

## HNC Series

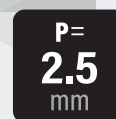
# 2.5mm Pitch Connector for Discrete Wire Connection



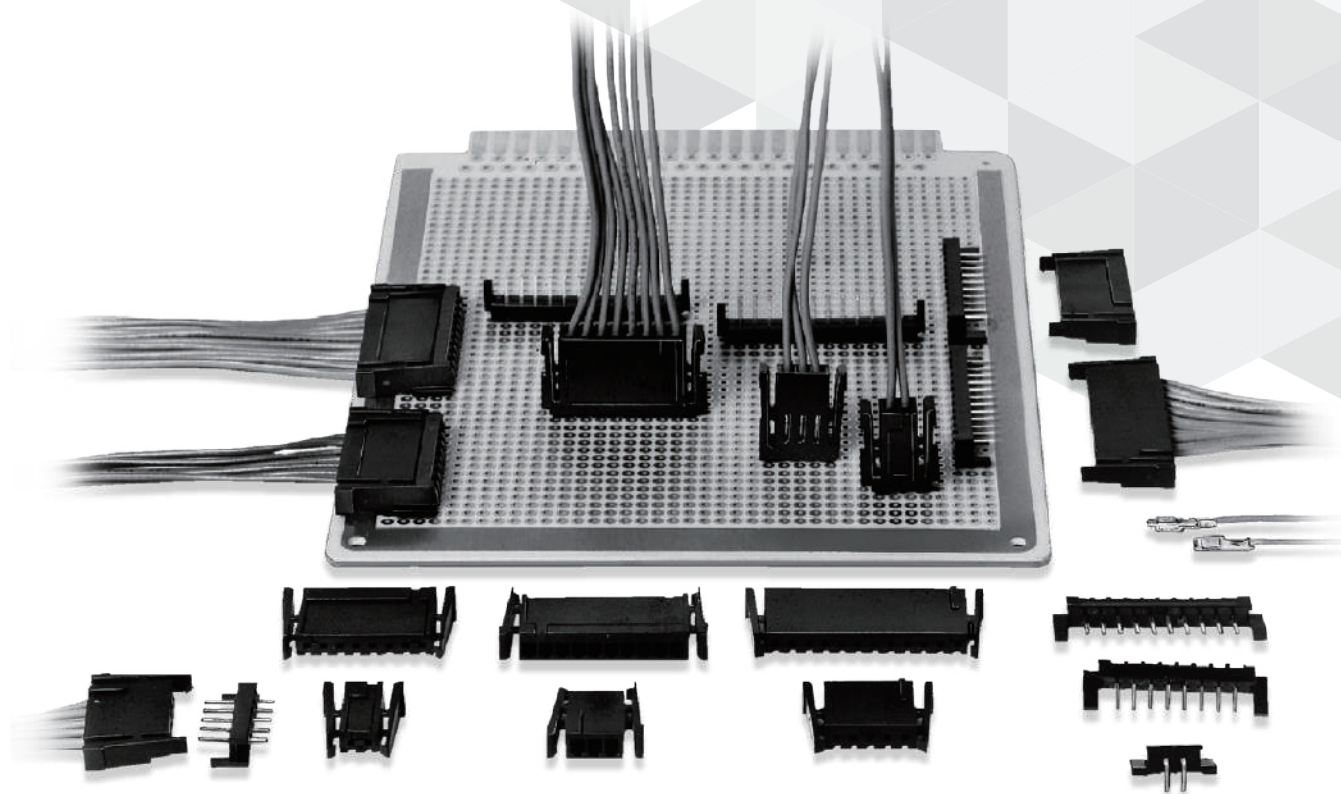
Positive-Lock



Low Profile



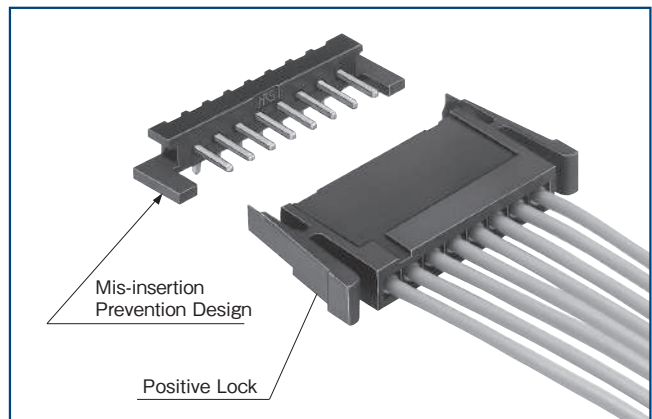
P=2.5mm



## Features

### 1. Positive Lock

Positive lock design does not unlock without releasing the lock on both sides for effective prevention against cable disconnection when the cable gets caught, etc.



### 2. Low Profile

Mounted height when the connector is used at a right angle : 4.8mm

### 3. Mechanism to Prevent Mis-insertion

This thin type connector is equipped with a mis-insertion prevention design.

### 4. Tin and Gold Plating Variations Available

Two plating types, tin and gold, are available and can be chosen based on your application needs. Additionally, the tin plating type has a light operating feel.

## Applications

Various business equipment, financial terminals

Product Specifications

|                        |            |        |        |        |          |                                   |             |
|------------------------|------------|--------|--------|--------|----------|-----------------------------------|-------------|
| Rated Current (Note 1) | 22 AWG     | 24AWG  | 26 AWG | 28 AWG | 30 AWG   | Operating Temperature (Note 2)    | -55 to +85℃ |
|                        | 3A/pin     | 3A/pin | 2A/pin | 1A/pin | 0.5A/pin | Storage Temperature Range         | -10 to +60℃ |
| Rated Voltage          | 250V AC/DC |        |        |        |          | Operating Humidity Range (Note 3) | 20 to 80%   |
|                        |            |        |        |        |          | Storage Humidity Range            | 40 to 70%   |

| Item                         | Specification                                                                                   | Condition                                                                                                    |
|------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Insulation Resistance        | 1000M Ω Min.                                                                                    | 500V DC                                                                                                      |
| Withstanding Voltage         | No flashover or insulation breakdown.                                                           | 1000V AC for 1 min.                                                                                          |
| Contact Resistance           | 10m Ω Max.                                                                                      | Measured at a maximum of 20mV, 1mA (DC or 1000Hz)                                                            |
| Insertion/Extraction Force   | Insertion force : 4.4N Max.<br>Extraction force : 0.4N Min.                                     | Measure at the square steel pin of 0.635±0.002mm                                                             |
| Vibration                    | No electrical discontinuity of 10 μ s or more                                                   | 10 cycles in each of three axis at frequency 10-55Hz,<br>half amplitude 0.75mm                               |
| Humidity (Steady State)      | Contact resistance : 10m Ω Max.<br>Insulation resistance : 1000M Ω Min.                         | 96 hours at temperature of 40±2℃ and humidity of 90% to 95%                                                  |
| Temperature Cycle            | Contact resistance : 10m Ω Max.<br>Insulation resistance : 1000M Ω Min.                         | (-55℃ : 30 minutes → 5 to 35℃ : 2 to 3 minutes<br>-85℃ : 30 minutes → 5 to 35℃ : 2 to 3 minutes)<br>5 cycles |
| Mating Durability            | Tin plating : Contact resistance : 30m Ω Max.<br>Gold plating : Contact resistance : 20m Ω Max. | Tin plating : 30 cycles<br>Gold plating : 50 cycles                                                          |
| Resistance to Soldering Heat | No deformation of components affecting performance.                                             | Flow : 250℃ for 5 seconds                                                                                    |
|                              |                                                                                                 | Manual soldering : 300℃ for 2 seconds                                                                        |

Note 1 : The rated current varies based on the cable size for use. The rated current of the header only is 3A.  
Note 2 : Includes temperature rise caused by current flow.  
Note 3 : The connector should be completely dry (no condensation present).  
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 | RoHS |
|----------------------|-----------|-----------------|---------------------------|---------|------|
| Crimp Socket         | Insulator | Polyamide       | Black                     | UL94V-2 | ○    |
| Socket Crimp 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.

## Connector

**HNC2 - 2.5 P - # DSL**  
①                      ②                      ③                      ④                      ⑤

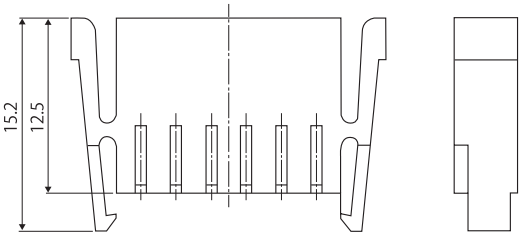
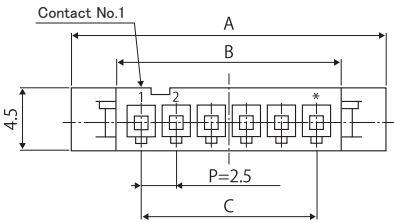
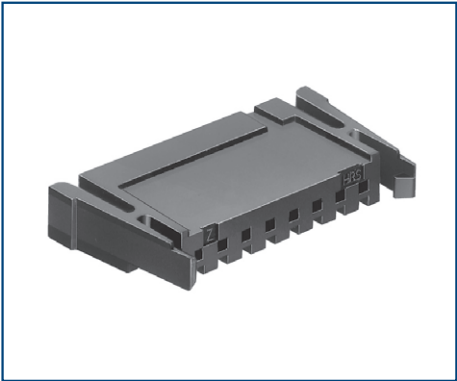
|                  |                              |                      |                                                           |
|------------------|------------------------------|----------------------|-----------------------------------------------------------|
| ① Series Name    | HNC2                         | ④ Number of Contacts | 2 to 5                                                    |
| ② Contact Pitch  | 2.5mm                        | ⑤ Contact Type       | None : Crimp Socket<br>DS : Straight<br>DSL : Right Angle |
| ③ Connector Type | 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 | A : 22-26 AWG<br>B : 26-30 AWG |
| ② Packaging Type | C : Reel<br>D : Bag |                         |                                |

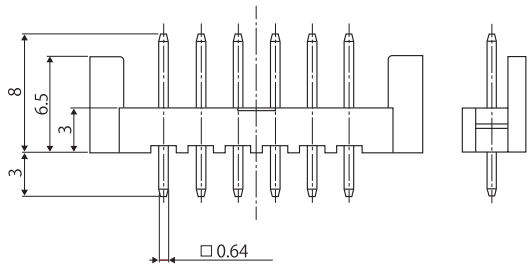
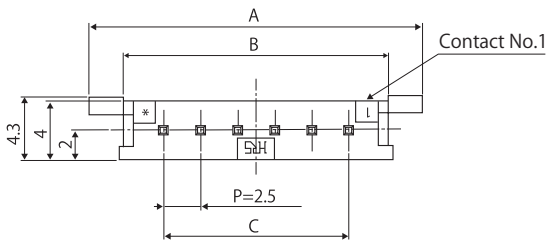
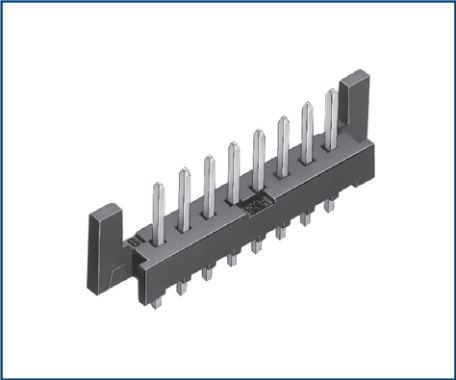
Crimp Socket



Unit : mm

| Part No.    | HRS No.          | No. of Pos. | A    | B    | C    | Purchase Unit  |
|-------------|------------------|-------------|------|------|------|----------------|
| HNC2-2.5S-2 | CL0218-0011-1-00 | 2           | 12.4 | 6.0  | 2.5  | 100pcs per bag |
| HNC2-2.5S-3 | CL0218-0022-8-00 | 3           | 14.9 | 8.5  | 5.0  |                |
| HNC2-2.5S-4 | CL0218-0039-0-00 | 4           | 17.4 | 11.0 | 7.5  |                |
| HNC2-2.5S-5 | CL0218-0027-1-00 | 5           | 19.9 | 13.5 | 10.0 |                |

Straight Pin Header

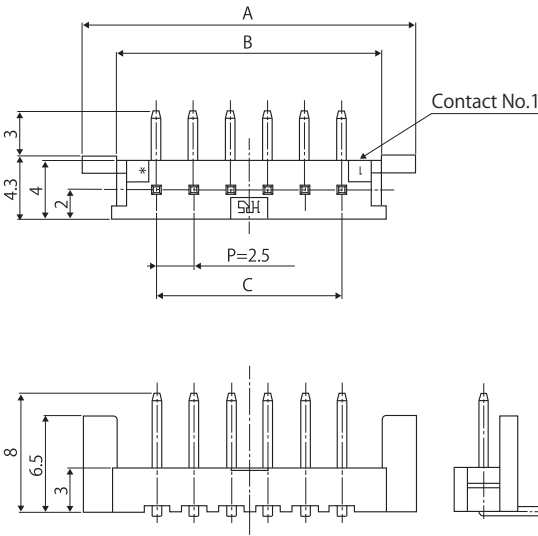
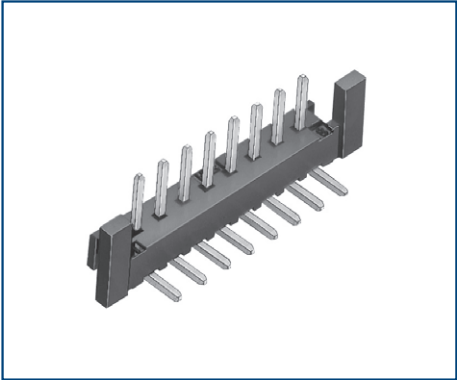


Note : Board Through-hole Diameter :  $\phi\ 1.1^{+0.1}_{0}$

Unit : mm

| Part No.          | HRS No.          | No. of Pos. | A    | B    | C    | Specific No. |              | Purchase Unit  |
|-------------------|------------------|-------------|------|------|------|--------------|--------------|----------------|
|                   |                  |             |      |      |      | Tin Plating  | Gold Plating |                |
| HNC2-2.5P-2DS(##) | CL0218-0012-4-## | 2           | 12.5 | 7.8  | 2.5  | 55           | 02           | 100pcs per bag |
| HNC2-2.5P-3DS(##) | CL0218-0023-0-## | 3           | 15.0 | 10.4 | 5.0  | -            | 02           |                |
| HNC2-2.5P-5DS(##) | CL0218-0028-4-## | 5           | 20.0 | 15.4 | 10.0 | -            | 02           |                |

Right Angle Pin Header

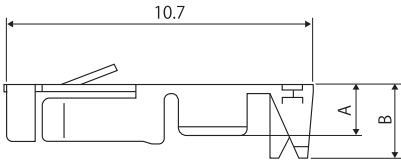


Note : Board Through-hole Diameter :  $\phi 1.1^{+0.1}_0$

Unit : mm

| Part No.           | HRS No.          | No. of Pos. | A    | B    | C   | Specific No. |              | Purchase Unit  |
|--------------------|------------------|-------------|------|------|-----|--------------|--------------|----------------|
|                    |                  |             |      |      |     | Tin Plating  | Gold Plating |                |
| HNC2-2.5P-3DSL(##) | CL0218-0024-3-## | 3           | 15.0 | 10.4 | 5.0 | 55           | -            | 100pcs per bag |
| HNC2-2.5P-4DSL(##) | CL0218-0041-2-## | 4           | 17.5 | 12.9 | 7.5 | 55           | -            |                |

# Socket Crimp Contact



Unit : mm

| Part No.         | A   | B   |
|------------------|-----|-----|
| HNC-2.5S-C-A(15) | 1.8 | 2.6 |
| HNC-2.5S-C-A(02) |     |     |
| HNC-2.5S-D-A(15) |     |     |
| HNC-2.5S-D-A(02) |     |     |
| HNC-2.5S-C-B(15) | 1.5 | 1.7 |
| HNC-2.5S-C-B(02) |     |     |
| HNC-2.5S-D-B(15) |     |     |
| HNC-2.5S-D-B(02) |     |     |

## ●Reel Contact (Applicable Tool : Applicator)

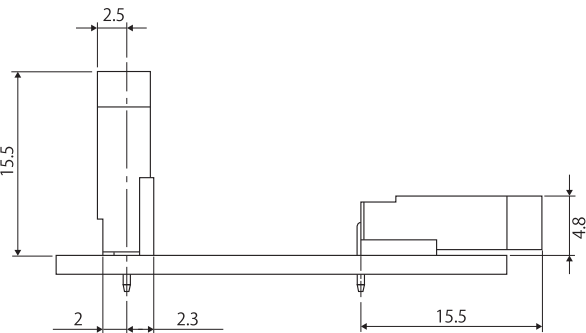
| Part No.                             | HRS No.                              | Finish                    | Applicable Wire (Tin Plated Annealing Copper Wire) (Note 2) |                |                                    |                                                                      |                 | Purchase Unit      |
|--------------------------------------|--------------------------------------|---------------------------|-------------------------------------------------------------|----------------|------------------------------------|----------------------------------------------------------------------|-----------------|--------------------|
|                                      |                                      |                           | UL                                                          | AWG            | Wire Construction                  | Sectional Area                                                       | Jacket Diameter |                    |
| HNC-2.5S-C-A(15)<br>HNC-2.5S-C-A(02) | CL0218-0021-5-15<br>CL0218-0021-5-02 | Tin Plated<br>Gold Plated | 1007                                                        | 22<br>24<br>26 | 17/0.16mm<br>11/0.16mm<br>7/0.16mm | 0.342mm <sup>2</sup><br>0.221mm <sup>2</sup><br>0.141mm <sup>2</sup> | 1.35 to 1.7mm   | 10,000pcs per reel |
| HNC-2.5S-C-B(15)<br>HNC-2.5S-C-B(02) | CL0218-0020-2-15<br>CL0218-0020-2-02 | Tin Plated<br>Gold Plated |                                                             | 26<br>28<br>30 | 7/0.16mm<br>7/0.127mm<br>7/0.1mm   | 0.141mm <sup>2</sup><br>0.089mm <sup>2</sup><br>0.055mm <sup>2</sup> | 1.0 to 1.35mm   |                    |
|                                      |                                      |                           |                                                             |                |                                    |                                                                      |                 |                    |

## ●Loose Contact (Applicable Tool : Manual Crimping Tool)

| Part No.                             | HRS No.                              | Finish                    | Applicable Wire (Tin Plated Annealing Copper Wire) (Note 2) |                |                                    |                                                                      |                         | Purchase Unit  |
|--------------------------------------|--------------------------------------|---------------------------|-------------------------------------------------------------|----------------|------------------------------------|----------------------------------------------------------------------|-------------------------|----------------|
|                                      |                                      |                           | UL                                                          | AWG            | Wire Construction                  | Sectional Area                                                       | Jacket Diameter         |                |
| HNC-2.5S-D-A(15)<br>HNC-2.5S-D-A(02) | CL0218-0037-5-15<br>CL0218-0037-5-02 | Tin Plated<br>Gold Plated | 1007                                                        | 22<br>24<br>26 | 17/0.16mm<br>11/0.16mm<br>7/0.16mm | 0.342mm <sup>2</sup><br>0.221mm <sup>2</sup><br>0.141mm <sup>2</sup> | 1.6mm<br>1.5mm<br>1.3mm | 100pcs per bag |
| HNC-2.5S-D-B(15)<br>HNC-2.5S-D-B(02) | CL0218-0038-8-15<br>CL0218-0038-8-02 | Tin Plated<br>Gold Plated |                                                             | 26<br>28<br>30 | 7/0.16mm<br>7/0.127mm<br>7/0.1mm   | 0.141mm <sup>2</sup><br>0.089mm <sup>2</sup><br>0.055mm <sup>2</sup> | 1.3mm<br>1.2mm<br>1.1mm |                |
|                                      |                                      |                           |                                                             |                |                                    |                                                                      |                         |                |

Note : Please consult with a Hirose representative when using wires other than those specified.

# Mated Diagram



## Applicable Crimping Tool

| Type                 | Part No.                                    | HRS No.          | Applicable Contact                                                     |
|----------------------|---------------------------------------------|------------------|------------------------------------------------------------------------|
| Applicator           | AP105-HNC                                   | CL0901-4502-0-00 | HNC-2.5S-C-A(15)、HNC-2.5S-C-A(02)<br>HNC-2.5S-C-B(15)、HNC-2.5S-C-B(02) |
| Press Main Unit      | CM-105C                                     | CL0901-0001-0-00 | —                                                                      |
| Manual Crimping Tool | TC-HNC-B                                    | CL0250-0005-7-00 | HNC-2.5S-D-B(15)、HNC-2.5S-D-B(02)                                      |
|                      | TC-HNC-A                                    | CL0250-0006-0-00 | HNC-2.5S-D-A(15)、HNC-2.5S-D-A(02)                                      |
| Extraction Tool      | Flat-blade screwdriver (thickness < 0.75mm) |                  |                                                                        |

Note 1 : Please conduct crimping work according to the "Crimping Quality Standard" (ETAD-H0980-00)" and "Crimping Condition Table".  
Note 2 : Issues with non-Hirose specified tools are outside the scope of warranty.  
Note 3 : When non-authorized tools are used, please consult with Hirose sales representative about provision of the drawing of the crimping tool.

## Crimping

### ■ Items Required Prior to Starting

The work-related documents listed below are required before starting harness assembly.

The ● mark indicates a required document.

When the documents shown below are not available, ask a Hirose sales personnel to provide them.

| Document Title                                   | Description                                                        | Automatic Crimping Machine | Hand Crimping Tool | Remarks                                           |
|--------------------------------------------------|--------------------------------------------------------------------|----------------------------|--------------------|---------------------------------------------------|
| 1. Crimping Machine Main Unit Instruction Manual | Explanation of main press machine unit                             | ●                          | -                  | Bundled with purchase of main press machine unit. |
| 2. Applicator Instruction Manual                 | Crimp Method                                                       | ●                          | -                  | Bundled with purchase of applicator.              |
| 3. Applicator Spare Parts List                   | Explanation for Applicator Installation                            | ●                          | -                  |                                                   |
| 4. Crimp Conditions                              | Standard crimp height and tensile strength values                  | ●                          | -                  |                                                   |
| 5. Crimp Quality Standards                       | Various standards for crimping conditions                          | ●                          | -                  | Bundled with purchase of hand tool.               |
| 6. Operating Instructions for Hand Tool          | Crimping method, standard crimp height and tensile strength values | -                          | ●                  |                                                   |
| 7. Cable Assembly Procedure                      | Cable Assembly Procedure                                           | ●                          | ●                  | Ask a Hirose sales personnel to provide them.     |

### ■ Tools

The tools specified by Hirose should be used for crimping work.

Crimping work by tools other than those specified must not be done because it may result in contact failure, disconnection of cable, etc.

\*The operating instructions manual is available for the crimping machine and the applicator.

Be sure to carefully read the operating instructions manual before implementing the work.

### ■ Applicable Electric Wires

Check that the electric wire to be used is within the applicable range.

If you intend to use an electric wire other than those recommended, ask a HRS sales personnel.

#### [Precautions]

- Electric wires that are suitable for crimping connectors are tin-plated stranded softcopper wire.
- Avoid crimping solid wires, wires with polyester threads or tin-coated wires.
- Avoid crimping two electric wires together.
- The crimp height setting value (Note) may vary between tin-plated and gold-plated contacts even if the same electric wires are used.
- The crimp height setting value (Note) may vary depending on the difference in the core wire configuration even if the computed cross-sectional area is the same.

Note : The crimp height is an important item that determines crimping quality. We execute crimping tests for each electric wire to ensure the optimal value for the crimp height with high precision, thereby ensuring optimal setup values.

## Handling Precautions

### 1. Cleaning Conditions

Please refer to the "Wire-to-Board Connector Guide".

### 2. Handling Instructions

Please refer to the following documents.

■ Crimp Quality Standard (ETAD-H0980-00)

■ Board-to-Wire Connector Guidelines : ETAD-H1023-00

## While Taking into Consideration

Specifications mentioned in this catalog are reference values.

When considering to order or use this product, please review the Drawing and Product Specifications sheets.

Use an appropriate cable when using the connector in combination with cables.

If considering usage of a non-specified cable, please contact your sales representative.

If assembly process is done by jigs & tools which are not identified by Hirose, the warranty of the product may be affected.

If considering usage for below mentioned applications, please contact your sales representative.

In cases where the application will demand a high level of reliability, such as automotive, medical instruments, public infrastructure, aerospace/defense etc. Hirose must review before assurance of reliability can be given.

**HIROSE****HIROSE ELECTRIC CO.,LTD.**2-6-3 Nakagawa Chuoh, Tsuzuki-Ku, Yokohama-Shi 224-8540, JAPAN  
<https://www.hirose.com>

※ The contents of this catalog are current as of date of 8/2023. Contents are subject to change without notice for the purpose of improvements.

※ The HRS logo and "HIROSE" are trademarks of HIROSE ELECTRIC CO., LTD.