      | Yes  |
| HNC2-2.5P- 3DS(**) | 218-0023-0-**- | 3               | 15.0 | 10.4 | 5.0  | 55           | 02           |            |      |
| HNC2-2.5P- 4DS(**) | 218-0040-0-**- | 4               | 17.5 | 12.9 | 7.5  | 55           | 01           |            |      |
| HNC2-2.5P- 5DS(**) | 218-0028-4-**- | 5               | 20.0 | 15.4 | 10.0 | 55           | 02           |            |      |
| HNC2-2.5P- 6DS(**) | 218-0043-8-**- | 6               | 22.5 | 17.9 | 12.5 | 55           | 01           |            |      |
| HNC2-2.5P- 7DS(**) | 218-0031-9-**- | 7               | 25.0 | 20.4 | 15.0 | 55           | 02           |            |      |
| HNC2-2.5P- 8DS(**) | 218-0015-2-**- | 8               | 27.5 | 22.8 | 17.5 | 55           | 02           |            |      |
| HNC2-2.5P-10DS(**) | 218-0018-0-**- | 10              | 32.5 | 27.8 | 22.5 | 55           | 02           | Fig.4      |      |
| HNC1-2.5P-12DS(**) | 218-0009-0-**- | 12              | 35.5 | 32.8 | 27.5 | 55           | 02           |            |      |
| HNC2-2.5P-15DS(**) | 218-0046-6-**- | 15              | 45.0 | 40.4 | 35.0 | 55           | 01           | Fig.3      |      |

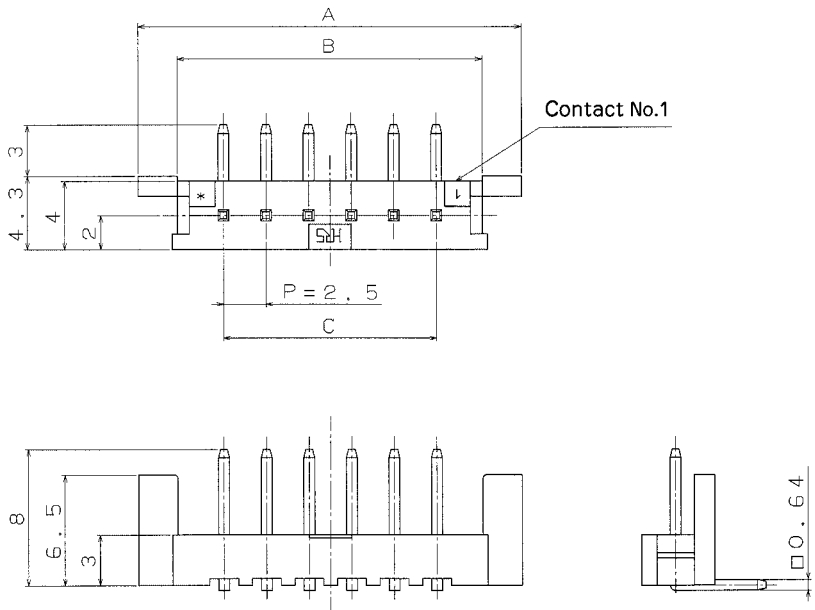
Note1 : Please order a quantity multiplied by 100 pcs. (Not per bag, but per piece)

Note2 : The series name of the 12 contacts connector is HNC1 and the style will be partially changed.

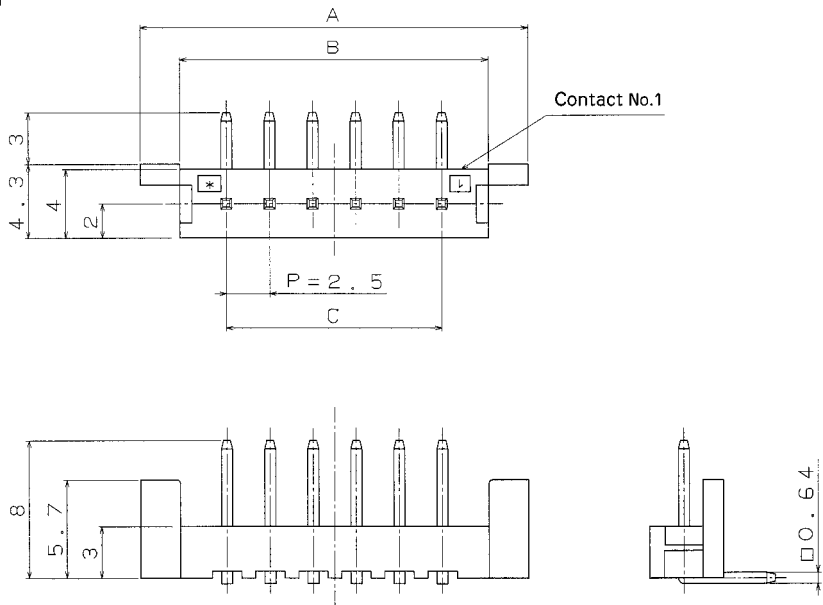
■Right Angle Pin Header [Fig.5]



●Board Through-hole Diameter:  $\phi 1.1^{+0.1}_{-0}$



[Fig.6]



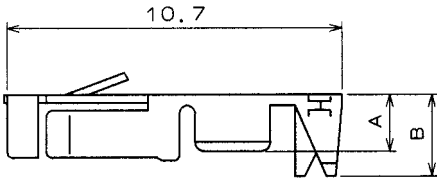
Unit : mm

| Part No.            | HRS No.        | No. of Contacts | A    | B    | C    | Specific No. |              | Dimensions | RoHS |
|---------------------|----------------|-----------------|------|------|------|--------------|--------------|------------|------|
|                     |                |                 |      |      |      | Tin plating  | Gold plating |            |      |
| HNC2-2.5P- 2DSL(**) | 218-0013-7-**- | 2               | 12.5 | 7.8  | 2.5  | 55           | 02           | Fig.5      | Yes  |
| HNC2-2.5P- 3DSL(**) | 218-0024-3-**- | 3               | 15.0 | 10.4 | 5.0  | 55           | 02           |            |      |
| HNC2-2.5P- 4DSL(**) | 218-0041-2-**- | 4               | 17.5 | 12.9 | 7.5  | 55           | 01           |            |      |
| HNC2-2.5P- 5DSL(**) | 218-0029-7-**- | 5               | 20.0 | 15.4 | 10.0 | 55           | 02           |            |      |
| HNC2-2.5P- 6DSL(**) | 218-0044-0-**- | 6               | 22.5 | 17.9 | 12.5 | 55           | 01           |            |      |
| HNC2-2.5P- 7DSL(**) | 218-0032-1-**- | 7               | 25.0 | 20.4 | 15.0 | 55           | 02           |            |      |
| HNC2-2.5P- 8DSL(**) | 218-0016-5-**- | 8               | 27.5 | 22.8 | 17.5 | 55           | 02           |            |      |
| HNC2-2.5P-10DSL(**) | 218-0019-3-**- | 10              | 32.5 | 27.8 | 22.5 | 55           | 02           | Fig.6      |      |
| HNC1-2.5P-12DSL(**) | 218-0010-9-**- | 12              | 35.5 | 32.8 | 27.5 | 55           | 02           |            |      |
| HNC2-2.5P-15DSL(**) | 218-0047-9-**- | 15              | 45.0 | 40.4 | 35.0 | 55           | 01           | Fig.5      |      |

Note1 : Please order a quantity multiplied by 100 pcs. (Not per bag, but per piece)  
Note2 : The series name of the 12 contacts connector is HNC1 and the style will be partially changed.

■Crimping Contact for Socket

●Applicable Cable (Tin Plated Annealing Copper Wire)



| Conductor Size (Contact wire construction) | Jacket Diameter |
|--------------------------------------------|-----------------|
| 22 AWG (17pieces/0.16mm)                   | φ1.35 to φ1.7mm |
| 24 AWG (11pieces/0.16mm)                   |                 |
| 26 AWG ( 7pieces/0.16mm)                   |                 |
| 28 AWG ( 7pieces/0.127mm)                  | φ1.0 to φ1.35mm |
| 30 AWG ( 7pieces/0.1mm)                    |                 |

●Recommended Cable

UL1061, UL1007

●Strip Length

2.8 to 3.3mm

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

Unit : mm

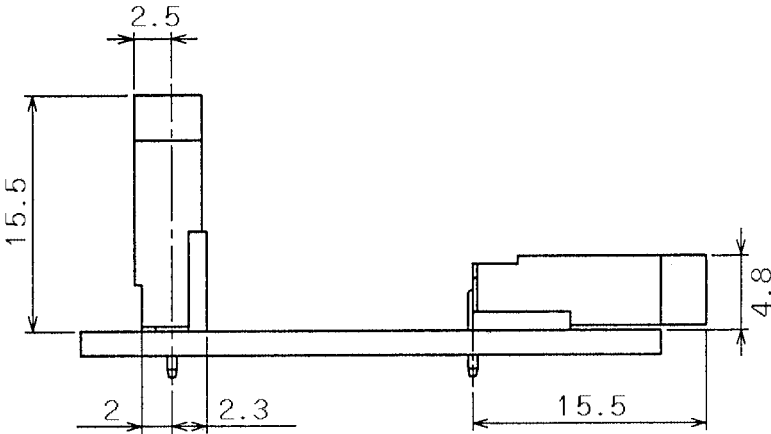
| Part No.         | HRS No.        | Conductor Size | Jacket Diameter | A   | B   | Packaging Type | Quantity | Specific No. |              | RoHS |
|------------------|----------------|----------------|-----------------|-----|-----|----------------|----------|--------------|--------------|------|
|                  |                |                |                 |     |     |                |          | Tin plating  | Gold plating |      |
| HNC-2.5S-D-A(**) | 218-0037-5-**- | 22 to 26 AWG   | φ1.35 to 1.7mm  | 1.8 | 2.6 | Bag            | 100      | 15           | 02           | Yes  |
| HNC-2.5S-C-A(**) | 218-0021-5-**- |                |                 | 1.8 | 2.6 | Reel           | 10,000   |              |              |      |
| HNC-2.5S-D-B(**) | 218-0038-8-**- | 26 to 30 AWG   | φ1.0 to 1.35mm  | 1.5 | 1.7 | Bag            | 100      |              |              |      |
| HNC-2.5S-C-B(**) | 218-0020-2-**- |                |                 | 1.5 | 1.7 | Reel           | 10,000   |              |              |      |

◆Applicable Crimping Tool

| Type                 | Part No.                                  | HRS No.    | Applicable Contact                |
|----------------------|-------------------------------------------|------------|-----------------------------------|
| Applicator           | AP105-HNC                                 | 901-4502-0 | HNC-2.5S-C-A(**)/HNC-2.5S-C-B(**) |
| Press Main Unit      | CM-105C                                   | 901-0001-0 |                                   |
| Manual Crimping Tool | TC-HNC-B                                  | 250-0005-7 | HNC-2.5S-D-B(**)                  |
|                      | TC-HNC-A                                  | 250-0006-0 | HNC-2.5S-D-A(**)                  |
| Extraction Tool      | Flat-blade screwdriver (thickness<0.75mm) |            |                                   |

Note 1 : If a trouble has occurred due to tools which are not designated by Hirose, Hirose won't guarantee any product.  
Note 2 : Please do the crimping operations according to the "Crimp quality standard" and "Crimping condition table".

◆Application Pattern



## ◆Precautions

|                                    |                                                                    |
|------------------------------------|--------------------------------------------------------------------|
| 1. Recommended Soldering Condition | Flow : 250℃ for 5 seconds<br>Manual soldering : 300℃ for 2 seconds |
| 2. Cleaning Condition              | Refer to Wire-to-Board Connector Use Handbook.                     |
| 3. Connection Condition            | Refer to Wire-to-Board Connector Use Handbook.                     |