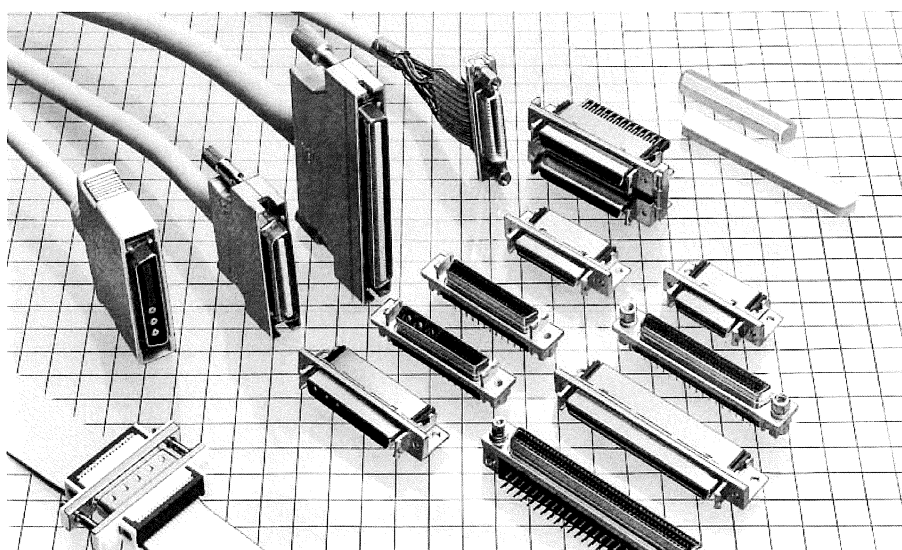


# DX SERIES HIGH-DENSITY I/O CONNECTORS

## General

DX series high-density I/O connectors with bellow contacts are perfect for tomorrow's miniaturized electronic devices. This new 1.27mm (0.050") interconnect design ensures positive locking, effortless coupling, terminal protection and EMI reduction in a miniaturized and rugged package. DX series offers you one of the most

varied and complete lines of High-Density connectors in the world, i.e. IDC, Solder and with Co-axial contacts for the plug and right angle dip, straight dip, IDC and with Co-axial contacts for the receptacle. Available in 20, 28, 36, 50, 68, 80, 100 and 132 way.



## Features

1. 1.27mm (0.050") contact spacing conserves valuable board space and permits ultra-high density designs.
2. Bellow contacts create smooth and precise mating and unmating.
3. Unique shell design assures first make/last break grounding and overall noise protection.
4. IDC termination allows quick and low cost termination to AWG # 28 & # 30 wires.
5. Group IDC termination of 1.27mm pitch cable and loose piece contacts is possible simply by replacing the protector, allowing you to select a termination system meeting requirements, trial production and mass production, for example.
6. Backshell and receptacle shell are made of die-cast zinc alloy to reduce the penetration of external EMI noise.
7. Easy to use 'One-Touch' and 'Screw' locking mechanisms assure quick and easy 'positive' closures every time.
8. Termination method is available in IDC, Soldering, Right Angle Dip, Straight Dip and SMT.
9. DX with 3 cavities and 2 cavities for Co-axial contacts are newly introduced to meet the needs of high speed data transmission.
10. Shielded Plug-in type for interface between 2 Units available.

## Application

Office Automation, Computers, Communications Equipment, Factory Automation, Home Automation and other commercial applications needing high density interconnections.

The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information.

All non-RoHS products have been discontinued, or will be discontinued soon. Please check the products status on the Hirose website RoHS search at [www.hirose-connectors.com](http://www.hirose-connectors.com), or contact your Hirose sales representative.

## Specifications

| Items                 | Standard value                  |
|-----------------------|---------------------------------|
| Current capacity      | 0.5A                            |
| Rated voltage         | AC125V                          |
| Insulation resistance | 250M $\Omega$ or more at DC100V |
| Contact resistance    | 50m $\Omega$ or less at DC100mA |
| Withstanding voltage  | AC300Vr.m.s. for 1 minute       |

## Material & Finish

| Parts            | Materials                | Finish                 |
|------------------|--------------------------|------------------------|
| Plug shell       | Zinc alloy die-cast      | Silver finish          |
| Receptacle shell | Zinc alloy die-cast      | Nickel plating         |
| Insulator        | PBT resin or equivalent※ | Black※                 |
| Pin contact      | Copper alloy             | Selective gold plating |
| Socket contact   | Copper alloy             | Selective gold plating |

※UL94V-0

※To identify DX30A, DX31A, DX32A & DX33A for AWG # 28, natural color is partially used in the insulator.

## Applicable cable

| I/O cable (Discrete wire) |                    |             |
|---------------------------|--------------------|-------------|
| Conductor size            | AWG # 30           | AWG # 28    |
| Conductor information     | 7/0.1              | 7/0.127     |
| Insulator outer dia.      | $\phi$ 0.5         | $\phi$ 0.58 |
| UL style cables           | UL20276 and UL2789 |             |

| Ribbon cable (flat & slit) |                         |
|----------------------------|-------------------------|
| Conductor size             | AWG # 28                |
| Conductor information      | 19/0.08                 |
| Cable thickness            | 0.9                     |
| UL style cables            | UL2651, UL2734, UL20012 |

## Ordering Information

### ● Receptacle Connector

|           |           |          |          |   |           |          |   |          |             |
|-----------|-----------|----------|----------|---|-----------|----------|---|----------|-------------|
| <u>DX</u> | <u>10</u> | <u>※</u> | <u>※</u> | — | <u>50</u> | <u>S</u> | — | <u>※</u> | <u>(50)</u> |
|           |           |          |          |   |           |          |   |          |             |
| (1)       | (2)       | (3)      | (5)      |   | (6)       | (7)      |   | (8)      | (12)        |

### ● Plug Connector

|           |           |          |          |   |           |          |   |          |             |
|-----------|-----------|----------|----------|---|-----------|----------|---|----------|-------------|
| <u>DX</u> | <u>30</u> | <u>A</u> | <u>※</u> | — | <u>50</u> | <u>P</u> | — | <u>※</u> | <u>(50)</u> |
|           |           |          |          |   |           |          |   |          |             |
| (1)       | (2)       | (4)      | (5)      |   | (6)       | (7)      |   | (8)      | (12)        |

### ● Co-axial Connector

|           |           |          |          |   |           |          |   |            |             |
|-----------|-----------|----------|----------|---|-----------|----------|---|------------|-------------|
| <u>DX</u> | <u>30</u> | <u>A</u> | <u>J</u> | — | <u>26</u> | <u>P</u> | — | <u>CP3</u> | <u>(50)</u> |
|           |           |          |          |   |           |          |   |            |             |
| (1)       | (2)       | (4)      | (5)      |   | (10)      | (7)      |   | (8)        | (12)        |

|           |           |          |   |          |           |   |            |          |          |             |
|-----------|-----------|----------|---|----------|-----------|---|------------|----------|----------|-------------|
| <u>DX</u> | <u>10</u> | <u>J</u> | — | <u>0</u> | <u>SE</u> | — | <u>CR3</u> | <u>/</u> | <u>A</u> | <u>(50)</u> |
|           |           |          |   |          |           |   |            |          |          |             |
| (1)       | (2)       | (5)      |   | (10)     | (7)       |   | (8)        |          | (11)     | (12)        |

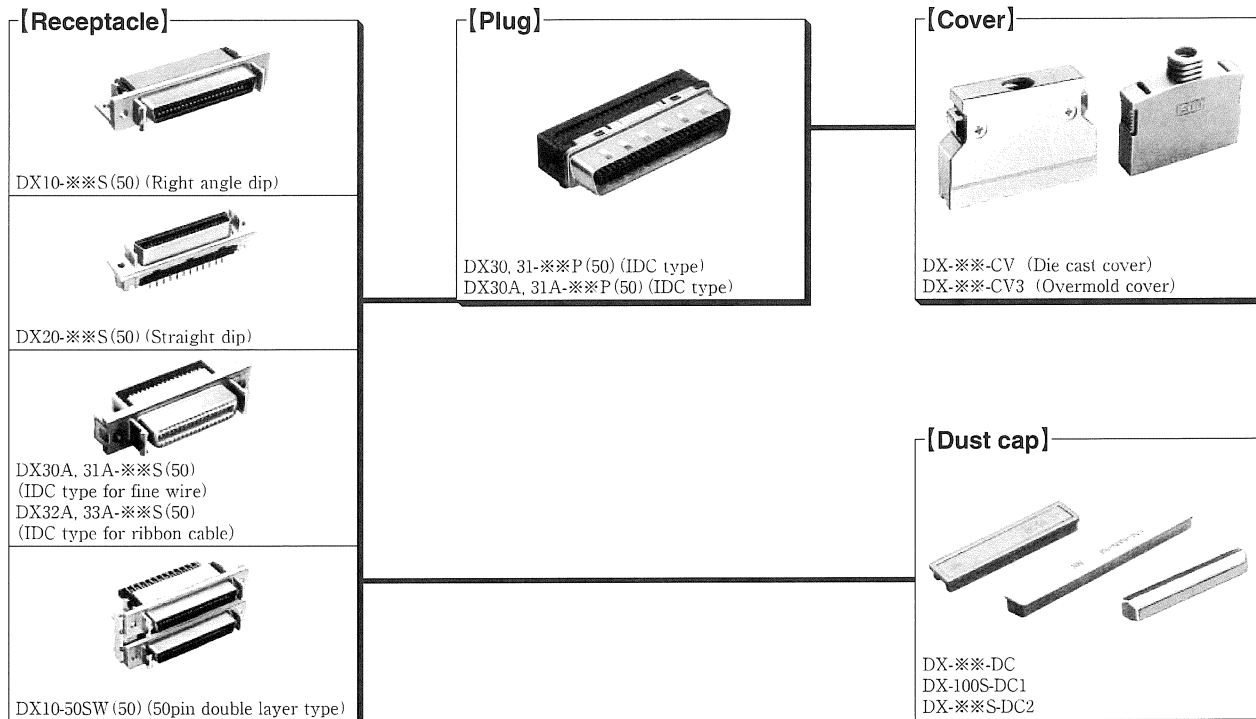
### ● Accessories

|           |   |           |   |           |             |
|-----------|---|-----------|---|-----------|-------------|
| <u>DX</u> | — | <u>50</u> | — | <u>CV</u> | <u>(50)</u> |
|           |   |           |   |           |             |
| (1)       |   | (6)       |   | (9)       | (12)        |

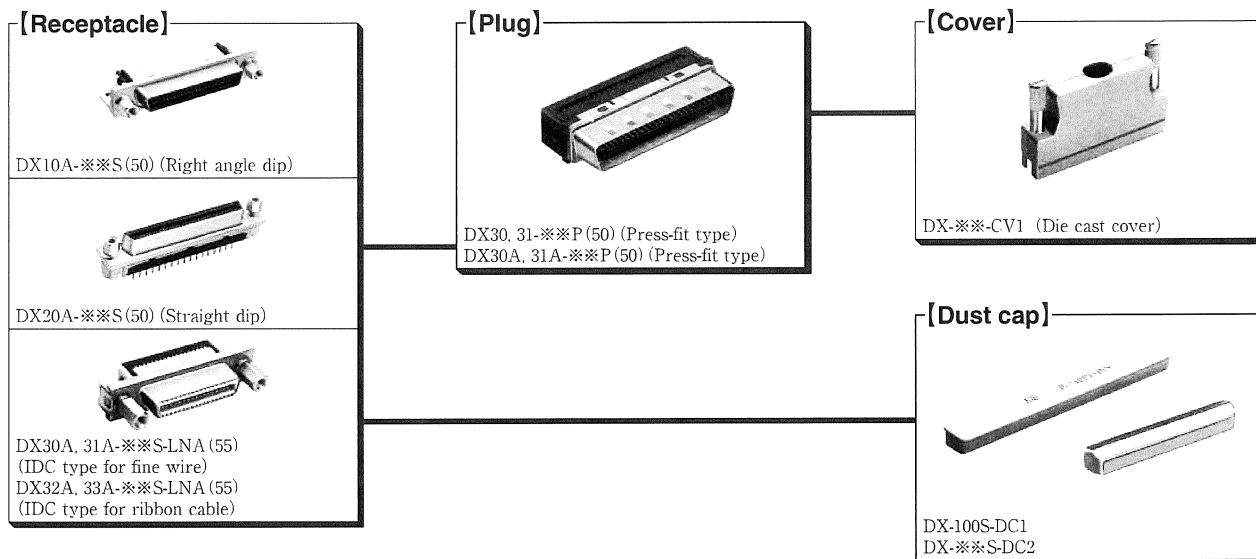
- (1) Series Number: DX
- (2) Connection Type
  - 10: Right Angle Dip
  - 20: Straight Dip
  - 30: IDC for discrete thin wire (AWG # 28 and 30)
  - 31: IDC for discrete wire laminated (AWG # 28 and 30)
  - 32: IDC for slit ribbon cable (AWG # 28)
  - 33: IDC for flat ribbon cable (AWG # 28)
- (3) Lock Type
  - Blank: One Touch Lock
  - A : Screw Lock
- (4) Applicable Wire
  - Blank: AWG # 30
  - A : AWG # 28
- (5) Variation
  - Blank: Standard
  - J : Co-axial contact included
- (6) Number of Pins: 20, 28, 36, 50, 60, 68, 80, 100
- (7) Types of Opening
  - P : Plug connector
  - S : Receptacle connector
  - SW : Receptacle connector (double layer)
  - SE : Receptacle connector (Lock Pin)
- (8) Variation
  - Blank: Standard
  - CR2A: 2 co-axial contacts provided (Receptacle)
  - CR3 : 3 co-axial contacts provided (Receptacle)
  - CP3 : 3 co-axial contact holes provided (Plug)
  - LNA : Screw lock mechanism (Receptacle)
  - PG : Plug-in (Plug)
  - SG : Plug-in (Receptacle)
- (9) Accessories
  - CV : Straight cable (One-touch lock type)
  - CV1 : Straight cable entry case (Screw lock type)
  - CV3 : Straight cable entry case (Over mode type)
  - CV4 : Straight cable entry (Symmetry big cable)
  - DC : Dust cap (Semi-hard, for one-touch lock)
  - DC1 : Dust cap (Semi-hard, for screw lock)
  - DC2 : Dust cap (Soft for screw lock)
- (10) No. of signal terminals: 0, 26
- (11) Shell size
  - No.symbol: 50 pins
  - A : 20 pins
- (12) Specifications Content
  - (※※) : Individual specifications

## DX Series variations

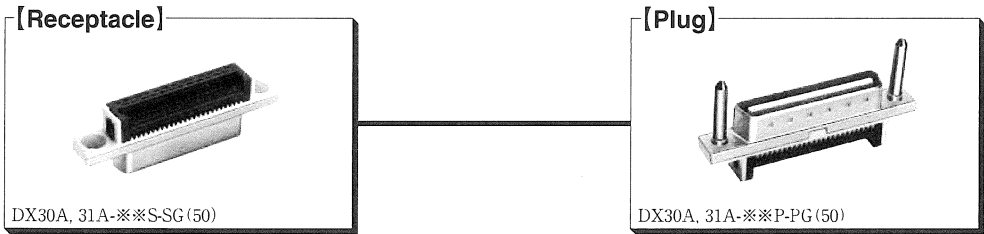
### ● One-touch lock I/O connector



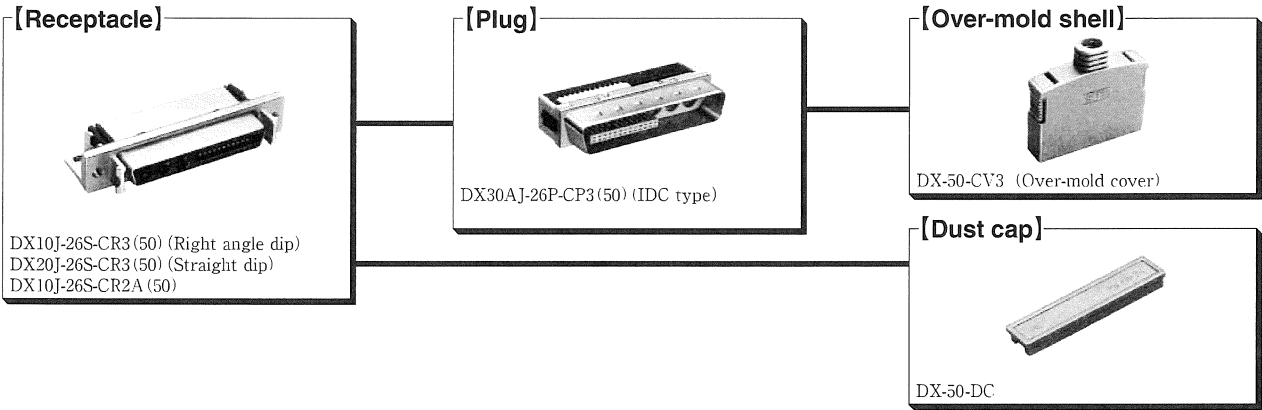
### ● Screw lock I/O connector



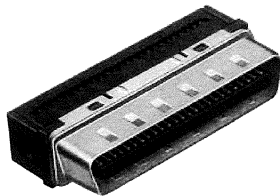
● Plug-in connector



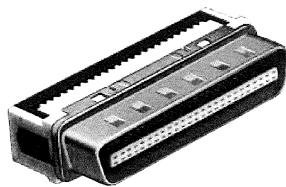
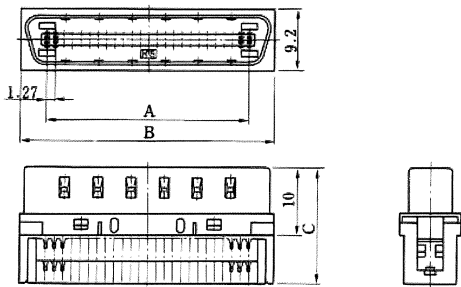
● I/O connector with co-axial contact



1. IDC Plug Connector  
1.1 DX30, DX30A-※※P (50)



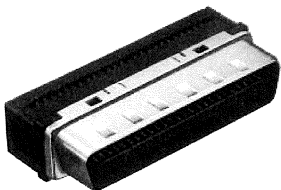
DX30-50P(50)



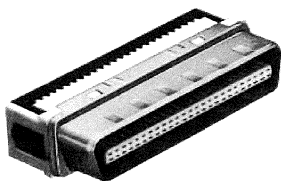
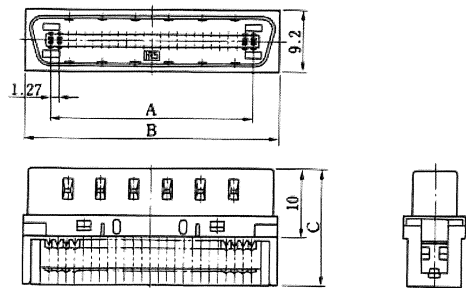
DX30A-50P(50)

| Unit: mm        |            |                 |                  |       |       |      |      |
|-----------------|------------|-----------------|------------------|-------|-------|------|------|
| HRS No.         | No. of Pin | Part No.        | Applicable cable | A     | B     | C    | RoHS |
| CL230-0008-0-50 | 20         | DX30-20P (50)   | AWG # 30         | 11.43 | 19.18 | 17.2 | YES  |
| CL230-0022-1-50 |            | DX30A-20P (50)  | AWG # 28         |       |       |      |      |
| CL230-0009-3-50 | 28         | DX30-28P (50)   | AWG # 30         | 16.51 | 24.26 | 17.2 |      |
| CL230-0023-4-50 |            | DX30A-28P (50)  | AWG # 28         |       |       |      |      |
| CL230-0010-2-50 | 36         | DX30-36P (50)   | AWG # 30         | 21.59 | 29.34 | 17.2 |      |
| CL230-0024-7-50 |            | DX30A-36P (50)  | AWG # 28         |       |       |      |      |
| CL230-0011-5-50 | 50         | DX30-50P (50)   | AWG # 30         | 30.48 | 38.23 | 17.2 |      |
| CL230-0025-0-50 |            | DX30A-50P (50)  | AWG # 28         |       |       |      |      |
| CL230-0012-8-50 | 68         | DX30-68P (50)   | AWG # 30         | 41.91 | 49.66 | 17.2 |      |
| CL230-0026-2-50 |            | DX30A-68P (50)  | AWG # 28         |       |       |      |      |
| CL230-0013-0-50 | 80         | DX30-80P (50)   | AWG # 30         | 49.53 | 57.28 | 17.2 |      |
| CL230-0027-5-50 |            | DX30A-80P (50)  | AWG # 28         |       |       |      |      |
| CL230-0014-3-50 | 100        | DX30-100P (50)  | AWG # 30         | 62.23 | 69.98 | 18.2 |      |
| CL230-0028-8-50 |            | DX30A-100P (50) | AWG # 28         |       |       |      |      |

1.2 IDC Plug Connector DX31, DX31A-※※P (50) (Discrete Wire Laminated)



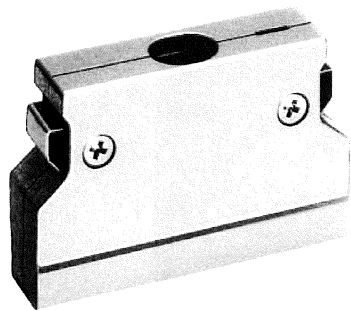
DX31-50P(50)



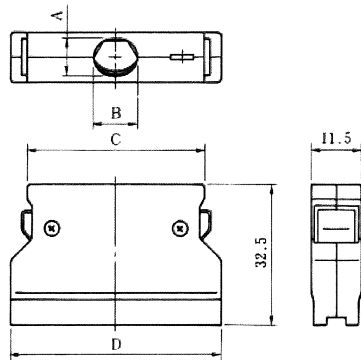
DX31A-50P(50)

| Unit: mm        |            |                  |                  |       |       |      |      |
|-----------------|------------|------------------|------------------|-------|-------|------|------|
| HRS No.         | No. of Pin | Part No.         | Applicable cable | A     | B     | C    | RoHS |
| CL230-0015-6-50 | 20         | DX31-20P (50)    | AWG # 30         | 11.43 | 19.18 | 17.2 | YES  |
| CL230-0029-0-50 |            | DX31 A-20P (50)  | AWG # 28         |       |       |      |      |
| CL230-0016-9-50 | 28         | DX31-28P (50)    | AWG # 30         | 16.51 | 24.26 | 17.2 |      |
| CL230-0030-0-50 |            | DX31 A-28P (50)  | AWG # 28         |       |       |      |      |
| CL230-0017-1-50 | 36         | DX31-36P (50)    | AWG # 30         | 21.59 | 29.34 | 17.2 |      |
| CL230-0031-2-50 |            | DX31 A-36P (50)  | AWG # 28         |       |       |      |      |
| CL230-0018-4-50 | 50         | DX31-50P (50)    | AWG # 30         | 30.48 | 38.23 | 17.2 |      |
| CL230-0032-5-50 |            | DX31 A-50P (50)  | AWG # 28         |       |       |      |      |
| CL230-0019-7-50 | 68         | DX31-68P (50)    | AWG # 30         | 41.91 | 49.66 | 17.2 |      |
| CL230-0033-8-50 |            | DX31 A-68P (50)  | AWG # 28         |       |       |      |      |
| CL230-0020-6-50 | 80         | DX31-80P (50)    | AWG # 30         | 49.53 | 57.28 | 17.2 |      |
| CL230-0034-0-50 |            | DX31 A-80P (50)  | AWG # 28         |       |       |      |      |
| CL230-0021-9-50 | 100        | DX31-100P (50)   | AWG # 30         | 62.23 | 69.98 | 18.2 |      |
| CL230-0035-3-50 |            | DX31 A-100P (50) | AWG # 28         |       |       |      |      |

2. Shell  
2.1 DX-※※-CV (One Touch Lock)



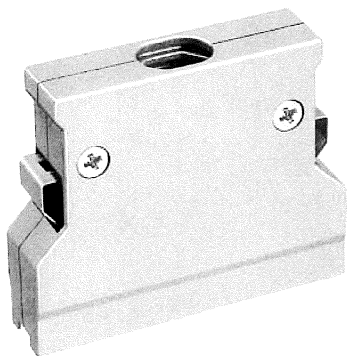
DX-50-CV



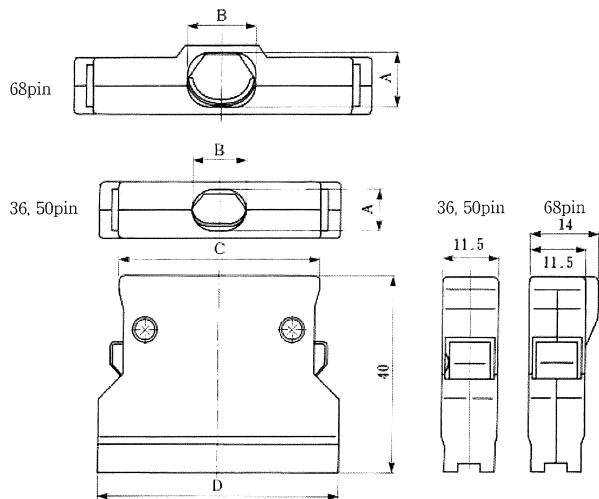
Unit: mm

| HRS No.      | No. of Pin | Part No. | A     | B     | C     | D     | RoHS |
|--------------|------------|----------|-------|-------|-------|-------|------|
| CL230-0036-6 | 20         | DX-20-CV | φ 6.7 | φ 6.7 | 22.3  | 30.0  | YES  |
| CL230-0037-9 | 28         | DX-28-CV | φ 7.5 | φ 7.5 | 27.38 | 35.08 |      |
| CL230-0038-1 | 36         | DX-36-CV | φ 8.7 | φ 8.7 | 32.46 | 40.16 |      |
| CL230-0039-4 | 50         | DX-50-CV | 8.5   | 10.0  | 41.35 | 49.05 |      |
| CL230-0040-3 | 68         | DX-68-CV | 9.2   | 10.0  | 52.78 | 60.48 |      |
| CL230-0041-6 | 80         | DX-80-CV | 8.5   | 12.5  | 60.4  | 68.1  |      |

2.2 DX-※※-CV4 (Large Cable, One Touch Lock)



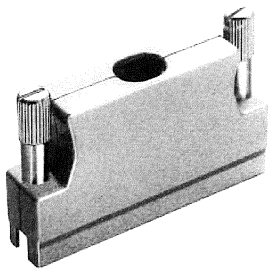
DX-50-CV4



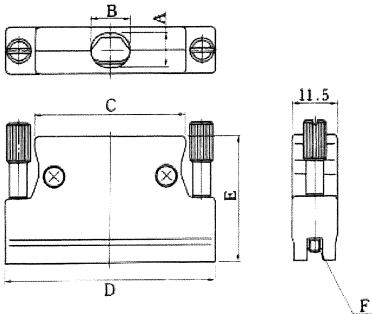
Unit: mm

| HRS No.      | No. of Pin | Part No.  | A    | B  | C     | D     | RoHS |
|--------------|------------|-----------|------|----|-------|-------|------|
| CL230-0226-1 | 36         | DX-36-CV4 | 8.5  | 11 | 32.46 | 40.16 | YES  |
| CL230-0227-4 | 50         | DX-50-CV4 | 8.5  | 11 | 41.35 | 49.05 |      |
| CL230-0228-7 | 68         | DX-68-CV4 | 11.0 | 14 | 52.78 | 60.48 |      |

2.3 DX-※※-CV1 (Screw Lock)



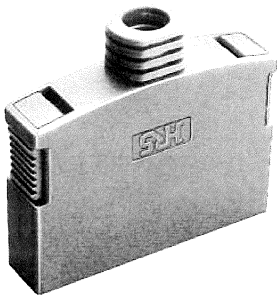
DX-68-CV1



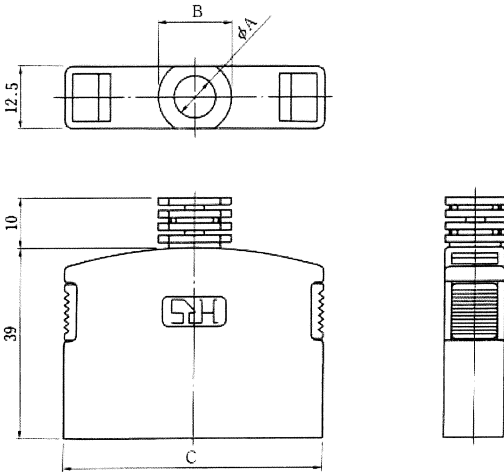
Unit: mm

| HRS No.      | No. of Pts | Part No.   | A   | B    | C     | D     | E    | F         | RoHS |
|--------------|------------|------------|-----|------|-------|-------|------|-----------|------|
| CL230-0054-8 | 20         | DX-20-CV1  | 6.0 | 8.0  | 19.2  | 34.2  | 32   | M3×0.5    | YES  |
| CL230-0055-0 | 28         | DX-28-CV1  | 6.5 | 8.5  | 24.28 | 39.28 | 32   | M3×0.5    |      |
| CL230-0056-3 | 36         | DX-36-CV1  | 7.5 | 9.0  | 29.36 | 44.36 | 32   | M3×0.5    |      |
| CL230-0057-6 | 50         | DX-50-CV1  | 8.5 | 10.0 | 38.25 | 53.25 | 32   | M3×0.5    |      |
| CL230-0058-9 | 68         | DX-68-CV1  | 8.5 | 11.0 | 49.68 | 64.68 | 32   | M3×0.5    |      |
| CL230-0059-1 | 80         | DX-80-CV1  | 8.5 | 12.5 | 57.3  | 72.3  | 32   | M3×0.5    |      |
| CL230-0044-4 | 100        | DX-100-CV1 | 8.5 | 14.0 | 60.0  | 85.0  | 38.9 | M2.6×0.45 |      |

2.4 DX-※※-CV3 (One Touch Lock, Overmold)



DX-50-CV3

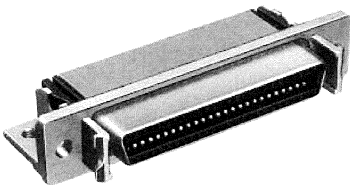


Unit: mm

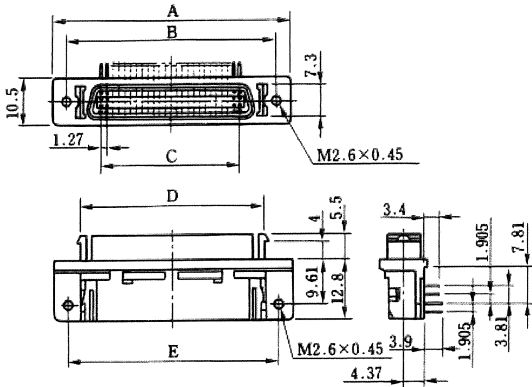
| HRS No.      | No. of Pts | Part No.  | A   | B    | C     | RoHS |
|--------------|------------|-----------|-----|------|-------|------|
| CL230-0147-7 | 50         | DX-50-CV3 | 8.8 | 15   | 53    | YES  |
| CL230-0237-8 | 68         | DX-68-CV3 | 9.6 | 14.9 | 64.43 |      |

### 3. Receptacle

#### 2.1 DX10-※※-S (50) (Right Angle Dip, One Touch Lock)



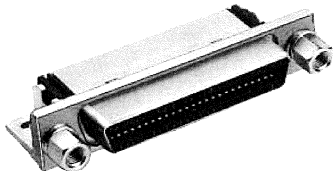
DX10-50S(50)



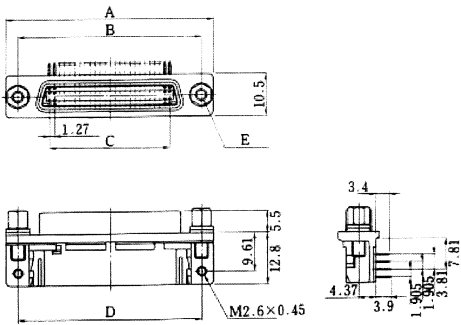
Unit: mm

| HRS No.         | No. of Pin | Part No.      | A     | B     | C     | D     | E     | RoHS |
|-----------------|------------|---------------|-------|-------|-------|-------|-------|------|
| CL230-0001-1-50 | 20         | DX10-20S (50) | 33.4  | 27.4  | 11.43 | 21.6  | 27.4  | YES  |
| CL230-0002-4-50 | 28         | DX10-28S (50) | 38.48 | 32.48 | 16.51 | 26.68 | 32.48 |      |
| CL230-0003-7-50 | 36         | DX10-36S (50) | 43.56 | 37.56 | 21.59 | 31.76 | 37.56 |      |
| CL230-0004-0-50 | 50         | DX10-50S (50) | 52.45 | 46.45 | 30.48 | 40.65 | 46.45 |      |
| CL230-0005-2-50 | 68         | DX10-68S (50) | 63.88 | 57.88 | 41.91 | 52.08 | 57.88 |      |
| CL230-0006-5-50 | 80         | DX10-80S (50) | 71.5  | 65.5  | 49.53 | 59.7  | 65.5  |      |

#### 3.2 DX10A-※※-S (50) (Right Angle Dip, Screw Lock)



DX10A-50S(50)

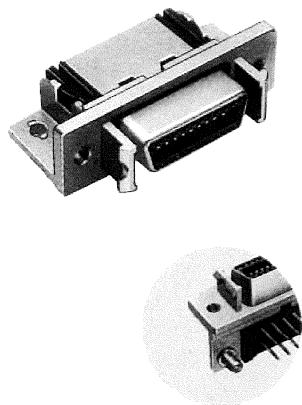


| Panel Thickness | No. of Washer |
|-----------------|---------------|
| t=0.7~1.0       | Each 2 pieces |
| t=1.5~1.8       | Each 1 piece  |

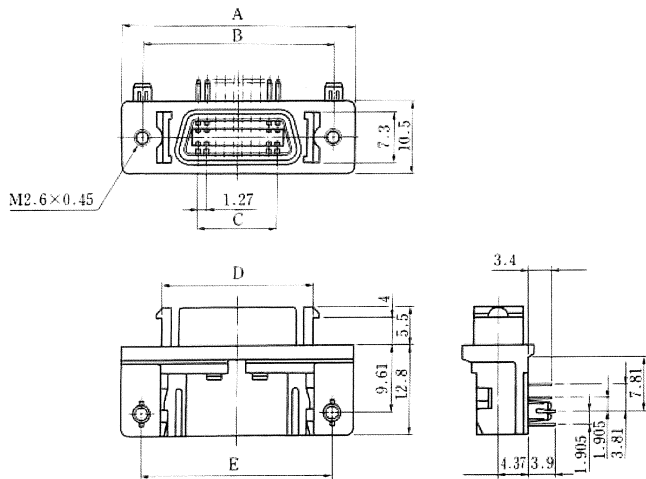
Unit: mm

| HRS No.         | No. of Pin | Part No.        | A     | B     | C     | D     | E           | RoHS |
|-----------------|------------|-----------------|-------|-------|-------|-------|-------------|------|
| CL230-0047-2-50 | 20         | DX10A-20S (50)  | 33.4  | 27.4  | 11.43 | 27.4  | M3 x 0.5    | YES  |
| CL230-0048-5-50 | 28         | DX10A-28S (50)  | 38.48 | 32.48 | 16.51 | 32.48 | M3 x 0.5    |      |
| CL230-0049-8-50 | 36         | DX10A-36S (50)  | 43.56 | 37.56 | 21.59 | 37.56 | M3 x 0.5    |      |
| CL230-0050-7-50 | 50         | DX10A-50S (50)  | 52.45 | 46.45 | 30.48 | 46.45 | M3 x 0.5    |      |
| CL230-0051-0-50 | 68         | DX10A-68S (50)  | 63.88 | 57.88 | 41.91 | 57.88 | M3 x 0.5    |      |
| CL230-0052-2-50 | 80         | DX10A-80S (50)  | 71.5  | 65.5  | 49.53 | 65.5  | M3 x 0.5    |      |
| CL230-0043-1-50 | 100        | DX10A-100S (50) | 84.2  | 78.2  | 62.23 | 78.2  | M2.6 x 0.45 |      |

3.3 DX10-※※-SE (50) (Right Angle Dip, One Touch Lock, Lock Pin)



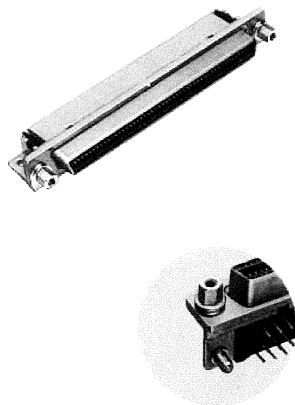
DX10-20SE(50)



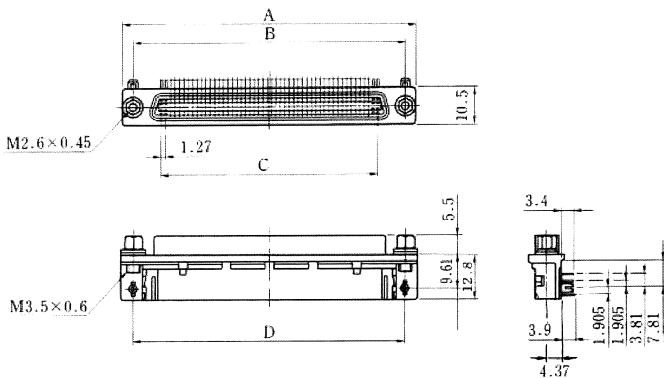
Unit: mm

| HRS No.         | No. of Pins | Part No.      | A    | B    | C     | D    | E    | RoHS |
|-----------------|-------------|---------------|------|------|-------|------|------|------|
| CL230-0274-4-50 | 20          | DX10-20SE(50) | 33.4 | 27.4 | 11.43 | 21.6 | 27.4 | YES  |

3.4 DX10A-※※-SE (50) (Right Angle Dip, Screw Lock, Lock Pin)



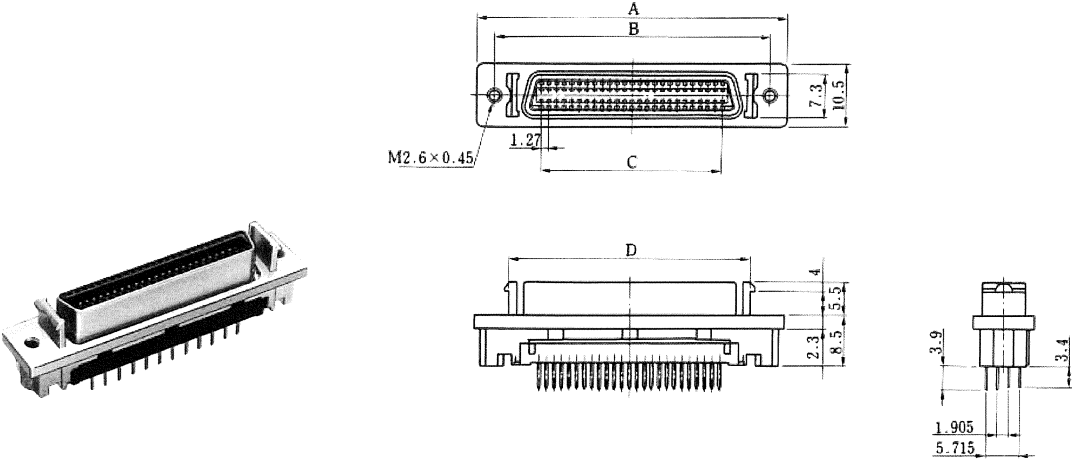
DX10A-100SE(50)



Unit: mm

| HRS No.         | No. of Pins | Part No.        | A    | B    | C     | D    | RoHS |
|-----------------|-------------|-----------------|------|------|-------|------|------|
| CL230-0262-5-50 | 100         | DX10A-100SE(50) | 84.2 | 78.2 | 62.23 | 78.2 | YES  |

3.5 DX20-※※-S (50) (Straight Dip, One Touch Lock)

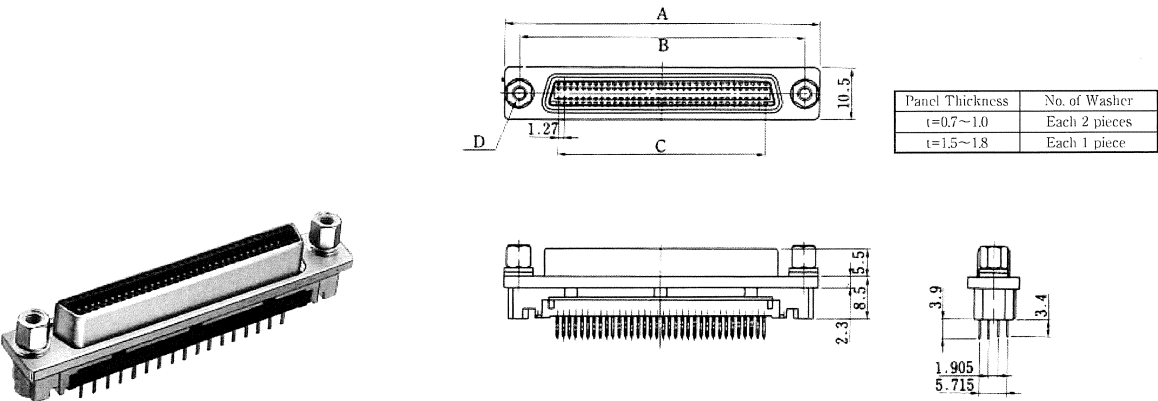


DX20-50S(50)

Unit: mm

| HRS No.         | No. of Pin | Part No.     | A     | B     | C     | D     | RoHS |
|-----------------|------------|--------------|-------|-------|-------|-------|------|
| CL230-0081-0-50 | 36         | DX20-36S(50) | 43.56 | 37.56 | 21.59 | 31.76 | YES  |
| CL230-0068-2-50 | 50         | DX20-50S(50) | 52.45 | 46.45 | 30.48 | 40.65 |      |
| CL230-0083-6-50 | 80         | DX20-80S(50) | 71.5  | 65.5  | 49.53 | 59.7  |      |

3.6 DX20A-※※-S (50) (Straight Dip, Screw Lock)



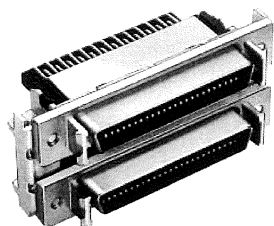
DX20A-68S(50)

Unit: mm

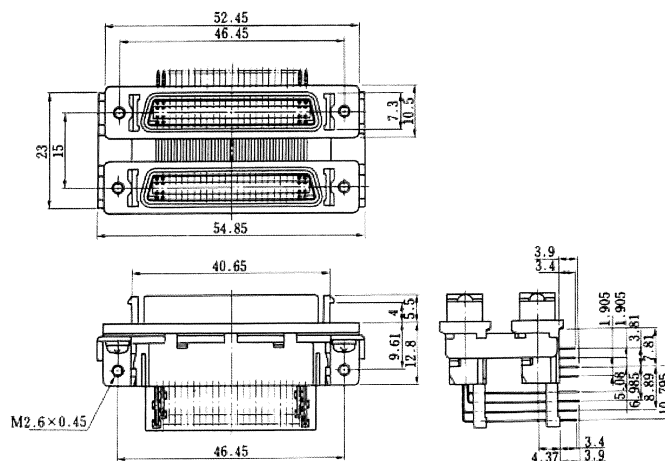
| HRS No.         | No. of Pin | Part No.       | A     | B     | C     | E           | RoHS |
|-----------------|------------|----------------|-------|-------|-------|-------------|------|
| CL230-0156-8-50 | 36         | DX20A-36S(50)  | 43.56 | 37.56 | 21.59 | M3 x 0.5    | YES  |
| CL230-0272-9-50 | 50         | DX20A-50S(50)  | 52.45 | 46.45 | 30.48 | M3 x 0.5    |      |
| CL230-0144-9-50 | 68         | DX20A-68S(50)  | 63.88 | 57.88 | 41.91 | M3 x 0.5    |      |
| CL230-0084-9-50 | 100        | DX20A-100S(50) | 84.2  | 78.2  | 62.23 | M2.6 x 0.45 |      |

All non-RoHS products have been discontinued, or will be discontinued soon. Please check the products status on the Hirose website RoHS search at [www.hirose-connectors.com](http://www.hirose-connectors.com), or contact your Hirose sales representative.

### 3.7 DX10-50-SW (50) (Right Angle Dip, One Touch Lock, Double Layer)



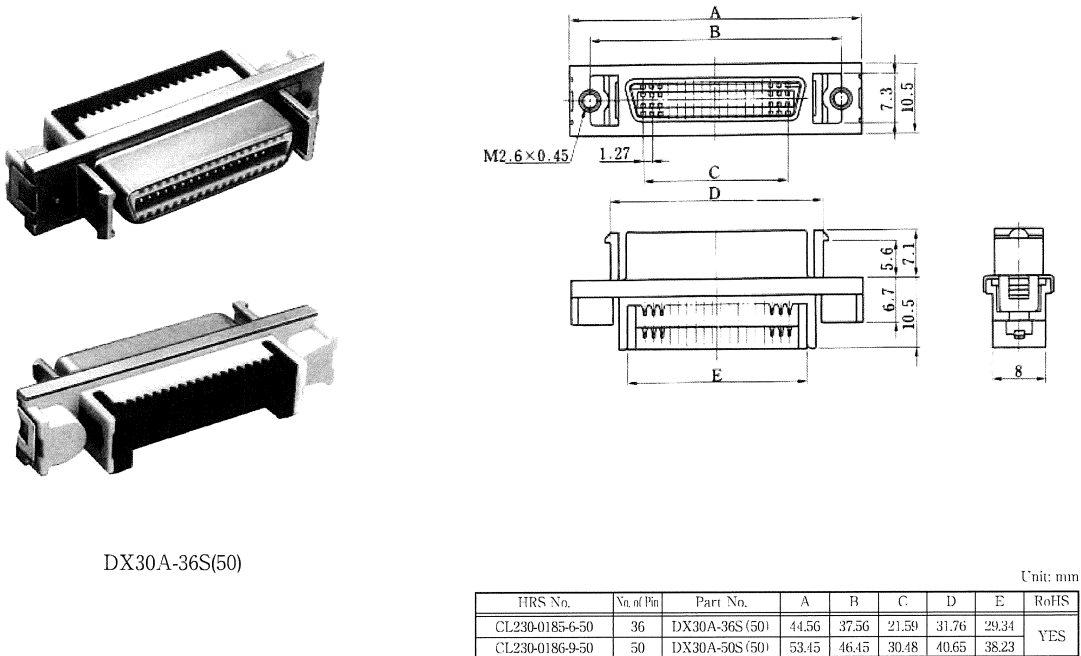
DX10-50SW (50)



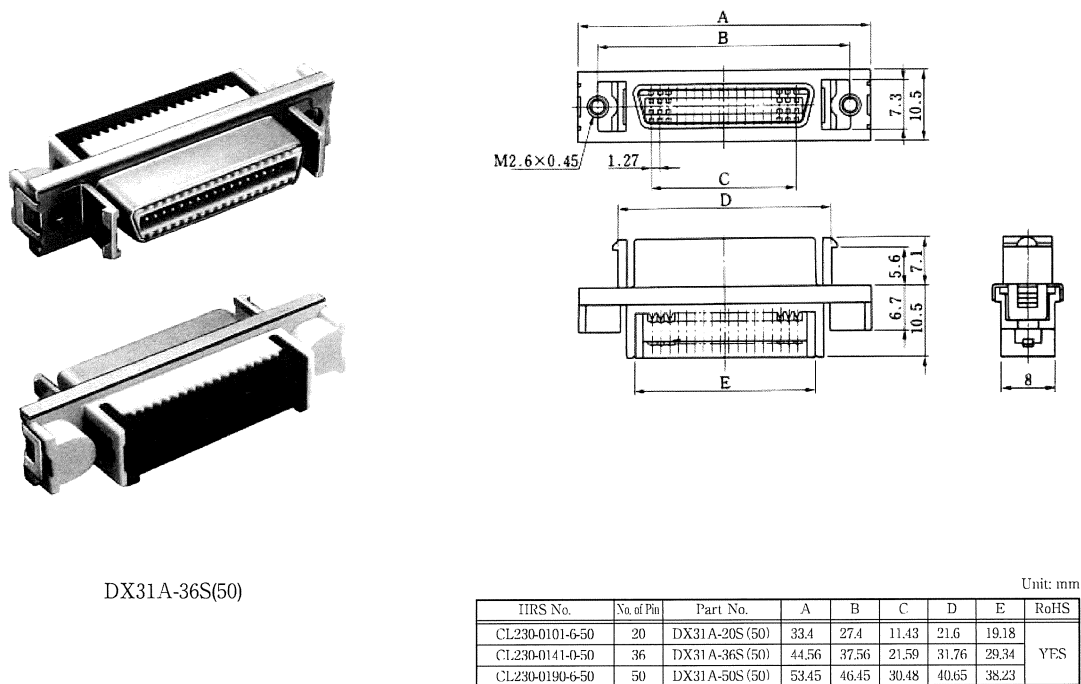
Unit: mm

| HRS No.         | Part No.       | RoHS |
|-----------------|----------------|------|
| CL230-0069-5-50 | DX10-50SW (50) | YES  |

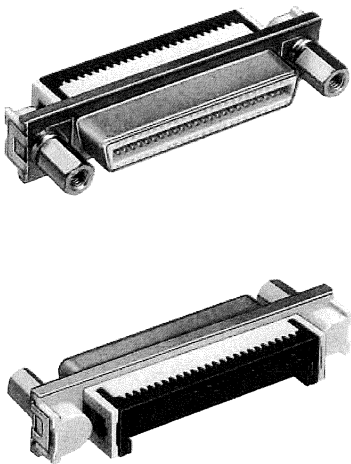
4. Panel mount Cable to Cable Connector  
4.1 DX30A-※※-S (50) (Discrete Wire, Thin Cable, One Touch Lock)



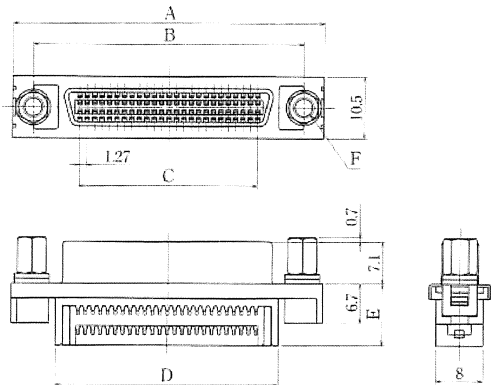
4.2 DX31A-※※-S (50) (Discrete Wire Laminated, Fine Cable, One Touch Lock)



4.3 DX30A-※※S-LNA (5※) (Discrete Thin Wire, Screw Lock)



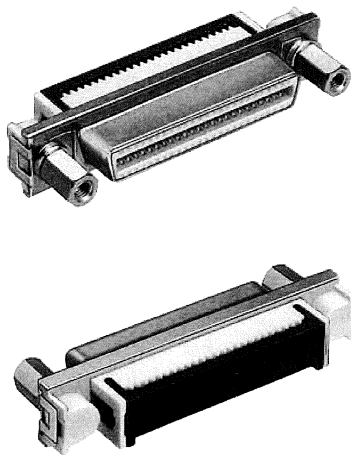
DX30A-50S-LNA(55)



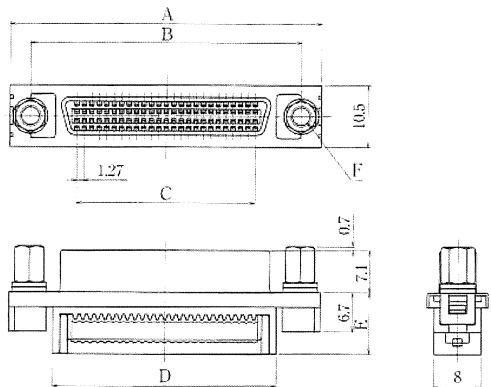
Unit: mm

| HRS No.         | No. of Pins | Part No.           | A     | B     | C     | D     | E    | F         | RoHS |
|-----------------|-------------|--------------------|-------|-------|-------|-------|------|-----------|------|
| CL230-0167-4-55 | 36          | DX30A-36S-LNA(55)  | 44.56 | 37.56 | 21.59 | 29.34 | 10.5 | M3×0.5    | YES  |
| CL230-0189-7-55 | 50          | DX30A-50S-LNA(55)  | 53.45 | 46.45 | 30.48 | 38.23 | 10.5 | M3×0.5    |      |
| CL230-0168-7-50 | 100         | DX30A-100S-LNA(50) | 86.82 | 78.2  | 62.23 | 69.98 | 11.5 | M2.6×0.45 |      |

4.4 DX31A-※※S-LNA (5※) (Discrete Wire Laminated, Screw Lock)



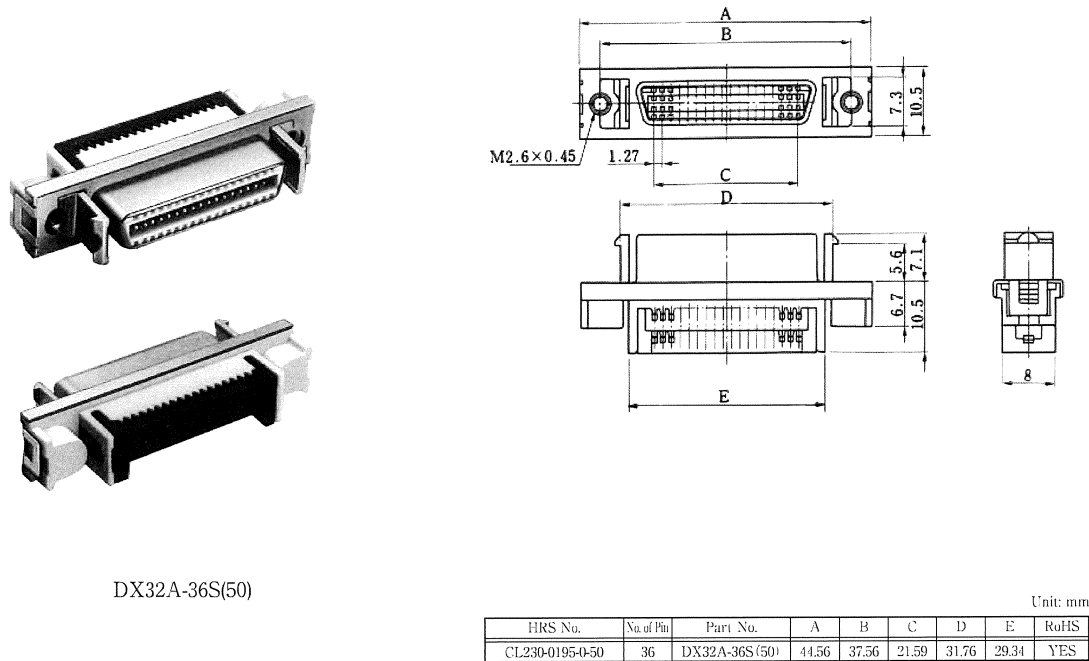
DX31A-50S-LNA(55)



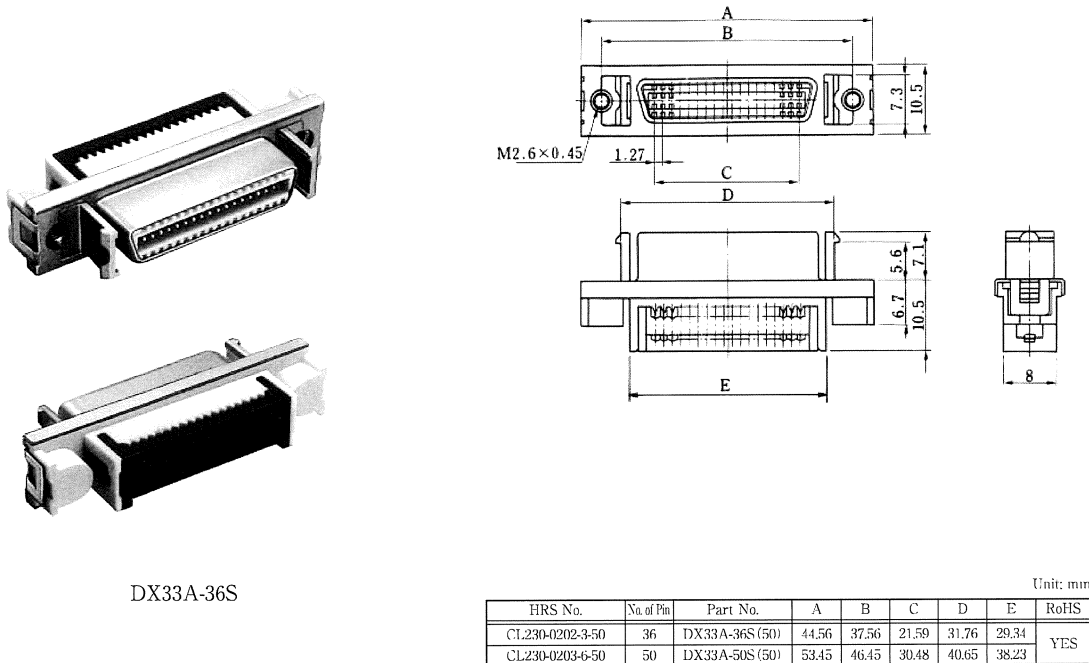
Unit: mm

| HRS No.         | No. of Pins | Part No.           | A     | B     | C     | D     | E    | F         | RoHS |
|-----------------|-------------|--------------------|-------|-------|-------|-------|------|-----------|------|
| CL230-0217-4-55 | 36          | DX31A-36S-LNA(55)  | 44.56 | 37.56 | 21.59 | 29.34 | 10.5 | M3×0.5    | YES  |
| CL230-0193-4-55 | 50          | DX31A-50S-LNA(55)  | 53.45 | 46.45 | 30.48 | 38.23 | 10.5 | M3×0.5    |      |
| CL230-0086-4-50 | 100         | DX31A-100S-LNA(50) | 86.82 | 78.2  | 62.23 | 69.98 | 11.5 | M2.6×0.45 |      |

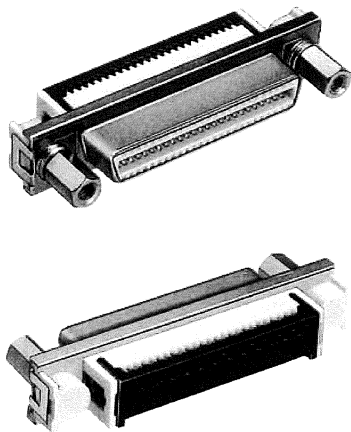
4.5 DX32A-※※-S (50) (Discrete Wire Laminated, Ribbon Cable, One Touch Lock)



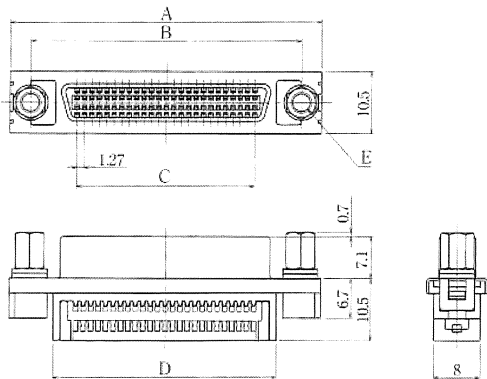
4.6 DX33A-※※-S (50) (Group IDC, Flat Ribbon Cable, One Touch Lock)



4.7 DX32A-※※S-LNA (55) (Loose Piece IDC, Slit Ribbon Cable, Screw Lock)



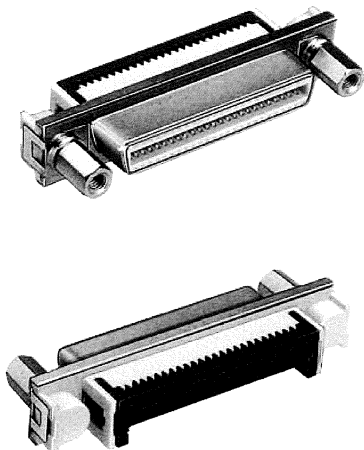
DX32A-50S-LNA(55)



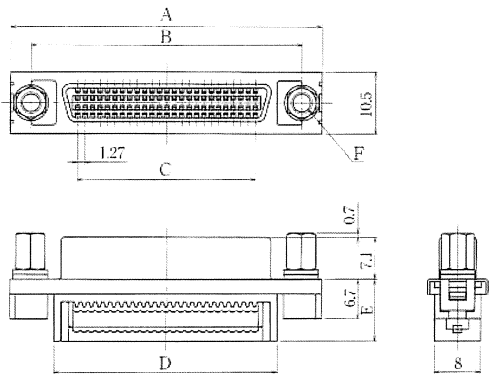
Unit: mm

| HRS No.         | No. of Pins | Part No.          | A     | B     | C     | D     | E      | RoHS |
|-----------------|-------------|-------------------|-------|-------|-------|-------|--------|------|
| CL230-0199-0-55 | 50          | DX32A-50S-LNA(55) | 53.45 | 46.45 | 30.48 | 38.23 | M3×0.5 | YES  |

4.8 DX33A-※※S-LNA (5※) (Group IDC, Flat Ribbon Cable, Screw Lock)



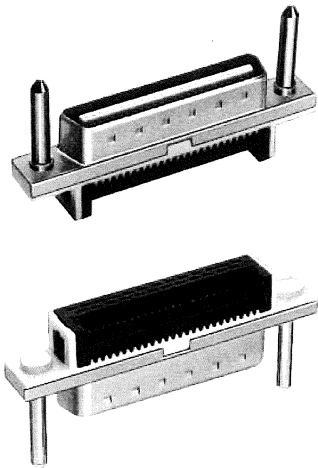
DX33A-50S-LNA(55)



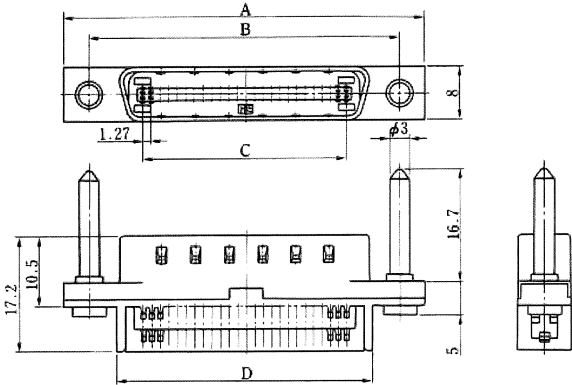
Unit: mm

| HRS No.         | No. of Pins | Part No.           | A     | B     | C     | D     | E    | RoHS      |
|-----------------|-------------|--------------------|-------|-------|-------|-------|------|-----------|
| CL230-0206-4-55 | 50          | DX33A-50S-LNA(55)  | 53.45 | 46.45 | 30.48 | 38.23 | 10.5 | M3×0.5    |
| CL230-0171-1-50 | 100         | DX33A-100S-LNA(50) | 86.82 | 78.2  | 62.23 | 69.98 | 11.5 | M2.6×0.45 |

5. Plug In Connector  
5.1 DX30A-※※P-PG (50) (Discrete Thin Wire)



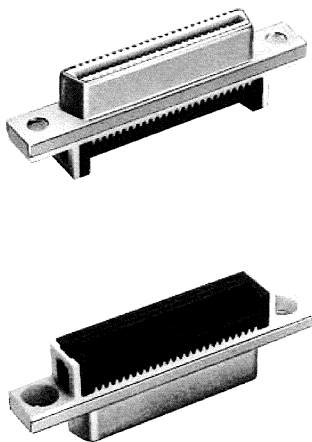
DX30A-50P-PG(50)



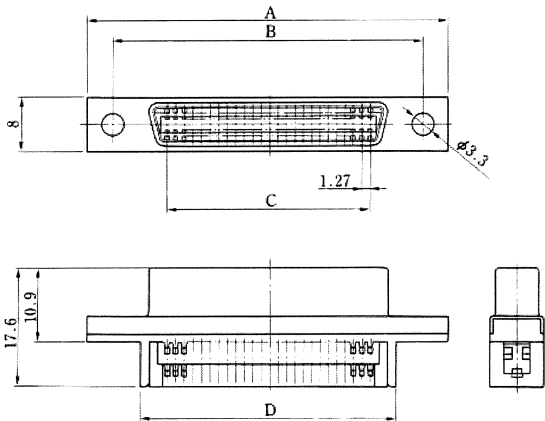
Unit: mm

| HRS No.         | No. of Pin | Part No.         | A     | B     | C     | D     | RoHS |
|-----------------|------------|------------------|-------|-------|-------|-------|------|
| CL230-0061-3-50 | 28         | DX30A-28P-PG(50) | 40.0  | 32.48 | 16.51 | 24.26 |      |
| CL230-0135-8-50 | 36         | DX30A-36P-PG(50) | 45.08 | 37.56 | 21.59 | 29.34 | YES  |
| CL230-0152-7-50 | 50         | DX30A-50P-PG(50) | 53.97 | 46.45 | 30.48 | 38.23 |      |

5.2 DX30A-※※S-SG (50) (Discrete Thin Wire)



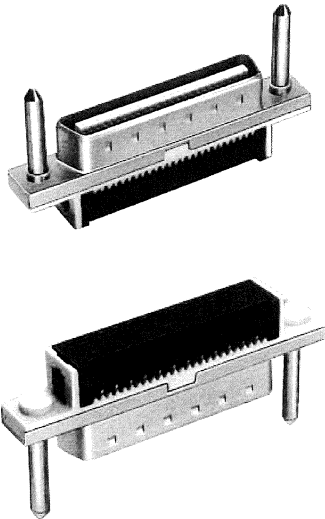
DX30A-50S-SG(50)



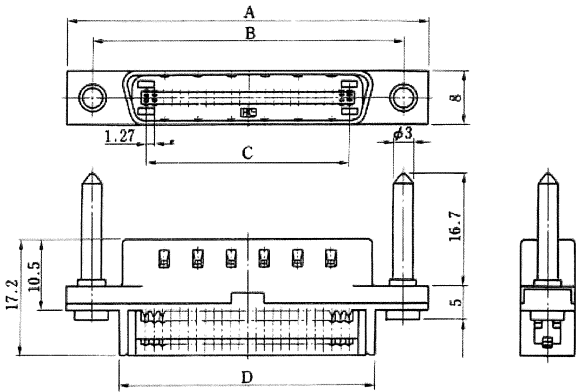
Unit: mm

| HRS No.         | No. of Pin | Part No.         | A     | B     | C     | D     | RoHS |
|-----------------|------------|------------------|-------|-------|-------|-------|------|
| CL230-0062-6-50 | 28         | DX30A-28S-SG(50) | 40.0  | 32.48 | 16.51 | 24.26 |      |
| CL230-0153-0-50 | 50         | DX30A-50S-SG(50) | 53.97 | 46.45 | 30.48 | 38.23 | YES  |

5.3 DX31A-※※P-PG (50) (Discrete WireLaminated)



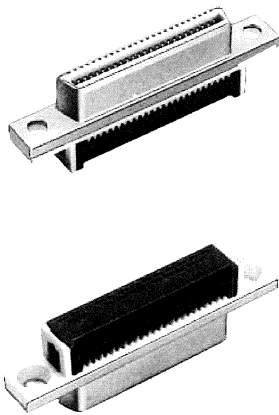
DX31A-50P-PG(50)



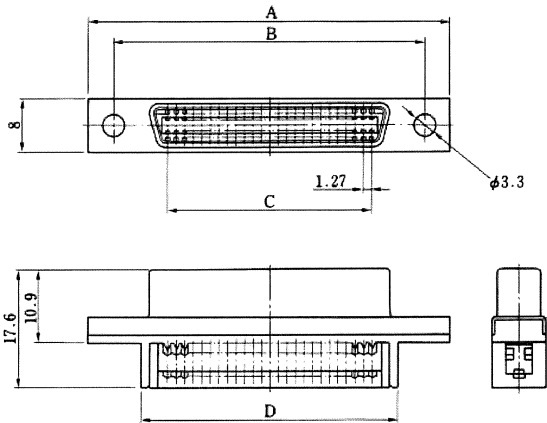
Unit: mm

| HRS No.         | No. of Pin | Part No.         | A     | B     | C     | D     | RoHS |
|-----------------|------------|------------------|-------|-------|-------|-------|------|
| CL230-0160-5-50 | 28         | DX31A-28P-PG(50) | 40.0  | 32.48 | 16.51 | 24.26 | YES  |
| CL230-0162-0-50 | 50         | DX31A-50P-PG(50) | 53.97 | 46.45 | 30.48 | 38.23 |      |

5.4 DX31A-※※S-SG (50) (Discrete Wire Laminated)



DX31A-50S-SG(50)

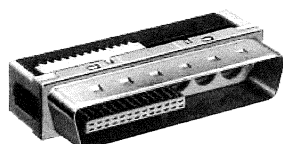


Unit: mm

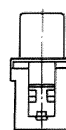
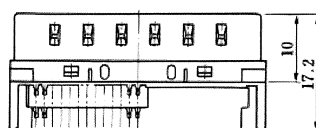
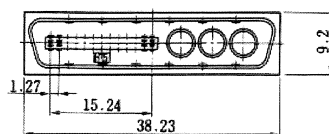
| HRS No.         | No. of Pin | Part No.         | A     | B     | C     | D     | RoHS |
|-----------------|------------|------------------|-------|-------|-------|-------|------|
| CL230-0163-3-50 | 28         | DX31A-28S-SG(50) | 40.0  | 32.48 | 16.51 | 24.26 | YES  |
| CL230-0164-6-50 | 36         | DX31A-36S-SG(50) | 45.08 | 37.56 | 21.59 | 29.34 |      |
| CL230-0165-9-50 | 50         | DX31A-50S-SG(50) | 53.97 | 46.45 | 30.48 | 38.23 |      |

## 7. Co-axial Connector

### 7.1 Co-axial, Signal Terminal Connector



DX30AJ-26P-CP3(50)



Applicable coaxial contact

CL313-0351-6-40

MJ-P-1.5CV (P) (40)

Applicable Cable

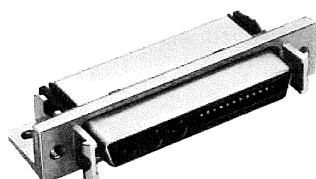
Sumitomo Electric Industrial Co., Ltd.

UL20121 (80°C, 30V)

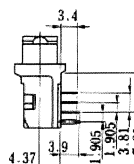
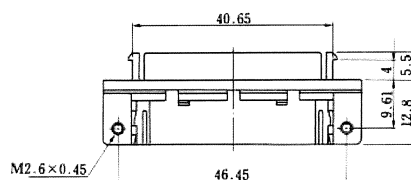
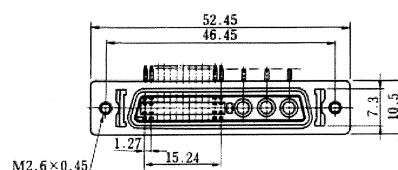
Complex 29 pins cable with double shield  
(Light Beige)

Unit: mm

| HRS No.         | Part No.           | RoHS |
|-----------------|--------------------|------|
| CL230-0148-0-50 | DX30AJ-26P-CP3(50) | YES  |

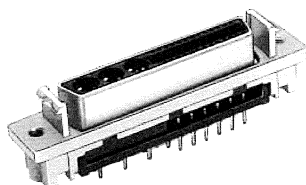


DX10J-26S-CR3(50)

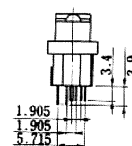
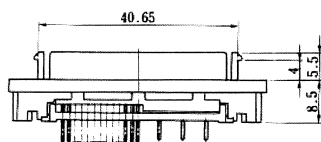
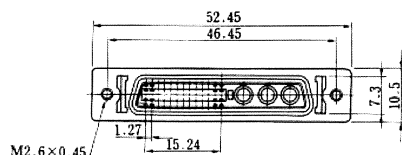


Unit: mm

| HRS No.         | Part No.          | RoHS |
|-----------------|-------------------|------|
| CL230-0063-0-50 | DX10J-26S-CR3(50) | YES  |



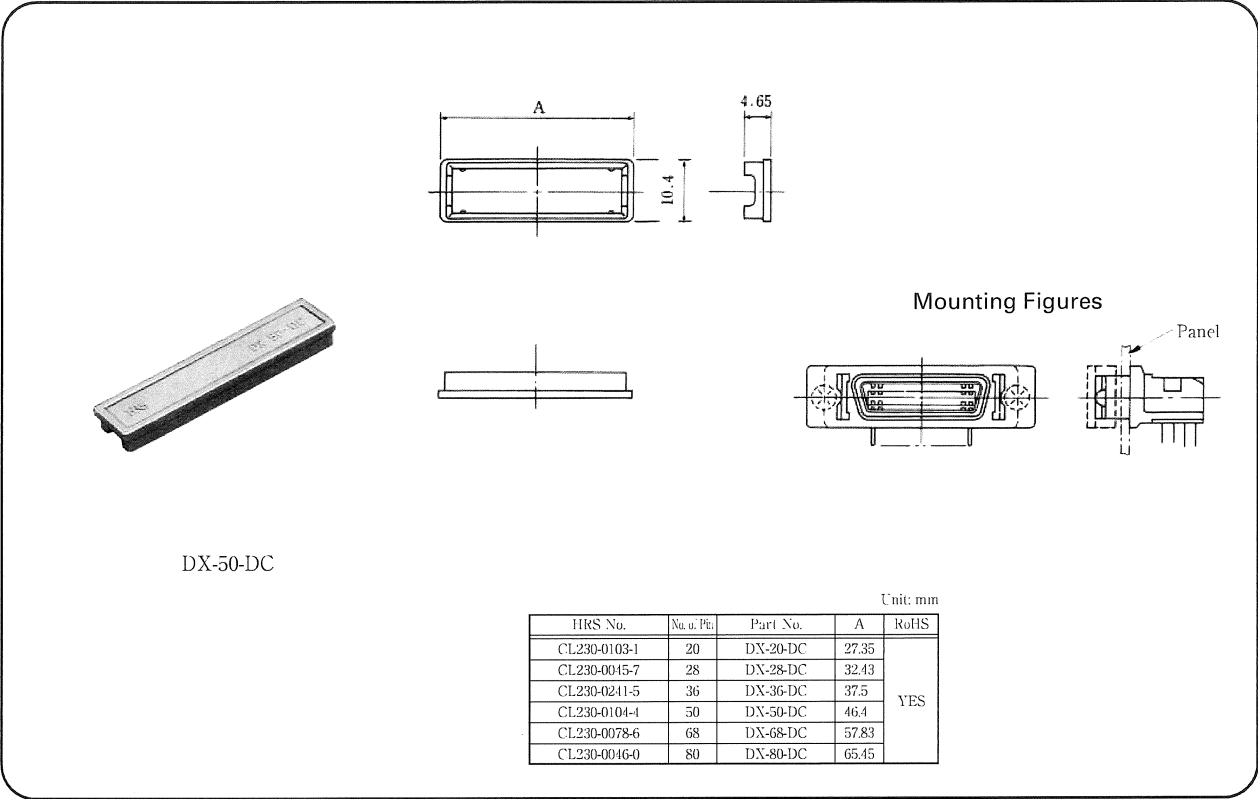
DX20J-26S-CR3(50)



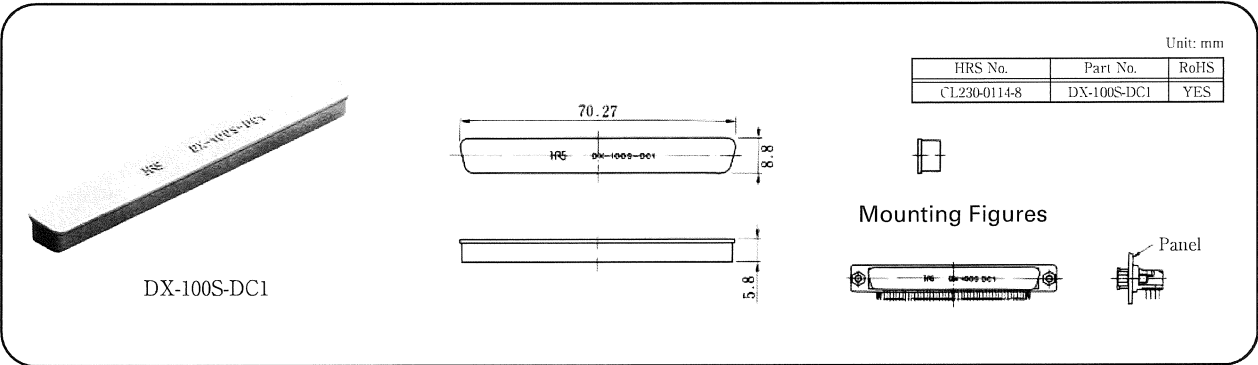
Unit: mm

| HRS No.         | Part No.          | RoHS |
|-----------------|-------------------|------|
| CL230-0064-1-50 | DX20J-26S-CR3(50) | YES  |

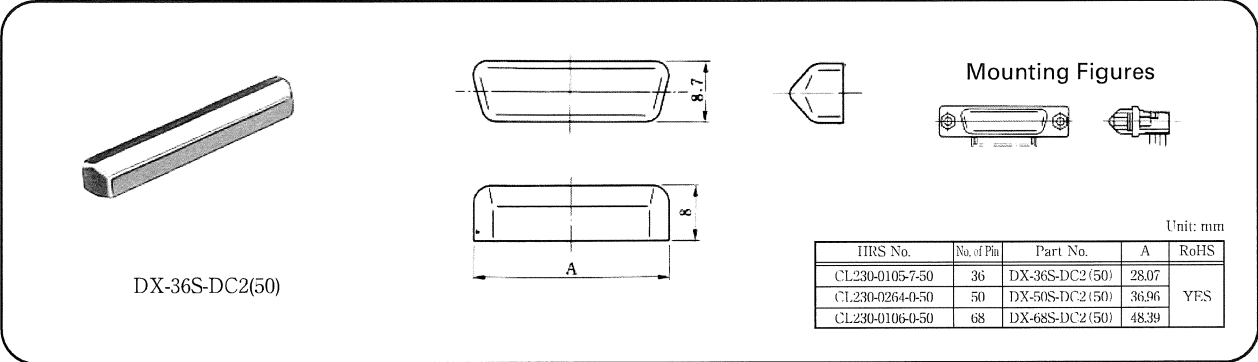
9. Dust Cap  
9.1 DX-※※-DC (Semi-Hard, for One Touch Lock)



9.2 DX-100S-DC1 (Semi-Hard, for One-Touch Locking, for Screw Lock)

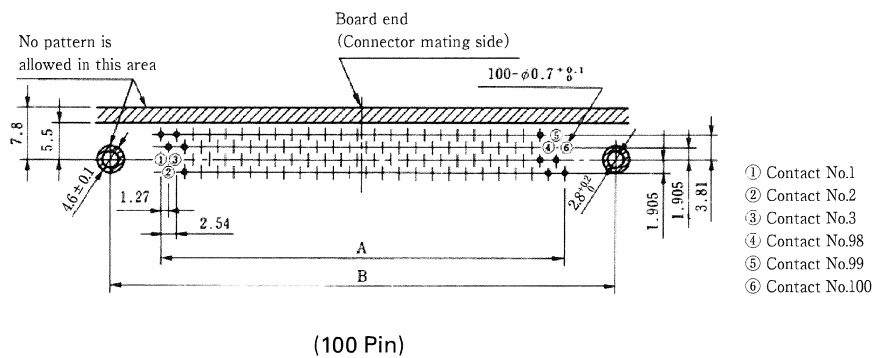
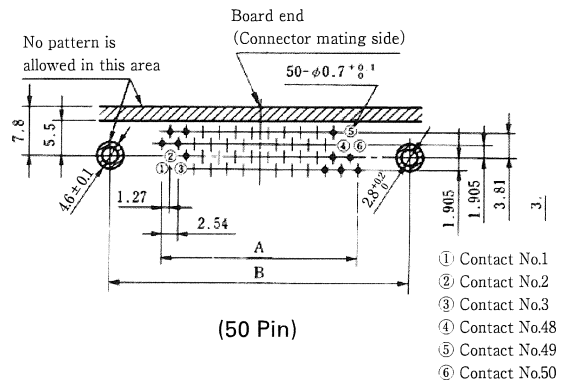
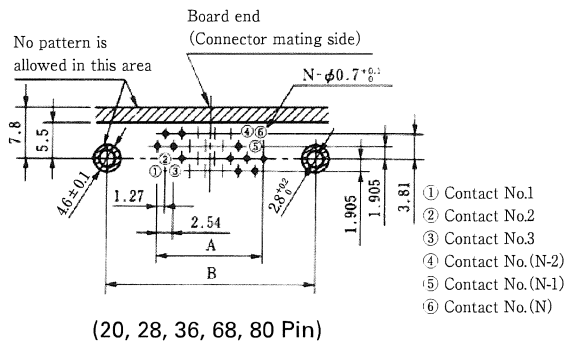


9.3 DX-※※S-DC2 (Soft-Hard, for One-Touch Locking, for Screw Lock)



## PC Board Layout (Recommended board thickness : 1.6mm)

### DX10, DX10A-※※S (50)

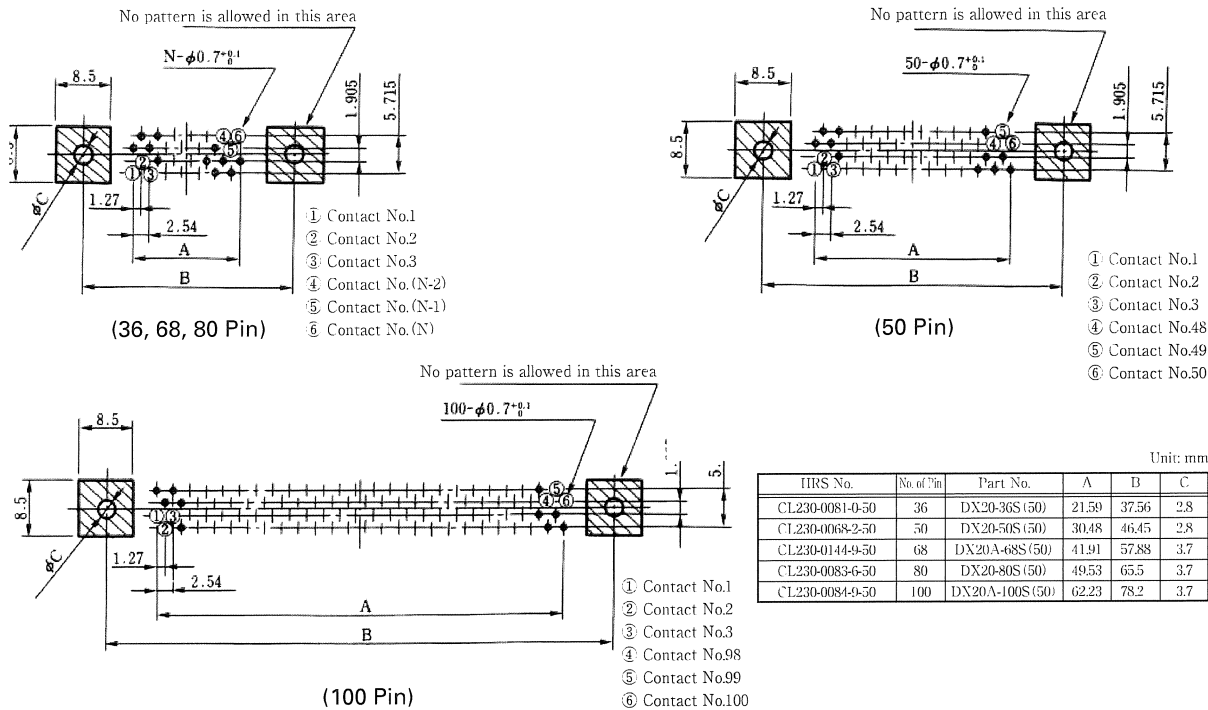


Unit: mm

| HRS No.         | No. of Pin | Part No.       | A     | B     |
|-----------------|------------|----------------|-------|-------|
| CL230-0001-1-50 | 20         | DX10-20S (50)  | 11.43 | 27.4  |
| CL230-0047-2-50 |            | DX10A-20S (50) |       |       |
| CL230-0002-4-50 | 28         | DX10-28S (50)  | 16.51 | 32.48 |
| CL230-0048-5-50 |            | DX10A-28S (50) |       |       |
| CL230-0003-7-50 | 36         | DX10-36S (50)  | 21.59 | 37.56 |
| CL230-0049-8-50 |            | DX10A-36S (50) |       |       |
| CL230-0004-0-50 | 50         | DX10-50S (50)  | 30.48 | 46.45 |
| CL230-0050-7-50 |            | DX10A-50S (50) |       |       |

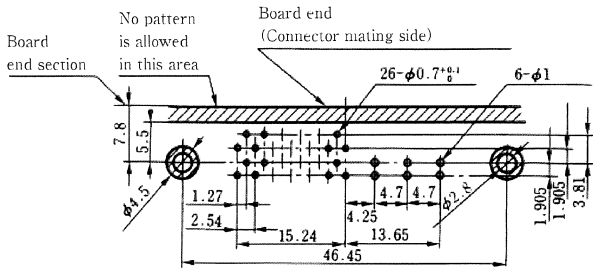
| HRS No.         | No. of Pin | Part No.        | A     | B     |
|-----------------|------------|-----------------|-------|-------|
| CL230-0005-2-50 | 68         | DX10-68S (50)   | 41.91 | 57.88 |
| CL230-0051-0-50 |            | DX10A-68S (50)  |       |       |
| CL230-0006-5-50 | 80         | DX10-80S (50)   | 49.53 | 65.5  |
| CL230-0052-2-50 |            | DX10A-80S (50)  |       |       |
| CL230-0043-1-50 | 100        | DX10A-100S (50) | 62.23 | 78.2  |

DX20, DX20A-※※S (50)

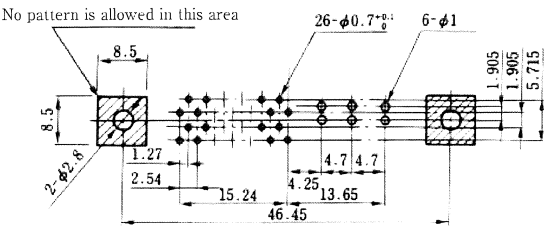


Coaxial-Connector

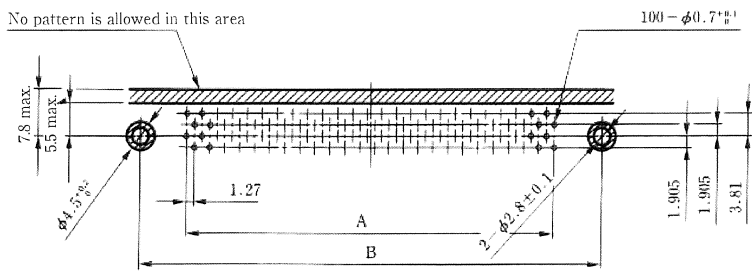
DX10J-26S CR3 (50)



DX20J-26S CR3 (50)



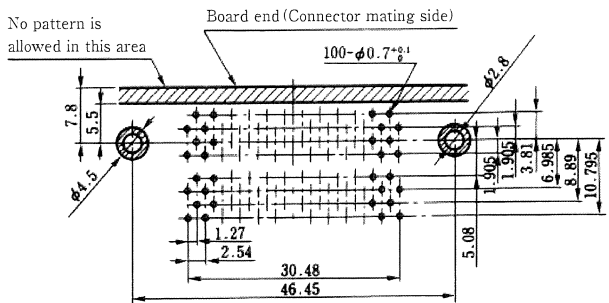
**DX10, DX10A-※SE(50)**



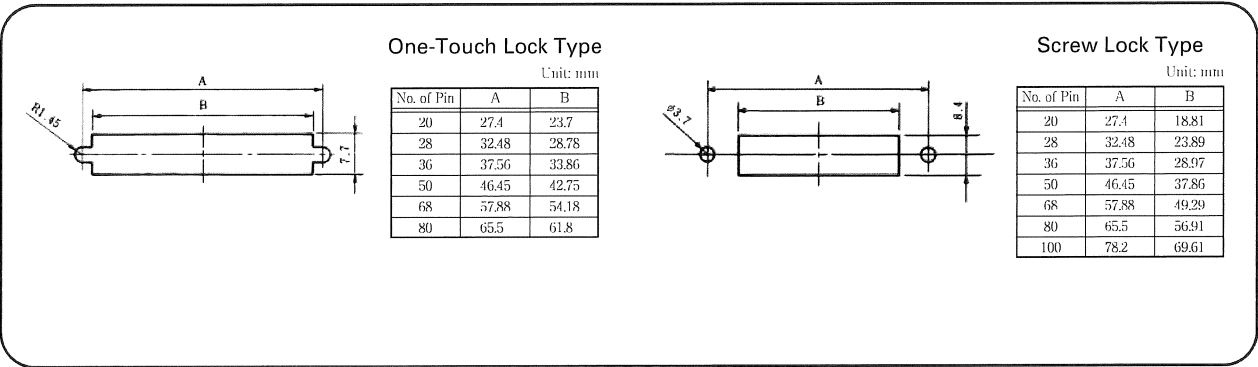
Unit: mm

| HRS No.         | No. of Pin | Part No.        | A     | B    |
|-----------------|------------|-----------------|-------|------|
| CL230-0274-4-50 | 20         | DX10-20SE(50)   | 11.43 | 27.4 |
| CL230-0262-5-50 | 100        | DX10A-100SE(50) | 62.23 | 78.2 |

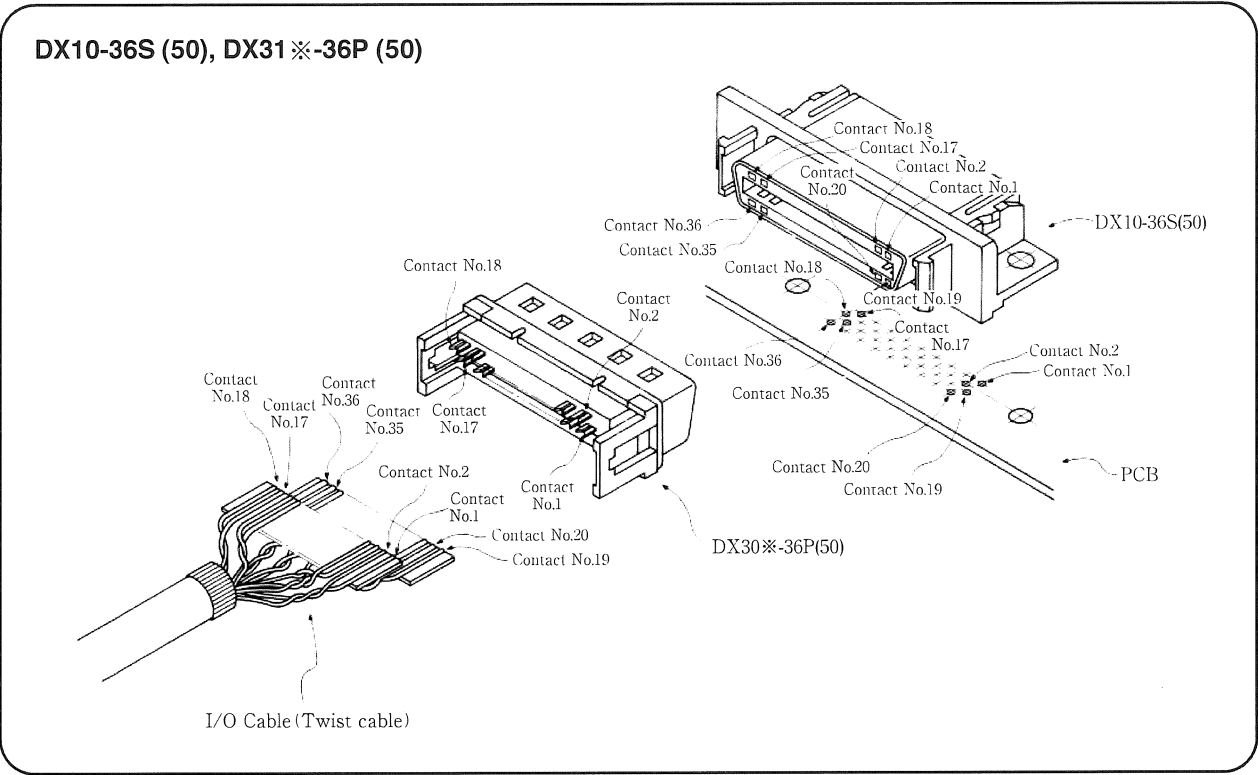
**DX10-50SW (50)**



Panel-Fitting Dimensional Drawing (Recommended panel thickness :

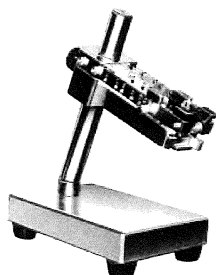


DX Connector Distribution Diagram



## Connecting Method (for Discrete Cable)

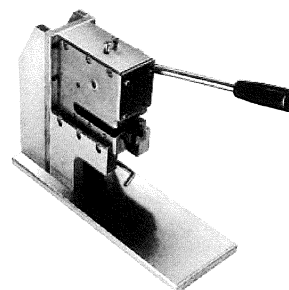
### ● Connecting Tools



DX30 Cable Distribution Jig

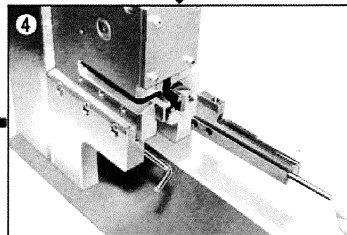
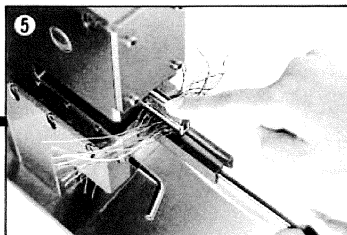
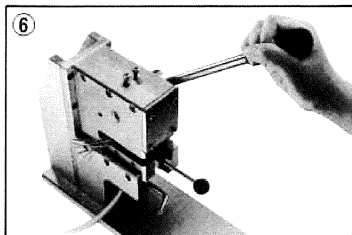
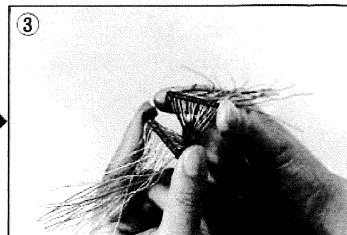
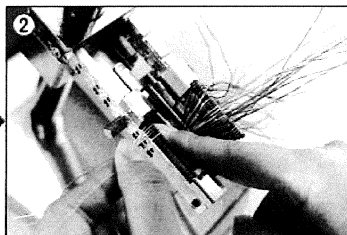
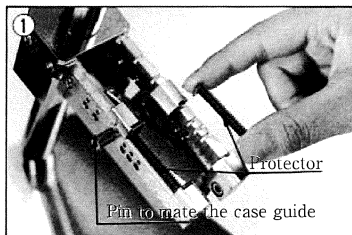


Guide Plate  
DX30-※※GP  
※※(20, 28, 36, 50, 68, 80)



Connecting Press DX30-HR

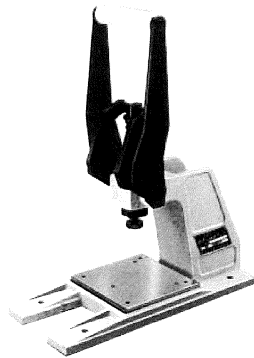
### ● Connecting Order



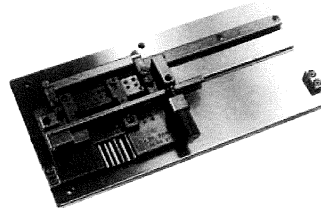
1. Mate the case guide of the distribution jig to the number of pins of the connector and set the protector.
2. Clamp the cable and distribute every one of the signal wires.
3. Combine the two protectors and temporarily fix it to the connector unit.
4. Set the guide plate (DX30-※※GP) to the connecting press DX30-HP.
5. Set the connector to the guide plate and insert the guide plate in the connecting press DX30-HP.
6. Depress the handle. (With this the connection and the cutting of a remaining part of cable have been completed)

## Connecting Method (for Discrete Cable)

### ● Connecting Tools

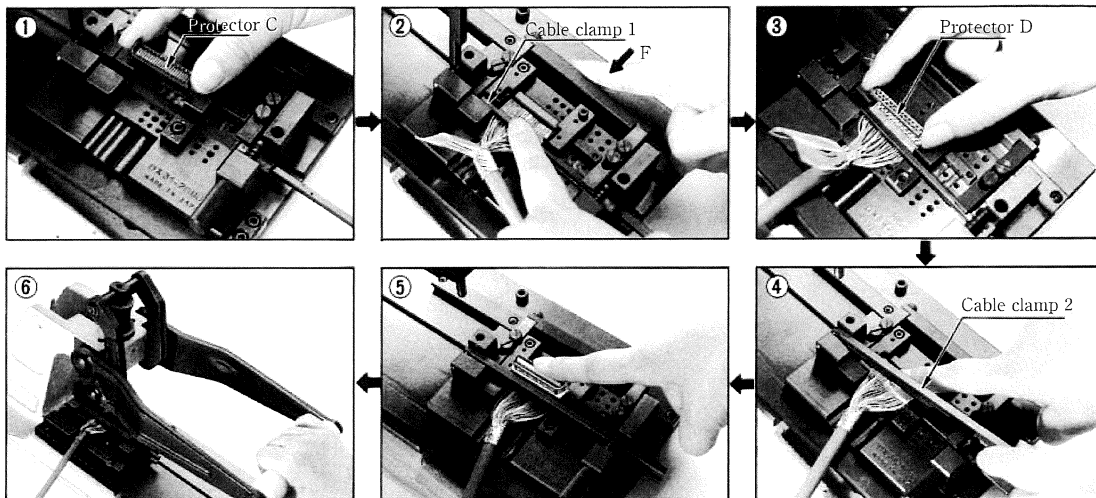


**Connecting Press**  
**Hi-Flex Connecting Press**



**Guide Plate**  
**DX31-2080GP (For 20P~80P)**  
**DX31-100GP (For 100P)**  
Note: Comes with a pressure block

### ● Connecting Order



1. Set the guide plate in the connecting press and set the Protector C in the guide plate.
2. Set the first cable. (Fix the first cable with the cable clamp 1 of the guide plate)
3. Combine the Protector D with the Protector C.
4. Set the second cable. (With the cable clamp 2 of the guide plate, fix the second cable)
5. Place the connector body over the protector.
6. Shift the side base to the position to crimp and depress the handle. (With this the connection has been completed)

The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information.

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## List of Connecting jigs and Accessories

### Plug Connector

| Cable                                                  | Connector Name                    | Wire Configuration                                        | Crimping (Connection)                                  |                                                                                           |
|--------------------------------------------------------|-----------------------------------|-----------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------------------|
|                                                        |                                   |                                                           | Press                                                  | Guide plate                                                                               |
| I/O Cable<br>(Discrete wire)                           | DX30-20P (50)<br>DX30A-20P (50)   | By hand<br>DX30<br>Cable distribution JIG<br>CL902-0116-1 | Connecting press<br>DX30-HP<br>CL902-0117-4            | DX30-20GP<br>CL902-0118-7                                                                 |
|                                                        | DX30-28P (50)<br>DX30A-28P (50)   |                                                           |                                                        | DX30-26GP<br>CL902-0119-0                                                                 |
|                                                        | DX30-36P (50)<br>DX30A-36P (50)   |                                                           |                                                        | DX30-36GP<br>CL902-0120-9                                                                 |
|                                                        | DX30-50P (50)<br>DX30A-50P (50)   |                                                           |                                                        | DX30-50GP<br>CL902-0121-1                                                                 |
|                                                        | DX30-68P (50)<br>DX30A-68P (50)   |                                                           |                                                        | DX30-68GP<br>CL902-0122-4                                                                 |
|                                                        | DX30-80P (50)<br>DX30A-80P (50)   |                                                           |                                                        | DX30-80GP<br>CL902-0123-7                                                                 |
|                                                        | DX30-100P (50)<br>DX30A-100P (50) |                                                           |                                                        | DX30-100GP<br>CL902-2031-1                                                                |
| I/O Cable<br>(1.27mm pitch<br>fusion welding<br>cable) | DX31-20P (50)<br>DX31A-20P (50)   |                                                           | Hi-Flex Connecting<br>press<br>HHP-502<br>CL550-0082-2 | DX31-2080GPA<br>(Common to 20P-<br>80P)<br>CL902-2003-6<br>(Comes with<br>pressure block) |
|                                                        | DX31-28P (50)<br>DX31A-28P (50)   |                                                           |                                                        |                                                                                           |
|                                                        | DX31-36P (50)<br>DX31A-36P (50)   |                                                           |                                                        |                                                                                           |
|                                                        | DX31-50P (50)<br>DX31A-50P (50)   |                                                           |                                                        |                                                                                           |
|                                                        | DX31-68P (50)<br>DX31A-68P (50)   |                                                           |                                                        |                                                                                           |
|                                                        | DX31-80P (50)<br>DX31A-80P (50)   |                                                           |                                                        |                                                                                           |
|                                                        | DX31-100P (50)<br>DX31A-100P (50) |                                                           |                                                        | DX31-100GPA<br>CL902-0125-2<br>(100pin private)<br>(Comes with pressure block)            |

### Extension Connector

| Cable                                                                  | Connector Name                                                               | Wire Configuration                                        | Crimping (Connection)                                  |                                                                                            |
|------------------------------------------------------------------------|------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------------------------|
|                                                                        |                                                                              |                                                           | Press                                                  | Guide plate                                                                                |
| I/O Cable<br>(Discrete wire)<br>Ribbon Cable<br>(IDC)                  | DX30A-20S (50)                                                               | By hand<br>DX30<br>Cable distribution JIG<br>CL902-0116-1 | DX30-HP<br>CL902-0229-8                                | DX30-20SGP<br>CL902-0292-4                                                                 |
|                                                                        | DX30A-36S (50)<br>DX32A-36S (50)                                             |                                                           |                                                        | DX30-36SGP<br>CL902-0234-8                                                                 |
|                                                                        | DX30A-50S (50)<br>DX30A-50S-LNA (55)<br>DX32A-50S-LNA (55)                   |                                                           |                                                        | DX30-50SGP<br>CL902-0235-0                                                                 |
|                                                                        | DX30A-100S-LNA (50)                                                          |                                                           |                                                        | DX30-100SGP<br>CL902-0230-7                                                                |
| I/O Cable<br>(1.27mm pitch<br>fusion welding<br>cable)<br>Ribbon Cable | DX31A-20S (50)                                                               |                                                           | Hi-Flex Connecting<br>press<br>HHP-502<br>CL550-0082-2 | DX31-2080SGPA<br>(Common to 20P-<br>80P)<br>CL902-2013-0<br>(Comes with<br>pressure block) |
|                                                                        | DX31A-36S (50)<br>DX31A-36S-LNA (55)<br>DX33A-36S (50)                       |                                                           |                                                        |                                                                                            |
|                                                                        | DX31A-50S (50)<br>DX31A-50S-LNA (55)<br>DX33A-50S (50)<br>DX33A-50S-LNA (55) |                                                           |                                                        |                                                                                            |
|                                                                        | DX31A-100S-LNA (50)<br>DX33A-100S-LNA (50)                                   |                                                           |                                                        |                                                                                            |
|                                                                        |                                                                              |                                                           |                                                        | DX31-100SGPA<br>CL902-0246-7<br>(100pin private)<br>(Comes with pressure block)            |

Note : Please assembly cable without lock screws. (LNA type)

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Plug in Connector

| Cable                                                  | Connector Name    | Wire Configuration                                        | Crimping                                               |                              | Remaining part cutting      |             |
|--------------------------------------------------------|-------------------|-----------------------------------------------------------|--------------------------------------------------------|------------------------------|-----------------------------|-------------|
|                                                        |                   |                                                           | Press                                                  | Unit                         | Press                       | Unit        |
| I/O Cable<br>(Discrete wire)                           | DX30A-28P-PG (50) | By hand<br>DX30<br>Cable distribution JIG<br>CL902-0116-1 | DX30AM-HP1<br>CL902-0210-0                             | DX30A-PG-GPT                 | DX30AM-HP1<br>CL902-0210-0  | DX30A-PSG-C |
|                                                        | DX30A-36P-PG (50) |                                                           |                                                        |                              |                             |             |
|                                                        | DX30A-50P-PG (50) |                                                           |                                                        |                              |                             |             |
|                                                        | DX30A-28S-SG (50) |                                                           |                                                        |                              |                             |             |
|                                                        | DX30A-50S-SG (50) |                                                           |                                                        |                              |                             |             |
| DX30A-SG-GPT                                           |                   |                                                           |                                                        |                              |                             |             |
| Cable                                                  | Connector Name    | Wire Configuration                                        | Crimping                                               |                              |                             |             |
| I/O Cable<br>(1.27mm pitch<br>fusion welding<br>cable) | DX31A-28P-PG (50) | _____                                                     | Press                                                  | Guide plate                  | Pressure block              |             |
|                                                        | DX31A-50P-PG (50) |                                                           | Hi-Flex Connecting<br>press<br>HHP-502<br>CL550-0082-2 | DX31-PSG-GPA<br>CL902-2024-6 | DX31A-PG-PB<br>CL902-2025-9 |             |
|                                                        | DX31A-28S-SG (50) |                                                           |                                                        |                              | DX31A-SG-PB<br>CL902-2026-1 |             |
|                                                        | DX31A-36S-SG (50) |                                                           |                                                        |                              |                             |             |
|                                                        | DX31A-50S-SG (50) |                                                           |                                                        |                              |                             |             |

Coaxial Connector

| Cable                                    | Connector Name              |                                | Coaxial Connector Connection |                                         |                                  | Plug Connector Connection |                         |             |                       |                   |
|------------------------------------------|-----------------------------|--------------------------------|------------------------------|-----------------------------------------|----------------------------------|---------------------------|-------------------------|-------------|-----------------------|-------------------|
| I/O Cable<br>Coaxial<br>Complex<br>Cable | Plug<br>Connector           | Coaxial<br>Signal<br>Connector | Inner Conductor Crimping     |                                         | Shell<br>Contact<br>Caulking     | Wire<br>Configuration     | Crimping                |             | Shield case<br>fixing | Hood<br>insertion |
|                                          |                             |                                | Crimping<br>machine          | Applicator                              |                                  |                           | Press                   | Guide plate |                       |                   |
|                                          | DX30AJ-<br>26P-<br>CP3 (50) | MJ-P-<br>1.5CV (P) (40)        | CM-105<br>CL901-<br>0005-4   | AP-105-MJ-<br>1.5CV<br>CL901-<br>3001-0 | MJ-P-<br>1.5CV (P) -<br>CCT (01) | DX30J-<br>CAT (01)        | DX30-HP<br>CL902-0117-4 | DX30J-26GP  | DX30J-CCT<br>(01)     | DX30J-IHPT        |
|                                          |                             |                                |                              |                                         |                                  |                           |                         |             |                       |                   |



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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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