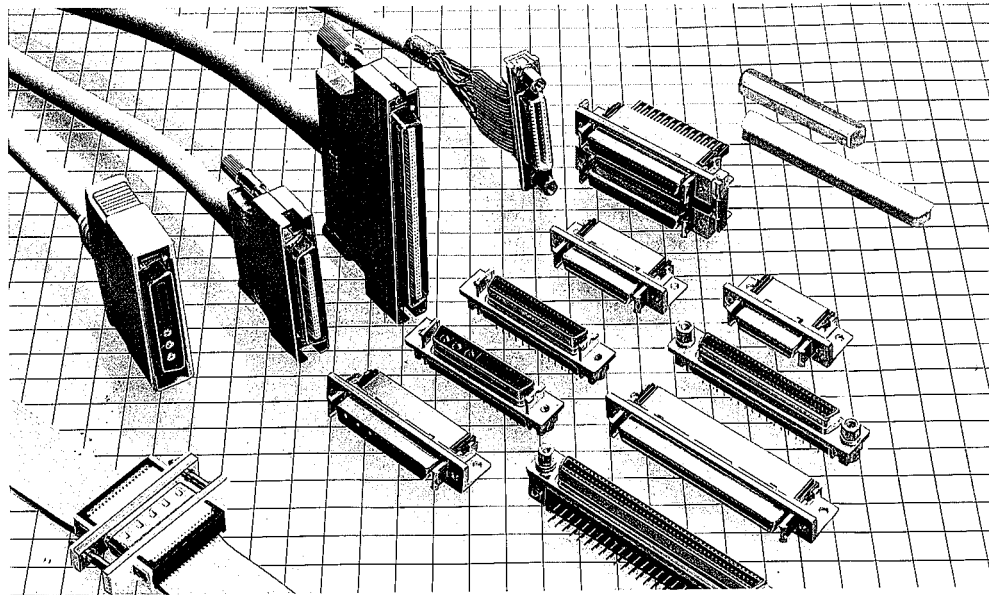


DX SERIES HIGH-DENSITY I/O CONNECTORS

General

DX series high-density I/O connectors with bellow contacts are perfect for tomorrow's miniaturized electronic devices. This new 1.27 mm (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. 1.27 mm (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 1.27 mm 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.

Applications

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

Specifications

| Items | Standard value |
|-----------------------|---------------------------------|
| Current capacity | 0.5A |
| Rated voltage | AC125V |
| Insulation resistance | 250M Ω or more at DC100V |
| Contact resistance | 50m Ω 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. | ϕ 0.5 | ϕ 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

| | | | | | | | | |
|-----|-----|-----|-----|---|-----|-----|---|-----|
| DX | 10 | ※ | ※ | — | 50 | S | — | ※ |
| | | | | | | | | |
| (1) | (2) | (3) | (5) | | (6) | (7) | | (8) |

• Plug Connector

| | | | | | | | | |
|-----|-----|-----|-----|---|-----|-----|---|-----|
| DX | 30 | A | ※ | — | 50 | P | — | ※ |
| | | | | | | | | |
| (1) | (2) | (4) | (5) | | (6) | (7) | | (8) |

• Co-axial Connector

| | | | | | | | | |
|-----|-----|-----|-----|---|------|-----|---|-----|
| DX | 30 | A | J | — | 26 | P | — | CP3 |
| | | | | | | | | |
| (1) | (2) | (4) | (5) | | (10) | (7) | | (8) |

| | | | | | | | | | |
|-----|-----|-----|---|------|-----|---|-----|---|------|
| DX | 10 | J | — | 0 | SE | — | CR3 | / | A |
| | | | | | | | | | |
| (1) | (2) | (5) | | (10) | (7) | | (8) | | (11) |

• SMT Connector

| | | | | | | | |
|-----|-----|-----|---|-----|-----|---|-----|
| DX | 10 | S | — | 60 | S | — | SG |
| | | | | | | | |
| (1) | (2) | (3) | | (6) | (7) | | (8) |

| | | | | | | | |
|-----|-----|-----|---|-----|-----|---|-----|
| DX | 30 | A | — | 60 | P | — | PG |
| | | | | | | | |
| (1) | (2) | (4) | | (6) | (7) | | (8) |

• Accessories

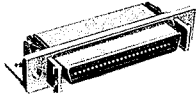
| | | | | |
|-----|---|-----|---|-----|
| DX | — | 50 | — | CV |
| | | | | |
| (1) | | (6) | | (9) |

- (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 S : SMT type
- (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, 132
- (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

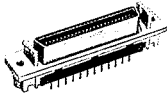
DX Series variations

● One-touch lock I/O connector

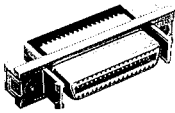
[Receptacle]



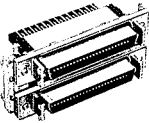
DX10-***S (Right angle dip)



DX20-***S (Straight dip)

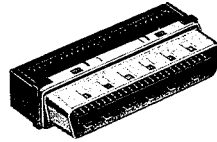


DX30A, 31A-***S
(IDC type for fine wire)
DX32A, 33A-***S
(IDC type for ribbon cable)



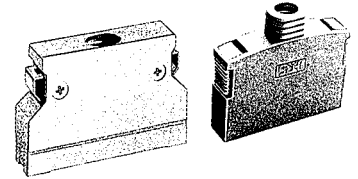
DX10-50SW (50 pin double layer type)

[Plug]



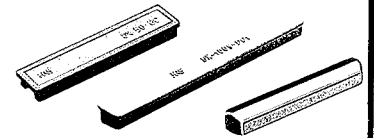
DX30, 31-***P (IDC type)
DX30A, 31A-***P (IDC type)

[Cover]



DX-***-CV (Die cast cover)
DX-***-CV3 (Overmold cover)

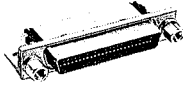
[Dust cap]



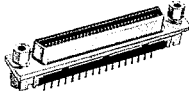
DX-***-DC
DX-100S-DC1
DX-***S-DC2

● Screw lock I/O connector

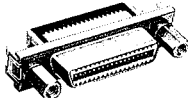
[Receptacle]



DX10A-***S (Right angle dip)

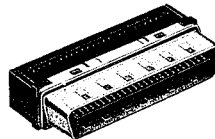


DX20A-***S (Straight dip)



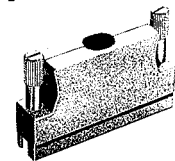
DX30A, 31A-***S-LNA
(IDC type for fine wire)
DX32A, 33A-***S-LNA
(IDC type for ribbon cable)

[Plug]



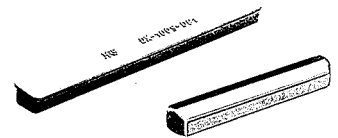
DX30, 31-***P (Press-fit type)
DX30A, 31A-***P (Press-fit type)

[Cover]



DX-***-CV1 (Die cast cover)

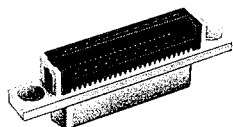
[Dust cap]



DX-100S-DC1
DX-***S-DC2

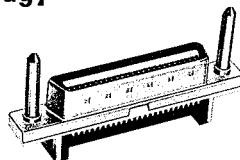
● Plug-in connector

[Receptacle]



DX30A.31A-※※S-SG

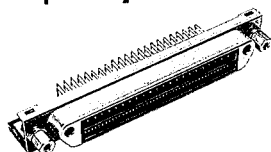
[Plug]



DX30A.31A-※※P-PG

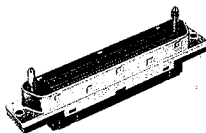
● Multipole (132 pins) Connector

[Receptacle]



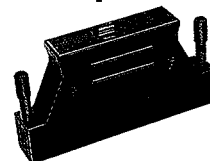
DX10A-132S

[Plug]



DX30A-132P

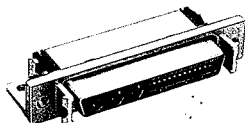
[Diecast shell]



DX-132-CV1

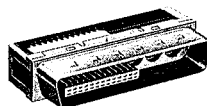
● I/O connector with co-axial contact

[Receptacle]



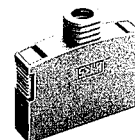
DX10J-26S-CR3 (Right angle dip)
DX20J-26S-CR3 (Straight dip)
DX10J-26S-CR2A

[Plug]



DX30AJ-26P-CP3 (IDC type)

[Over-mold shell]



DX-50-CV3

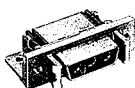
[Dust cap]



DX-50-DC

〈Prevention of mis-insertion〉

[Receptacle]



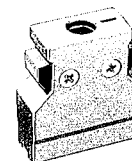
DX10J-0SE-CR3/A
DX10J1-0SE-CR3/A

[Plug]



DXJ-0P-CP3/A
DXJ1-0P-CP3/A

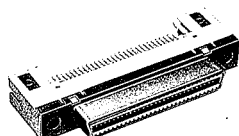
[Diecast shell]



DX-20-CV

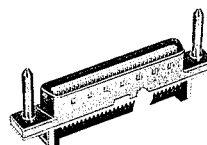
● SMT connector

[Receptacle]



DX10S-60S-SG

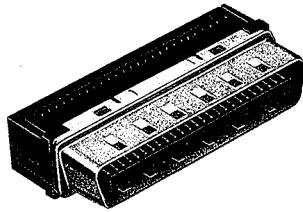
[Plug]



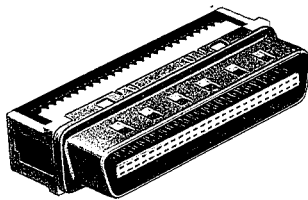
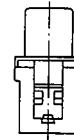
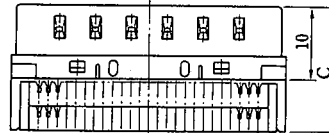
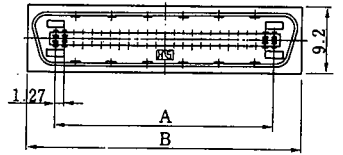
DX30A-60P-PG

1. IDC Plug Connector

1.1 DX30, DX30A-※※P (AWG#28 Discrete Thin Wire)



CL230-0011-5
DX30-50P

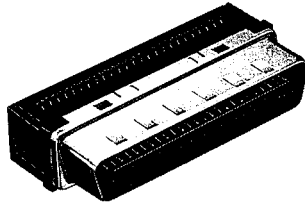


CL230-0025-0
DX30A-50P

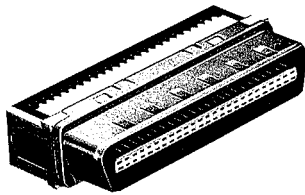
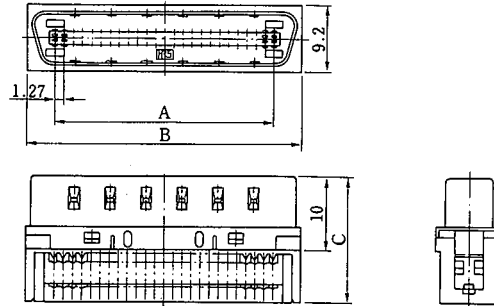
Unit: mm

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

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



CL230-0018-4
DX31-50P



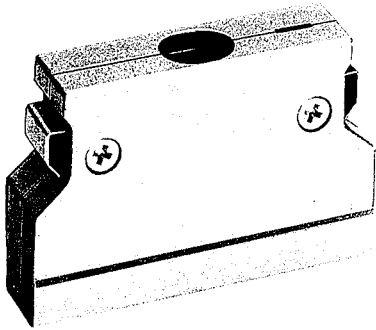
CL230-0032-5
DX31A-50P

Unit: mm

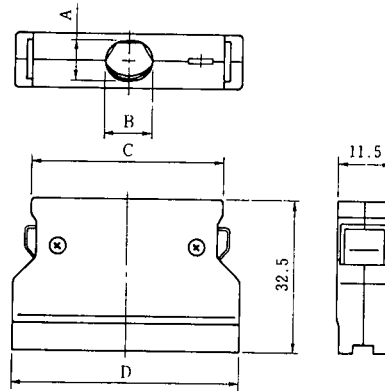
| HRS No. | No. of Pin | Part No. | Applicable cable | A | B | C |
|--------------|------------|------------|------------------|-------|-------|------|
| CL230-0015-6 | 20 | DX31-20P | AWG # 30 | 11.43 | 19.18 | 17.2 |
| CL230-0029-0 | | DX31A-20P | AWG # 28 | | | |
| CL230-0016-9 | 28 | DX31-28P | AWG # 30 | 16.51 | 24.26 | 17.2 |
| CL230-0030-0 | | DX31A-28P | AWG # 28 | | | |
| CL230-0017-1 | 36 | DX31-36P | AWG # 30 | 21.59 | 29.34 | 17.2 |
| CL230-0031-2 | | DX31A-36P | AWG # 28 | | | |
| CL230-0018-4 | 50 | DX31-50P | AWG # 30 | 30.48 | 38.23 | 17.2 |
| CL230-0032-5 | | DX31A-50P | AWG # 28 | | | |
| CL230-0019-7 | 68 | DX31-68P | AWG # 30 | 41.91 | 49.66 | 17.2 |
| CL230-0033-8 | | DX31A-68P | AWG # 28 | | | |
| CL230-0020-6 | 80 | DX31-80P | AWG # 30 | 49.53 | 57.28 | 17.2 |
| CL230-0034-0 | | DX31A-80P | AWG # 28 | | | |
| CL230-0021-9 | 100 | DX31-100P | AWG # 30 | 62.23 | 69.98 | 18.2 |
| CL230-0035-3 | | DX31A-100P | AWG # 28 | | | |

2. Shell

2.1 DX-**-CV (One Touch Lock)



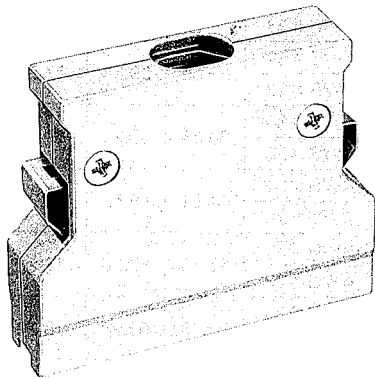
CL230-0039-4
DX-50-CV



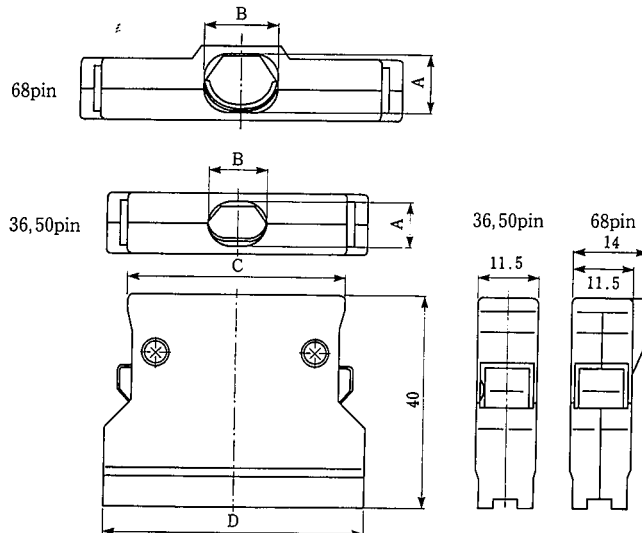
Unit: mm

| HRS No. | No. of Pin | Part No. | A | B | C | D |
|--------------|------------|----------|-------|-------|-------|-------|
| CL230-0036-6 | 20 | DX-20-CV | φ 6.7 | φ 6.7 | 22.3 | 30.0 |
| 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 | DC-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) Type



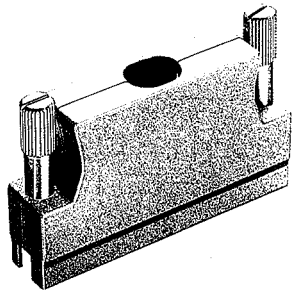
CL230-0227-4
DX-50-CV4



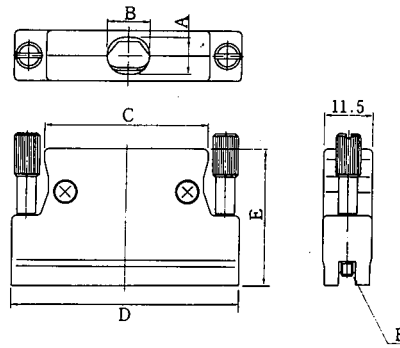
Unit:mm

| HRS No. | No. of Pin | Part No. | A | B | C | D |
|--------------|------------|-----------|------|----|-------|-------|
| CL230-0226-1 | 36 | DX-36-CV4 | 8.5 | 11 | 32.46 | 40.16 |
| 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)



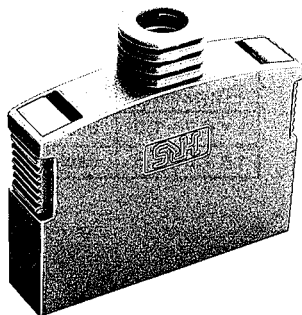
CL230-0058-9
DX-68-CV1



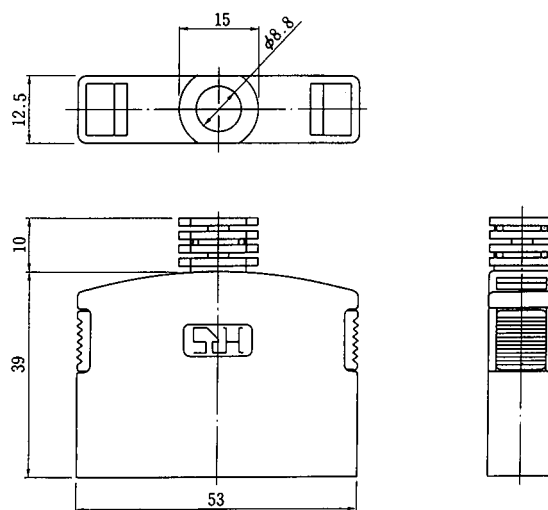
Unit: mm

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

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



CL230-0147-7
DX-50-CV3

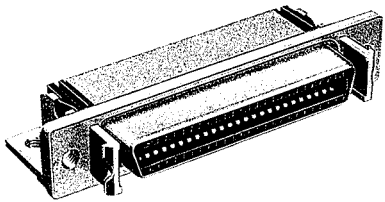


Unit: mm

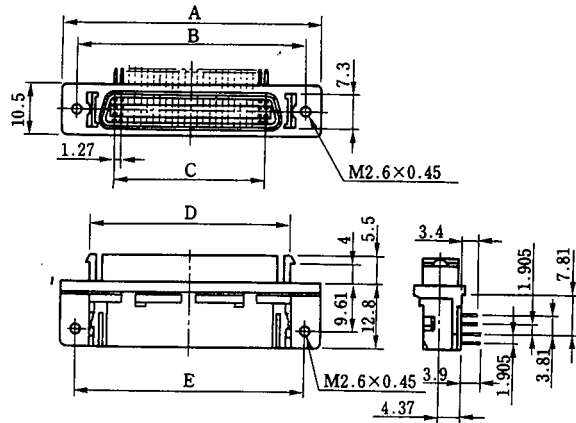
| HRS No. | No. of Pin | Part No. | A | B | C |
|--------------|------------|-----------|-----|------|-------|
| CL230-0147-7 | 50 | DX-50-CV3 | 8.8 | 15 | 53 |
| CL230-0237-8 | 68 | DX-68-CV3 | 9.6 | 14.9 | 64.43 |

3. Receptacle

3.1 DX10-※※S (Right Angle Dip, One Touch Lock)



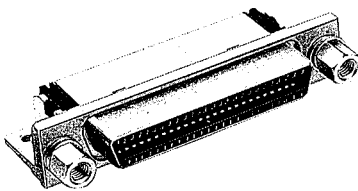
CL230-0004-0
DX10-50S



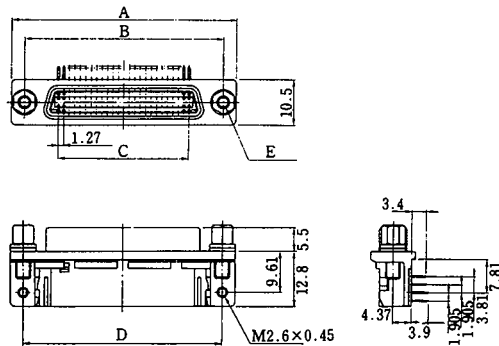
Unit: mm

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

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



CL230-0050-7
DX10A-50S

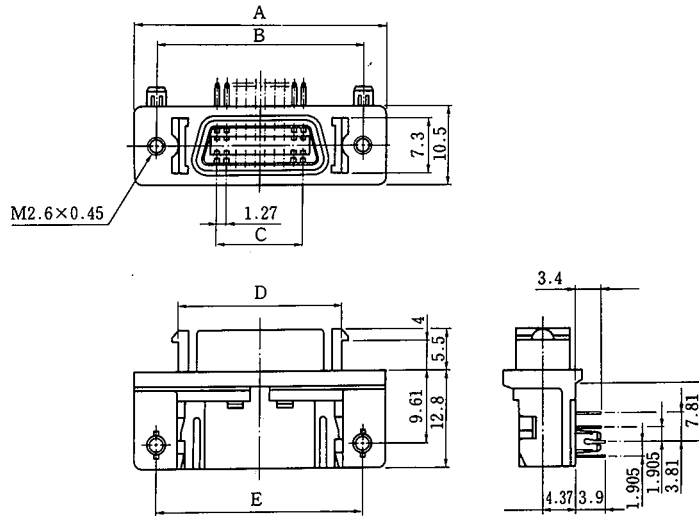
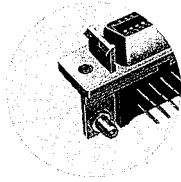
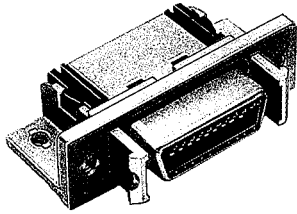


| Panel Thickness | No. of Washer |
|-----------------|---------------|
| t = 0.7~1.0 | Each 2 pieces |
| t = 1.5~1.8 | Each 1 piece |

Unit: mm

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

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

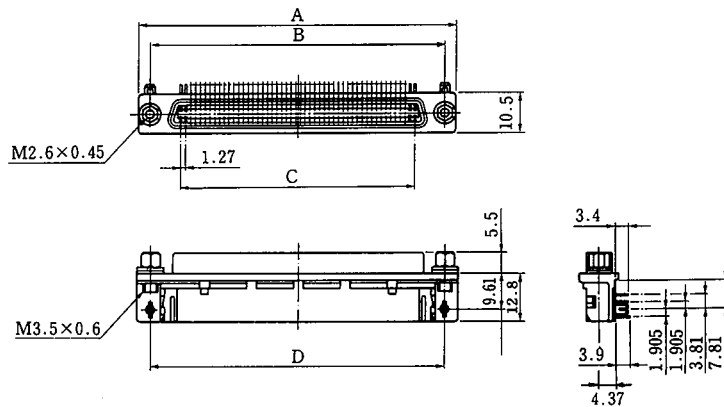
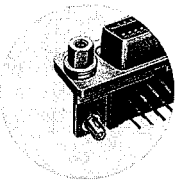
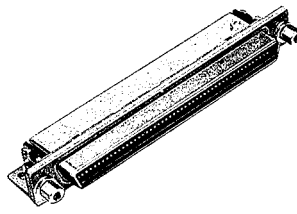


CL230-0274-4
DX10-20SE

Unit: mm

| HRS No. | No. of Pin | Part No. | A | B | C | D | E |
|--------------|------------|-----------|------|------|-------|------|------|
| CL230-0274-4 | 20 | DX10-20SE | 33.4 | 27.4 | 11.43 | 21.6 | 27.4 |

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

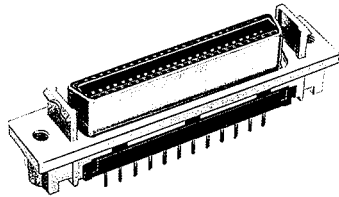


CL230-0262-5
DX10A-100SE

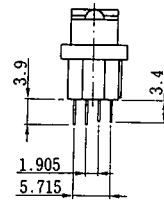
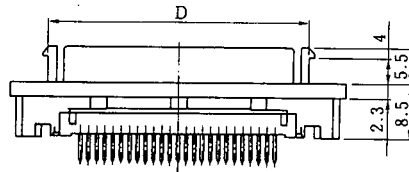
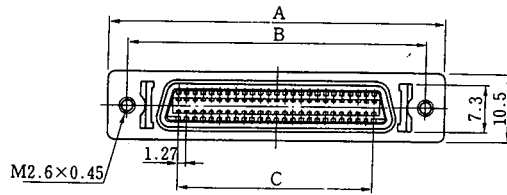
Unit: mm

| HRS No. | No. of Pin | Part No. | A | B | C | D |
|--------------|------------|-------------|------|------|-------|------|
| CL230-0262-5 | 100 | DX10A-100SE | 84.2 | 78.2 | 62.23 | 78.2 |

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



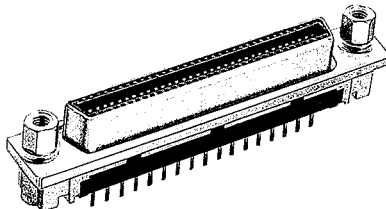
CL230-0068-2
DX20-50S



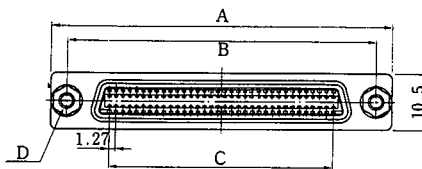
Unit: mm

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

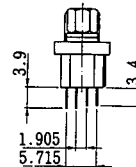
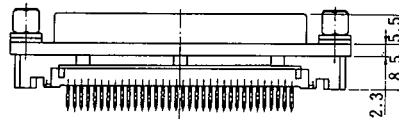
3.6 DX20A-※※S (Straight Dip, Screw Lock)



CL230-0144-9
DX20A-68S



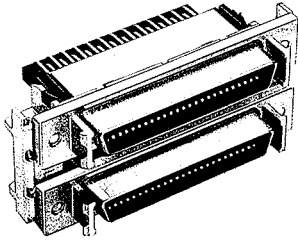
| Panel Thickness | No. of Washer |
|-----------------|---------------|
| t = 0.7~1.0 | Each 2 pieces |
| t = 1.5~1.8 | Each 1 piece |



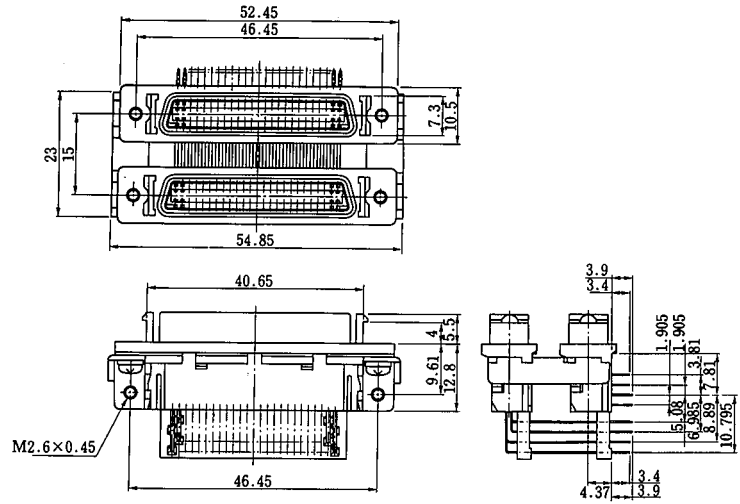
Unit:mm

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

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

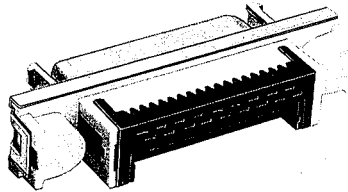
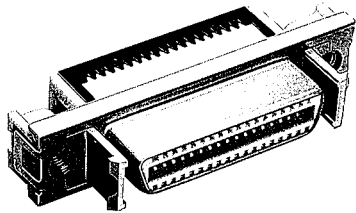


CL230-0069-5
DX10-50SW

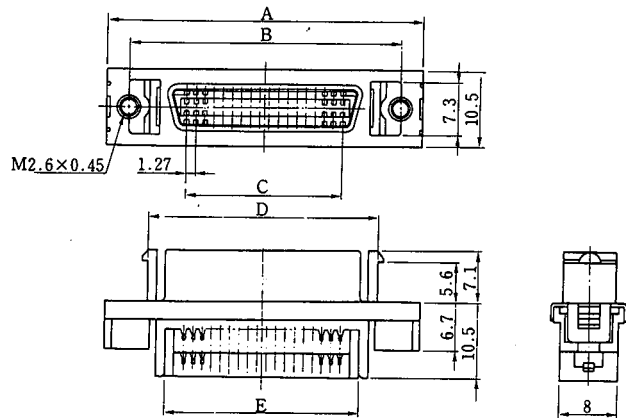


4. Cable to Cable Connector

4.1 DX30A***S (Discrete Wire, Thin Cable, One Touch Lock)



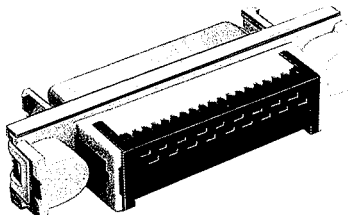
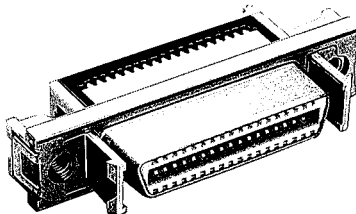
CL230-0185-6
DX30A-36S



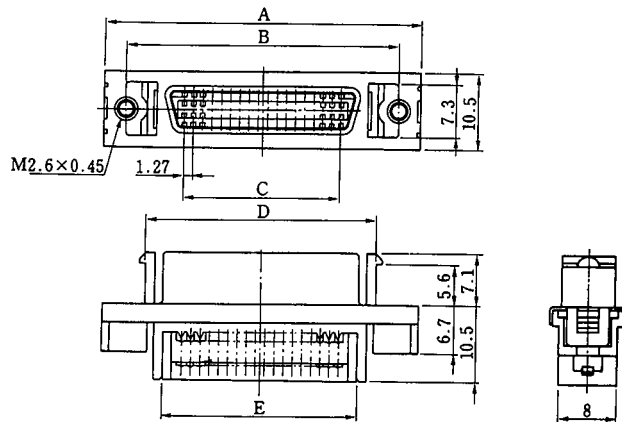
Unit: mm

| HRS No. | No. of Pin | Part No. | A | B | C | D | E |
|--------------|------------|-----------|-------|-------|-------|-------|-------|
| CL230-0185-6 | 36 | DX30A-36S | 44.56 | 37.56 | 21.59 | 31.76 | 29.34 |
| CL230-0186-9 | 50 | DX30A-50S | 53.45 | 46.45 | 30.48 | 40.65 | 38.23 |

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



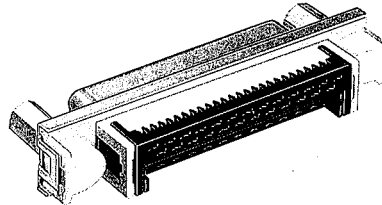
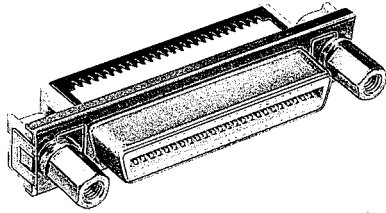
CL230-0141-0
DX31A-36S



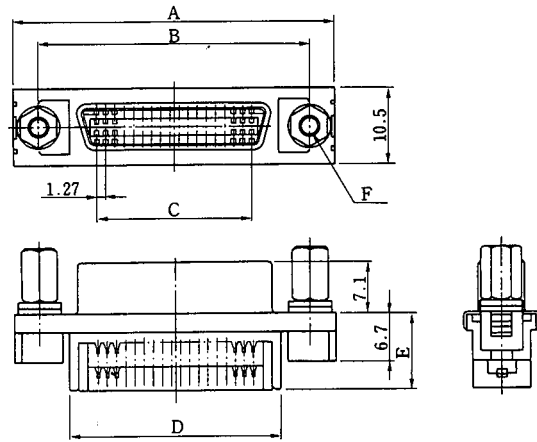
Unit: mm

| HRS No. | No. of Pin | Part No. | A | B | C | D | E |
|--------------|------------|-----------|-------|-------|-------|-------|-------|
| CL230-0101-6 | 20 | DX31A-20S | 33.4 | 27.4 | 11.43 | 21.6 | 19.18 |
| CL230-0141-0 | 36 | DX31A-36S | 44.56 | 37.56 | 21.59 | 31.76 | 29.34 |
| CL230-0190-6 | 50 | DX31A-50S | 53.45 | 46.45 | 30.48 | 40.65 | 38.23 |

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



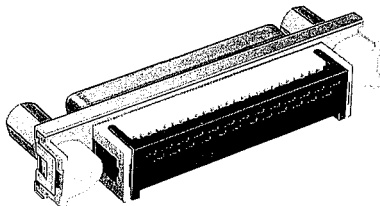
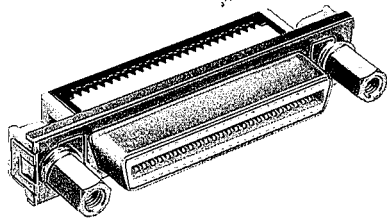
CL230-0189-7
DX30A-50S-LNA



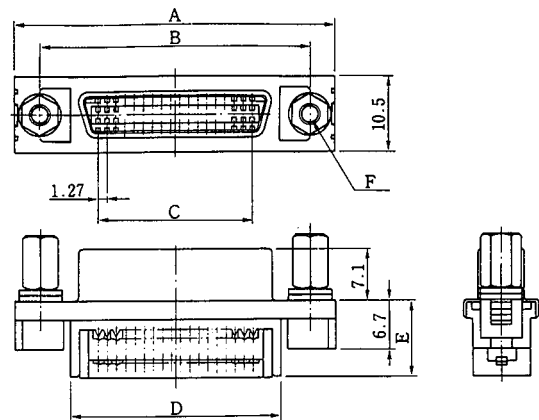
Unit: mm

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

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



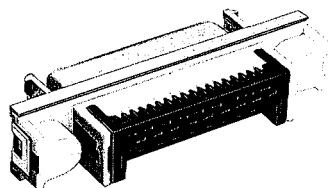
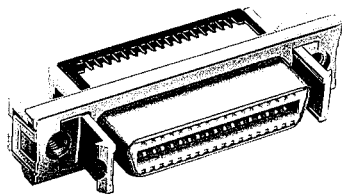
CL230-0193-4
DX31A-50S-LNA



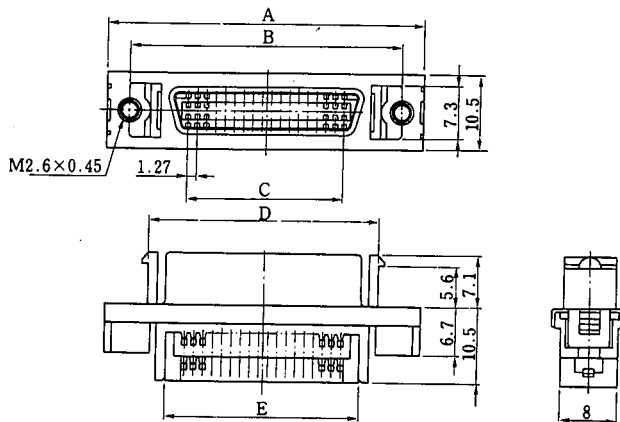
Unit: mm

| HRS No. | No. of Pin | Part No. | A | B | C | D | E | F |
|--------------|------------|----------------|-------|-------|-------|-------|------|-------------|
| CL230-0217-0 | 36 | DX31A-36S-LNA | 44.56 | 37.56 | 21.59 | 29.34 | 10.5 | M3 x 0.5 |
| CL230-0193-4 | 50 | DX31A-50S-LNA | 53.45 | 46.45 | 30.48 | 38.23 | 10.5 | M3 x 0.5 |
| CL230-0086-4 | 100 | DX31A-100S-LNA | 86.82 | 78.2 | 62.23 | 69.98 | 11.5 | M2.6 x 0.45 |

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



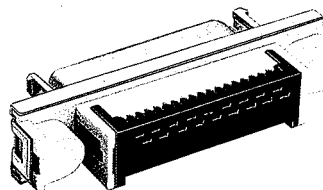
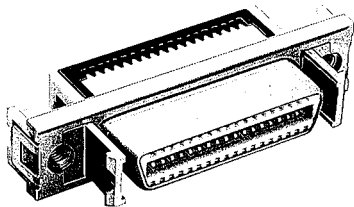
CL230-0195-0
DX32A-36S



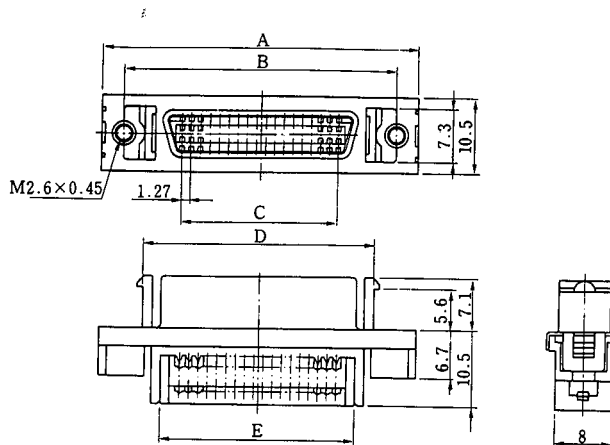
Unit: mm

| HRS No. | No. of Pin | Part No. | A | B | C | D | E |
|--------------|------------|-----------|-------|-------|-------|-------|-------|
| CL230-0195-0 | 36 | DX32A-36S | 44.56 | 37.56 | 21.59 | 31.76 | 29.34 |

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



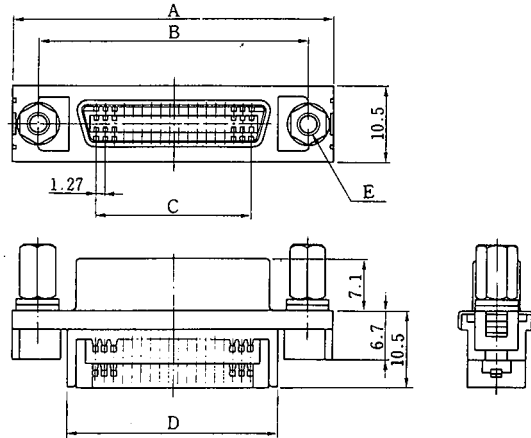
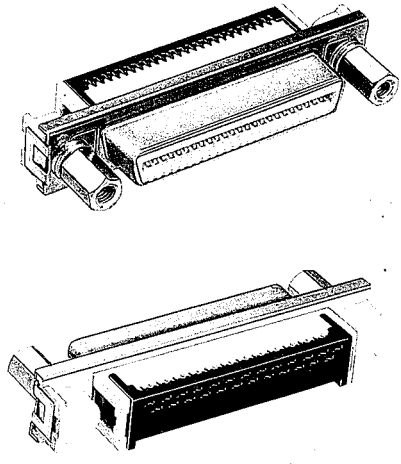
CL230-0202-3
DX33A-36S



Unit: mm

| HRS No. | No. of Pin | Part No. | A | B | C | D | E |
|--------------|------------|-----------|-------|-------|-------|-------|-------|
| CL230-0202-3 | 36 | DX33A-36S | 44.56 | 37.56 | 21.59 | 31.76 | 29.34 |
| CL230-0203-6 | 50 | DX33A-50S | 53.45 | 46.45 | 30.48 | 40.65 | 38.23 |

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

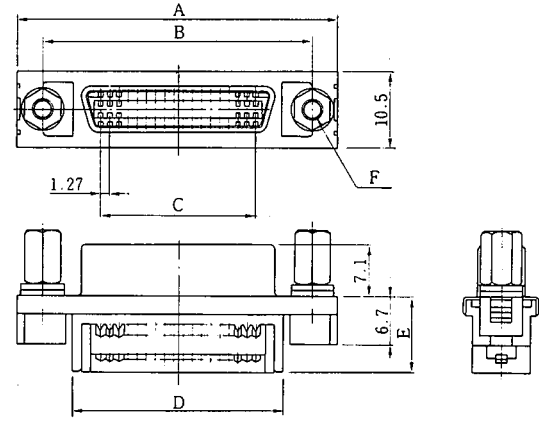
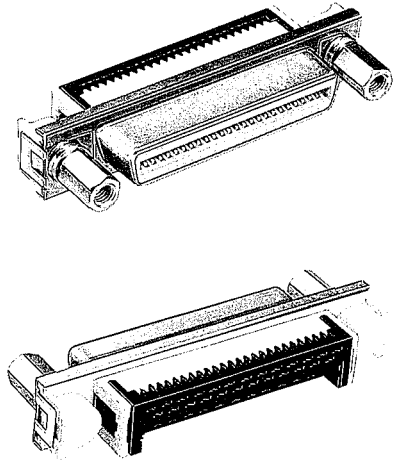


CL230-0199-0
DX32A-50S-LNA

| HRS No. | No. of Pin | Part No. | A | B | C | D | E |
|--------------|------------|---------------|-------|-------|-------|-------|----------|
| CL230-0199-0 | 50 | DX32A-50S-LNA | 53.45 | 46.45 | 30.48 | 38.23 | M3 x 0.5 |

Unit: mm

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



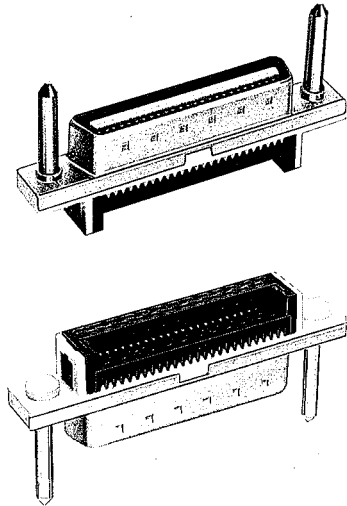
CL230-0206-4
DX33A-50S-LNA

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

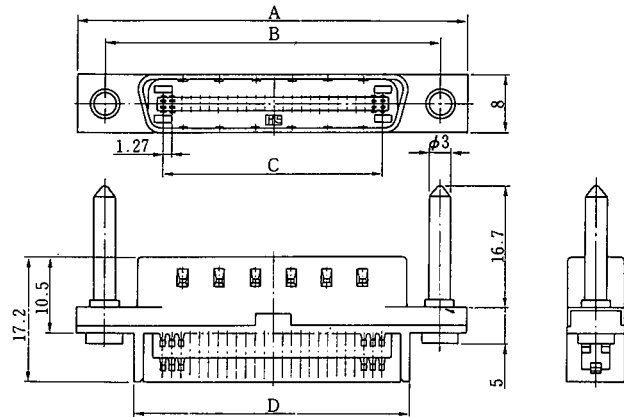
Unit:mm

5. Plug In Connector

5.1 DX30A-※※P-PG (Discrete Thin Wire)



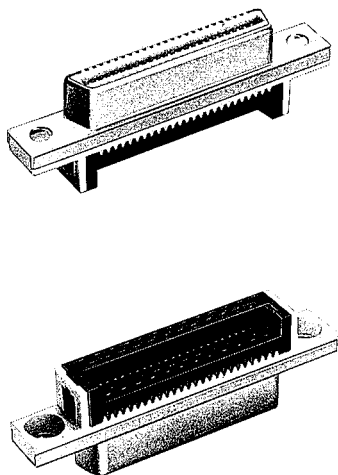
CL230-0152-7
DX30A-50P-PG



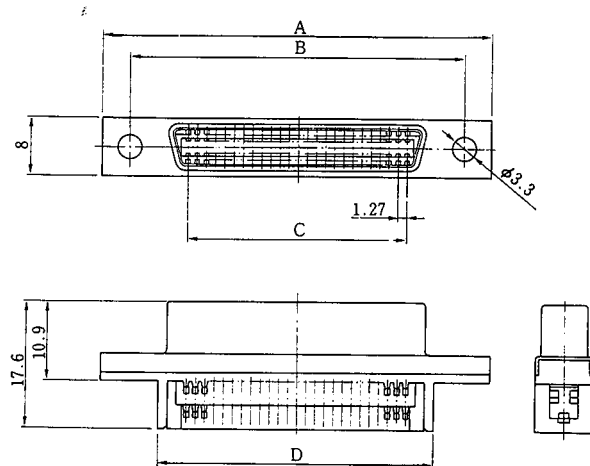
Unit: mm

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

5.2 DX30A-※※S-SG (Discrete Thin Wire)



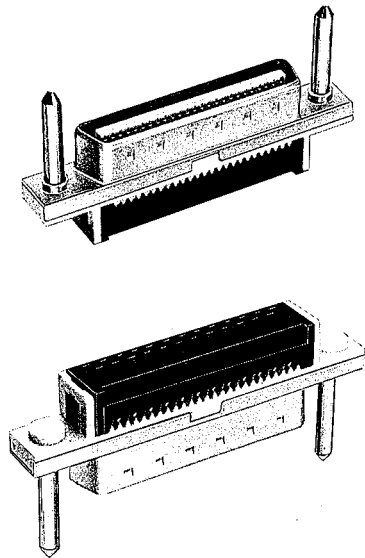
CL230-0153-0
DX30A-50S-SG



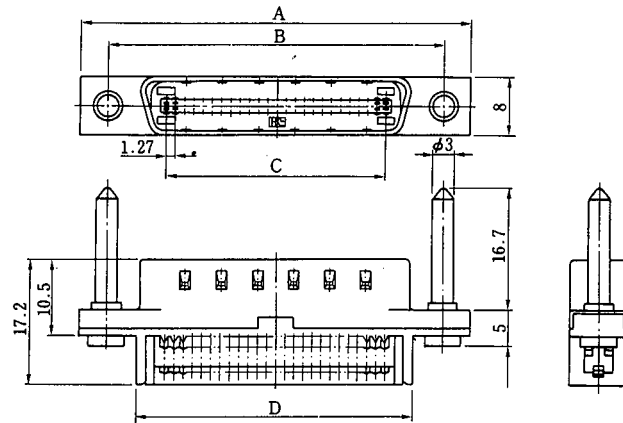
Unit: mm

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

5.3 DX31A-※※P-PG (Discrete Wire Laminated)



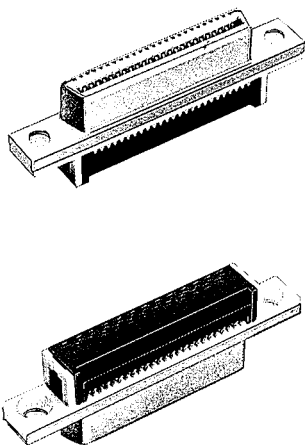
CL230-0162-0
DX31A-50P-PG



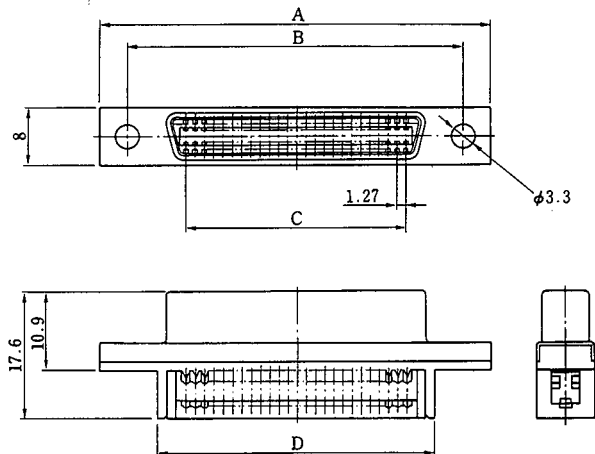
Unit: mm

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

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



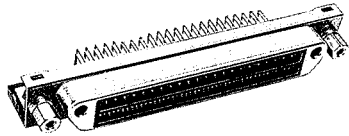
CL230-0165-9
DX31A-50S-SG



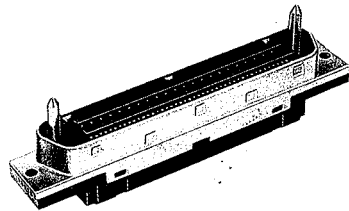
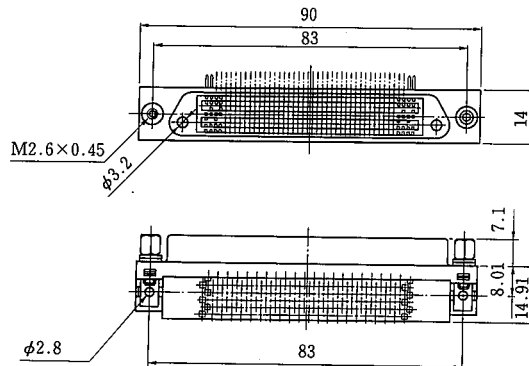
Unit: mm

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

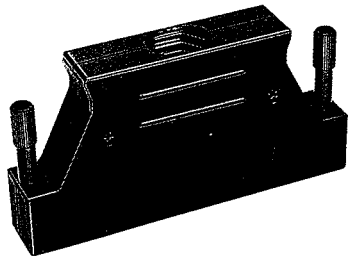
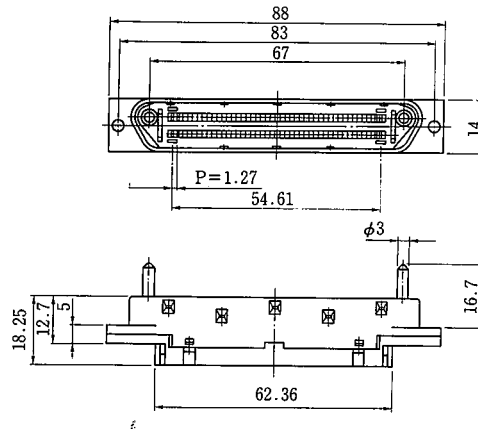
6. Multipole Connector (132 pins)



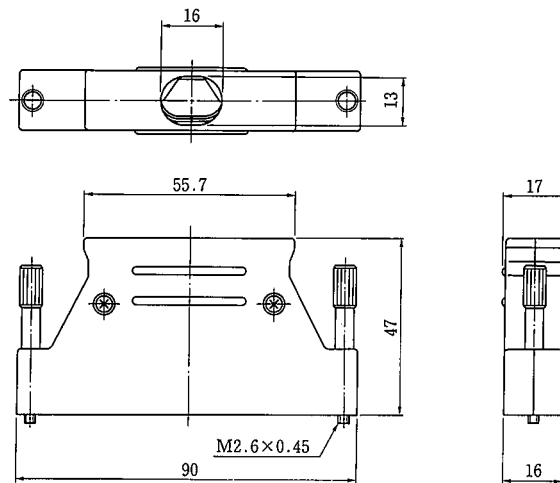
CL230-0225-9
DX10A-132S



CL230-0224-6
DX30A-132P

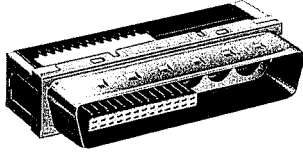


CL230-0232-4
DX-132-CV1

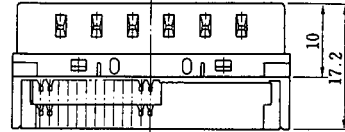
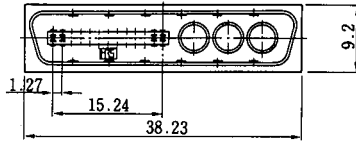


7. Co-axial Connector

7.1 Co-axial, Signal Terminal Connector

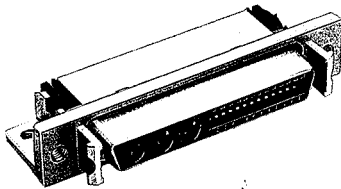
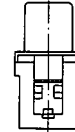


CL230-0148-0
DX30AJ-26P-CP3

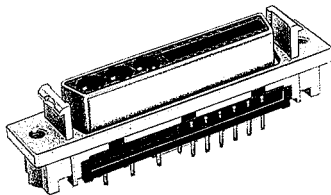
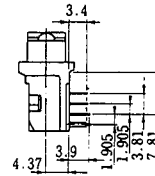
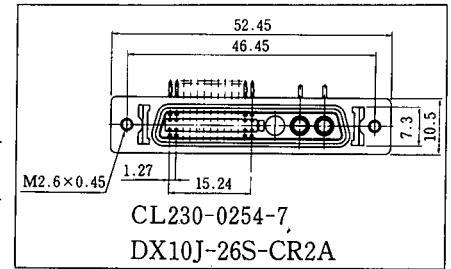
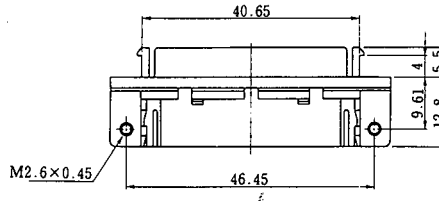
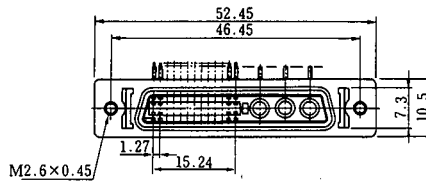


Applicable coaxial contact
CL313-0351-6
MJ-P-1.5CV(P)

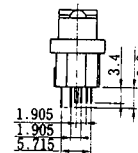
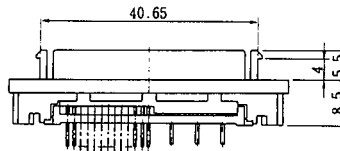
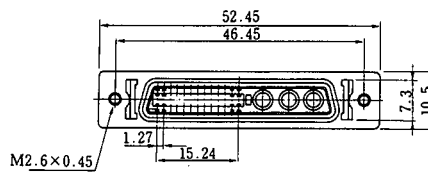
Applicable Cable
Sumitomo Electric Industrial Co., Ltd.
UL20121 (80°C, 30V)
Complex 29 pins cable with double shield
(Light Beige)



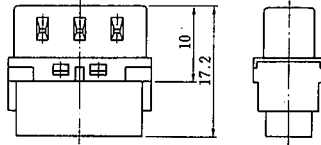
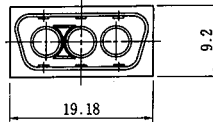
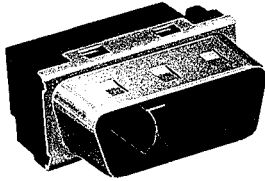
CL230-0063-9
DX10J-26S-CR3



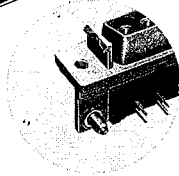
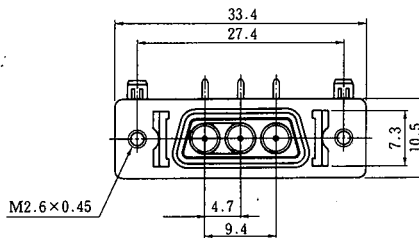
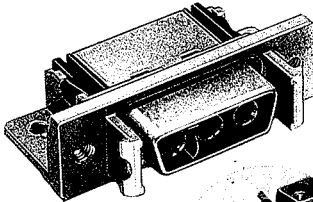
CL230-0064-1
DX20J-26S-CR3



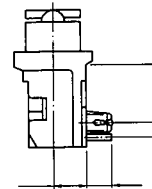
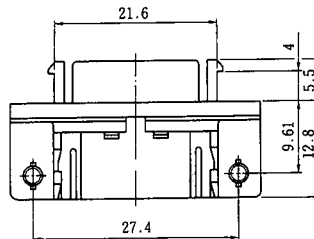
7.2 Co-axial Connector (Prevention of Mis-insertion)



CL230-0269-4
DXJ-0P-CP3-A

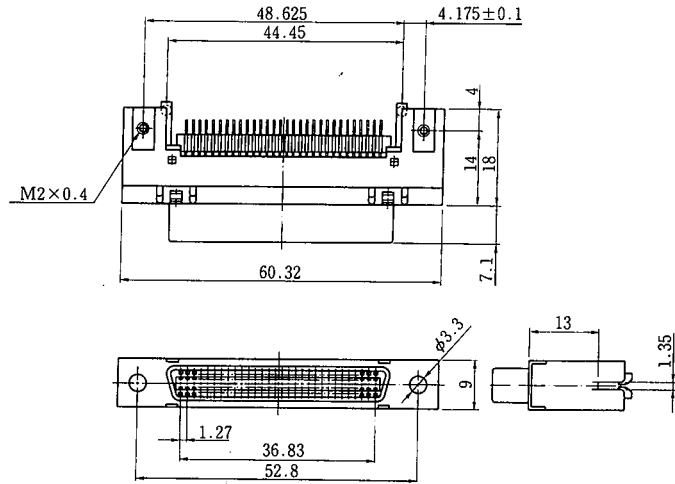
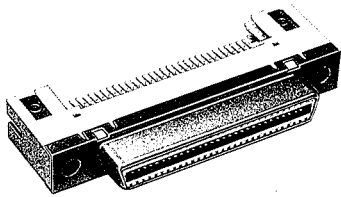


CL230-0268-1
DX10J-0SE-CR3/A



8. SMT Connector

8.1 DX10S-60S-SG Socket



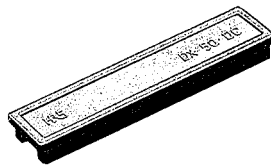
(Board thickness: 1.2mm)

CL230-0238-0
DX10S-60S-SG

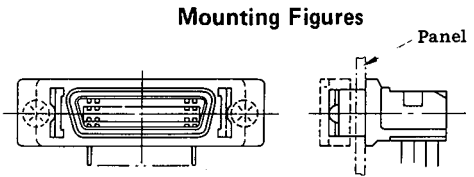
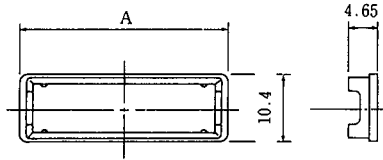
(In board mounting, refer to P.225)

9. Dust Cap

9.1 DX-※※-DC (Semi-Hard, for One Touch Lock)



CL230-0104-4
DX-50-DC

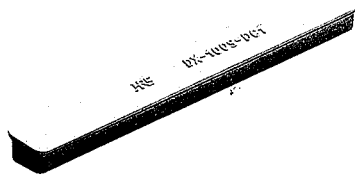


Mounting Figures

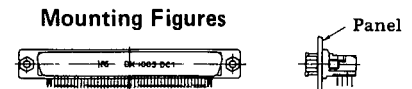
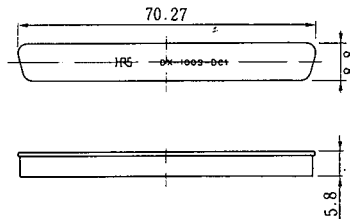
Unit: mm

| HRS No. | No. of Pin | Part No. | A |
|--------------|------------|----------|-------|
| CL230-0103-1 | 20 | DX-20-DC | 27.35 |
| CL230-0045-7 | 28 | DX-28-DC | 32.43 |
| CL230-0241-5 | 36 | DX-36-DC | 37.5 |
| CL230-0104-4 | 50 | DX-50-DC | 46.4 |
| CL230-0078-6 | 68 | DX-68-DC | 57.83 |
| CL230-0046-0 | 80 | DX-80-DC | 65.45 |

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

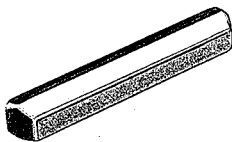


CL230-0114-8
DX-100S-DC1

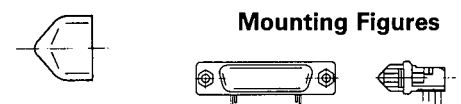
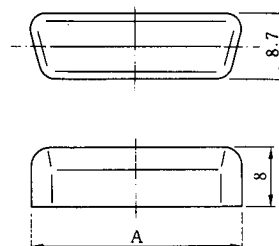


Mounting Figures

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



CL230-0105-7
DX-36S-DC2



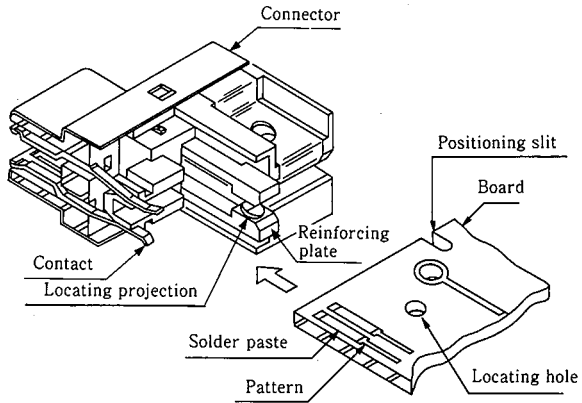
Mounting Figures

Unit: mm

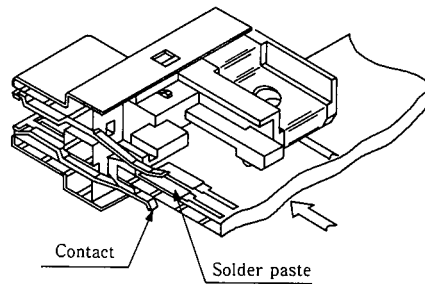
| HRS No. | No. of Pin | Part No. | A |
|--------------|------------|------------|-------|
| CL230-0105-7 | 36 | DX-36S-DC2 | 28.07 |
| CL230-0264-0 | 50 | DX-50S-DC2 | 36.96 |
| CL230-0106-0 | 68 | DX-68S-DC2 | 48.39 |

SMT Mounting Instructions

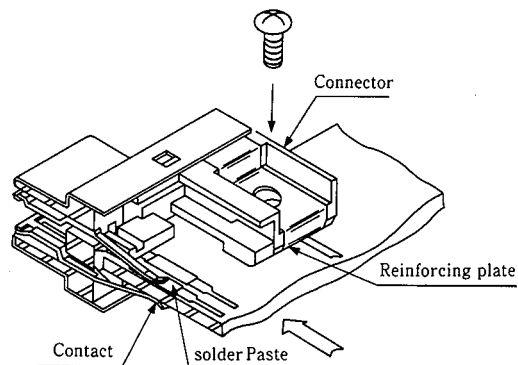
1. Insert board in connector until the projections for locating the reinforcing plate stop in the locating holes on the board.



2. When the projections for locating the reinforcing plate are on the surface of the board, a gap exists between the solder paste on the board and the connector contacts.

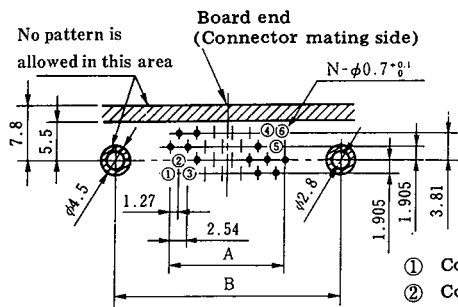


3. When the board is inserted fully, the locating projections snap into the locating holes on the board, allowing the connector contacts to close and make contact with the solder paste.



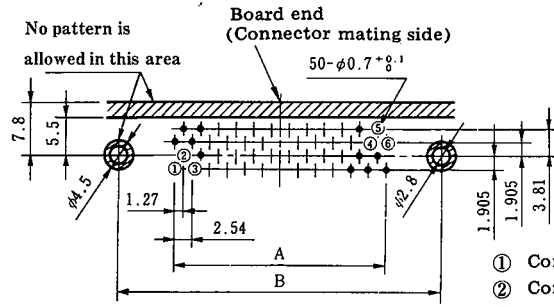
PC Board Layout (Recommended board thickness: 1.6mm)

DX10, DX10A—※※S



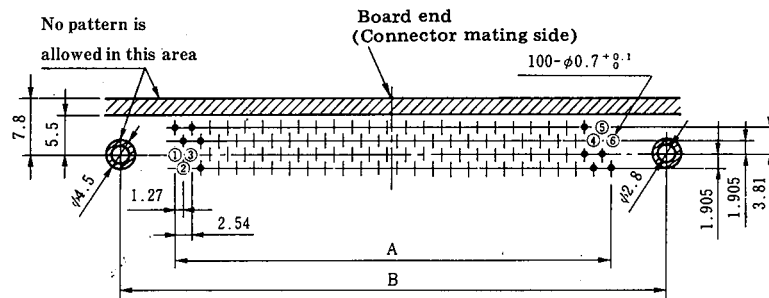
(20, 28, 36, 68, 80 Pin)

- ① Contact No.1
- ② Contact No.2
- ③ Contact No.3
- ④ Contact No.(N-2)
- ⑤ Contact No.(N-1)
- ⑥ Contact No.(N)



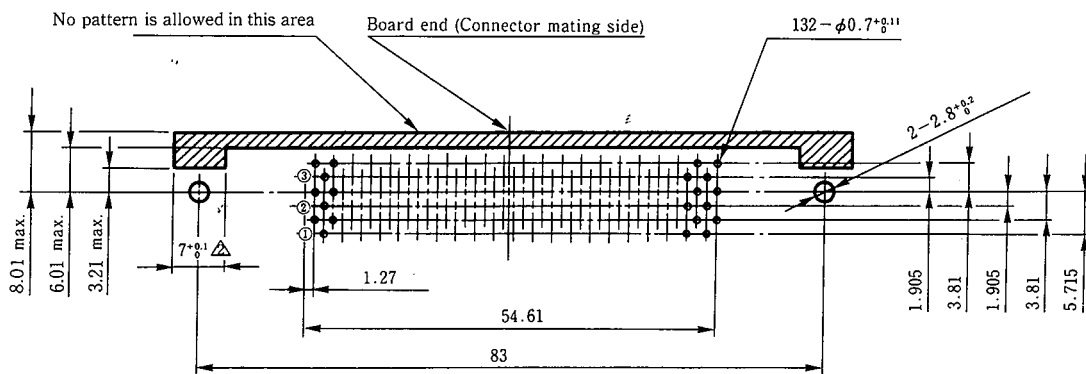
(50 Pin)

- ① Contact No.1
- ② Contact No.2
- ③ Contact No.3
- ④ Contact No.48
- ⑤ Contact No.49
- ⑥ Contact No.50



(100 Pin)

- ① Contact No.1
- ② Contact No.2
- ③ Contact No.3
- ④ Contact No.98
- ⑤ Contact No.99
- ⑥ Contact No.100



(132 pin)

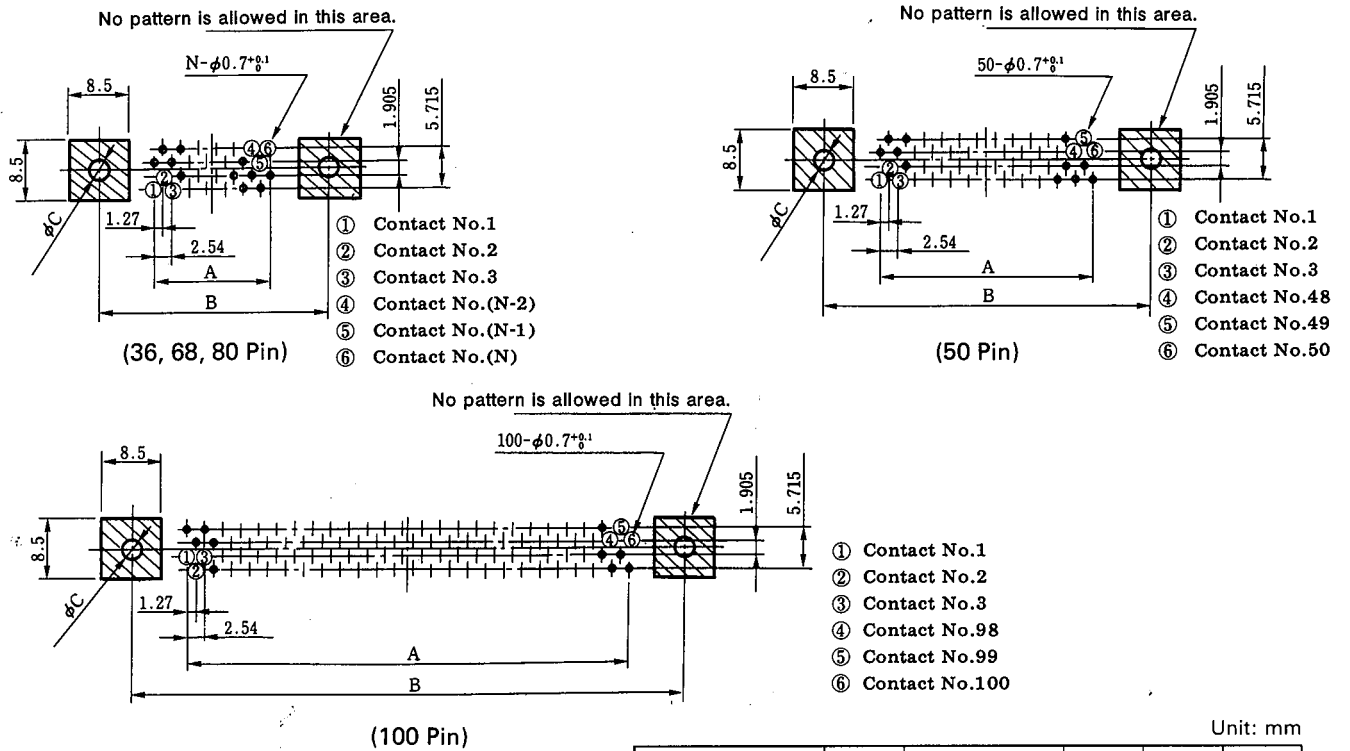
- ① Terminal No.1
- ① Terminal No.45
- ① Terminal No.89

Unit: mm

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

| HRS No. | No. of Pin | Part No. | A | B |
|--------------|------------|------------|-------|-------|
| CL230-0005-2 | 68 | DX10-68S | 41.91 | 57.88 |
| CL230-0051-0 | | DX10A-68S | | |
| CL230-0006-5 | 80 | DX10-80S | 49.53 | 65.5 |
| CL230-0052-2 | | DX10A-80S | | |
| CL230-0043-1 | 100 | DX10A-100S | 62.23 | 78.2 |
| CL230-0225-9 | 132 | DX10A-132S | 54.61 | 83 |

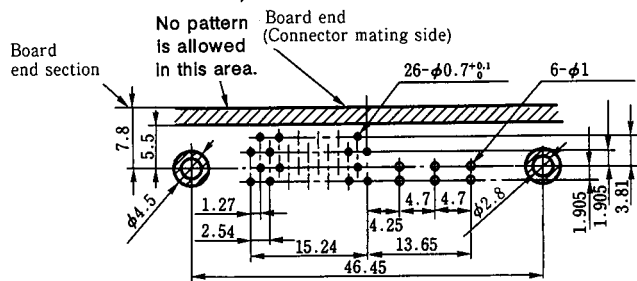
DX20, DX20A-※※S



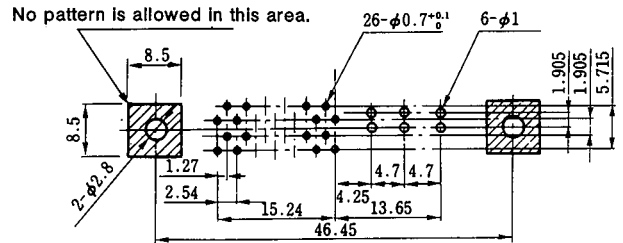
| HRS No. | No. of Pin | Part No. | A | B | C |
|--------------|------------|------------|-------|-------|-----|
| CL230-0081-0 | 36 | DX20-36S | 21.59 | 37.56 | 2.8 |
| CL230-0068-2 | 50 | DX20-50S | 30.48 | 46.45 | 2.8 |
| CL230-0144-9 | 68 | DX20A-68S | 41.91 | 57.88 | 3.7 |
| CL230-0158-3 | 80 | DX20-80S | 49.53 | 65.5 | 3.7 |
| CL230-0084-9 | 100 | DX20A-100S | 62.23 | 78.2 | 3.7 |

Coaxial-Connector

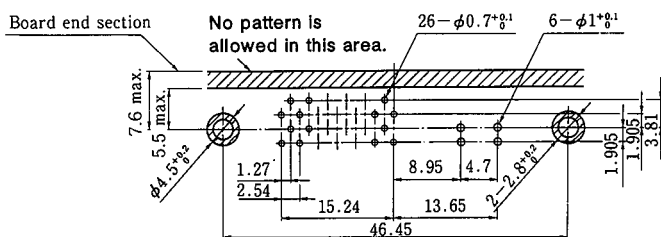
DX10J-26S-CR3



DX20J-26S-CR3

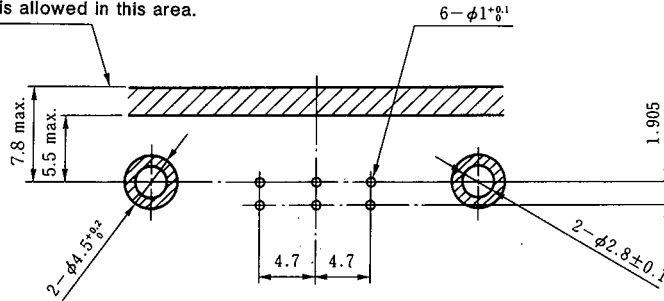


DX10J-26S-CR2A



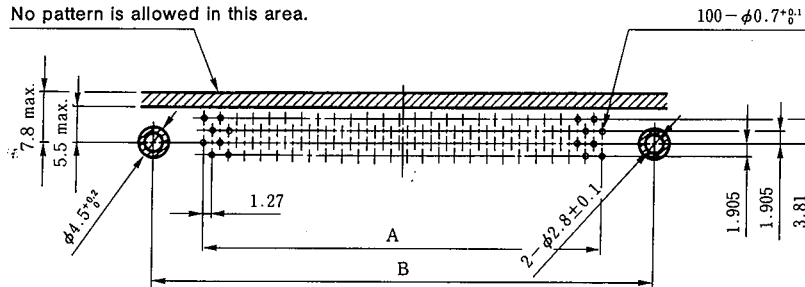
DX10J(1)-OSE-CR3/A

No pattern is allowed in this area.



DX10-※SE

No pattern is allowed in this area.

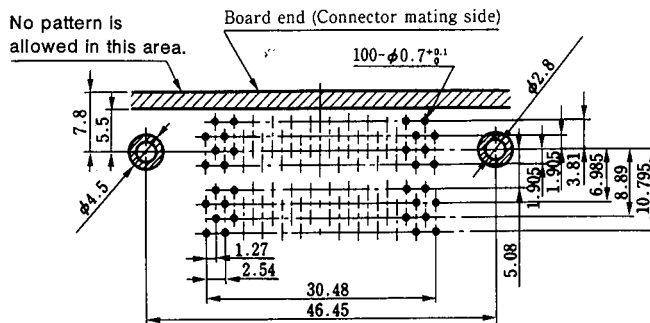


Unit: mm

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

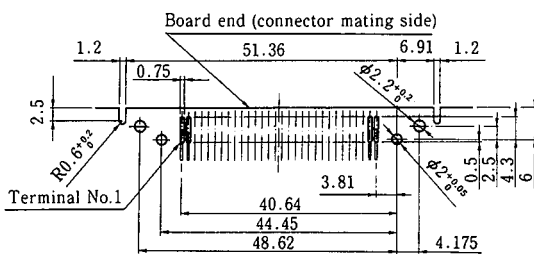
DX10-50SW

No pattern is allowed in this area.



SMT Connector

DX10S-60S-SG



Panel-Fitting Dimensional Drawing (Recommended panel thickness:1.6mm)

One-Touch Lock Type

Unit: mm

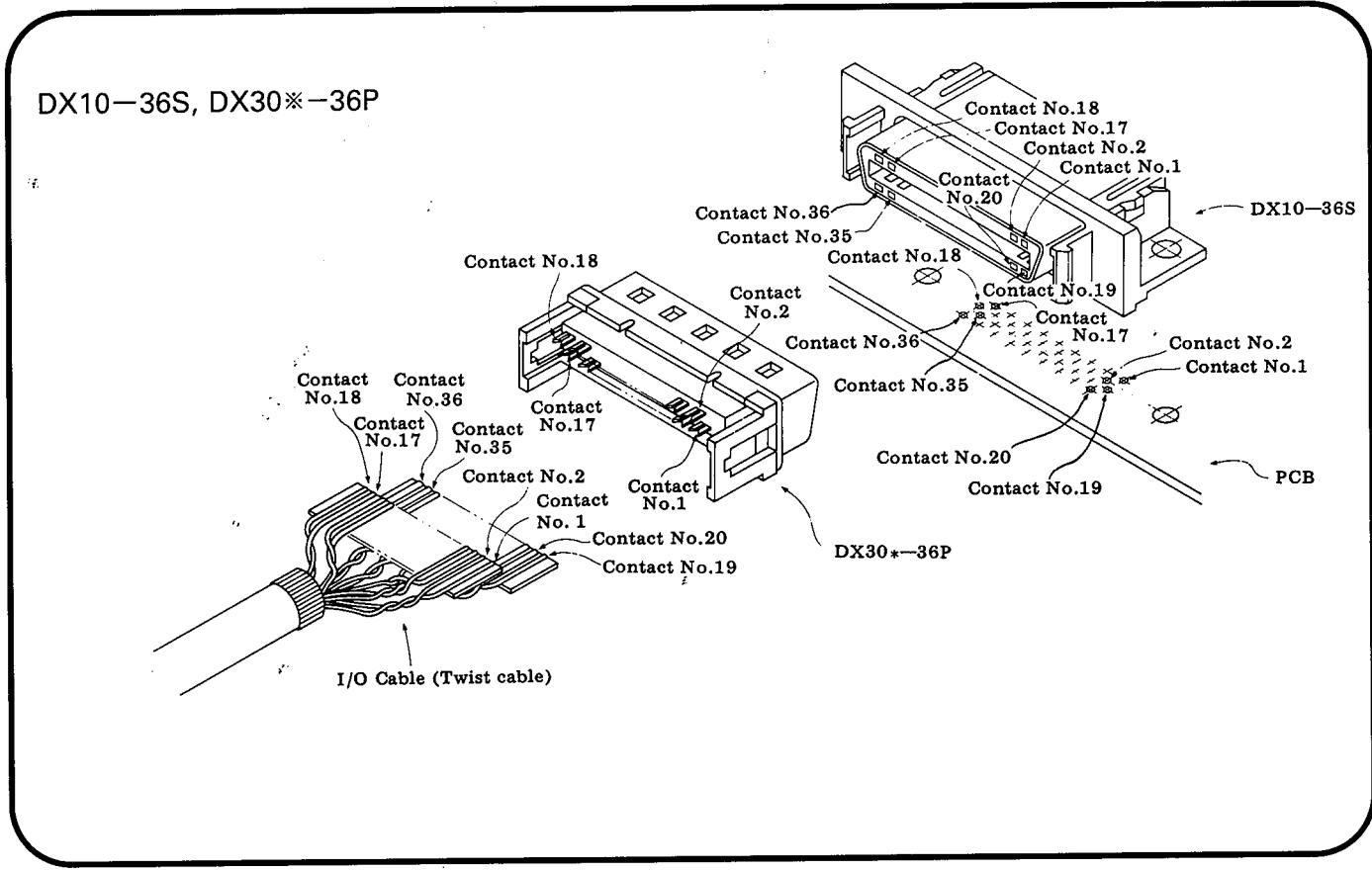
| No. of Pin | A | B |
|------------|-------|-------|
| 20 | 27.4 | 23.7 |
| 28 | 32.48 | 28.78 |
| 36 | 37.56 | 33.86 |
| 50 | 46.45 | 42.75 |
| 68 | 57.88 | 54.18 |
| 80 | 65.5 | 61.8 |

Screw Lock Type

Unit: mm

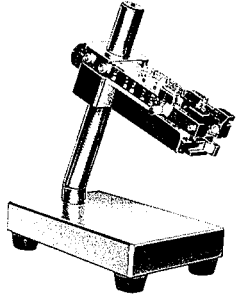
| No. of Pin | A | B |
|------------|-------|-------|
| 20 | 27.4 | 18.81 |
| 28 | 32.48 | 23.89 |
| 36 | 37.56 | 28.97 |
| 50 | 46.45 | 37.86 |
| 68 | 57.88 | 49.29 |
| 80 | 65.5 | 56.91 |
| 100 | 78.2 | 69.61 |

DX Connector Distribution Diagram

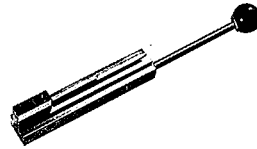


Connecting Method (for Discrete Cable)

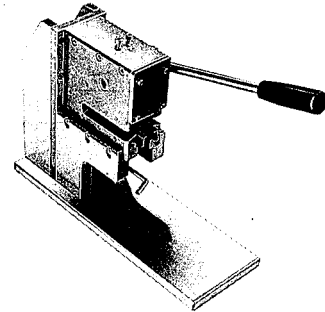
• Connecting Tools



DX30 Cable Distribution Jig

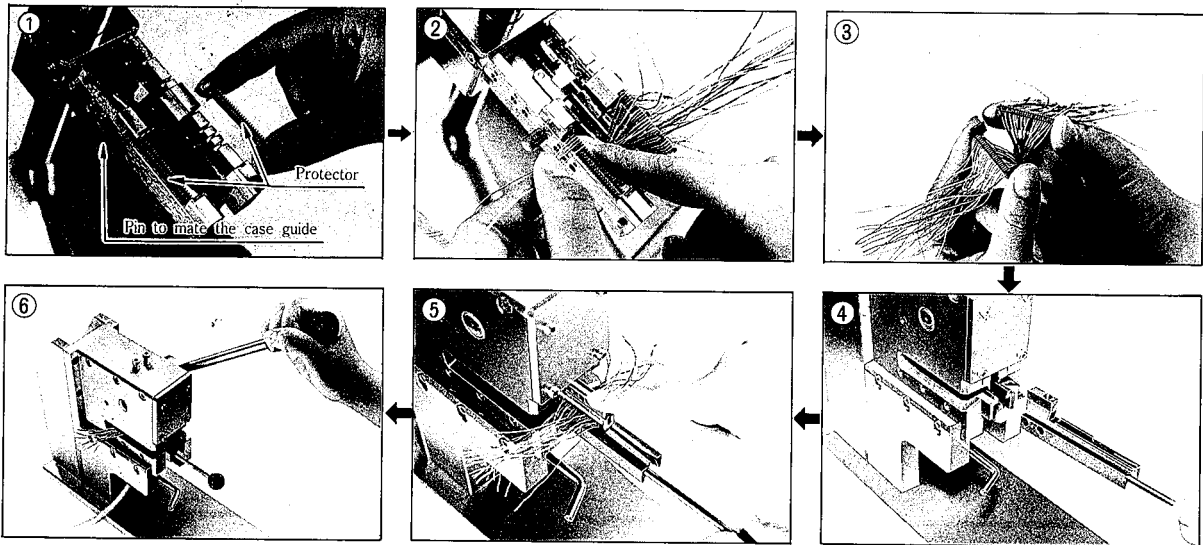


Guide Plate
DX30-**GP
**(20, 28, 36, 50, 68, 80)



Connecting Press DX30-HR

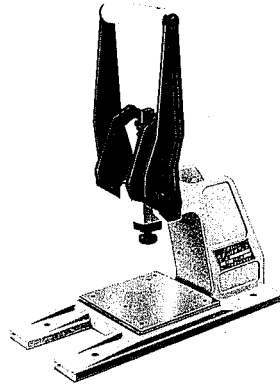
• Connecting Order



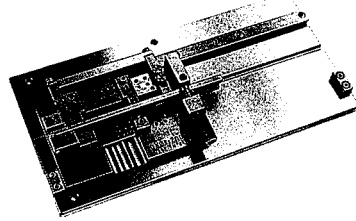
1. Mate the case guide of the distribution jig to the number of pins of the connector and set the protector.
2. Clamp the cable and distribute every one of the signal wires.
3. Combine the two protectors and temporarily fix it to the connector unit.
4. Set the guide plate (DX30-**GP) to the connecting 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 Cadle Pitch 1.27mm)

• Connecting Tools



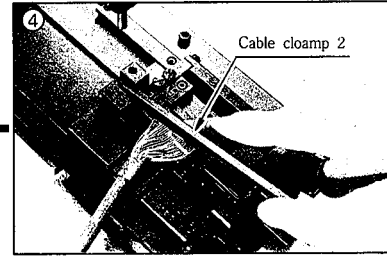
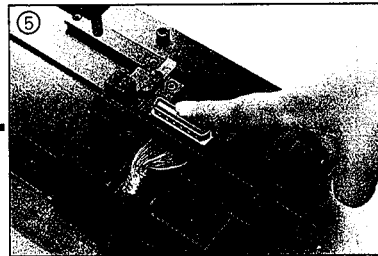
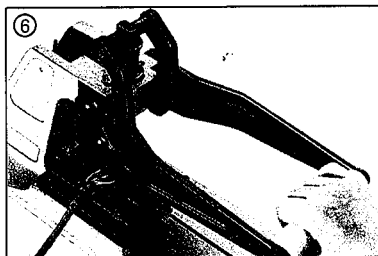
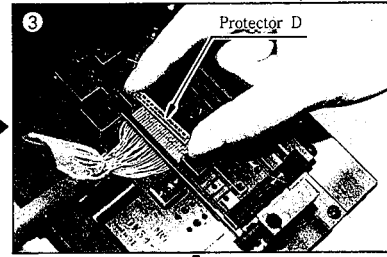
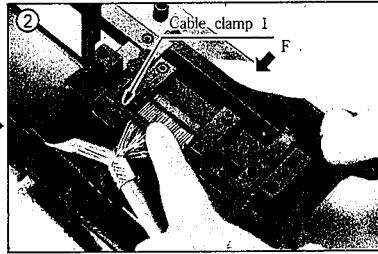
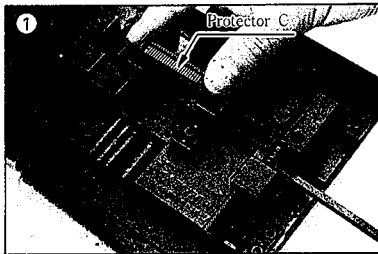
Connecting Press
Hi-Flex Connecting Press



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 slide base to the position to crimp and depress the handle. (With this the connection has been completed)

List of Connecting jigs and Accessories

Plug Connector

| Cable | Connector Name | Wire Configuration | Crimping (Connection) | |
|--|-------------------------|---|--|---|
| | | | Press | Guide plate |
| I/O Cable (Discrete wire) | DX30-20P DX30A-20P | By hand DX30 Cable distribution JIG CL902-0116-1 Semi-Auto machine SA200/DX30 CL903-0003-1 Automatic machine AM200/DX30 CL903-0030-4 | Connecting press DX30-HP CL902-0117-4 | DX30-20GP CL902-0118-7 |
| | DX30-26P DX30A-26P | | | DX30-26GP CL902-0119-0 |
| | DX30-36P DX30A-36P | | | DX30-36GP CL902-0120-9 |
| | DX30-50P DX30A-50P | | | DX30-50GP CL902-0121-1 |
| | DX30-68P DX30A-68P | | | DX30-68GP CL902-0122-4 |
| | DX30-80P DX30A-80P | | | DX30-80GP CL902-0123-7 |
| | DX30-100P DX30A-100P | | | DX30-100GP CL902-2031-1 |
| I/O Cable (1.27mm pitch fusion welding cable) | DX31-20P DX31A-20P | _____ | Hi-Flex Connecting press HHP-502 CL550-0082-2 | DX31-2080GPA (Common to 20P- 80P) CL902-2003-6 (Comes with pressure block) |
| | DX31-26P DX31A-26P | | | |
| | DX31-36P DX31A-36P | | | |
| | DX31-50P DX31A-50P | | | |
| | DX31-68P DX31A-68P | | | |
| | DX31-80P DX31A-80P | | | |
| | DX31-100P DX31A-100P | | | DX31-100GPA CL902-0125-2 (100pin private) (Comes with pressure block) |

Extension Connector

| Cable | Connector Name | Wire Configuration | Crimping (Connection) | |
|--|--|--|--|--|
| | | | Press | Guide plate |
| I/O Cable (Discrete wire) Ribbon Cable (IDC) | DX30A-20S | By hand DX30 Cable distribution JIG CL902-0116-1 Semi-Auto machine SA200/DX30 CL903-0003-1 Automatic machine AM200/DX30 CL200/DX30 | DX30-SHP CL902-0229-8 | DX30-20SGP CL902-0292-4 |
| | DX30A-36S DX32A-36S | | | DX30-36SGP CL902-0234-8 |
| | DX30A-50S DX30A-50S-LNA DX32A-50S-LNA | | | DX30-50SGP CL902-0235-0 |
| | DX30A-100S-LNA | | | DX30-100SGP CL902-0230-7 |
| I/O Cable (1.27mm pitch fusion welding cable) Ribbon Cable | DX31A-20S | _____ | Hi-Flex Connecting press HHP-502 CL550-0082-2 | DX31-2080SGPA (Common to 20P- 80P) CL902-2013-0 (Comes with pressure block) |
| | DX31A-36S DX31A-36S-LNA DX33A-36S | | | |
| | DX31A-50S DX31A-50S-LNA DX33A-50S DX33A-50S-LNA | | | |
| | DX31A-100S-LNA DX33A-100S-LNA | | | DX31-100SGPA CL902-0246-7 (100pin private) (Comes with pressure block) |

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

Plug in Connector

| Cable | Connector Name | Wire Configuration | Crimping | | Remaining part cutting | |
|--|----------------|---|--|------------------------------|----------------------------|--|
| | | | Press | Unit | Press | Unit |
| I/O Cable (Discrete wire) | DX30A-28P-PG | By hand DX30 Cable distribution JIG CL902-0116-1 Semi-Auto machine SA200/DX30 CL903-0003-1 Automatic machine AM200/DX30 CL903-0030-4 | DX30AM-HP1 CL902-0210-0 | DX30A-PG-GPT | DX30AM-HP1 CL902-0210-0 | DX30A-PSG-C |
| | DX30A-36P-PG | | | | | |
| | DX30A-50P-PG | | | | | |
| | DX30A-28S-SG | | | | | |
| | DX30A-36S-SG | | | | | |
| DX30A-50S-SG | | | | | | |
| Cable | Connector Name | Wire Configuration | Crimping | | | |
| I/O Cable (1.27mm pitch fusion welding cable) | DX31A-28P-PG | _____ | Hi-Flex Connecting press HHP-502 CL550-0082-2 | DX31-PSG-GPA CL902-2024-6 | Pressure block | DX31A-PG-PB CL902-2025-9 DX31A-SG-PB CL902-2026-1 |
| | DX31A-36P-PG | | | | | |
| | DX31A-50P-PG | | | | | |
| | DX31A-28S-SG | | | | | |
| | DX31A-36S-SG | | | | | |
| | DX31A-50S-SG | | | | | |

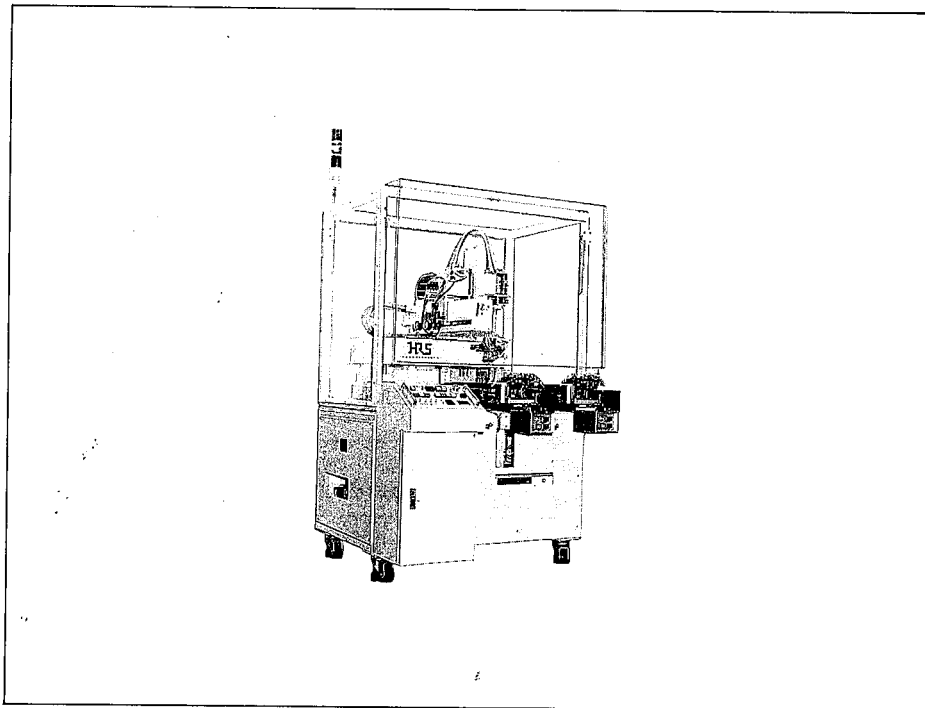
Coaxial Connector

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

AUTOMATIC DISCRETE CABLE COMBING MACHINE

General

This Automatic Combing Machine arranges and streamlines the conductor cables of a multiconductor round I/O cable when terminating it to a connector.



Features

- (1) Cable number identification is provided.
- (2) High speed and highly accurate conductor cable handling mechanism.
- (3) Twin stage design provides highly efficient combing operation.
- (4) Pushbutton operation offers very simple operating procedure.
- (5) Lightweight, quiet operation, and clean working environment.

Principal Specifications

- | | |
|---|---|
| 1. Power supply | 200VAC |
| 2. Pneumatic supply pressure | 5kgf/cm ² |
| 3. Dimensions and weight of the main unit | 1,100mm W × 1,150mm D × 1,720mm H (not including circular indicating lamp) Weight 400kg |
| 4. Cables to be used | AWG #28 (0.58mm φ) |