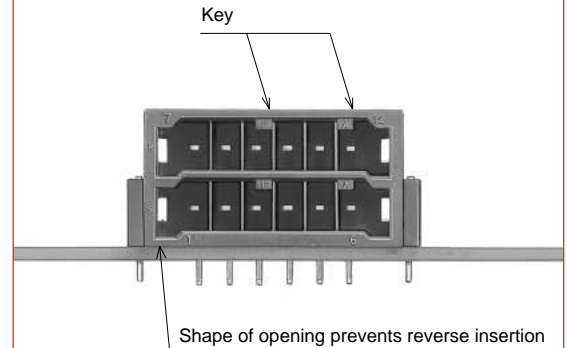


Power Supply Connectors For Industrial Equipment

PX Series



Structure prevents mis-insertion



■ Features

1. Power supply connector for high-current

Withstands voltage of 2200V AC max. and 10A/contact (60A/6contacts) of rating current.

2. Housing design prevents incorrect insertion

Opening section is designed to prevent reverse insertion and mating direction is easily checked. Additionally, the opening section is keyed to prevent misalignment of plugs in parallel applications.

3. Reduced Size

When compared to traditional products, Hirose's plug is smaller in size by 65% and the receptacle is smaller by 55%.

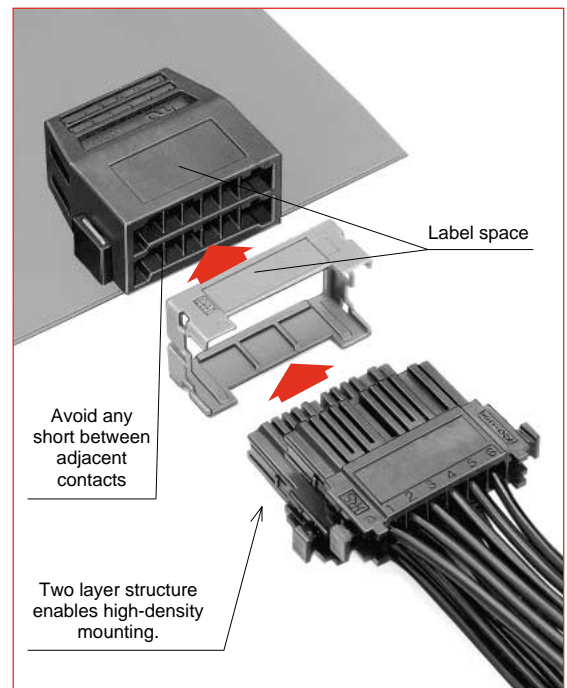
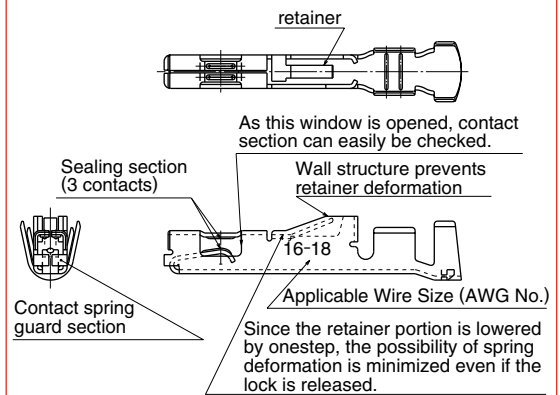
4. Reliable contact structure

- ① Three point contact
- ② Gold plated contacts (standard) with high-level environmental resistance
- ③ Contact spring guard structure
- ④ Structure prevents retainer deformation

5. Easy Cable Assembly

- ① Use of dedicated crimping tools will make harness work easier. One tool crimps both AWG#16 and AWG#18 wire.
- ② Positive lock can be felt on contact insertion.
- ③ Release of contact lock can easily be performed with dedicated jig, which facilitates the wiring modification after assembly.

Reliable contact structure



■Product Specifications

| | | |
|---------|-----------------------------|--------------|
| Ratings | Operating temperature range | -55°C~+105°C |
| | Voltage rating | 600V AC |
| | Current rating | 10A |

| Description | Specifications | Requirements |
|-------------------------|--|---|
| 1.Contact resistance | 10mΩ max. | 100mA |
| 2.Insulation resistance | 1000MΩ min. | 500V DC |
| 3.Withstanding voltage | No flashover or insulation breakdown. | 2200V AC / 1 minute. |
| 4.Durability | ①Contact resistance : 20mΩ max. ②No damage, cracks or looseness of parts | 1000 cycles |
| 5.Vibration | ①No electrical discontinuity of 10μs or more. ②Contact resistance : 20mΩ max. ③No damage, cracks or looseness of parts | Frequency:10 to 55Hz,single amplitude of 0.75mm, 2 hours,3axis |
| 6.Shock | | Acceleration: 490m/s ² Duration: 11ms Test at sine half-wave, 3 axes, bi-directional three times, respectively. |
| 7.Temperature cycle | ①Contact resistance : 20mΩ max. ②Insulation resistance : 1000MΩ min. ③No damage, cracks or looseness of parts | Temperature : -55→+5~+35→+85→+5~+35°C Time : 30→ 10~ 15→ 30→ 10~15Minutes 5 cycles |
| 8.Humidity | ①Contact resistance : 20mΩ max. ②Insulation resistance : 1000MΩ min. ③No damage, cracks or looseness of parts | 96 hours at 40±2°C and humidity of 90~95% |
| 9.Salt spray | ①No corrosions | 5% salt water for 48 hours |

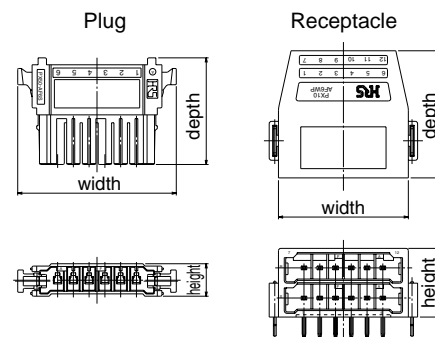
■Materials

| Parts | Material | Finish |
|---------------|---------------|--------------------|
| Contacts | Copper alloy | Gold plating |
| Insulator | PBT (UL94V-0) | |
| Metal fixture | Copper alloy | Tin reflow plating |

◆Comparison In Size With Conventional Equivalent

(mm)

| | | PX | A company-made |
|------------|--------|------|----------------|
| Plug | Width | 34.2 | 44.94 |
| | Height | 7.0 | 7.15 |
| | Depth | 23.0 | 22.80 |
| Receptacle | Width | 28.0 | 39.40 |
| | Height | 14.8 | 18.47 |
| | Depth | 27.4 | 27.18 |



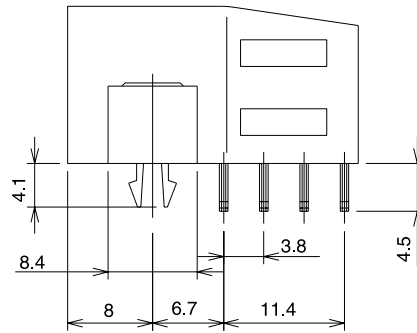
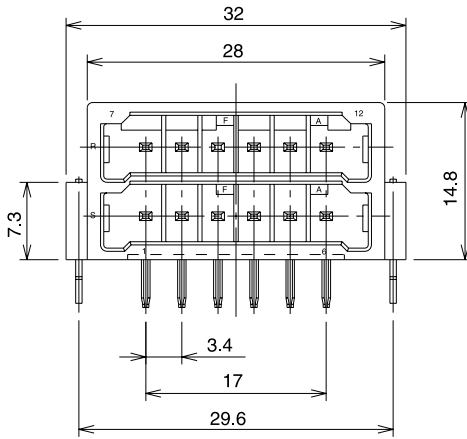
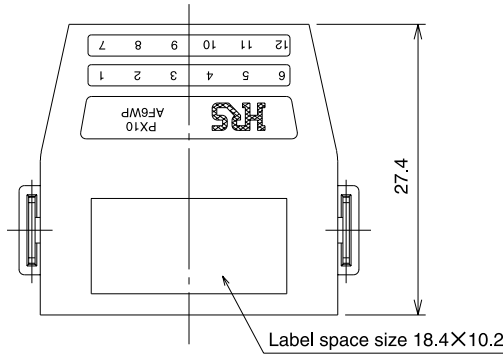
For volume ratio, plug is downsized to : nearly 65%; and
 receptacle : nearly 55%.

■Receptacles

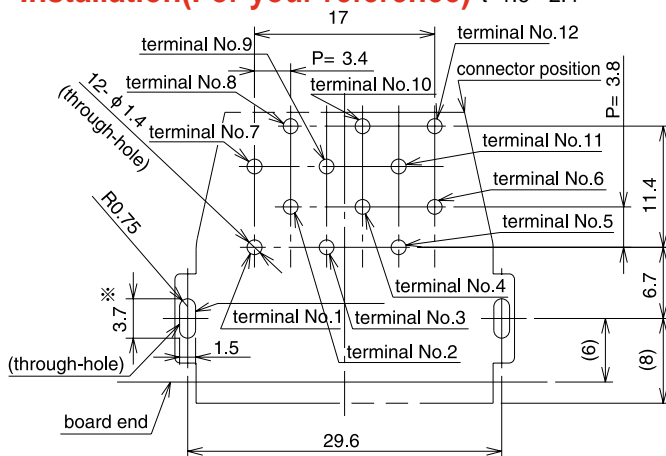
●6position/2row Type



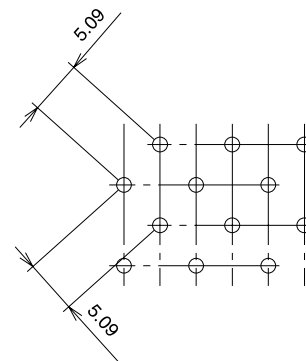
| Part No. | CL No. | RoHS |
|----------------|---------------|------|
| PX10-AF6WP(50) | 236-0001-0-50 | YES |



◆Dimensions For Circuit Board Installation(For your reference) $t=1.6\sim 2.4$



◆PCB mounting pattern

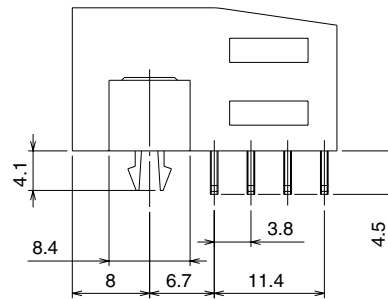
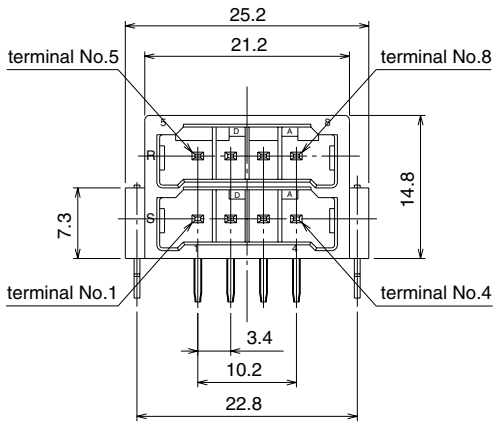
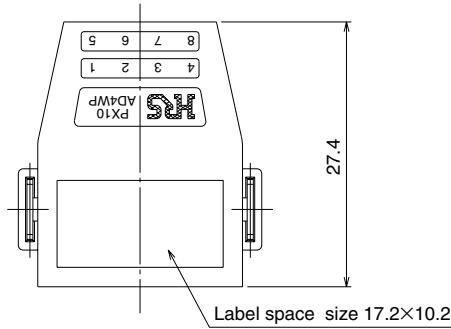


* Where $t=1.6$ (Setting value depends on thickness of boards.)

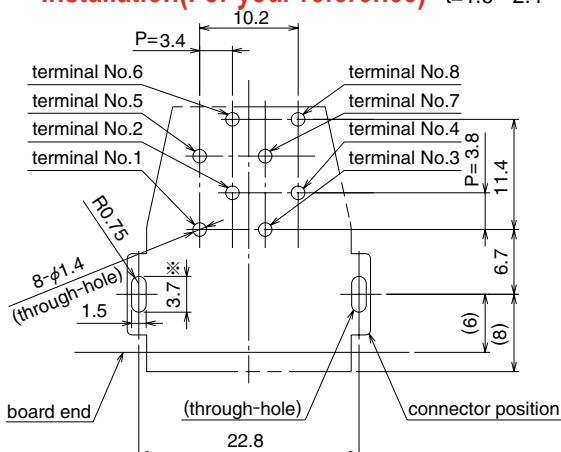
●4Position/2 Row Type



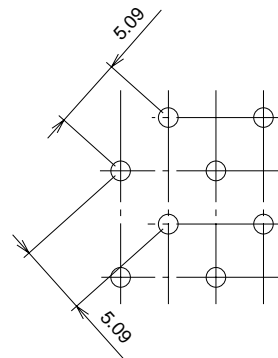
| Part No. | CL No. | RoHS |
|----------------|---------------|------|
| PX10-AD4WP(50) | 236-0005-0-50 | YES |



◆ Dimensions For Circuit Board Installation (For your reference) $t=1.6\sim 2.4$



◆ PCB mounting pattern



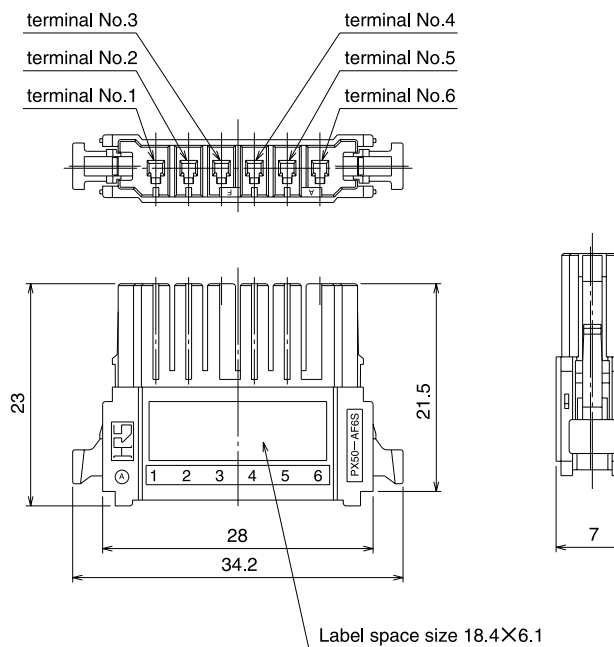
* Where $t=1.6$ (Setting value depends on thickness of boards.)

■ Plug

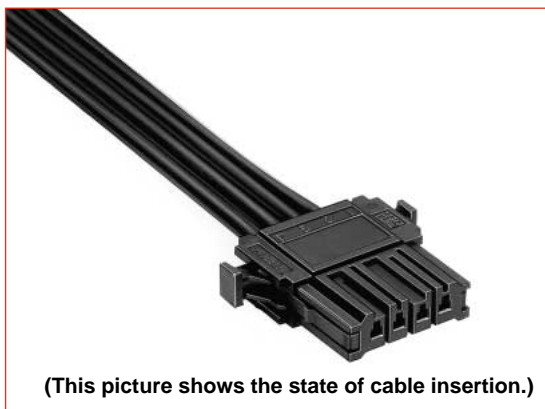
●6-Position Type



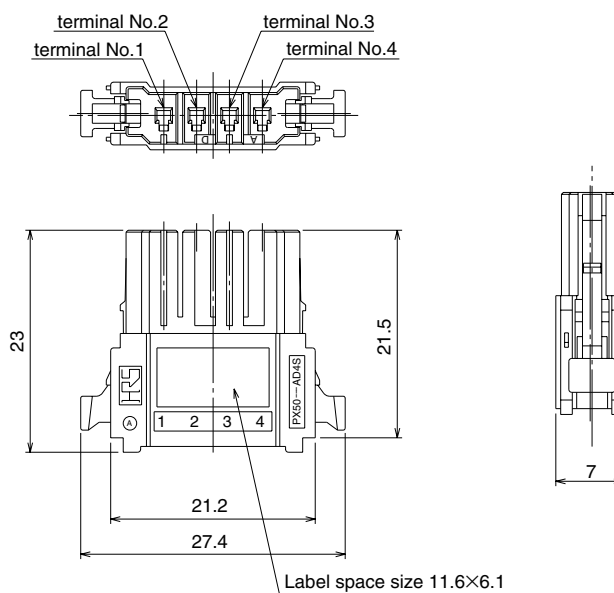
| Part No. | CL No. | RoHS |
|-----------|------------|------|
| PX50-AF6S | 236-0002-2 | YES |



●4-Position Type



| Part No. | CL No. | RoHS |
|-----------|------------|------|
| PX50-AD4S | 236-0006-3 | YES |

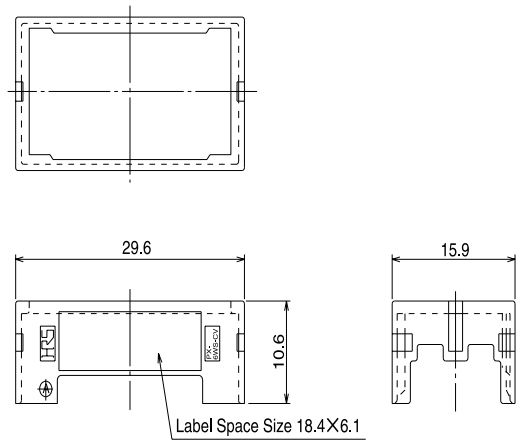


■ Simple-Type Plug Holder Cover

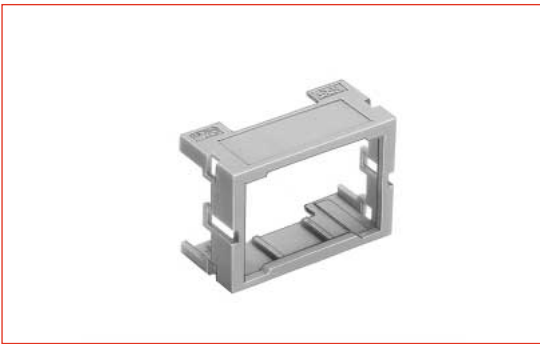
● For 6-Position Type



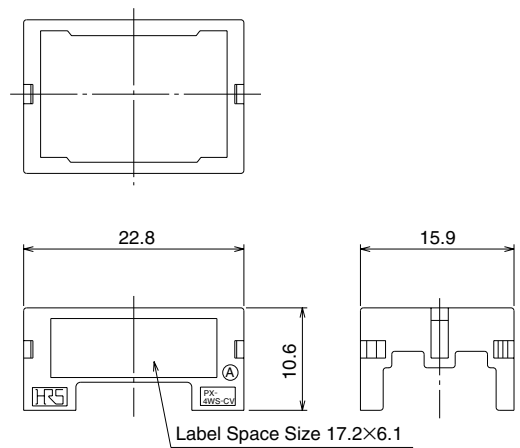
| Part No. | CL No. | RoHS |
|-----------|------------|------|
| PX-6WS-CV | 236-0004-8 | YES |



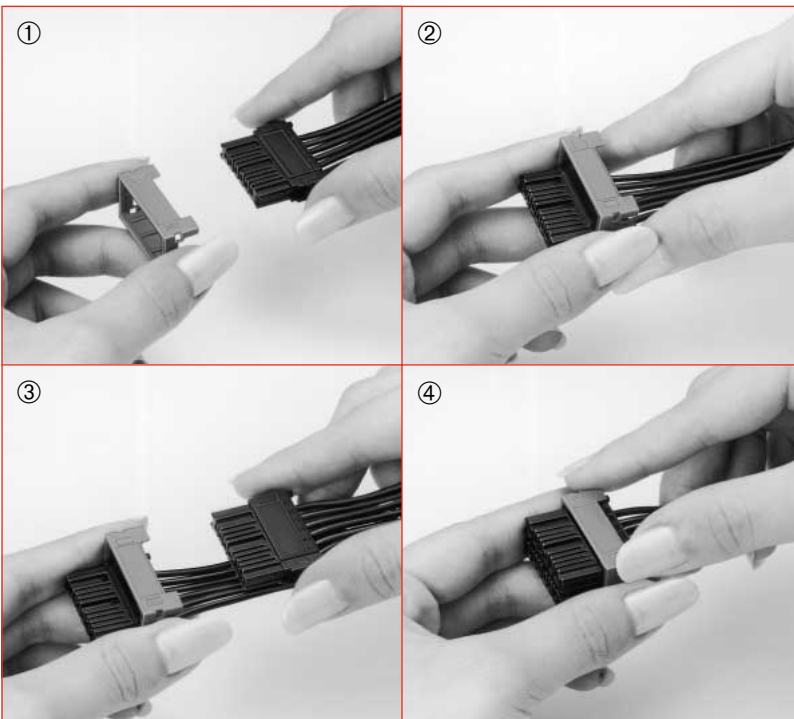
● For 4-Position Type



| Part No. | CL No. | RoHS |
|-----------|------------|------|
| PX-4WS-CV | 236-0007-6 | YES |



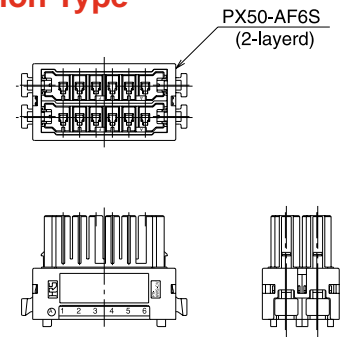
◆ Installation status



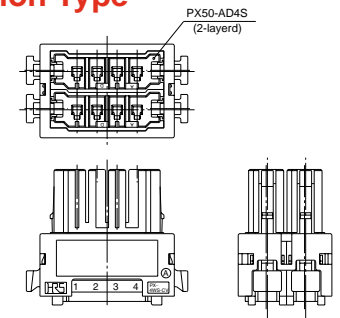
<Caution>The holder cover is not a rugged support fixture but only meant for alignment of the plugs. If external force is imposed by pulling of cables, etc. before mating, please bundle all cables together around the connector with union bands, etc.

◆ Installation method

● 6-Position Type



● 4-Position Type



■Crimp contact

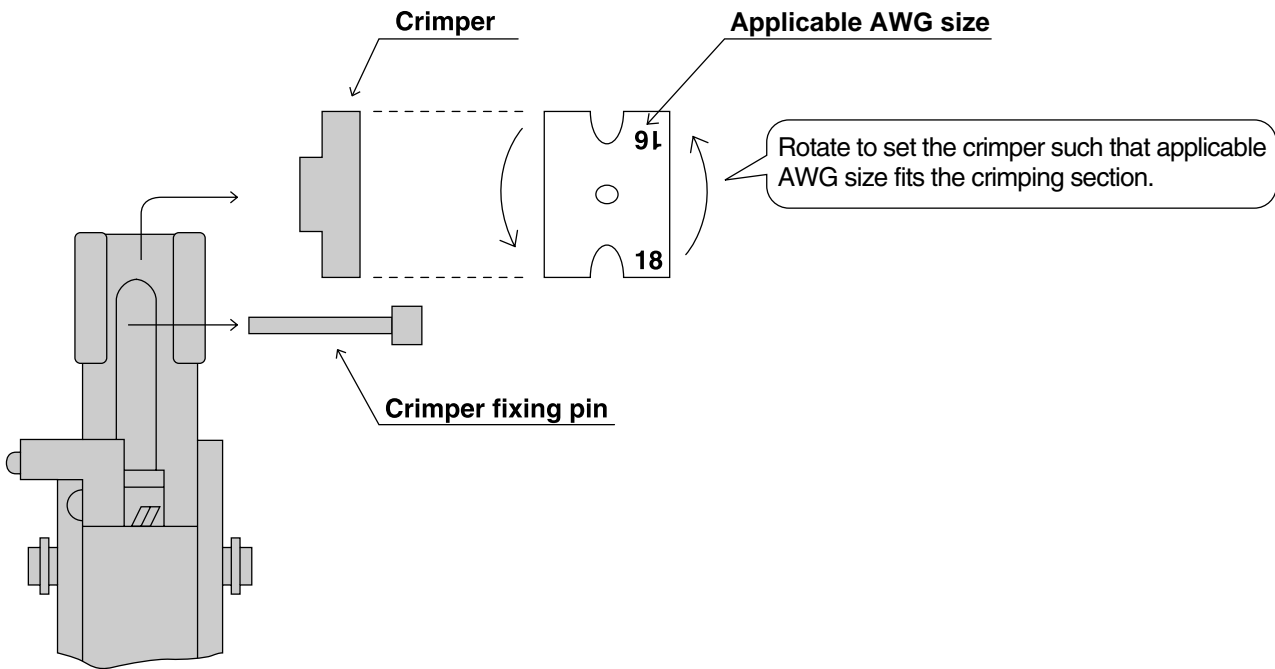
| Applicable wire size | Packaging | Part No. | CL No. | Quantity | RoHS |
|----------------------|-----------|-------------|------------|----------|------|
| 16, 18 | Reel | PX50-SC-231 | 236-0003-5 | 5,000 | YES |
| | Bag | PX50-SC-131 | 236-0008-9 | 200 | |

Please order by integral multiple of the packing volume.

■Tools

| Type | Description | Part No. | CL No. | Applicable contacts |
|-------------------------|---------------|--------------|------------|---------------------|
| Automatic | Press unit | CM-105 | 901-0005-4 | PX50-SC-231 |
| | Applicator | AP105-PX50-3 | 901-2573-8 | |
| Manual | Hand tool (*) | HT104/PX50-3 | 250-0229-4 | PX50-SC-131 |
| Contact extraction tool | | PX50-SC-TC | 250-0233-1 | PX50-SC-*31 |

* For our manual crimping tools, we employ the rotate-replace procedure to use the crimper depending on wire size.



[Manual crimping tool : crimped section]

Note : Since manual crimping tool cannot provide fine adjustment of crimp height, please use the proper crimp height of auto crimper in crimping of the wires other than specified ones

■Crimp Terminal Drawing Jig



| Part No. | CL No. | RoHS |
|-------------|------------|------|
| PX-50-SC-TC | 250-0233-1 | YES |

PX50-SC-TC CL250-0233-1

<WARNING>

When the crimp terminal drawing jig is inserted and pushed from the fitting section of a connector as shown below, retainer lock of the terminal will be released. Then please extract the cable. If the retainer is too lowered after extracting terminal, put it in a former position and reinsert. Position and direction of the jig top to be inserted are as shown in the Figures below.
 Be careful that any mistake will lead to the damage of terminal.

●How To Extract Crimp Terminal



* Insert the jig top into the peak of convex section on terminal hole.



HIROSE ELECTRIC CO.,LTD.

5-23,OSAKI 5-CHOME,SHINAGAWA-KU,TOKYO 141-8587,JAPAN
 PHONE: 81-3-3491-9741, FAX: 81-3-3493-2933
<http://www.hirose.com>
<http://www.hirose-connectors.com>