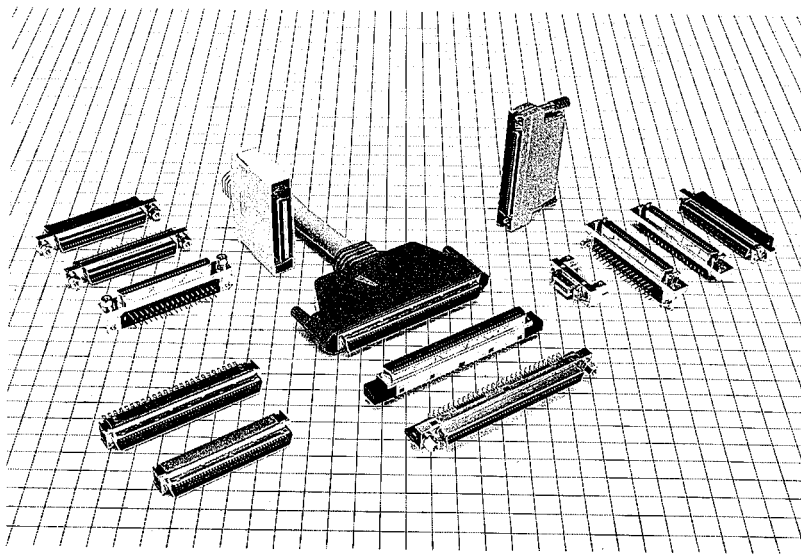


# DXM (1.27MM PITCH) SERIES HIGH-DENSITY I/O CONNECTOR

## General

DXM 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. DXM series offer you one of the

most varied and complete lines of High-Density connectors in the world, i.e. IDC and Solder for the plug and right angle dip, straight dip, IDC and SMT for the receptacle. Available in 14, 20, 26, 36, 50, 68, 80, 100 and 110 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 wires.
5. Backshell and receptacle shell are made of die-cast zinc alloy or stainless steel to reduce the penetration of external EMI noise.
6. Ferrite added to DX Right Angle Dip Type for EMI Protection is available.
7. Overmold backshell provided for ESD protection is available in 'One-Touch' locking and 'Screw' locking.
8. Termination methods are available in IDC, Soldering, Right Angle Dip, Straight Dip and SMT.

## Applications

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

## Specifications

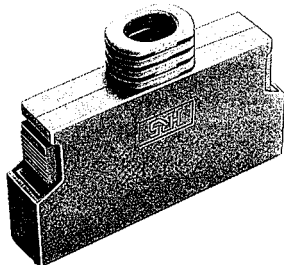
| Items                 | Standard value                  |
|-----------------------|---------------------------------|
| Current capacity      | 0.5A                            |
| Rated voltage         | AC125V                          |
| Insulation resistance | 250M $\Omega$ or more at DC100V |
| Contact resistance    | 35m $\Omega$ or less at DC100mA |
| Withstanding voltage  | AC 300Vr.m.s. for 1 minute      |

## DXM Series Variations

### ● One-touch lock type (14, 20, 26, 36, 50, 68 pins)

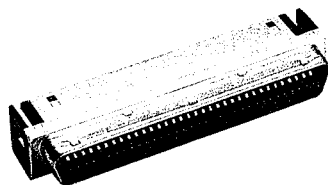
#### Plug cover

1.1 Over mold cover type

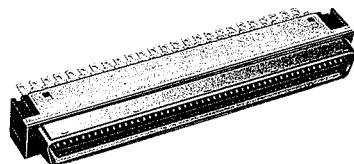


#### Plug

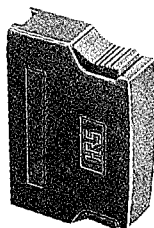
2.1 IDC type



2.2 Solder type (20 pins)

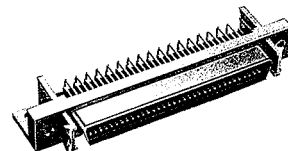


14.1 Terminator

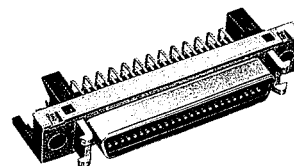


#### Receptacle

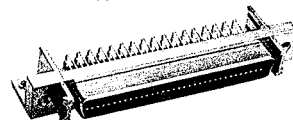
3.1 Right angle dip  
Board screw on type



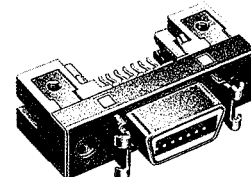
3.2 Right angle dip  
Board lock pin harpoon type



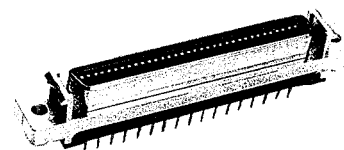
3.3 Right angle dip  
Board lock pin round type  
(round type)



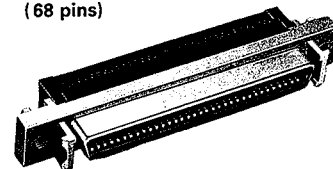
4.1 SMT type (14, 26 pins)



5.1 Straight dip type



6.1 IDC type  
(68 pins)

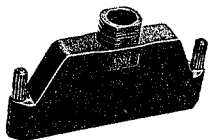


## ● Screw lock type (68, 80, 100, 110 pins)

Overmold cover type (100, 110 pins)

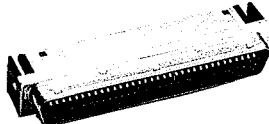
### Plug cover

7.1 Over mold cover type

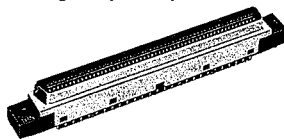


### Plug

2.1 IDC type

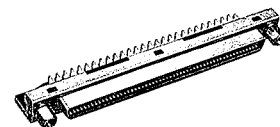


13.1 Straight dip (110 pins)

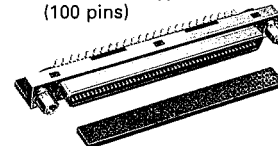


### Receptacle

8.2 Right angle dip  
Board lock pin harpoon type



9.1 Right angle dip  
Ferrite core type  
(100 pins)



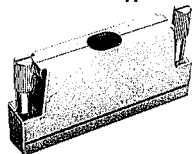
10.1 SMT type (100 pins)



Die cast cover (68, 80, 100 pins)

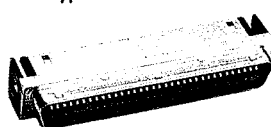
### Plug cover

7.2 Die cast cover type

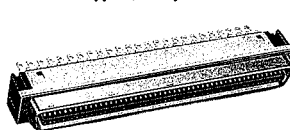


### Plug

2.1 IDC type

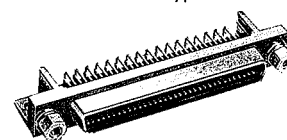


2.2 Solder type (100 pins)

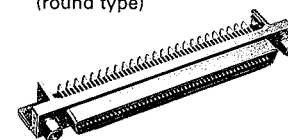


### Receptacle

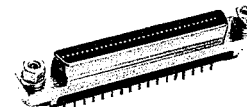
8.1 Right angle dip  
Board screw on type



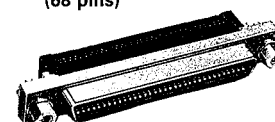
8.3 Right angle dip  
Board lock pin round type  
(round type)



11.1 Straight dip type



12.1 IDC type  
(68 pins)



Note: There is no interchangeability between the locks of the die cast cover type and overmold type.

## 1. One Touch Lock Plug Cover

### Ordering Information

DX30M — 50 — CV

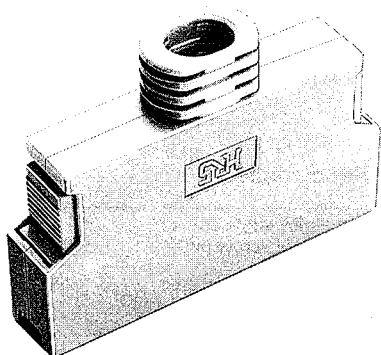
(1) (2) (3)

- 1) Series number: DX30M
- 2) No. of pins: 14, 20, 26, 36, 50, 68
- 3) Cover case type  
CV: Over mold cover case

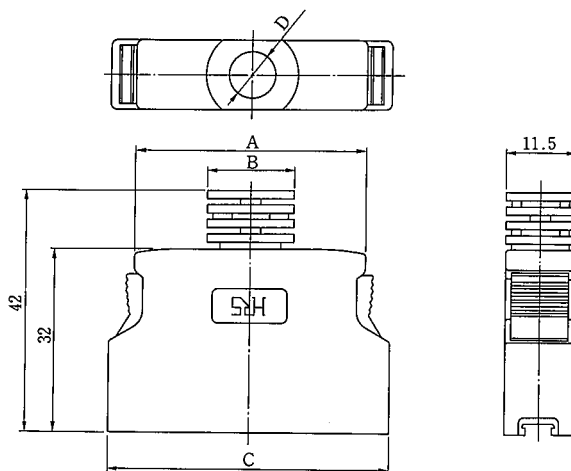
### Material Treatment

| Item                | Material                      | Treatment   |
|---------------------|-------------------------------|-------------|
| Overmold cover case | Synthetic resin,<br>Stainless | Light beige |

### 1.1 Overmold Cover



CL230-5056-0-10  
DX30M-68-CV(10)



Unit (mm)

| HRS No.         | No. of pin | Parts No.       | A     | B     | C     | D           | Applicable plug unit |             |
|-----------------|------------|-----------------|-------|-------|-------|-------------|----------------------|-------------|
|                 |            |                 |       |       |       |             | IDC type             | Solder type |
| CL230-5051-7-10 | 14         | DX30M-14-CV(10) | 17.09 | 11.50 | 25.79 | φ 6.3       | DX30AM-14P           | —           |
| CL230-5052-0-10 | 20         | DX30M-20-CV(10) | 20.90 | 14.50 | 29.60 | φ 6.7       | DX30AM-20P           | DX40M-20P   |
| CL230-5053-2-10 | 26         | DX30M-26-CV(10) | 24.80 | 15.00 | 33.50 | φ 7.0       | DX30AM-26P           | —           |
| CL230-5054-5-10 | 36         | DX30M-36-CV(10) | 31.06 | 15.75 | 39.80 | φ 8.1       | DX30AM-36P           | —           |
| CL230-5055-8-10 | 50         | DX30M-50-CV(10) | 39.95 | 16.00 | 48.70 | φ 8.7       | DX30AM-50P           | —           |
| CL230-5056-0-10 | 68         | DX30M-68-CV(10) | 51.38 | 17.57 | 60.13 | 8.7 × 10.27 | DX30AM-68P           | —           |

## General List of Engagement Combinations

| Cover case and plug unit      | Receptacle                |              |               |            |
|-------------------------------|---------------------------|--------------|---------------|------------|
|                               | Right angle type          | SMT type     | Straight type | IDC type   |
| DX30M-14-CV(10) + DX30AM-14-P | DX10M-14S(E), DX10GM-14SE | DX10MS-14ST2 | DX20M-14S     | —          |
| DX30M-20-CV(10) + DX30AM-20-P | DX10M-20S(E), DX10GM-20SE | —            | DX20M-20S     | —          |
| DX30M-26-CV(10) + DX30AM-26-P | DX10M-26S(E), DX10GM-26SE | DX10MS-26ST※ | DX20M-26S     | —          |
| DX30M-36-CV(10) + DX30AM-36-P | DX10M-36S(E), DX10GM-36SE | —            | DX20M-36S     | DX33AM-36S |
| DX30M-50-CV(10) + DX30AM-50-P | DX10M-50S(E), DX10GM-50SE | —            | DX20M-50S     | DX33AM-50S |
| DX30M-68-CV(10) + DX30AM-68-P | DX10M-68S(E), DX10GM-68SE | —            | DX20M-68S     | DX33AM-68S |

## 2. Plug Unit (Interchangeable One Touch-Screw Lock Type)

### Ordering Information

DX 30 A M - 50 P

(1) (2) (3) (1) (4) (5)

Note: This connector can be used for one touch lock cover and screw lock cover.

- 1) Series No.: DX--M
- 2) Wiring style 30: Discrete cable IDC (for fine wire use)  
40: Solder type
- 3) Applicable wire A: AWG #28  
(Discrete cable press-fit type)
- 4) No. of pins: 14, 20, 26, 36, 50, 68, 80, 100, 110
- 5) Mating type P: Plug

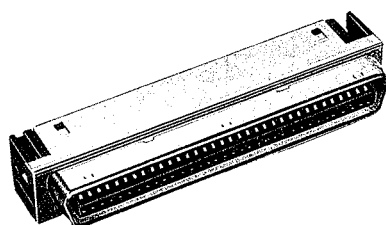
### Material Treatment

| Item          | Material     | Remarks                |
|---------------|--------------|------------------------|
| shell         | Steel        | Nickel plating         |
| Insulator     | PBT          | Black (UL94V-0)        |
| Male terminal | Copper alloy | Selective gold plating |

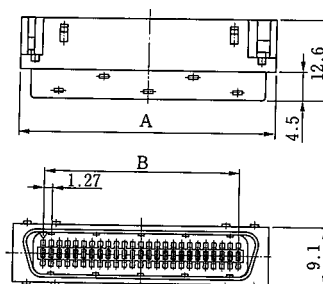
### Applicable

|                       | Interface cable               |        |                       |
|-----------------------|-------------------------------|--------|-----------------------|
|                       | Discrete cable fine wire type |        | Solder type           |
| Conductor size        | AWG #28                       |        |                       |
| Conductor composition | 7/0.127                       |        |                       |
| o.d. of insulator     | 0.58                          | 0.62   | 0.58                  |
| Cable style           | UL20276<br>and UL2789         | UL2990 | UL20276<br>and UL2789 |

### 2.1 Discrete Cable IDC Type (for Fine Wire)



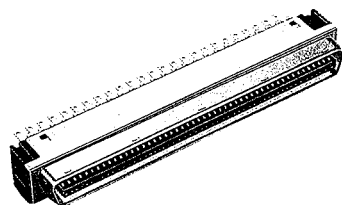
CL230-5029-8  
DX30AM-68P



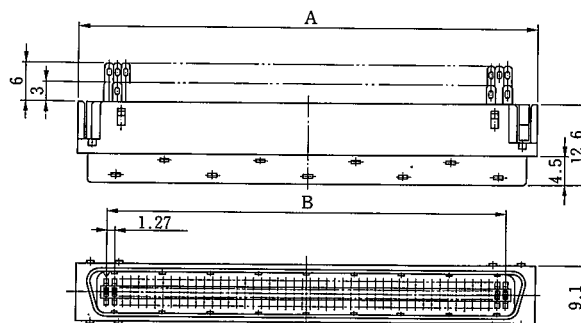
Unit (mm)

| HRS No.      | No. of Pin | Parts No.   | A     | B     | Applicable cover case |                   |
|--------------|------------|-------------|-------|-------|-----------------------|-------------------|
|              |            |             |       |       | One touch lock type   | Screw lock type   |
| CL230-5024-4 | 14         | DX30AM-14P  | 17.09 | 7.62  | DX30M-14-CV           | —                 |
| CL230-5025-7 | 20         | DX30AM-20P  | 20.90 | 11.43 | DX30M-20-CV           | —                 |
| CL230-5026-0 | 26         | DX30AM-26P  | 24.71 | 15.24 | DX30M-26-CV           | —                 |
| CL230-5027-2 | 36         | DX30AM-36P  | 31.06 | 21.59 | DX30M-36-CV           | —                 |
| CL230-5028-5 | 50         | DX30AM-50P  | 39.95 | 30.48 | DX30M-50-CV           | —                 |
| CL230-5029-8 | 68         | DX30AM-68P  | 51.38 | 41.96 | DX30M-68-CV           | DX30M-68-CV2      |
| CL230-5030-7 | 80         | DX30AM-80P  | 59.00 | 49.53 | —                     | DX30M-80-CV2      |
| CL230-5031-0 | 100        | DX30AM-100P | 71.70 | 62.23 | —                     | DX30M-100-CV1 • 2 |
| CL230-5064-9 | 110        | DX30AM-110P | 78.05 | 68.53 | —                     | DX30M-110-CV1     |

### 2.2 Solder Type



CL230-5039-1  
DX40M-100P



Unit: mm

| HRS No.      | No. of pins | Product No. | A     | B     | Applicable cover case |                 |
|--------------|-------------|-------------|-------|-------|-----------------------|-----------------|
|              |             |             |       |       | One touch lock type   | Screw lock type |
| CL230-5033-5 | 20          | DX40M-20P   | 20.90 | 11.43 | DX30M-20-CV           | —               |
| CL230-5039-1 | 100         | DX40M-100P  | 71.70 | 62.23 | —                     | ※DX30M-100-CV2  |

Cannot be used for ※DX30M-100-CV1.

### 3. One Touch Lock, Receptacle Right Angle Type

#### Ordering Information

DX 10 ※ M — 50 S E

(1) (2) (3) (1) (4) (5) (6)

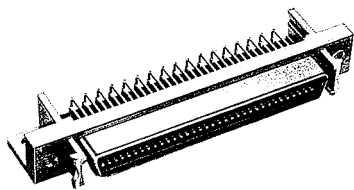
- 1) Series No.: DX--M
- 2) Wiring style 10: Right angle type
- 3) Lock style (one touch lock type)  
Blank : (Receptacle case material: zinc alloy die cast)  
G : (Receptacle case material: steel)

- 4) No. of pins: 14, 20, 26, 36, 50, 68
- 5) Mating type S: Receptacle
- 6) Board-fitting type  
Blank : Screw on type  
E : Lock pin type

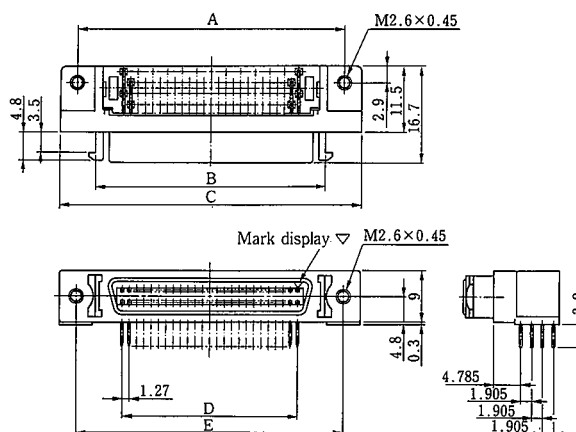
#### Material Treatment

| Item            | Material                     | Remarks                |
|-----------------|------------------------------|------------------------|
| Receptacle case | Zinc alloy die cast or steel | Nickel plating         |
| Shell           | Steel                        | Nickel plating         |
| Insulators      | PBT                          | Black (UL94V-0)        |
| Female terminal | Copper alloy                 | Selective gold plating |

#### 3.1 Board Screw on Type



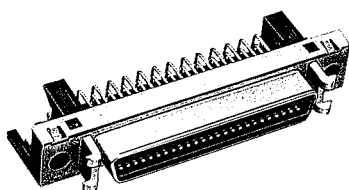
CL230-5181-2  
DX10GM-68S



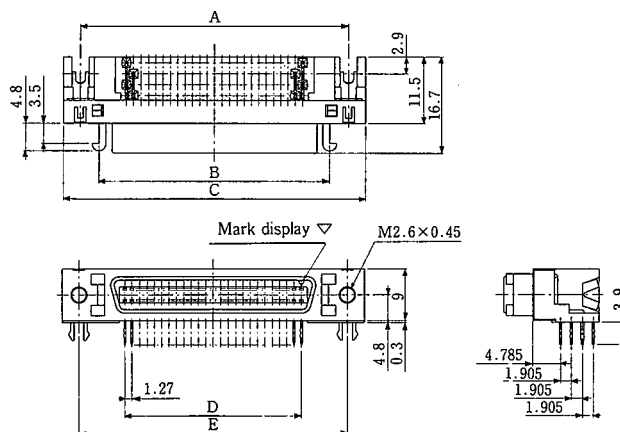
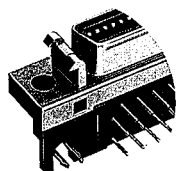
| HRS No.      | No. of Pin | Parts No.   | A     | B     | C     | D     | E     |
|--------------|------------|-------------|-------|-------|-------|-------|-------|
| CL230-5223-0 | 14         | DX10G1M-14S | 23.64 | 17.14 | 29.54 | 7.62  | 23.64 |
| CL230-5177-5 | 20         | DX10GM-20S  | 27.45 | 20.95 | 33.35 | 11.43 | 27.45 |
| CL230-5225-6 | 26         | DX10G1M-26S | 31.26 | 24.76 | 37.16 | 15.24 | 31.26 |
| CL230-5226-9 | 36         | DX10G1M-36S | 37.61 | 31.11 | 43.51 | 21.59 | 37.61 |
| CL230-5227-1 | 50         | DX10G1M-50S | 46.50 | 40.00 | 52.40 | 30.48 | 46.50 |
| CL230-5181-2 | 68         | DX10GM-68S  | 57.93 | 51.43 | 63.83 | 41.91 | 57.93 |

Unit (mm)

#### 3.2 Board Lock Pin Harpoon Type



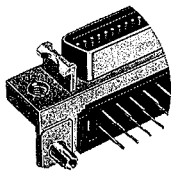
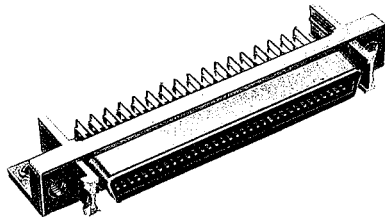
CL230-5214-0  
DX10G1M-50SE



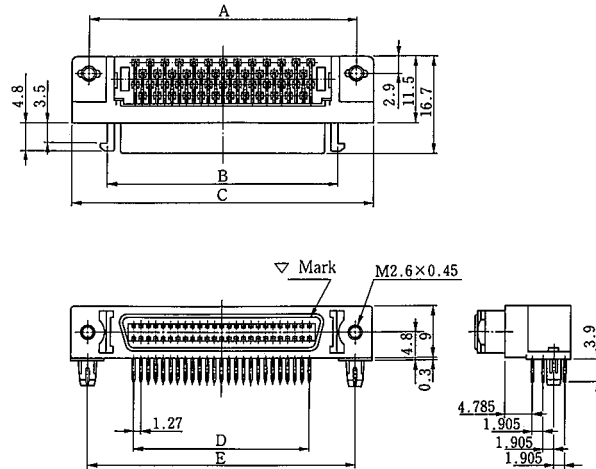
| HRS No.      | No. of Pin | Parts No.    | A     | B     | C     | D     | E     |
|--------------|------------|--------------|-------|-------|-------|-------|-------|
| CL230-5210-9 | 14         | DX10G1M-14SE | 23.64 | 17.14 | 29.54 | 7.62  | 23.64 |
| CL230-5130-1 | 20         | DX10GM-20SE  | 27.45 | 20.95 | 33.35 | 11.43 | 27.45 |
| CL230-5212-4 | 26         | DX10G1M-26SE | 31.26 | 24.76 | 37.16 | 15.24 | 31.26 |
| CL230-5213-7 | 36         | DX10G1M-36SE | 37.61 | 31.11 | 43.51 | 21.59 | 37.61 |
| CL230-5214-0 | 50         | DX10G1M-50SE | 46.50 | 40.00 | 52.40 | 30.48 | 46.50 |
| CL230-5134-2 | 68         | DX10GM-68SE  | 57.93 | 51.43 | 63.83 | 41.91 | 57.93 |

Unit (mm)

### 3.3 Board Lock Pin Round Type

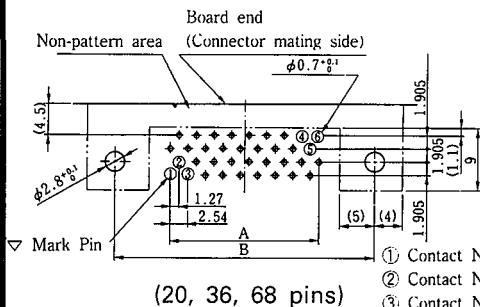


CL230-5071-4  
DX10M-68SE



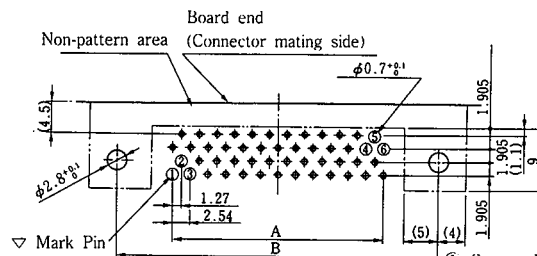
| Unit (mm)    |            |            |       |       |       |       |       |
|--------------|------------|------------|-------|-------|-------|-------|-------|
| HRS No.      | No. of Pin | Parts No.  | A     | B     | C     | D     | E     |
| CL230-5107-0 | 14         | DX10M-14SE | 23.64 | 17.14 | 29.54 | 7.62  | 23.64 |
| CL230-5067-7 | 20         | DX10M-20SE | 27.45 | 20.95 | 33.35 | 11.43 | 27.45 |
| CL230-5068-0 | 26         | DX10M-26SE | 31.26 | 24.76 | 37.16 | 15.24 | 31.26 |
| CL230-5069-2 | 36         | DX10M-36SE | 37.61 | 31.11 | 43.51 | 21.59 | 37.61 |
| CL230-5070-1 | 50         | DX10M-50SE | 46.50 | 40.00 | 52.40 | 30.48 | 46.50 |
| CL230-5071-4 | 68         | DX10M-68SE | 57.93 | 51.43 | 63.83 | 41.91 | 57.93 |

### PCB Layout (Recommended board thickness:1.6mm)



(20, 36, 68 pins)

- 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)
- ※N:Numbers of Pin



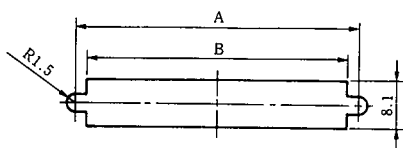
(14, 26, 50 pins)

- 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)
- ※N:Numbers of Pin

| Unit (mm)  |       |       |
|------------|-------|-------|
| No. of Pin | A     | B     |
| 14         | 7.62  | 23.64 |
| 20         | 11.43 | 27.45 |
| 26         | 15.24 | 31.26 |
| 36         | 21.59 | 37.61 |
| 50         | 30.48 | 46.50 |
| 68         | 41.91 | 57.93 |

### Panel-Fitting Dimensional Drawing

(Recommended panel thickness:max.2mm)



| Unit (mm)  |       |       |
|------------|-------|-------|
| No. of Pin | A     | B     |
| 14         | 23.64 | 19.99 |
| 20         | 27.45 | 23.80 |
| 26         | 31.26 | 27.60 |
| 36         | 37.61 | 33.90 |
| 50         | 46.50 | 42.80 |
| 68         | 57.93 | 54.23 |

## 4. One Touch Lock, Receptacle SMT Type

### Ordering Information

| DX  | 10  | ※   | M   | S   | — | 14  | S   | T2  |
|-----|-----|-----|-----|-----|---|-----|-----|-----|
| (1) | (2) | (3) | (1) | (4) |   | (5) | (6) | (7) |

- 1) Series No.: DX--M
- 2) Connector style  
10: Right angle type
- 3) Lock style  
Blank: One touch lock type
- 4) Board mounting style  
S: SMT type

5) No. of pins: 14, 26

6) Mating type

S: Receptacle

7) Board-thickness

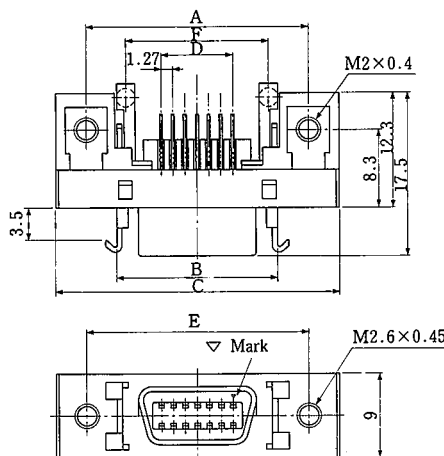
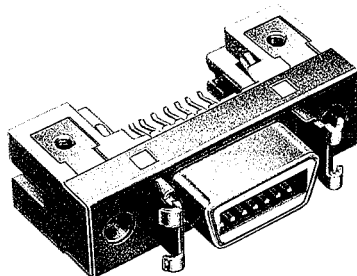
T2: SMT type (Board thickness 1.2mm)

T6: SMT type (Board thickness 1.6mm)

### Material Treatment

| Item            | Material     | Remarks                |
|-----------------|--------------|------------------------|
| Receptacle case | Steel        | Nickel plating         |
| Insulators      | PPS          | Natural                |
| Female terminal | Copper alloy | Selective gold plating |

### 4.1 Receptacle SMT Type

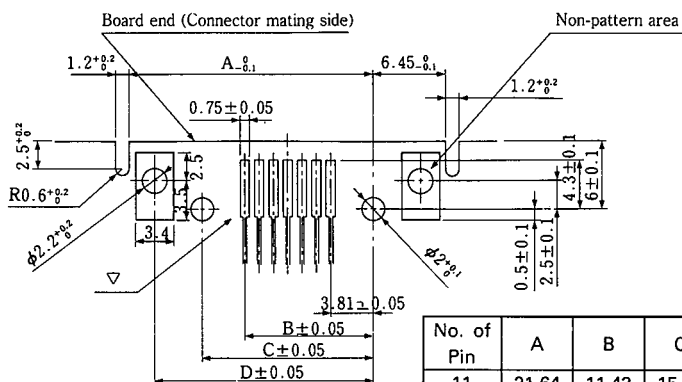


CL230-5125-1  
DX10MS-14ST2

Unit (mm)

| HRS No.      | No. of Pin | Parts No.    | A     | B     | C     | D    | E     | F     | G    |
|--------------|------------|--------------|-------|-------|-------|------|-------|-------|------|
| CL230-5125-1 | 14         | DX10MS-14ST2 | 23.64 | 17.14 | 30.14 | 7.62 | 23.64 | 15.24 | 1.35 |

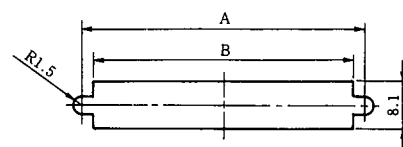
### PCB Layout



Unit (mm)

| No. of Pin | A     | B     | C     | D     |
|------------|-------|-------|-------|-------|
| 11         | 21.64 | 11.43 | 15.24 | 19.44 |
| 26         | 29.31 | 19.05 | 22.86 | 27.06 |

Panel fitting dimensional drawing  
(Recommended panel thickness: max. 2mm)



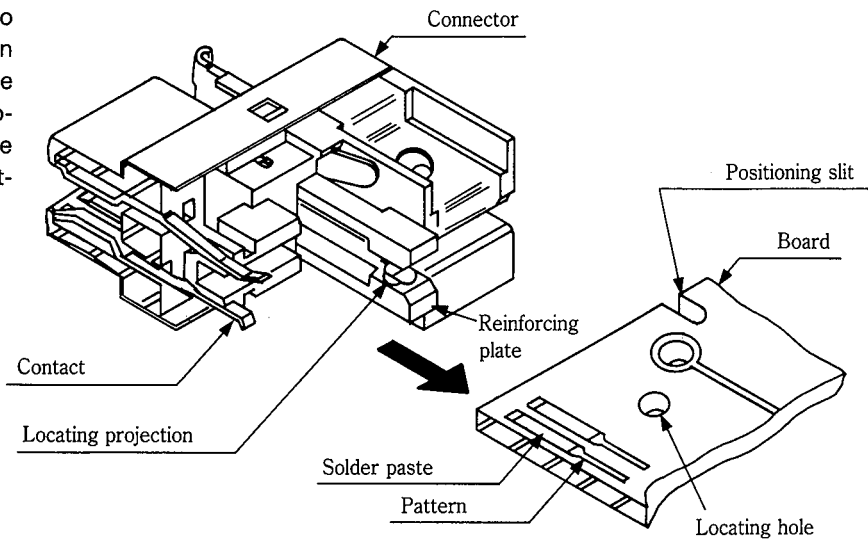
Unit (mm)

| No. of Pin | A     | B     |
|------------|-------|-------|
| 14         | 23.64 | 19.99 |
| 26         | 31.26 | 27.60 |

## DXM SMT MOUNTING FUNCTIONAL DRAWING

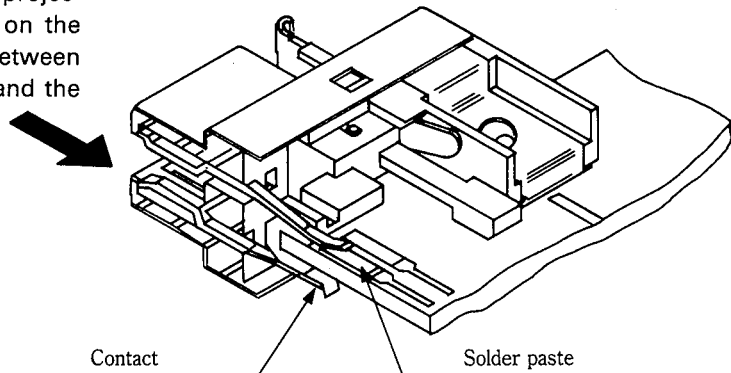
1

Insert the connector to the board and push in the reinforcing plate until the locating projection on the plate stops against the locating hole on the board.



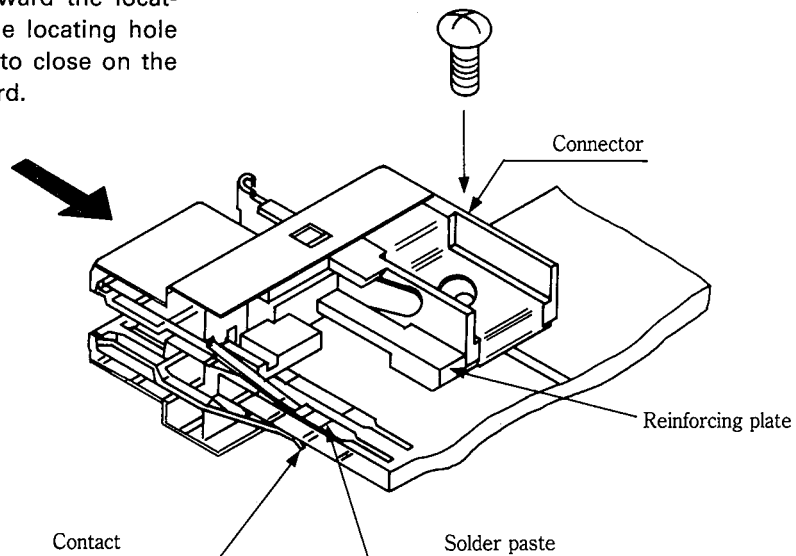
2

At the stage when the locating projection of the reinforcing plate is on the board, there is a gap formed between the cream solder on the board and the contact.



3

By further pressing forward the locating projection enters the locating hole and allows the contact to close on the solder paste on the board.



## 5. One Touch Lock, Receptacle Straight Type

### Ordering Information

|     |     |     |     |   |     |     |
|-----|-----|-----|-----|---|-----|-----|
| DX  | 20  | ※   | M   | — | 50  | S   |
| (1) | (2) | (3) | (1) |   | (4) | (5) |

1) Series No.: DX--M

2) Connector style

20: Straight dip

3) Lock style

Blank: One touch lock type

4) No. of pins: 14, 20, 26, 36, 50, 68

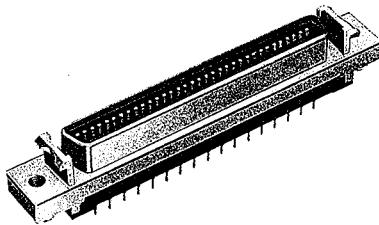
5) Mating type

S: Receptacle

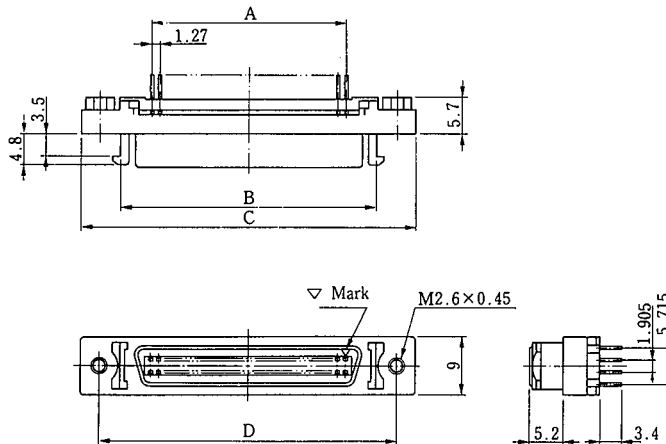
### Material Treatment

| Item            | Material            | Remarks                |
|-----------------|---------------------|------------------------|
| Receptacle case | Zinc alloy die cast | Nickel plating         |
| Shell           | Steel               | Nickel plating         |
| Insulators      | PBT resin           | Black(UL94V-0)         |
| Female terminal | Copper alloy        | Selective gold plating |

### 5.1 Receptacle Straight Type



CL230-5017-9  
DX20M-68S

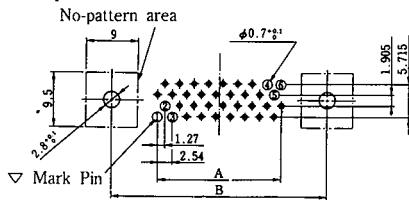


| HRS No.      | No. of Pin | Parts No. | A     | B     | C     | D     |
|--------------|------------|-----------|-------|-------|-------|-------|
| CL230-5012-5 | 14         | DX20M-14S | 7.62  | 17.14 | 29.54 | 23.64 |
| CL230-5013-8 | 20         | DX20M-20S | 11.43 | 20.95 | 33.35 | 27.45 |
| CL230-5014-0 | 26         | DX20M-26S | 15.24 | 24.76 | 37.16 | 31.26 |
| CL230-5015-3 | 36         | DX20M-36S | 21.59 | 31.11 | 43.51 | 37.61 |
| CL230-5016-6 | 50         | DX20M-50S | 30.48 | 40.00 | 52.40 | 46.50 |
| CL230-5017-9 | 68         | DX20M-68S | 41.91 | 51.43 | 63.83 | 57.93 |

Unit (mm)

### PCB Layout

(Recommended board thickness:1.6mm)



(20, 36, 68 pins)

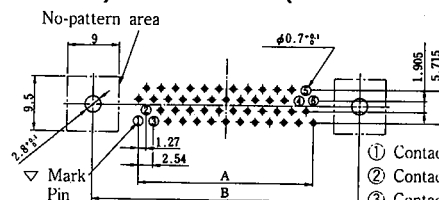
| No. of Pin | A     | B     |
|------------|-------|-------|
| 20         | 11.43 | 27.45 |
| 36         | 21.59 | 37.61 |
| 68         | 41.91 | 57.93 |

Unit (mm)

- 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)  
※N:Numbers of Pin

### Panel-Fitting Dimensional Drawing

(Recommended panel thickness:max:2mm)

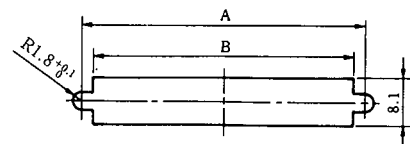


(14, 26, 50 pins)

| No. of Pin | A     | B     |
|------------|-------|-------|
| 14         | 7.62  | 23.46 |
| 26         | 15.24 | 31.26 |
| 50         | 30.48 | 46.50 |

Unit (mm)

- 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)  
※N:Numbers of Pin



Unit (mm)

| No. of Pin | A     | B     |
|------------|-------|-------|
| 14         | 23.46 | 19.99 |
| 20         | 27.45 | 23.8  |
| 26         | 31.26 | 27.6  |
| 36         | 37.61 | 33.9  |
| 50         | 46.50 | 42.8  |
| 68         | 57.93 | 54.23 |

## 6. One Touch Lock Receptacle Flat Ribbon Cable Type

### Ordering Information

DX 33 A M — 68 S  
 (1) (2) (3) (1) (4) (5)

- 1) Series No.: DX--M
- 2) Connector style  
33: Flat IDC type  
(for ribbon cable use)
- 3) Applicable cable  
A: AWG #28

4) No. of pins: 36, 50, 68

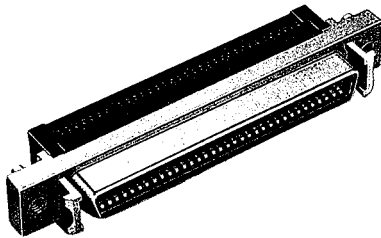
5) Mating type

S: Receptacle

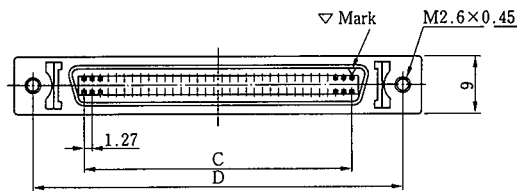
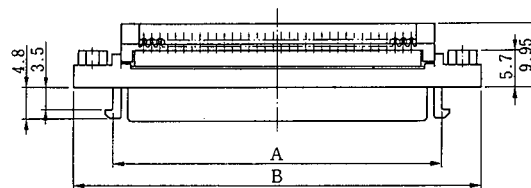
### Material Treatment

| Item            | Material            | Remarks                |
|-----------------|---------------------|------------------------|
| Receptacle case | Zinc alloy die cast | Nickel plating         |
| Shell           | Steel               | Nickel plating         |
| Insulators      | PBT resin           | Black (UL94V-0)        |
| Female terminal | Copper alloy        | Selective gold plating |

### 6.1 Receptacle, Flat Ribbon Cable Type



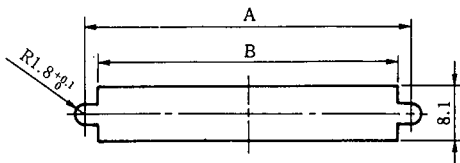
CL230-5062-3  
DX33AM-68S



|              |            |            |       |       |       | Unit (mm) |
|--------------|------------|------------|-------|-------|-------|-----------|
| HRS No.      | No. of Pin | Parts No.  | A     | B     | C     | D         |
| CL230-5095-2 | 36         | DX33AM-36S | 31.11 | 43.51 | 21.59 | 37.61     |
| CL230-5092-4 | 50         | DX33AM-50S | 40.00 | 52.40 | 30.48 | 46.50     |
| CL230-5062-3 | 68         | DX33AM-68S | 51.43 | 63.83 | 41.91 | 57.93     |

### Panel-Fitting Dimensional Drawing

(Recommended panel thickness:Max.2mm)



| Unit (mm)  |       |       |
|------------|-------|-------|
| No. of Pin | A     | B     |
| 36         | 37.61 | 33.90 |
| 50         | 46.50 | 42.80 |
| 68         | 57.93 | 54.23 |

## 7. Screw Lock Type, Plug Cover

### Ordering Information

DX30M — 110 — CV1

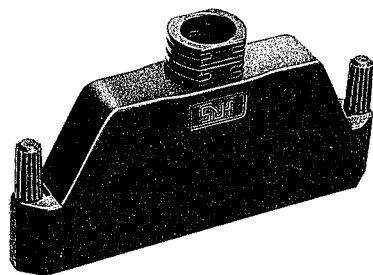
(1) (2) (3)

- 1) Series No.: DX30M
- 2) No. of pins: 68, 80, 100, 110
- 3) Cover case type  
CV1: Overmold cover case  
CV2: Die cast cover

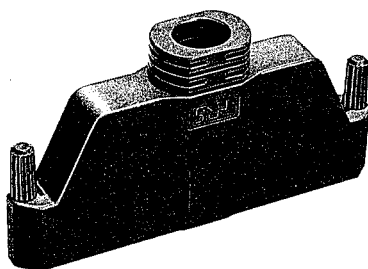
### Material Treatment

| Item           | Material                         | Remarks       |
|----------------|----------------------------------|---------------|
| Overmold cover | Stainless steel, Synthetic resin | Dark grey     |
| Die cast cover | Zinc alloy die cast              | Silver coated |

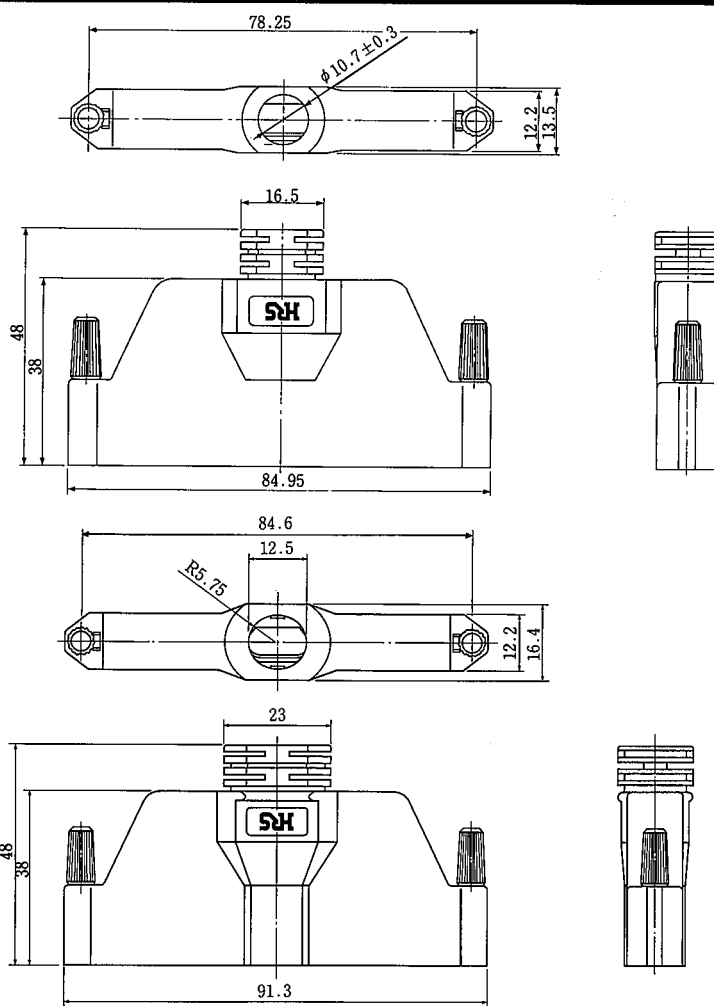
### 7.1 Overmold Cover



CL230-5093-7  
DX30M-100-CV1



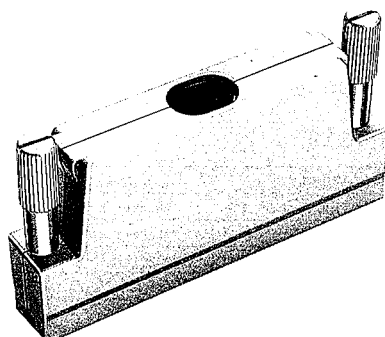
CL230-5083-3  
DX30M-110-CV1



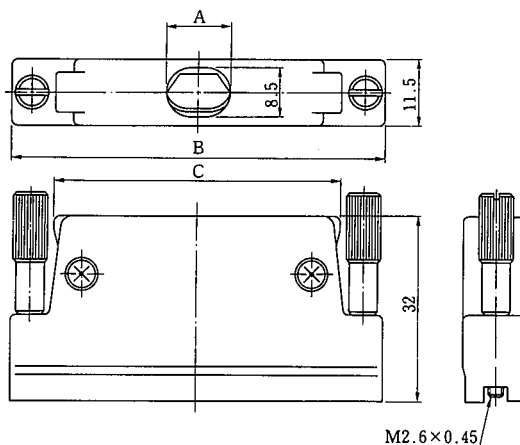
### List of Engagement Combinations

| Cover case and plug unit  | Receptacle                   |                |               |                   |
|---------------------------|------------------------------|----------------|---------------|-------------------|
|                           | Right angle type             | SMT type       | Straight type | Ferrite core type |
| DX30M-100-CV1+DX30AM-100P | DX10AM-100SE2, DX10AM-100SE1 | DX10AMS-100ST6 | —             | DX10AMF-100SE1    |
| DX30M-110-CV1+DX30AM-110P | DX10AM-110SE2, DX10AM-110SE1 | —              | —             | —                 |

## 7.2 Die Cast Cover



CL230-5059-9  
DX30M-68-CV2



| HRS No.      | No. of pin | Parts No.     | A     | B     | C     | Unit (mm)            |             |
|--------------|------------|---------------|-------|-------|-------|----------------------|-------------|
|              |            |               |       |       |       | Applicable plug unit |             |
|              |            |               |       |       |       | IDC type             | Solder type |
| CL230-5059-9 | 68         | DX30M-68-CV2  | 11.00 | 64.93 | 49.68 | DX30AM-68P           | —           |
| CL230-5060-8 | 80         | DX30M-80-CV2  | 12.50 | 72.55 | 57.30 | DX30AM-80P           | —           |
| CL230-5061-0 | 100        | DX30M-100-CV2 | 14.00 | 85.25 | 70.00 | DX30AM-100P          | DX40M-100P  |

## List of Engagement Combinations

| Cover case and plug unit  | Receptacle                |                   |                   |
|---------------------------|---------------------------|-------------------|-------------------|
|                           | Right angle type          | Straight DIP type | Ribbon cable type |
| DX30M- 68-CV2+DX30AM- 68P | DX10BM-68S, DX10BM-68SE   | DX20BM- 68S       | DX33M-68S-LNA     |
| DX30M- 80-CV2+DX30AM- 80P | DX10BM-80S, DX10BM-80SE   | DX20BM- 80S       | —                 |
| DX30M-100-CV2+DX30AM-100P | DX10BM-100S, DX10BM-100SE | DX20BM-100S       | —                 |

## 8. Screw Lock, Receptacle Right Angle Type

### Ordering Information

|     |     |     |     |   |     |     |     |
|-----|-----|-----|-----|---|-----|-----|-----|
| DX  | 10  | B   | M   | — | 68  | S   | E   |
| (1) | (2) | (3) | (1) |   | (4) | (5) | (6) |

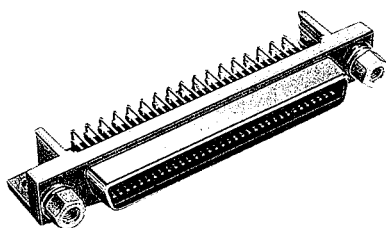
- 1) Series No.: DX--M
- 2) Connector style 10: Right angle type
- 3) Lock style (Screw lock type)
  - A: Receptacle case material — Steel
  - B: Receptacle case material — Zinc alloy die cast
- 4) No. of pins: 68, 80, 100, 110

- 5) Mating type S: Receptacle
- 6) Board fitting type
  - Blank : Screw on type
  - E : Lock pin round type
  - E1 : Lock pin harpoon type (Board thickness 1.6mm)
  - E2 : Lock pin harpoon type (Board thickness 1.2mm)

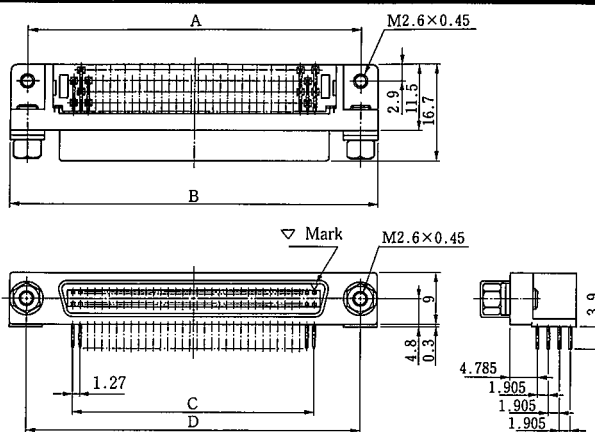
### Material Treatment

| Item            | Material                     | Remarks                |
|-----------------|------------------------------|------------------------|
| Receptacle case | Zinc alloy die cast or steel | Nickel plating         |
| Shell           | Steel                        | Nickel plating         |
| Insulator       | PBT resin                    | Black (UL94V-0)        |
| Female terminal | Copper alloy                 | Selective gold plating |

### 8.1 Board Screw on Type

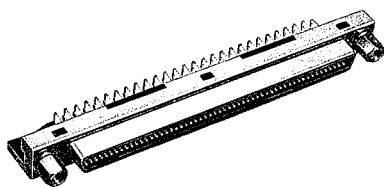


CL230-5008-8  
DX10BM-68S

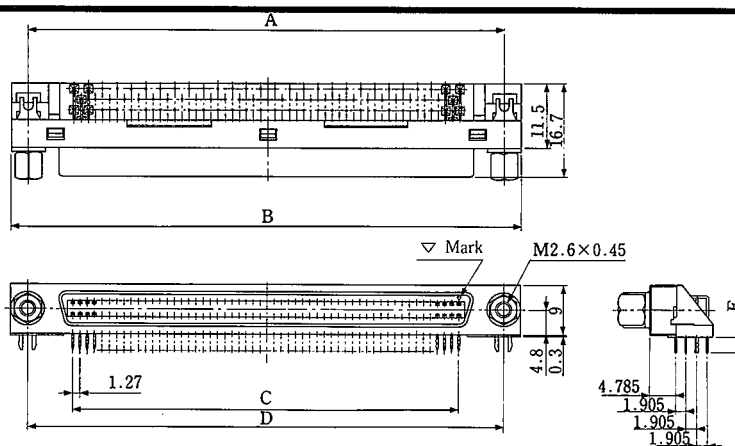


| HRS No.      | No. of Pin | Parts No.   | A     | B     | C     | D     | Unit (mm) |
|--------------|------------|-------------|-------|-------|-------|-------|-----------|
| CL230-5008-8 | 68         | DX10BM-68S  | 57.93 | 63.83 | 41.91 | 57.93 |           |
| CL230-5009-0 | 80         | DX10BM-80S  | 65.55 | 71.45 | 49.53 | 65.55 |           |
| CL230-5010-0 | 100        | DX10BM-100S | 78.25 | 84.15 | 62.23 | 78.25 |           |

### 8.2 Board Lock Pin Harpoon Type

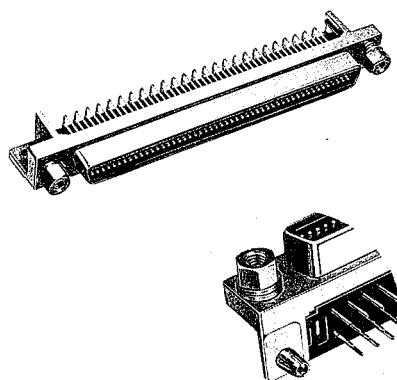


CL230-5138-3  
DX10AM-110SE2

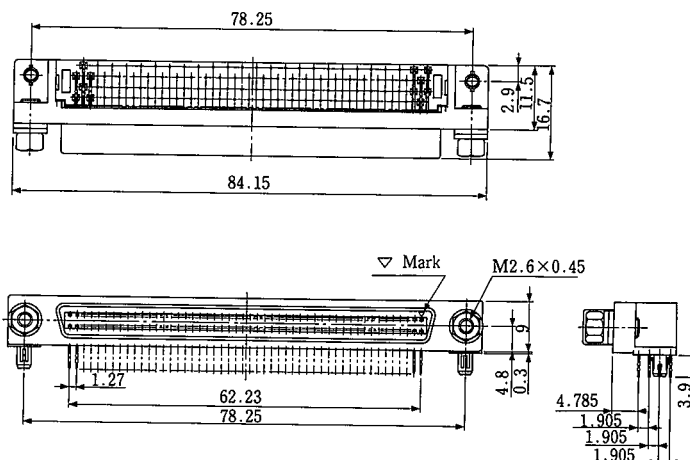


| HRS No.      | No. of Pin | Parts No.     | A     | B     | C     | D     | E   | Unit (mm) |
|--------------|------------|---------------|-------|-------|-------|-------|-----|-----------|
| CL230-5137-0 | 100        | DX10AM-100SE2 | 78.25 | 84.15 | 62.23 | 78.25 | 2.7 |           |
| CL230-5089-0 | 100        | DX10AM-100SE1 | 78.25 | 84.15 | 62.23 | 78.25 | 3.4 |           |
| CL230-5138-3 | 110        | DX10AM-110SE2 | 84.50 | 90.50 | 68.58 | 84.50 | 2.7 |           |
| CL230-5088-7 | 110        | DX10AM-110SE1 | 84.50 | 90.50 | 68.58 | 84.50 | 3.4 |           |

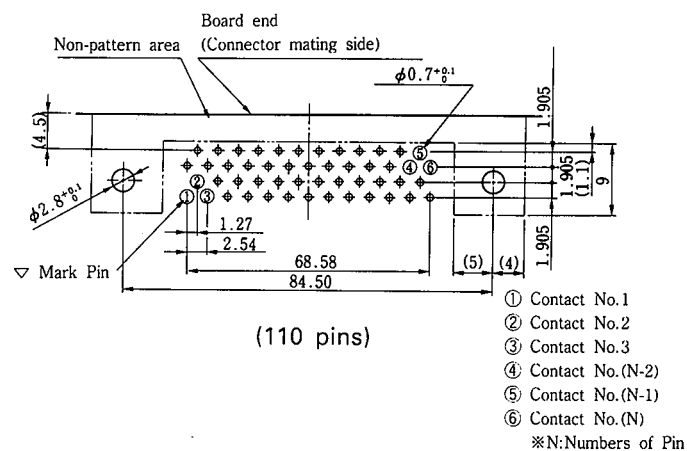
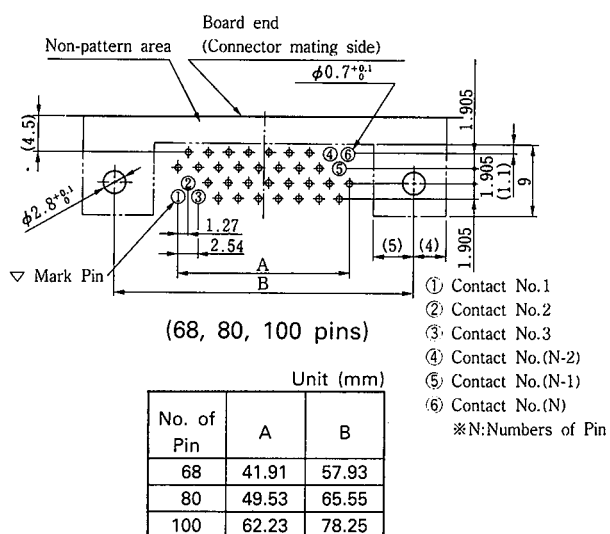
### 8.3 Board Lock Pin, Round Type



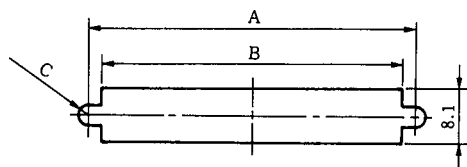
CL230-5076-8  
DX10BM-100SE



### PCB Layout (Recommended Board Thickness: 1.2mm, 1.6mm)



### Panel-Fitting Dimensional Drawing



#### ● DX10BM

| Panel thickness | No. of washers |
|-----------------|----------------|
| 0~t0.4          | 2              |
| t0.8~1.2        | 1              |
| t1.6~2          | No washer      |

#### ● DX10AM

| Panel thickness |
|-----------------|
| t0.8~1.2        |

| Unit (mm)  |       |       |       |                                |
|------------|-------|-------|-------|--------------------------------|
| No. of Pin | A     | B     | C     | Remarks                        |
| 68         | 57.93 | 54.23 | R1.85 | DX10BM-68S                     |
| 80         | 65.55 | 61.85 | R1.85 | DX10BM-80S                     |
| 100        | 78.25 | 74.55 | R1.85 | DX10BM-100SE                   |
| 100        | 78.25 | 74.55 | R1.5  | DX10AM-100SE2<br>DX10BM-100SE1 |
| 110        | 84.5  | 80.8  | R1.5  | DX10AM-110SE2<br>DX10AM-110SE1 |

## 9. Screw Lock, Receptacle Ferrite Core Type

### Ordering Information

DX 10 A M F - 100 S E1

(1) (2) (3) (1) (4) (5) (6) (7)

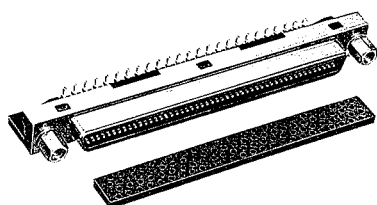
- 1) Series No.: DX--M
- 2) Connector style  
10: Right angle type
- 3) Lock style (Screw lock type)  
A: Receptacle case material-steel
- 4) Board mounting style  
F: Ferrite core type

- 5) No. of pins: 100
- 6) Mating type  
S: Receptacle
- 7) Board fitting type  
E1: Lock pin type (Board thickness 1.6mm)

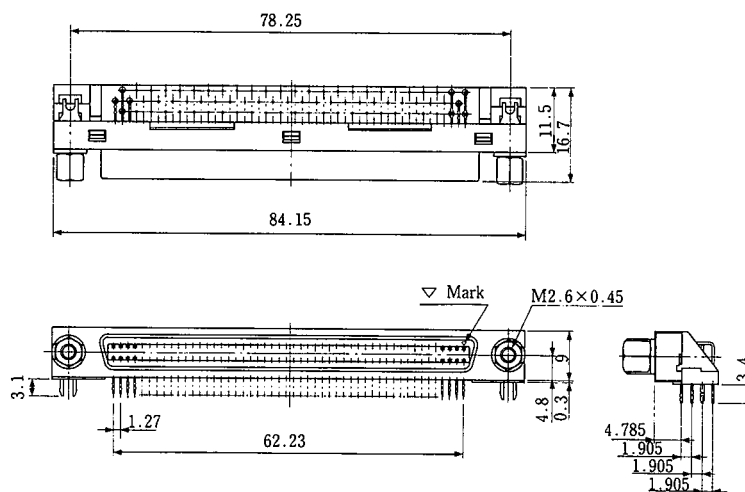
### Material Treatment

| Item            | Material     | Remarks                |
|-----------------|--------------|------------------------|
| Receptacle case | Steel        | Nickel plating         |
| Insulator       | PBT resin    | Black (UL94V-0)        |
| Female terminal | Copper alloy | Selective gold plating |
| Ferrite core    | —            | —                      |

### 9.1 Right Angle Ferrite Core Type

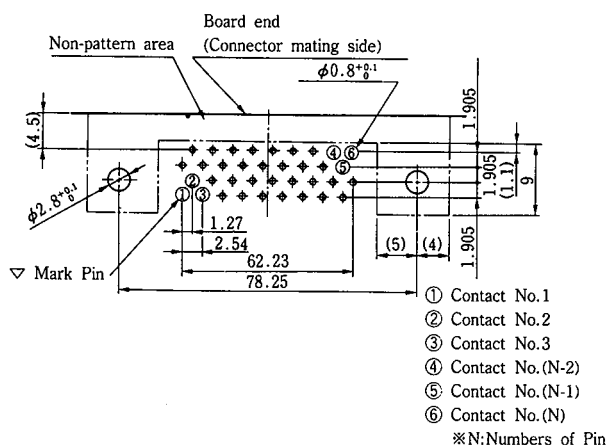


CL230-5127-7  
DX10AMF-100SE1

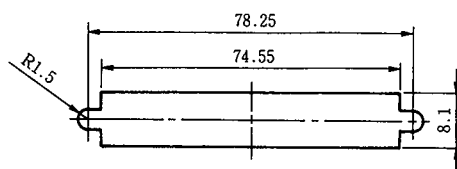


### PCB Layout

(Recommended Board Thickness:1.6mm)



### Panel-Fitting Dimensional Drawing



#### ●DX10AMF

|                 |
|-----------------|
| Panel thickness |
| t0.8~1.2        |

## 10. Screw Lock Receptacle SMT Type

### Ordering Information

DX 10 A M S - 100 S T6

(1) (2) (3) (1) (4) (5) (6) (7)

1) Series No.: DX--M

2) Connector style

10: Right angle type

3) Lock style

A: Receptacle case material, Steel

4) Board mounting style

S: SMT type

5) No. of pins: 100

6) Mating type

S: Receptacle

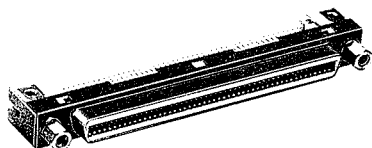
7) Board-thickness

T6: Board thickness 1.6mm

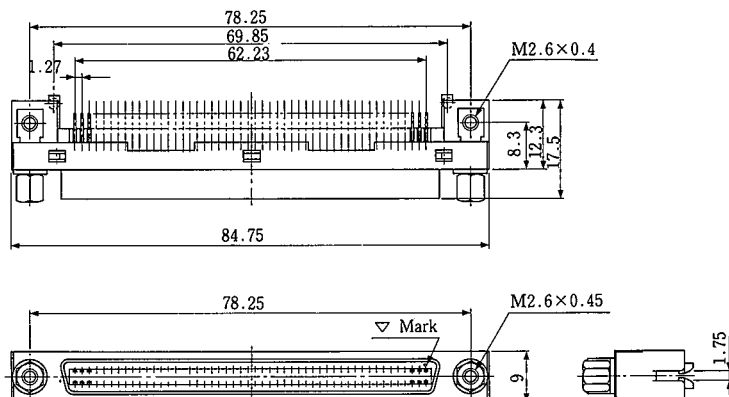
### Material Treatment

| Item            | Material     | Remarks                |
|-----------------|--------------|------------------------|
| Receptacle case | Steel        | Nickel plating         |
| Insulator       | PPS          | Natural                |
| Female terminal | Copper alloy | Selective gold plating |

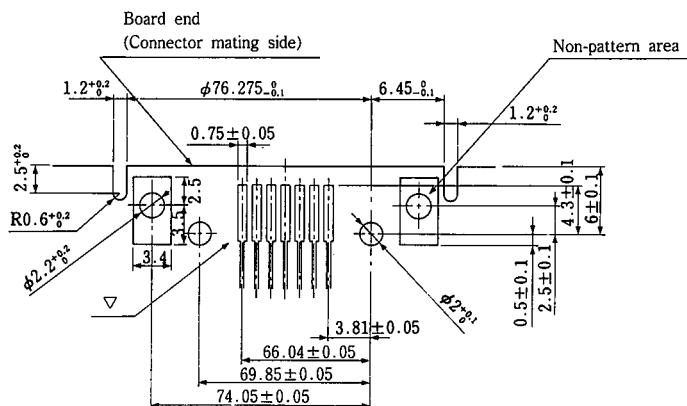
### 10.1 Receptacle SMT Type



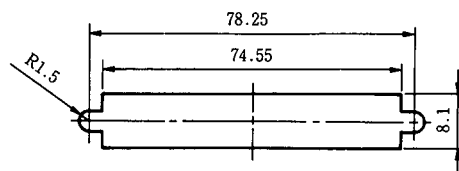
CL230-5126-4  
DX10AMS-100ST6



### PCB Layout



### Panel-Fitting Dimensional Drawing



●DX10AMS

|                 |
|-----------------|
| Panel thickness |
| t0.8~1.2        |

## 11. Screw Lock Receptacle Straight Type

### Ordering Information

|     |     |     |     |   |     |     |
|-----|-----|-----|-----|---|-----|-----|
| DX  | 20  | B   | M   | — | 80  | S   |
| (1) | (2) | (3) | (1) |   | (4) | (5) |

- 1) Series No.: DX--M
- 2) Connector style  
20: Straight dip
- 3) Lock style  
B: Screw lock type

4) No. of pins: 68, 80, 100

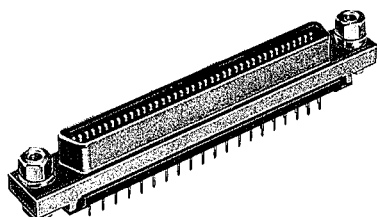
5) Mating type

S: Receptacle

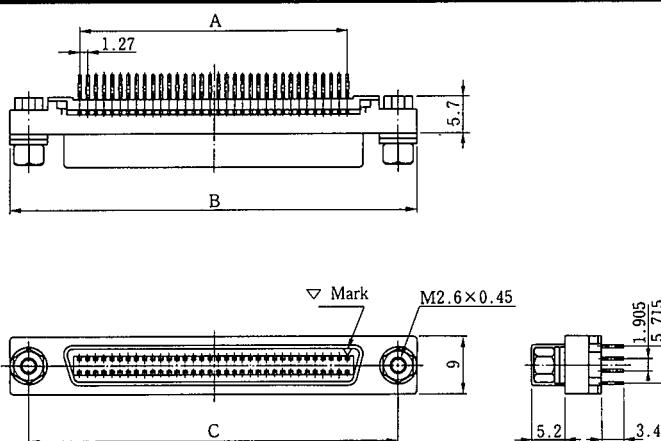
### Material Treatment

| Item            | Material            | Remarks                |
|-----------------|---------------------|------------------------|
| Receptacle case | Zinc alloy die cast | Nickel plating         |
| Shell           | Steel               | Nickel plating         |
| Insulator       | PBT resin           | Black (UL94V-0)        |
| Female terminal | Copper alloy        | Selective gold plating |

### 11.1 Receptacle Straight Type



CL230-5021-6  
DX20BM-80S



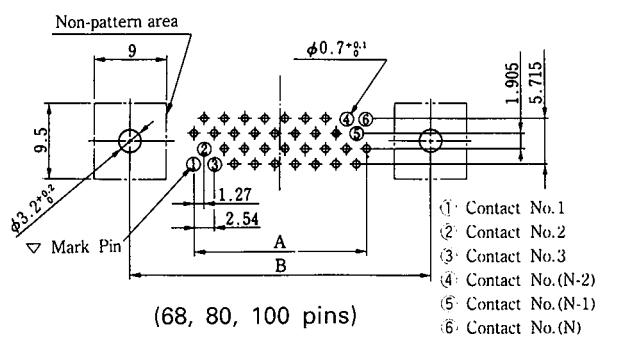
Unit: mm

| HRS No.      | No. of Pin | Part No.    | A     | B     | C     |
|--------------|------------|-------------|-------|-------|-------|
| CL230-5020-3 | 68         | DX20BM-68S  | 41.91 | 63.83 | 57.93 |
| CL230-5021-6 | 80         | DX20BM-80S  | 49.53 | 71.45 | 65.55 |
| CL230-5022-9 | 100        | DX20BM-100S | 62.23 | 84.15 | 78.25 |

### PCB Layout

(Recommended Board Thickness:1.6mm)

### Panel-Fitting Dimensional Drawing



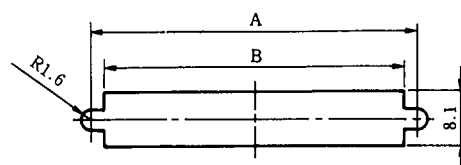
(68, 80, 100 pins)

Unit (mm)

| No. of Pin | A     | B     |
|------------|-------|-------|
| 68         | 41.91 | 57.93 |
| 80         | 49.53 | 65.55 |
| 100        | 62.23 | 78.25 |

#### • DX20BM

| Panel thickness | No. of washers |
|-----------------|----------------|
| 0~t0.4          | 2              |
| t0.8~1.2        | 1              |
| t1.6~2          | No washer      |



Unit (mm)

| No. of Pin | A     | B     |
|------------|-------|-------|
| 68         | 57.93 | 54.23 |
| 80         | 65.55 | 61.85 |
| 100        | 78.25 | 74.55 |

## 12. Screw Lock Receptacle, Flat Ribbon Cable Type

### Ordering Information

DX 33 A M — 68 S LNA

(1) (2) (3) (1) (4) (5) (6)

- 1) Series No.: DX--M
- 2) Connector style  
33: Flat IDC type (for ribbon cable)
- 3) Applicable wire  
A: AWG #28
- 4) No. of pins: 68

5) Mating type

S: Receptacle

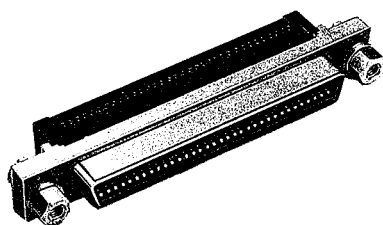
6) Board fitting type

LNA: Screw lock type

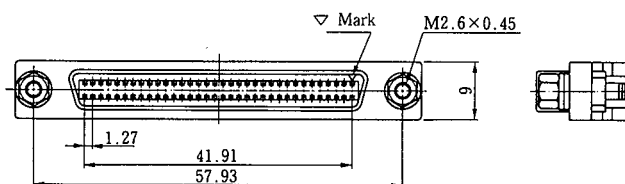
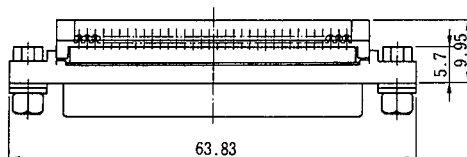
### Material Treatment

| Item            | Material            | Remarks                |
|-----------------|---------------------|------------------------|
| Receptacle case | Zinc alloy die cast | Nickel plating         |
| Shell           | Steel               | Nickel plating         |
| Insulator       | PBT resin           | Black (UL94V-0)        |
| Female terminal | Copper alloy        | Selective gold plating |

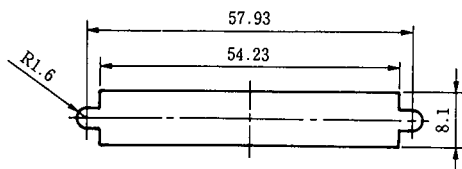
### 12.1 Receptacle, Flat Ribbon Cable Type



CL230-5078-3  
DX33AM-68S-LNA



### Panel-Fitting Dimensional Drawing



#### ● DX33AM

| Panel thickness | No. of washers |
|-----------------|----------------|
| 0~t0.4          | 2              |
| t0.8~1.2        | 1              |
| t1.6~2          | No washer      |

## 13. Plug Straight Type

### Ordering Information

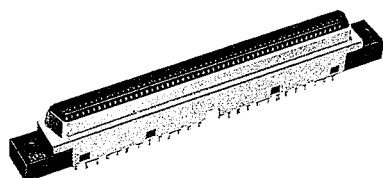
|     |     |     |   |     |     |
|-----|-----|-----|---|-----|-----|
| DX  | 20E | M   | — | 110 | P   |
| (1) | (2) | (1) |   | (3) | (4) |

- 1) Series No.: DX--M                      3) No. of pins: 110  
 2) Connector style                      4) Mating type  
     20E: Straight dip                      P: Plug

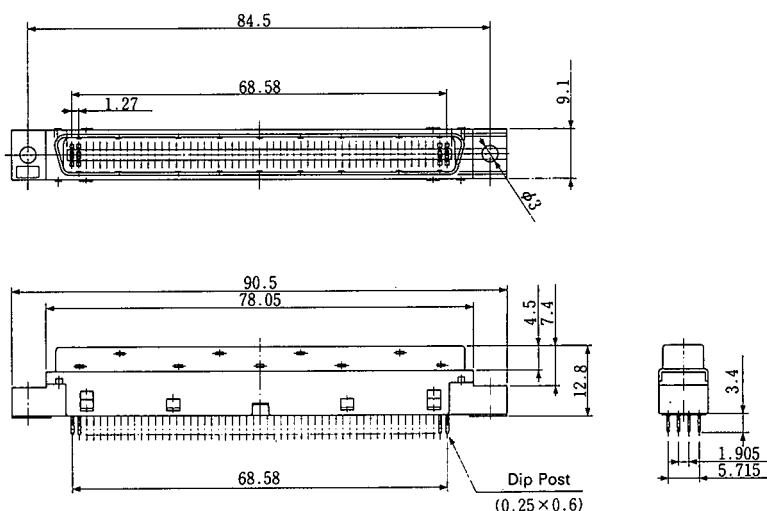
### Material Treatment

| Item         | Material     | Remarks                |
|--------------|--------------|------------------------|
| Shell        | Steel        | Nickel plating         |
| Insulator    | PBT resin    | Black (UL94V-0)        |
| Male contact | Copper alloy | Selective gold plating |

### 13.1 Plug Straight Type

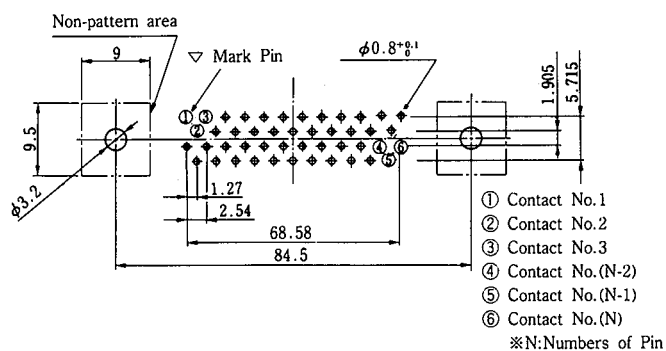


CL230-5094-0  
DX20EM-110P



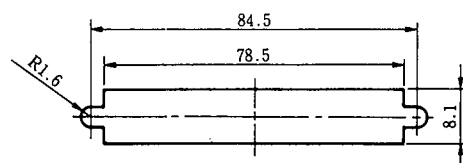
### PCB Layout

(Recommended Board Thickness: 1.5mm)



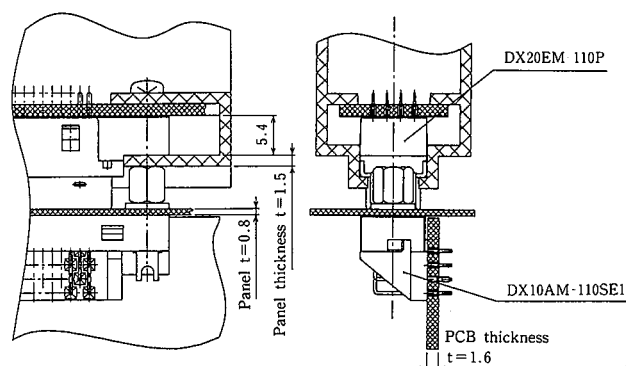
### Panel-Fitting Dimensional Drawing

(Recommended Panel Thickness: Max.1.5mm)



### Diagram of Mounting Conditions for DX20EM

Note: Secure the connectors and boards of this product to the panel.



### List of Engagement Combinations

| Plug straight type | Receptacle right angle type    |
|--------------------|--------------------------------|
| DX20EM-110P        | DX10AM-110SE1 or DX10AM-110SE2 |

## 14. SCSI-compatible Terminator

### Ordering Information

DX70M — 50 P (TB) — CV ※  
 (1) (2) (3) (4) (5) (6)

- 1) Series No.: DX70M
- 2) No. of contacts : 50
- 3) Type of opening: P : Plug
- 4) Type of circuit  
 TB : Single end (Alternative 2)  
 TC : Sink current resistant type  
 Single end (Alternative 2) type (Note 1)
- 5) Type of plug case  
 CV : Over mold plug case
- 6) Logo mark for plug case (Note 2)  
 No mark : No logo provided  
 A : Logo provided (active term)

### Material/Finish

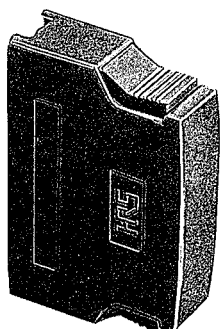
| Item         | Material        | Remarks                        |
|--------------|-----------------|--------------------------------|
| Shell        | Steel           | Nickel plated                  |
| Male contact | Copper alloy    | Part gold plated               |
| Insulation   | Synthetic resin | Plug case, button: Light beige |
|              |                 | Plug unit: Black (UL94V-0)     |

### Characteristics

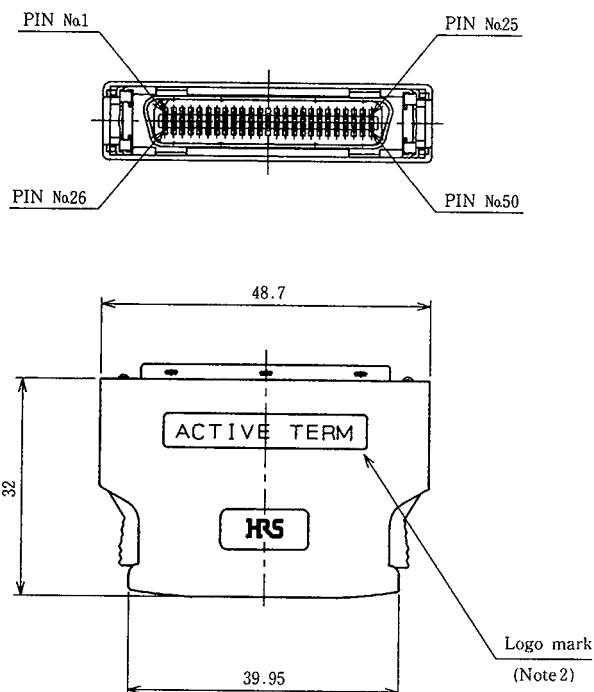
| Item                        | Characteristics |
|-----------------------------|-----------------|
| Operating voltage           | DC 4.25~5.25 V  |
| Operating temperature range | 0°C~+50°C       |

Note 1: Resistant to a sink current of up to 150 mA

### 14.1 Terminator

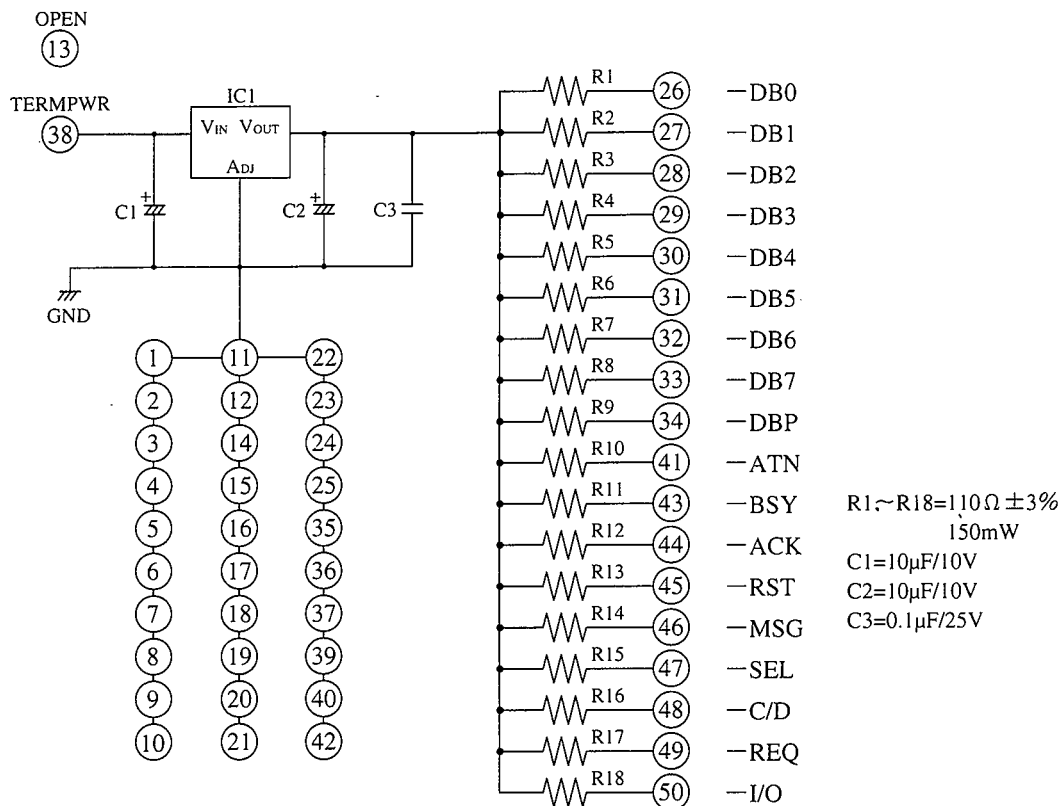


CL230-5195-7  
DX70M-50P(TB)-CV

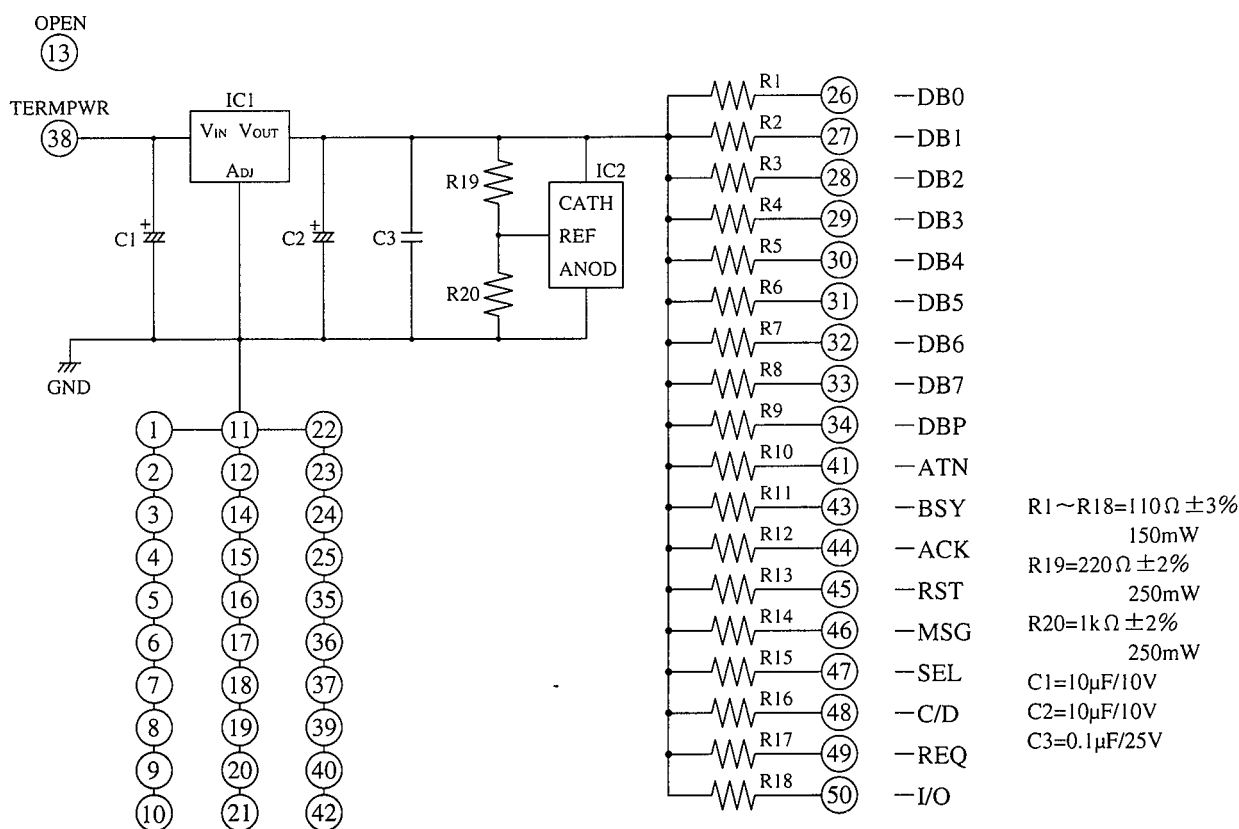


## Circuit Diagram

### Single end (Alternative 2) Type

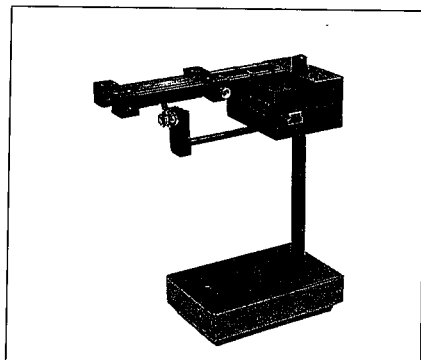


### Sink-Current-Resistant Single end (Alternative) Type

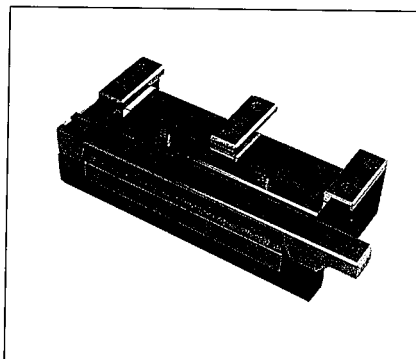


## Connecting Method (Discrete Cable IDC Type)

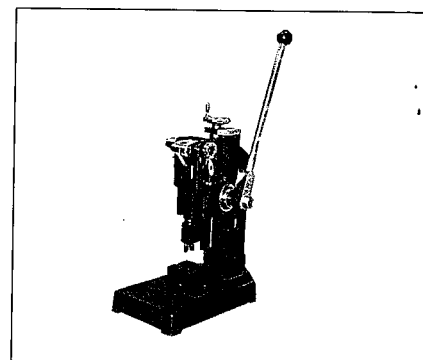
### • Connecting Tools



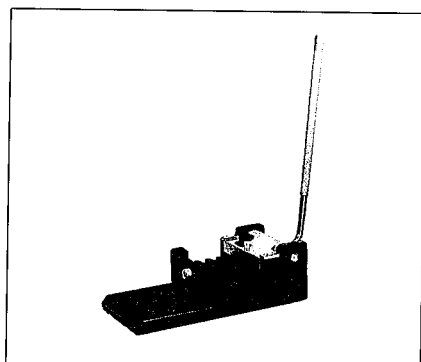
Cable distribution jig



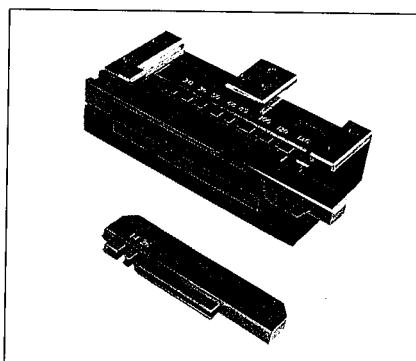
Cable shearing unit



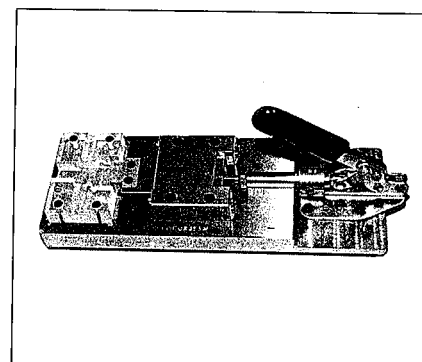
Shield case fixing jig



IDC press



IDC guide plate unit



Hood insertion jig

### List of Connecting Jigs and Accessories Plug Connector

| Cable                        | Connector Name | Process                                |                            |                            |                            |                             |                                 |                                 |                                 |
|------------------------------|----------------|----------------------------------------|----------------------------|----------------------------|----------------------------|-----------------------------|---------------------------------|---------------------------------|---------------------------------|
|                              |                | Cable Distribution                     | Remaining part cutting     |                            | Crimping                   |                             | Shield case fixing              | Hood insertion                  |                                 |
|                              |                |                                        | Press                      | Unit                       | Press                      | Remaining Part cutting      |                                 |                                 |                                 |
| I/O Cable<br>(Discrete wire) | DX30AM-14P     | By hand<br>DX30AM-CAT1<br>CL902-2090-0 | DX30AM-HP1<br>CL902-0210-0 | DX30AM-CU1<br>CL902-0211-2 | DX30AM-HP1<br>CL902-0210-0 | DX30AM-GPT1<br>CL902-0214-0 | Order attachments separately ※1 | Order attachments separately ※2 |                                 |
|                              | DX30AM-20P     |                                        |                            |                            |                            |                             | DX30AM-CCT1<br>CL902-0213-8     | DX30AM-HPT1<br>CL902-0216-6     |                                 |
|                              | DX30AM-26P     |                                        |                            |                            |                            |                             |                                 |                                 |                                 |
|                              | DX30AM-36P     | Semi-Auto machine<br>SA200/DX30AM      |                            |                            |                            |                             |                                 |                                 |                                 |
|                              | DX30AM-50P     |                                        |                            |                            |                            |                             |                                 |                                 |                                 |
|                              | DX30AM-68P     | Automatic machine<br>AM200/DX30        |                            |                            |                            |                             |                                 |                                 |                                 |
|                              | DX30AM-80P     |                                        |                            |                            |                            |                             |                                 |                                 |                                 |
|                              | DX30AM-100P    |                                        |                            |                            |                            |                             |                                 |                                 |                                 |
|                              | DX30AM-110P    | CL903-0030-4                           |                            |                            |                            |                             |                                 |                                 | Order attachments separately ※3 |

※1 DX30AM-CCT1(61) CL902-0213-8(61)  
DX30AM-CCT1(62) CL902-0213-8(62)

※2 DX30AM-HPT1-14 CL902-0217-9  
※3 DX30AM-HPT1-100 CL902-0218-1

※4 DX30AM-HPT1-110 CL902-0219-4

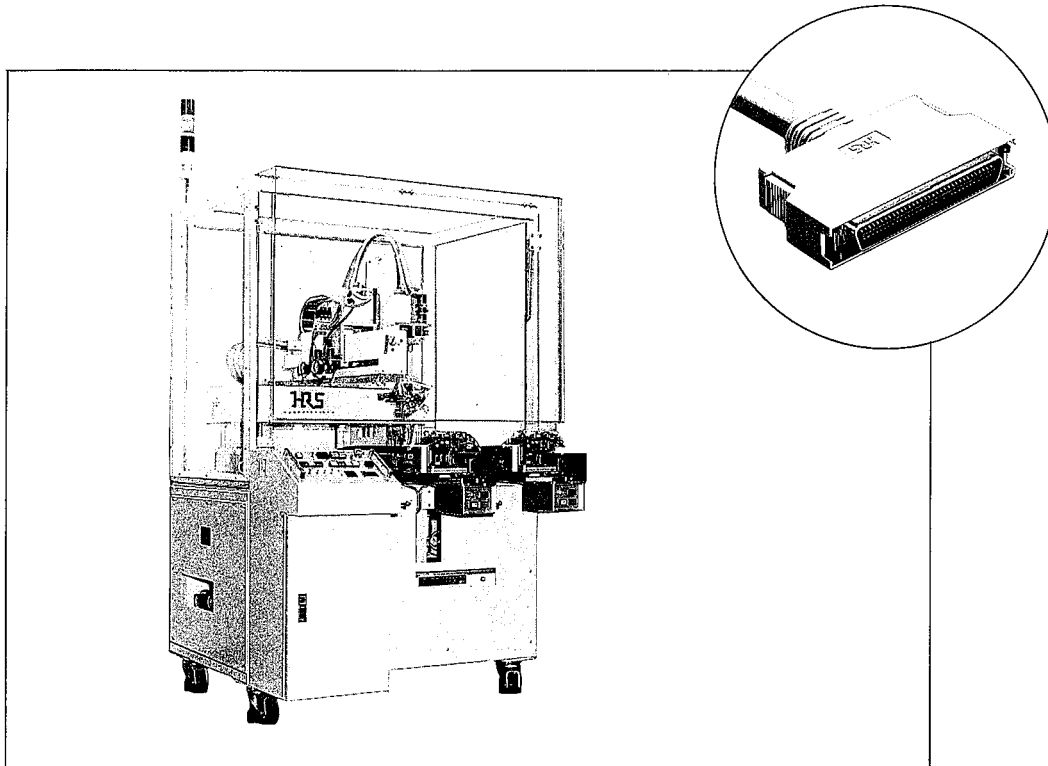
### Receptacle Connector

| Cable        | Connector Name | Press                                               | Guide plate                                               |
|--------------|----------------|-----------------------------------------------------|-----------------------------------------------------------|
| Ribbon Cable | DX33AM-68S-LNA | Hi-Flex Connecting press<br>HHP-502<br>CL550-0082-2 | DX33AM-GPA<br>(Comes with pressure block)<br>CL902-0233-5 |

# FOR DX. DXM SERIES 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 <sup>2</sup>                                                                          |
| 3. Dimensions and weight of the main unit | 1,100mm W × 1,150mm D × 1,720mm H<br>(not including circular indicating lamp)<br>Weight 400kg |
| 4. Cables to be used                      | AWG #28 (0.58mm φ)                                                                            |