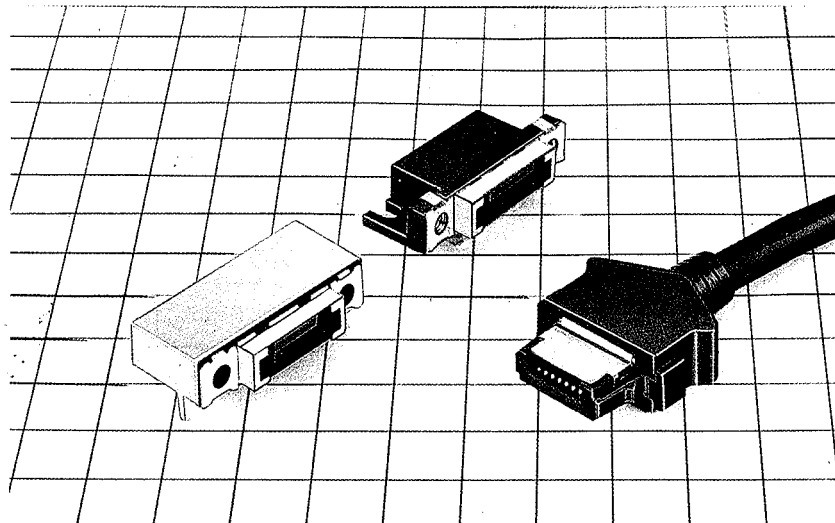


# 3100 SERIES LOW PROFILE CONNECTOR FOR PREVENTING EMI

## General

The 3100 series low profile I/O connectors for preventing EMI are perfect for today's compact electronic equipment.

Available in 6, 8, 12, 14 and 16 pins.



## Features

- (1) The metal shell guide structure for the receptacle connector reduces drastically the height for the substrate to 7mm.
- (2) The metal shell with a molded cover case is designed to shield it from electrostatic discharge (ESD).
- (3) The cantilever profile of the female contact ensures effortless coupling and long service life.
- (4) The effective engagement length is of sequence structure and sufficient to allow the shielded part to engage first when connecting.
- (5) The cable can be terminated efficiently just by crimping with a jig after passing the cable through the guide plate hole.
- (6) Cables AWG 26 to AGW 30 are applicable by partially changing the guide plate since the male connector adopts a U-slit type connection.
- (7) The side latching method of the molded cover assures easy locking of the plug connector.

## Application

Office Automation, Communications, Home Automation and Other equipment.

## Specification

| Specification         |                           |
|-----------------------|---------------------------|
| Current capacity      | 0.5A                      |
| Rated Voltage         | AC 125V                   |
| Insulation Resistance | Min. 250MΩ at DC 100V     |
| Contact Resistance    | Max. 35mΩ at DC 1mA       |
| Withstanding Voltage  | AC 300Vr.m.s for 1 minute |

| Relation between guide plate and applicable coating O.D. |                |                |                |
|--|----------------|----------------|----------------|
| Hole dia (mm) of Wire Configuration Guide Plate          | φ 0.65         | φ 0.85         | φ 1            |
| Applicable Cable Cut dia (mm)                            | φ 0.57~ φ 0.63 | φ 0.75~ φ 0.83 | φ 0.88~ φ 0.98 |

## Material & Finish

| Material Finish |             |                     |  |
|-----------------|-------------|---------------------|--|
| Receptacle      | Insulation  | PBT resin           | Black UL94V-0                          |
|                 | Contact     | Brass               | Selective gold plating                 |
|                 | Shell       | Brass               | Solder plating                         |
| Plug            | Insulation  | Polycarbonate Resin | White for AWG #28<br>Black for AWG #30 |
|                 | Contact     | Brass               | Selective gold plating                 |
|                 | Guide Plate | Polycarbonate resin | Transparent                            |
|                 | Shell       | Brass               | Solder plating                         |
|                 | Cover       | Polycarbonate resin |  |

## Ordering Information

### ● Receptacle

3 1 1 0 — 6 S A  
| | | | | | | |  
(1) (2) (3)(4)(5)

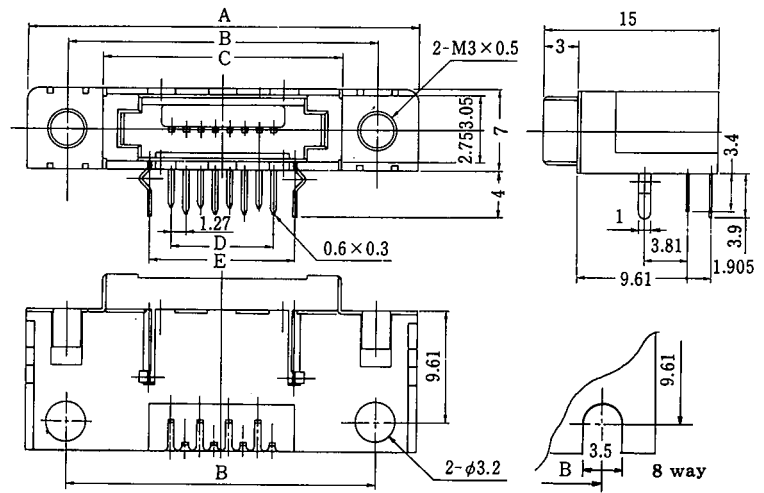
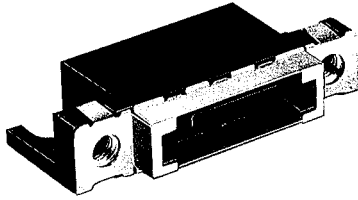
- (1) Series Number: 31
- (2) Type  
10: Right Angle Dip
- (3) No. of Pins: 6, 8, 12, 14, 16
- (4) Type of opening  
S: Receptacle
- (5) Additional Function  
Blank: Standard  
A: All Shield Type

### ● Plug

3 1 3 0 A — 6 P A — C  
| | | | | | | |  
(1) (2) (3) (4)(5)(6) (7)

- (1) Series Number: 31
- (2) Type  
30: AWG28, 26 IDC  
31: AWG30, IDC
- (3) Hole dia. of Wire Configuration Tube Plate  
Blank:  $\phi 1.0$  ( $\phi 0.88 \sim \phi 0.98$ )  
A:  $\phi 0.85$  ( $\phi 0.75 \sim \phi 0.83$ )  
B:  $\phi 0.65$  ( $\phi 0.57 \sim \phi 0.63$ )
- (4) No. of Pins: 6, 8, 12, 14, 16
- (5) Type of opening  
P: Plug
- (6) Cover Type  
Blank: Straight Cable Exit  
A: Side Cable Exit
- (7) Cover  
C: Standard

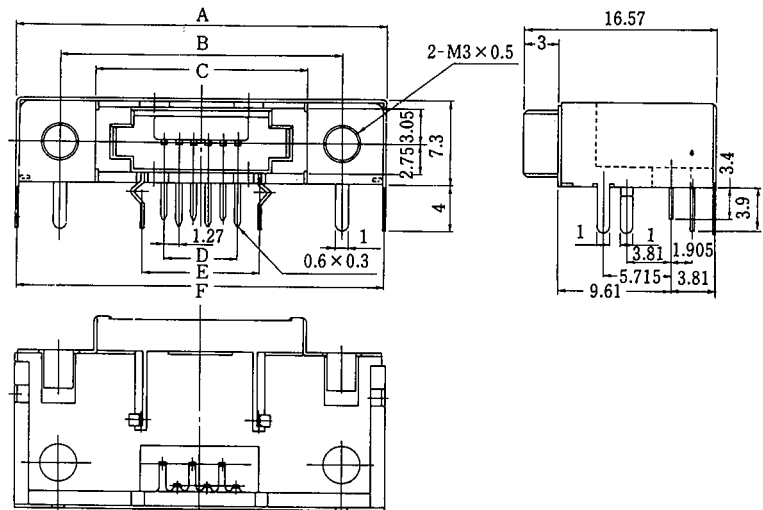
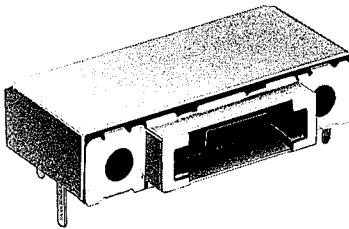
## Receptacle (Standard)



Unit:mm

| HRS No.      | No. of Pin | Part No. | A     | B     | C     | D     | E     |
|--------------|------------|----------|-------|-------|-------|-------|-------|
| CL231-3006-8 | 6          | 3110-6S  | 30.96 | 23.96 | 17.91 | 6.35  | 9.96  |
| CL231-3001-4 | 8          | 3110-8S  | 33.5  | 26.5  | 20.45 | 8.89  | 12.5  |
| CL231-3008-3 | 12         | 3110-12S | 38.58 | 31.58 | 25.53 | 13.97 | 17.58 |
| CL231-0018-0 | 16         | 3110-16S | 43.66 | 36.66 | 30.61 | 19.05 | 22.66 |

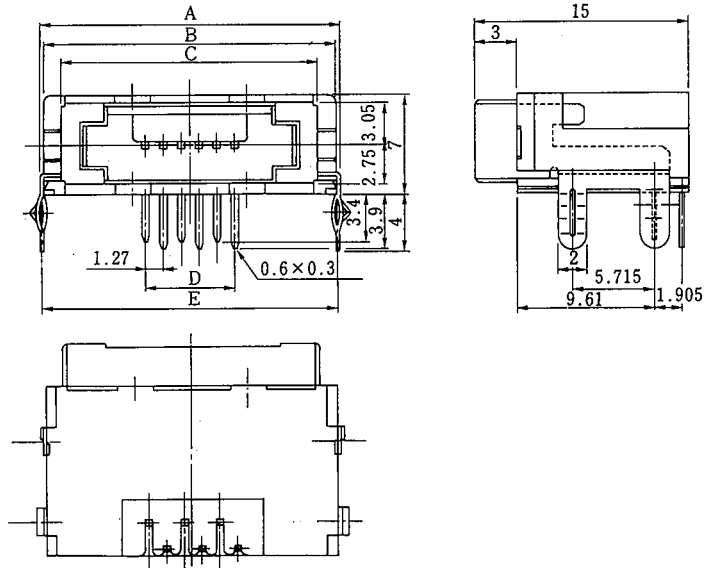
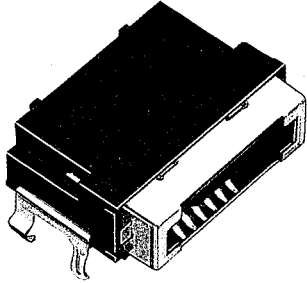
## Receptacle (All Shielded Type)



Unit:mm

| HRS No.      | No. of Pin | Part No.  | A     | B     | C     | D     | E     | F     |
|--------------|------------|-----------|-------|-------|-------|-------|-------|-------|
| CL231-3003-0 | 6          | 3110-6SA  | 31.56 | 23.96 | 17.91 | 6.35  | 9.96  | 31.26 |
| CL231-0020-2 | 16         | 3110-16SA | 44.26 | 36.66 | 30.61 | 19.06 | 22.66 | 43.96 |

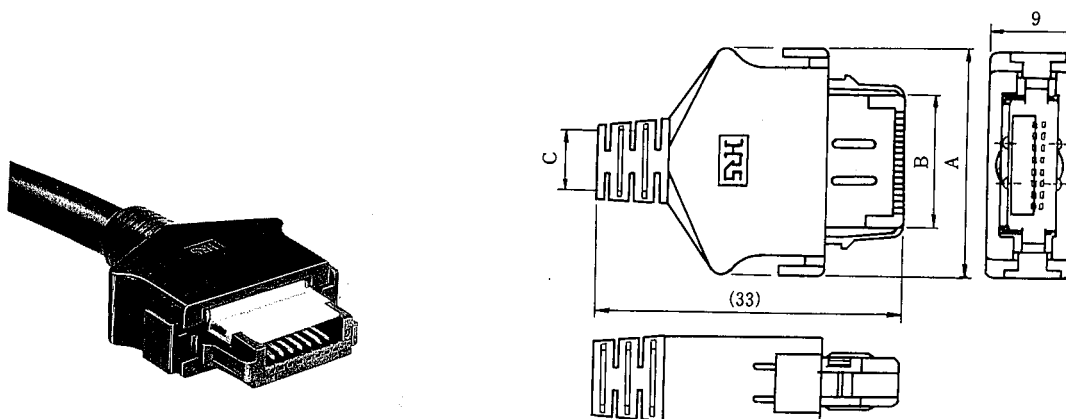
# Receptacle (Without Mounting Hole Type)



Unit: mm

| HRS No.      | No. of Pin | Part No.  | A     | B     | C     | D     | E     |
|--------------|------------|-----------|-------|-------|-------|-------|-------|
| CL231-3017-4 | 6          | 3110-6SB  | 20.86 | 20.26 | 17.19 | 6.35  | 20.58 |
| CL231-0021-5 | 14         | 3110-14SB | 31.02 | 30.42 | 28.07 | 16.51 | 30.72 |

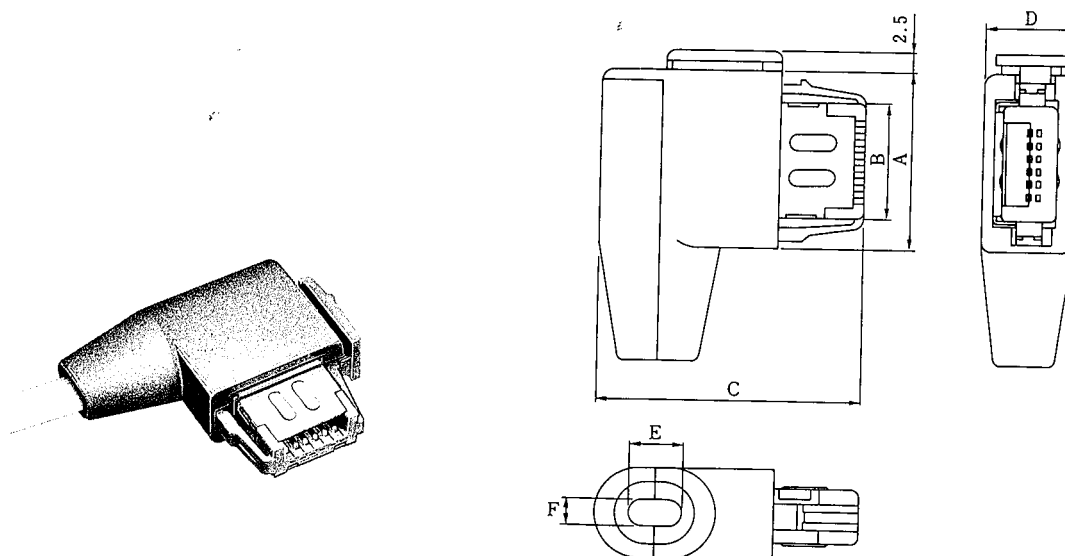
## Plug (Straight Cable Exit Type)



| HRS No.      | No. of Pin | Part No.   | A     | B     | C     |
|--------------|------------|------------|-------|-------|-------|
| CL231-3014-6 | 6          | 3130-6P-C  | 21.46 | 11.36 | φ 5.8 |
| CL231-3002-7 | 8          | 3130-8P-C  | 24    | 13.9  | φ 6.2 |
| CL231-3009-6 | 12         | 3130-12P-C | 29.08 | 18.98 | φ 6.7 |
| CL231-0022-8 | 14         | 3130-14P-C | 31.62 | 21.52 | φ 7.0 |

Unit:mm

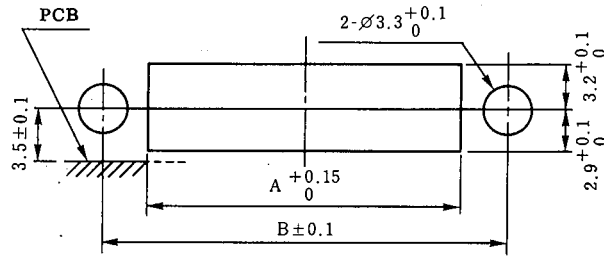
## Plug (Side Cable Exit Type)



| HRS No.      | No. of Pin | Part No.    | A     | B     | C     | D    | E     | F   |
|--------------|------------|-------------|-------|-------|-------|------|-------|-----|
| CL231-3004-2 | 6          | 3130-6PA    | 17.46 | 11.36 | 26.15 | 9.0  | 5.2   | 2.8 |
| CL231-0023-0 | 16         | 3130-16PA-C | 30.16 | 24.06 | 26.75 | 10.2 | φ 7.2 |     |

Unit:mm

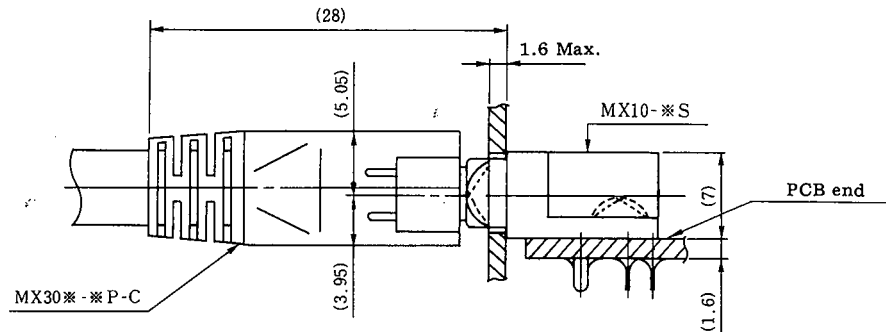
## Panel Cutout (Thickness of Panel:Max.1.6mm)



Unit: mm

| HRS No.      | No. of Pin | Part No.  | A     | B     |
|--------------|------------|-----------|-------|-------|
| CL231-3006-8 | 6          | 3110- 6S  | 18.06 | 23.96 |
| CL231-3001-4 | 8          | 3110- 8S  | 20.6  | 26.5  |
| CL231-3008-3 | 12         | 3110-12S  | 25.68 | 31.58 |
| CL231-0018-0 | 16         | 3110-16S  | 30.76 | 36.66 |
| CL231-0021-5 | 14         | 3110-14SB | 28.22 | —     |

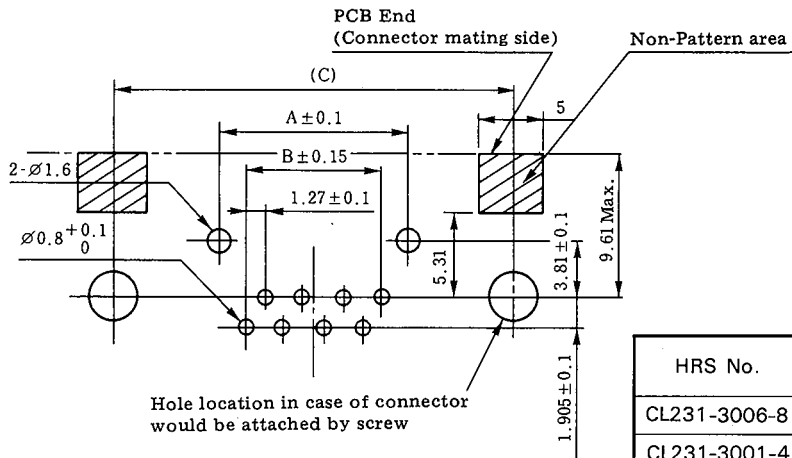
## Coupling Status



Note: Screw for Panel: M3 x 0.5 length 6 mm.

# Backboard Pattern

(Standard)

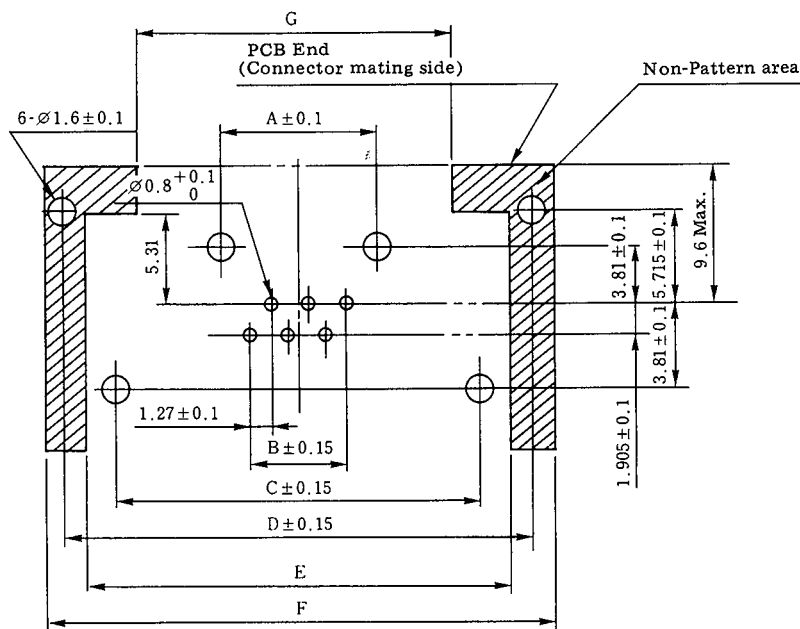


Hole location in case of connector would be attached by screw

Unit:mm

| HRS No.      | No. of Pin | Part No. | A     | B     | C     |
|--------------|------------|----------|-------|-------|-------|
| CL231-3006-8 | 6          | 3110-6S  | 9.96  | 6.35  | 23.96 |
| CL231-3001-4 | 8          | 3110-8S  | 12.5  | 8.39  | 26.5  |
| CL231-3008-3 | 12         | 3110-12S | 17.58 | 13.97 | 31.58 |
| CL231-0018-0 | 16         | 3110-16S | 22.66 | 19.05 | 36.66 |

(All Shielded Type)

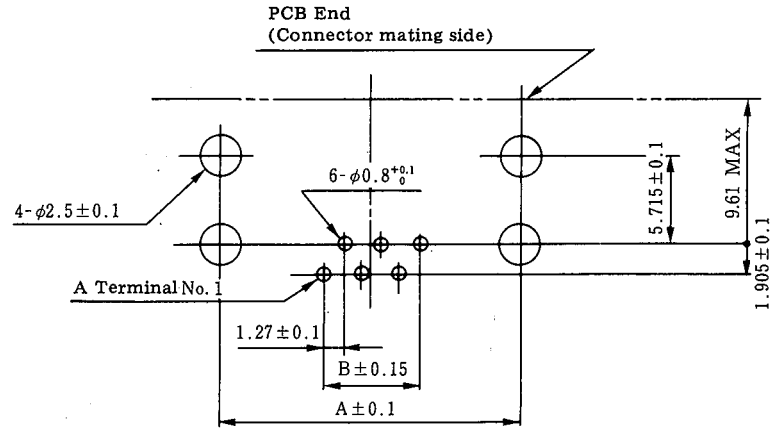


Unit:mm

| HRS No.      | No. of Pin | Part No.  | A     | B     | C     | D     | E     | F     | G     |
|--------------|------------|-----------|-------|-------|-------|-------|-------|-------|-------|
| CL231-3003-0 | 6          | 3110-6SA  | 9.96  | 6.35  | 23.96 | 31.26 | 27.56 | 31.96 | 18.96 |
| CL231-0020-2 | 16         | 3110-16SA | 22.66 | 19.05 | 36.66 | 43.96 | 40.26 | 44.66 | 31.66 |



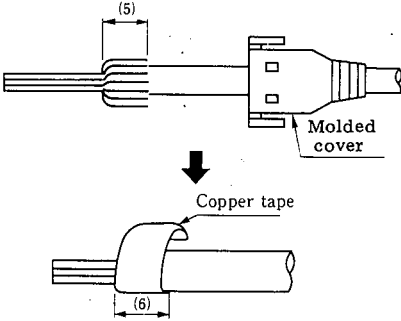
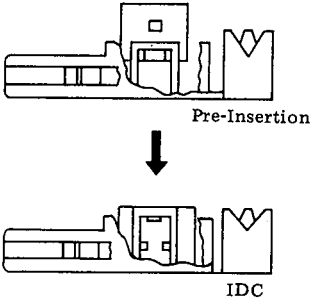
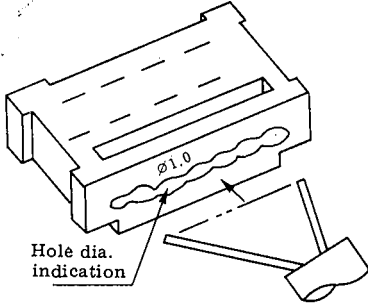
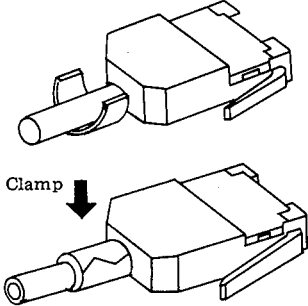
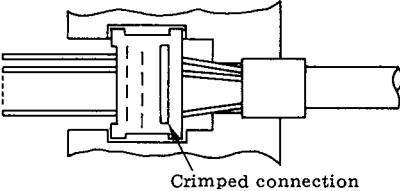
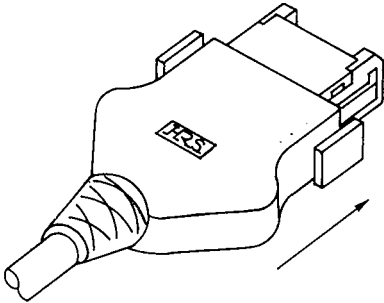
(Without Mounting Hole Type)



Unit:mm

| HRS No.      | No. of Pin | Part No.  | A     | B     |
|--------------|------------|-----------|-------|-------|
| CL231-3017-4 | 6          | 3110-6SB  | 20.56 | 6.35  |
| CL231-0021-5 | 14         | 3110-14SB | 30.72 | 16.51 |

# Connecting Method

| Procedure               | Specification  | Procedure                | Specification   |
|-------------------------|--|--------------------------|---|
| 1. Termination          | <p>Peel the shielded braid and terminate treatment.</p>                     | 4. IDC                   | <p>Insert the guide plate into the plug temporarily and press it.</p>  |
| 2. Wire configuration   | <p>Configure the cable conductor to the corresponding guide plate.</p>    | 5. Covering and clamping | <p>Cover the ground plate B and fasten the cable by clamping.</p>    |
| 3. Cutting and clamping | <p>Cut the remaining part of the wire and clamp the cable conductor.</p>  | 6. Covering              |    |

## Tooling

### (Straight Cable Exit Type)

| Connector  | Process                                   | Tool Name                                     |           |
|------------|---|---|-----------|
| 3130-6P-C  | Wire clamp<br>Remaining part of cable cut | Hi-Flex<br>Connecting press<br>(CL550-0082-2) | 3130-6CT  |
|            | Crimping, Clamp                           |   | 3130-6GP  |
| 3130-8P-C  | Wire clamp<br>Remaining part of cable cut |   | 3130-8CT  |
|            | Crimping, Clamp                           |   | 3130-8GP  |
| 3130-12P-C | Wire clamp<br>Remaining part of cable cut |   | 3130-12CT |
|            | Crimping, Clamp                           |   | 3130-12GP |
| 3130-14P-C | Wire clamp<br>Remaining part of cable cut |   | 3130-14CT |
|            | Crimping, Clamp                           |   | 3130-14GP |

### (Side Cable Exit Type)

| Connector   | Process                                   | Tool Name                                     |             |
|-------------|---|---|-------------|
| 3130-6PA    | Wire clamp<br>Remaining part of cable cut | Hi-Flex<br>Connecting press<br>(CL550-0082-2) | 3130-6CT-A  |
|             | Crimping, Clamp                           |   | 3130-6GP-A  |
| 3130-16PA-C | Wire clamp<br>Remaining part of cable cut |   | 3130-16CT-A |
|             | Crimping, Clamp                           |   | 3130-16GP-A |