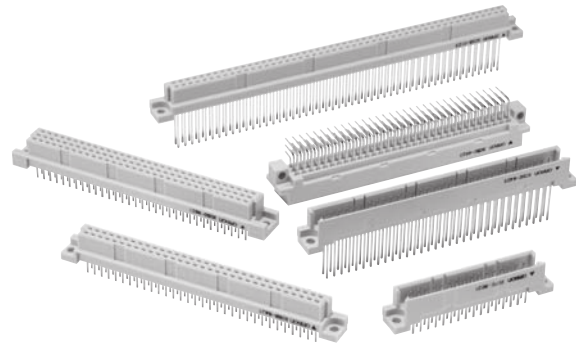


A Wide Variety of DIN Connectors That Conform to UL/CSA Standards.

- Fully preserve the characteristics of normal DIN connectors while increasing the number of terminals available.
- A wide product range to fit almost any application.
- Meeting world market needs with products ranging from one-piece connectors (card edge) to two-piece connectors.
- Use the twin-contact system for high reliability.
- Lower insertion force as a result of FEM analysis techniques.
- See the "Standards certification / conformity list" for information on conformity to certification standards.



RoHS Compliant

■ Ratings and Characteristics

| | |
|-------------------------------|--------------------------------------------------|
| Rated current | 2 A |
| Rated voltage | 300 VAC |
| Contact resistance | 20 mΩ max. (at 20 mV, 100 mA max.) |
| Insulation resistance | 10 ⁶ MΩ min. (at 100 VDC) |
| Dielectric strength | 1,000 VAC for 1 min (leakage current: 1 mA max.) |
| Total insertion force | 0.59 N max. per contact |
| Removal force | 0.15 N min. (with test gauge, t = 0.56 mm) |
| Insertion durability | 200 times |
| Ambient operating temperature | -55 to 125°C (with no icing at low temperature) |

■ Materials and Finish

| Item | | Plugs (See note 2.) | Sockets |
|----------|------------|------------------------------------------------------|----------------------------------------------------------------|
| Housings | | Fiber-glass reinforced PBT resin (UL94 V-0)/gray | |
| Contacts | Mating end | Brass/nickel base, 0.4-μm gold plating (See note 1.) | Phosphor bronze/nickel base, 0.4-μm gold plating (See note 1.) |
| | Terminal | Brass/nickel base, 2.0-μm tin plating | Phosphor bronze/nickel base, 2.0-μm tin plating |

- Note:**
1. For non-standard plating specifications, contact your OMRON representative.
 2. Wrap terminal contacts are made from phosphor bronze.

■ Applicable Wrap Post Wire Sizes

AWG30, AWG28, AWG26, or AWG24
(Solid wire: 0.25 to 0.51 mm dia.)

■ Wrap Post Length

3 wires

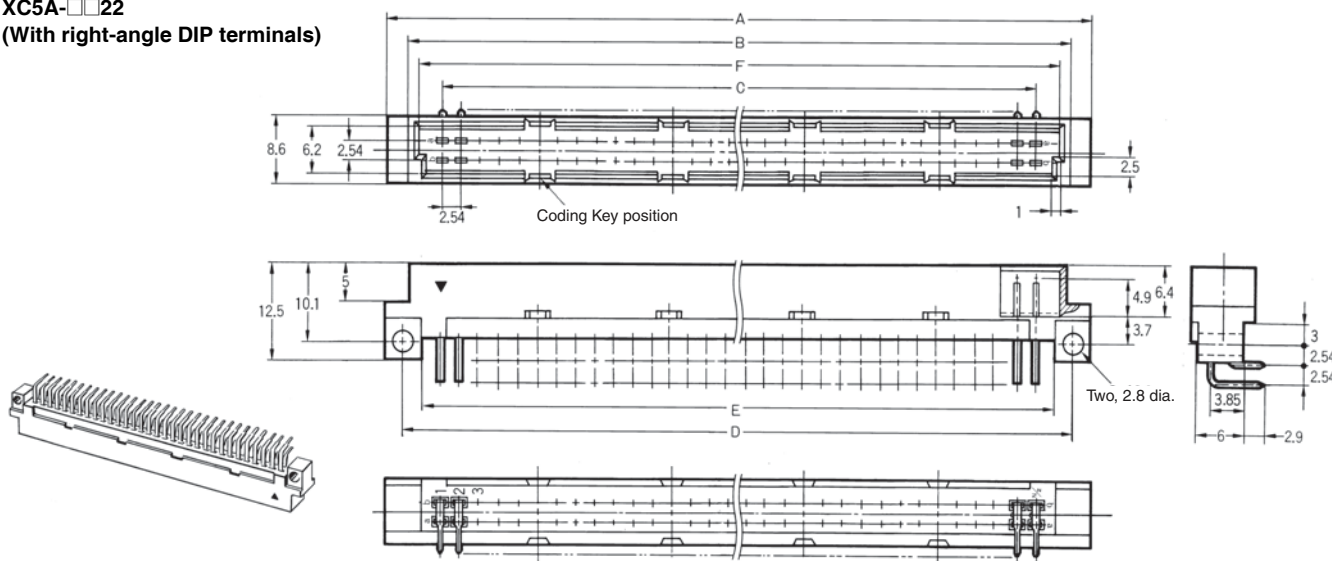
XC5A Double-row Plugs, DIN B-type (Standard)

■ Dimensions

(unit: mm)

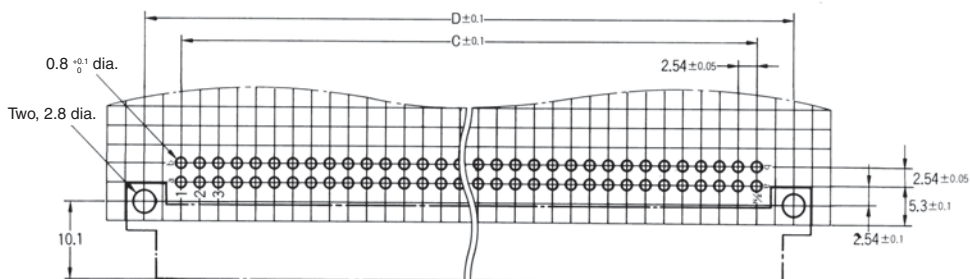
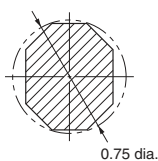
XC5A-□□22

(With right-angle DIP terminals)



XC5A
DIP terminal cross-section view

Mounting holes (bottom view)



Dimensions

| No. of contacts | Dimensions (mm) | | | | | | Coding Key positions (contact No.) |
|-----------------|-----------------|-------|--------|--------|-------|-------|------------------------------------|
| | A | B | C | D | E | F | |
| 20 | 37.9 | 32.1 | 22.86 | 33.02 | 28.1 | 29.3 | 3, 8 |
| 32 | 53.2 | 47.4 | 38.10 | 48.26 | 43.3 | 44.6 | 5, 12 |
| 44 | 68.4 | 62.6 | 53.34 | 63.50 | 58.5 | 59.8 | 4, 9, 14, 19 |
| 50 | 76.0 | 70.2 | 60.96 | 71.12 | 66.2 | 67.4 | 5, 10, 16, 21 |
| 64 | 93.8 | 88.0 | 78.74 | 88.90 | 83.9 | 85.2 | 6, 13, 20, 27 |
| 100 | 139.5 | 133.7 | 124.46 | 134.62 | 129.7 | 130.9 | 10, 20, 31, 41 |

■ Ordering Information

| No. of contacts | Terminal type | Model |
|-----------------|---------------------------|-----------|
| 20* | Right-angle DIP terminals | XC5A-2022 |
| 32 | | XC5A-3222 |
| 44* | | XC5A-4422 |
| 50* | | XC5A-5022 |
| 64 | | XC5A-6422 |
| 100* | | XC5A-0122 |

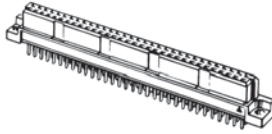
*Marked items have an increased number of contacts while following DIN standards.

XC5B Double-row Sockets, DIN B-type (Standard)

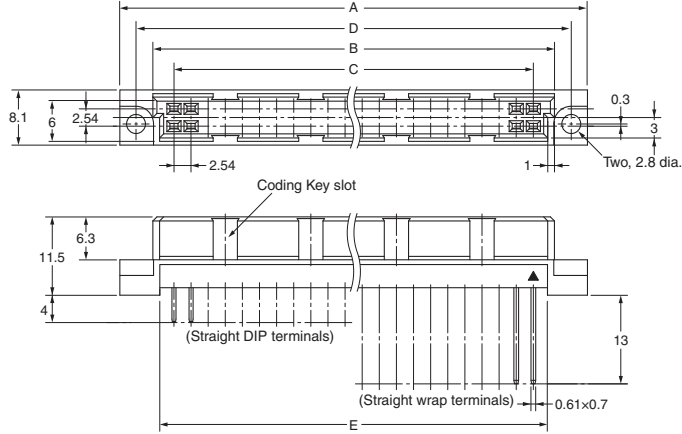
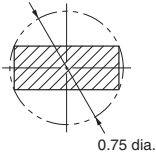
■ Dimensions

(unit: mm)

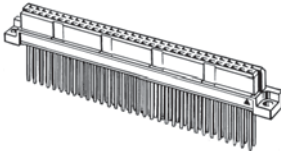
XC5B-□□21
(With straight DIP terminals)



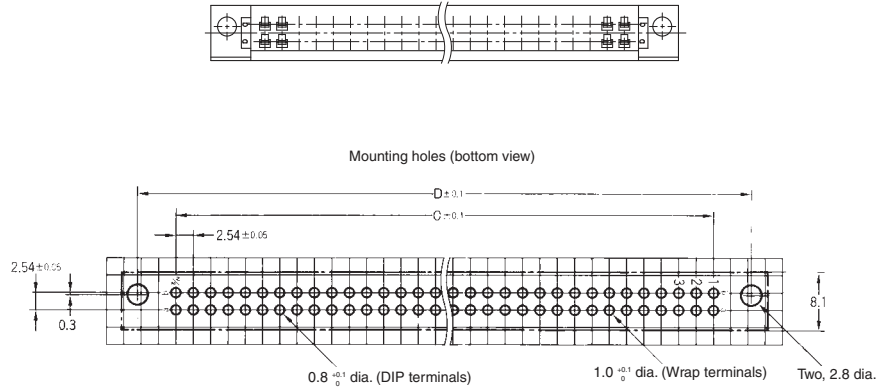
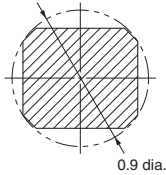
XC5B
DIP terminal cross-section view



XC5B-□□23
(With straight wrap terminals)



XC5B
Wrap terminal cross-section view



Dimensions

| No. of contacts | Dimensions (mm) | | | | | Coding Key slot positions (contact No.) |
|-----------------|-----------------|-------|--------|--------|-------|-----------------------------------------|
| | A | B | C | D | E | |
| 20 | 38.9 | 29.1 | 22.86 | 34.12 | 27.1 | 3, 8 |
| 32 | 54.2 | 44.4 | 38.10 | 49.36 | 42.3 | 5, 12 |
| 44 | 69.4 | 59.6 | 53.34 | 64.60 | 57.5 | 4, 9, 14, 19 |
| 50 | 77.0 | 67.2 | 60.96 | 72.22 | 65.2 | 5, 10, 16, 21 |
| 64 | 94.8 | 85.0 | 78.74 | 90.00 | 82.9 | 6, 13, 20, 27 |
| 100 | 140.5 | 130.7 | 124.46 | 135.72 | 128.7 | 10, 20, 31, 41 |

■ Ordering Information

| No. of contacts | Straight DIP terminals | Straight wrap terminals |
|-----------------|------------------------|-------------------------|
| | Model | Model |
| 20* | XC5B-2021 | XC5B-2023 |
| 32 | XC5B-3221 | XC5B-3223 |
| 44* | XC5B-4421 | XC5B-4423 |
| 50* | XC5B-5021 | XC5B-5023 |
| 64 | XC5B-6421 | XC5B-6423 |
| 100* | XC5B-0121 | XC5B-0123 |

*Marked items have an increased number of contacts while following DIN standards.

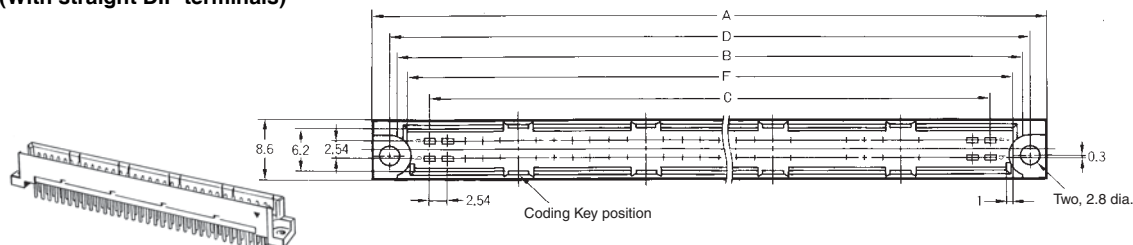
XC5E Double-row Plugs, DIN Q-type (Reverse)

■ Dimensions

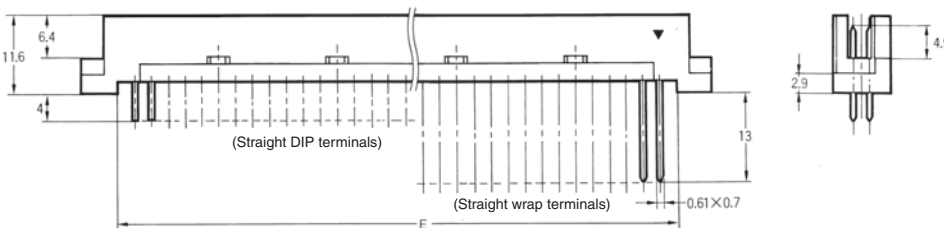
(unit: mm)

XC5E-□□21

(With straight DIP terminals)

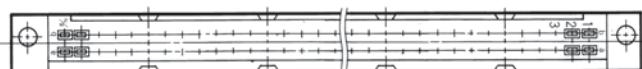
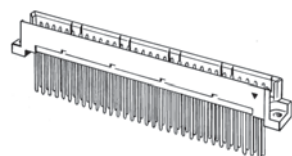


XC5E
DIP terminal cross-section
view

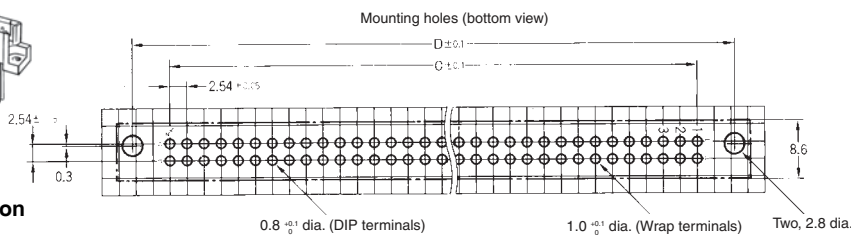
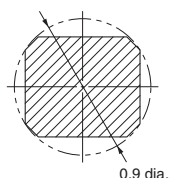


XC5E-□□23

(With straight wrap terminals)



XC5E
Wrap terminal cross-section
view



Dimensions

| No. of contacts | Dimensions (mm) | | | | | | Coding Key positions (contact No.) |
|-----------------|-----------------|-------|--------|--------|-------|-------|------------------------------------|
| | A | B | C | D | E | F | |
| 20 | 38.9 | 32.1 | 22.86 | 34.12 | 28.1 | 29.3 | 3, 8 |
| 32 | 54.2 | 47.4 | 38.10 | 49.36 | 43.3 | 44.6 | 5, 12 |
| 44 | 69.4 | 62.6 | 53.34 | 64.60 | 58.5 | 59.8 | 4, 9, 14, 19 |
| 50 | 77.0 | 70.2 | 60.96 | 72.22 | 66.2 | 67.4 | 5, 10, 16, 21 |
| 64 | 94.8 | 88.0 | 78.74 | 90.00 | 83.9 | 85.2 | 6, 13, 20, 27 |
| 100 | 140.5 | 133.7 | 124.46 | 135.72 | 129.7 | 130.9 | 10, 20, 31, 41 |

■ Ordering Information

| No. of contacts | Straight DIP terminals | Straight wrap terminals |
|-----------------|------------------------|-------------------------|
| | Model | Model |
| 20* | XC5E-2021 | XC5E-2023 |
| 32 | XC5E-3221 | XC5E-3223 |
| 44* | XC5E-4421 | XC5E-4423 |
| 50* | XC5E-5021 | XC5E-5023 |
| 64 | XC5E-6421 | XC5E-6423 |
| 100* | XC5E-0121 | XC5E-0123 |

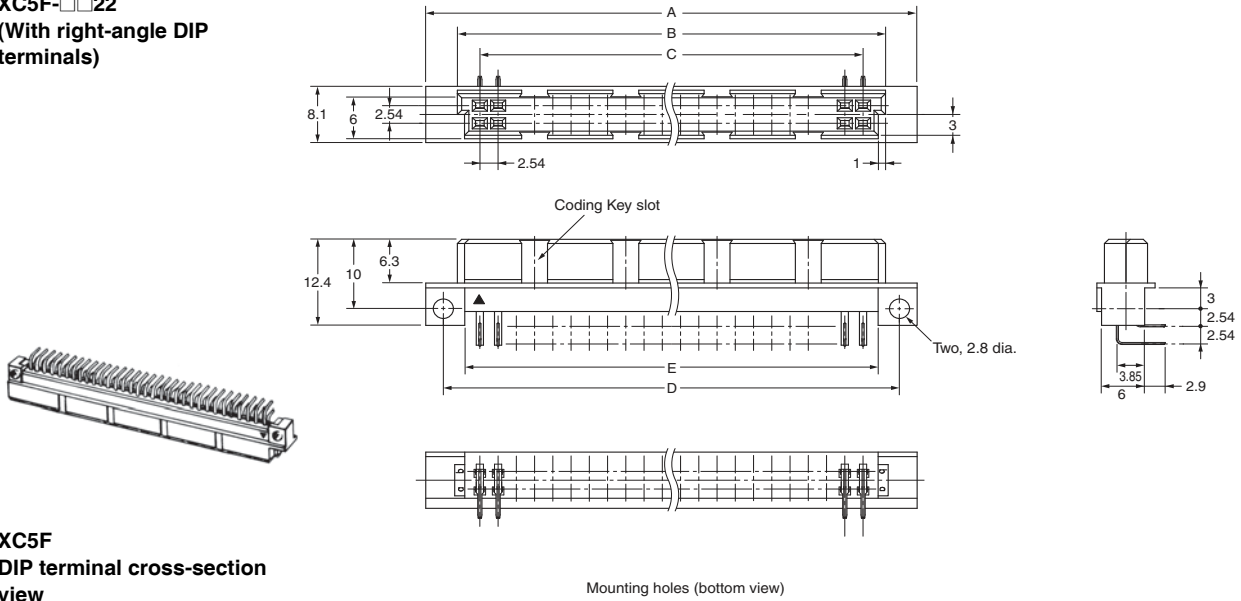
*Marked items have an increased number of contacts while following DIN standards.

XC5F Double-row Sockets, DIN Q-type (Reverse)

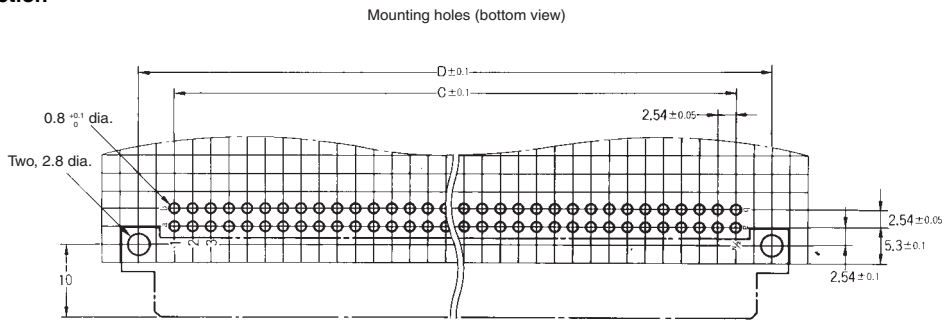
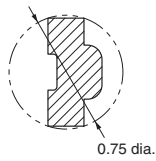
■ Dimensions

(unit: mm)

XC5F-□□22
(With right-angle DIP terminals)



XC5F
DIP terminal cross-section view



Dimensions

| No. of contacts | Dimensions (mm) | | | | | Coding Key slot positions (contact No.) |
|-----------------|-----------------|-------|--------|--------|-------|-----------------------------------------|
| | A | B | C | D | E | |
| 20 | 37.9 | 29.1 | 22.86 | 33.02 | 27.1 | 3, 8 |
| 32 | 53.2 | 44.4 | 38.10 | 48.26 | 42.3 | 5, 12 |
| 44 | 68.4 | 59.6 | 53.34 | 63.50 | 57.5 | 4, 9, 14, 19 |
| 50 | 76.0 | 67.2 | 60.96 | 71.12 | 65.2 | 5, 10, 16, 21 |
| 64 | 93.8 | 85.0 | 78.74 | 88.90 | 82.9 | 6, 13, 20, 27 |
| 100 | 139.5 | 130.7 | 124.46 | 134.62 | 128.7 | 10, 20, 31, 41 |

■ Ordering Information

| No. of contacts | Terminal type | Model |
|-----------------|---------------------------|-----------|
| 20* | Right-angle DIP terminals | XC5F-2022 |
| 32 | | XC5F-3222 |
| 44* | | XC5F-4422 |
| 50* | | XC5F-5022 |
| 64 | | XC5F-6422 |
| 100* | | XC5F-0122 |

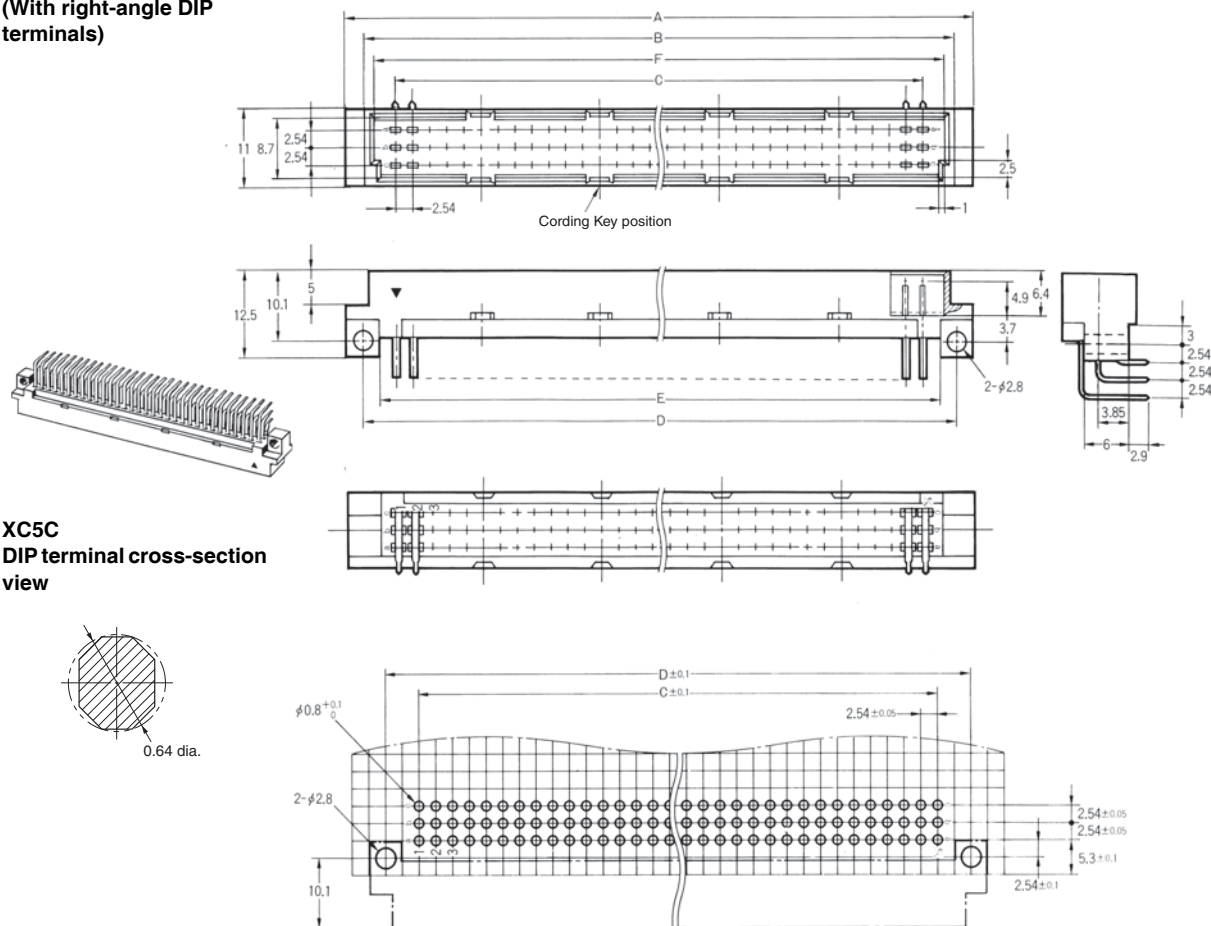
*Marked items have an increased number of contacts while following DIN standards.

XC5C Triple-row Plugs, DIN C-type (Standard)

■ Dimensions

(unit: mm)

XC5C-□□22
(With right-angle DIP terminals)



XC5C
DIP terminal cross-section
view

Dimensions

| No. of contacts | Dimensions (mm) | | | | | | Coding Key positions (contact No.) |
|-----------------|-----------------|------|-------|-------|------|------|------------------------------------|
| | A | B | C | D | E | F | |
| 32* | 53.2 | 47.4 | 38.10 | 48.26 | 43.3 | 44.6 | 5, 12 |
| 48 | 53.2 | 47.4 | 38.10 | 48.26 | 43.3 | 44.6 | 5, 12 |
| 64* | 93.8 | 88.0 | 78.74 | 88.90 | 83.9 | 85.2 | 6, 13, 20, 27 |
| 96 | 93.8 | 88.0 | 78.74 | 88.90 | 83.9 | 85.2 | 6, 13, 20, 27 |

*Has no center row (row b).

■ Ordering Information

| No. of contacts | Terminal type | Model |
|-----------------|---------------------------|-----------|
| 32* | Right-angle DIP terminals | XC5C-3222 |
| 48 | | XC5C-4822 |
| 64* | | XC5C-6422 |
| 96 | | XC5C-9622 |

*Has no center row (row b).

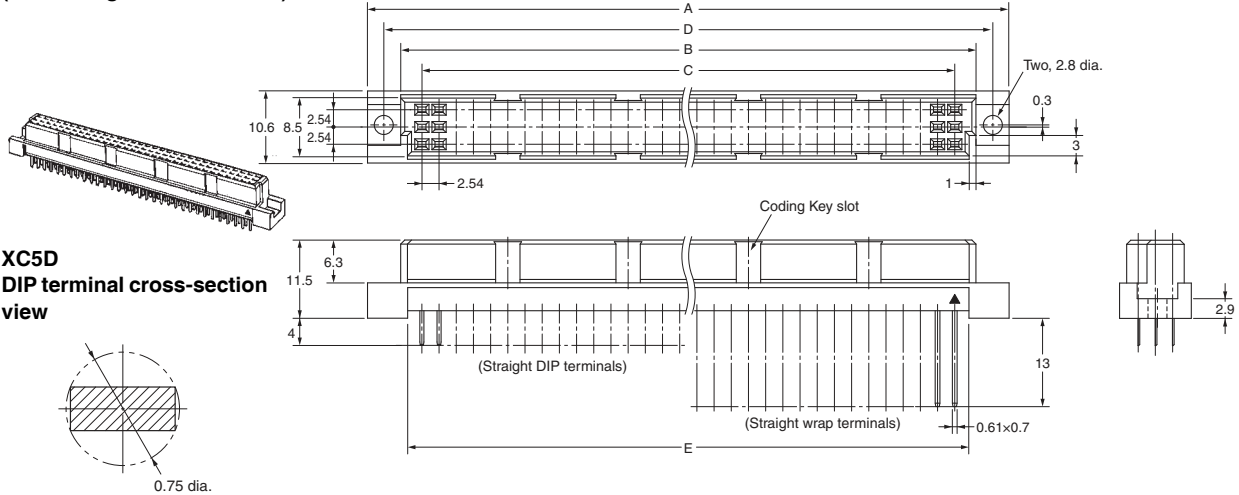
XC5D Triple-row Sockets, DIN C-type (Standard)

■ Dimensions

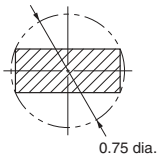
(unit: mm)

XC5D-□□21

(With straight DIP terminals)

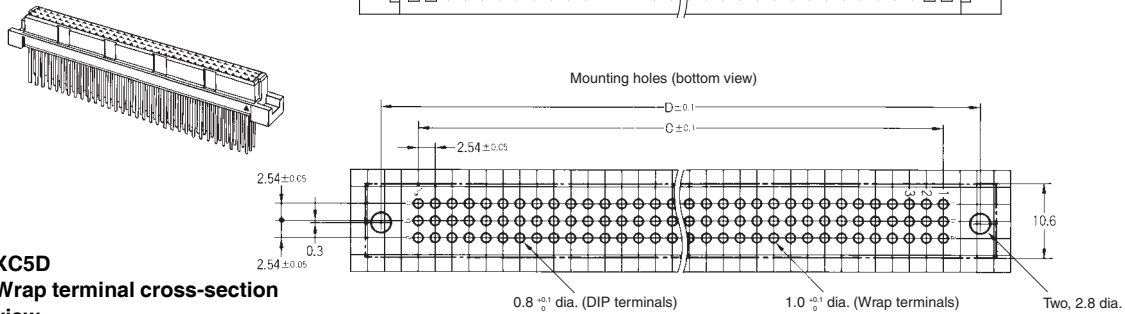


XC5D
DIP terminal cross-section
view

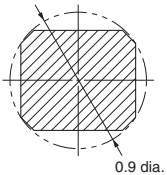


XC5D-□□23

(With straight wrap terminals)



XC5D
Wrap terminal cross-section
view



Dimensions

| No. of contacts | Dimensions (mm) | | | | | Coding Key slot positions (contact No.) |
|-----------------|-----------------|------|-------|-------|------|-----------------------------------------|
| | A | B | C | D | E | |
| 32* | 54.2 | 44.4 | 38.10 | 49.36 | 42.3 | 5, 12 |
| 48 | 54.2 | 44.4 | 38.10 | 49.36 | 42.3 | 5, 12 |
| 64* | 94.8 | 85.0 | 78.74 | 90.00 | 82.9 | 6, 13, 20, 27 |
| 96 | 94.8 | 85.0 | 78.74 | 90.00 | 82.9 | 6, 13, 20, 27 |

*Has no center row (row b).

■ Ordering Information

| No. of contacts | Straight DIP terminals | Straight wrap terminals |
|-----------------|------------------------|-------------------------|
| | Model | Model |
| 32* | XC5D-3221 | --- |
| 48 | XC5D-4821 | XC5D-4823 |
| 64* | XC5D-6421 | XC5D-6423 |
| 96 | XC5D-9621 | XC5D-9623 |

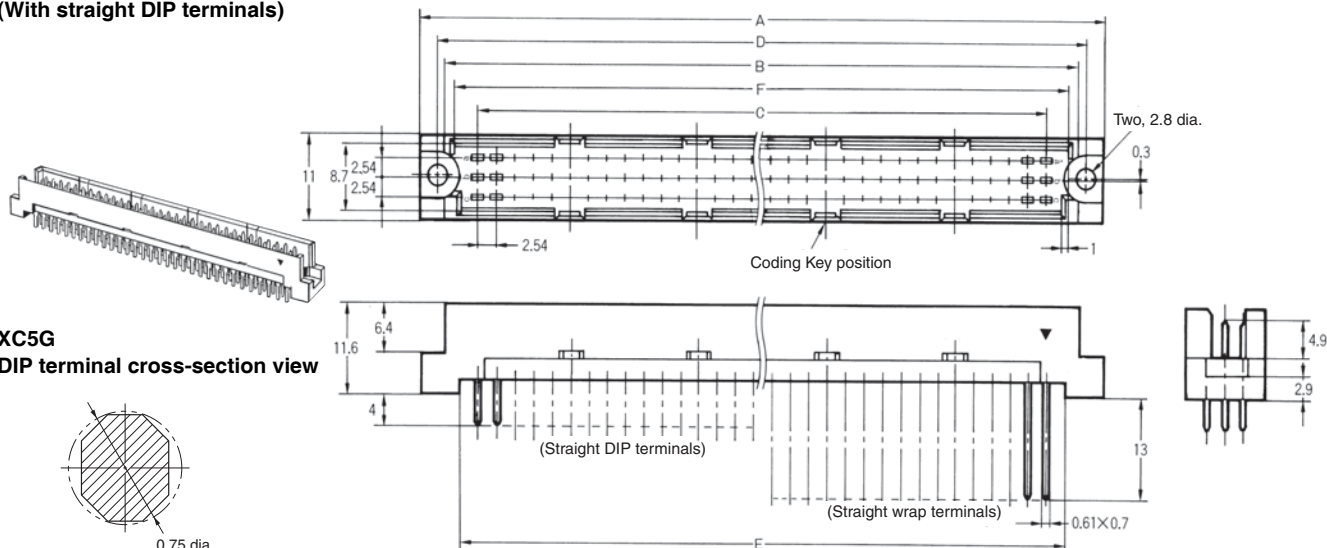
*Has no center row (row b).

XC5G Triple-row Plugs, DIN R-type (Reverse)

■ Dimensions

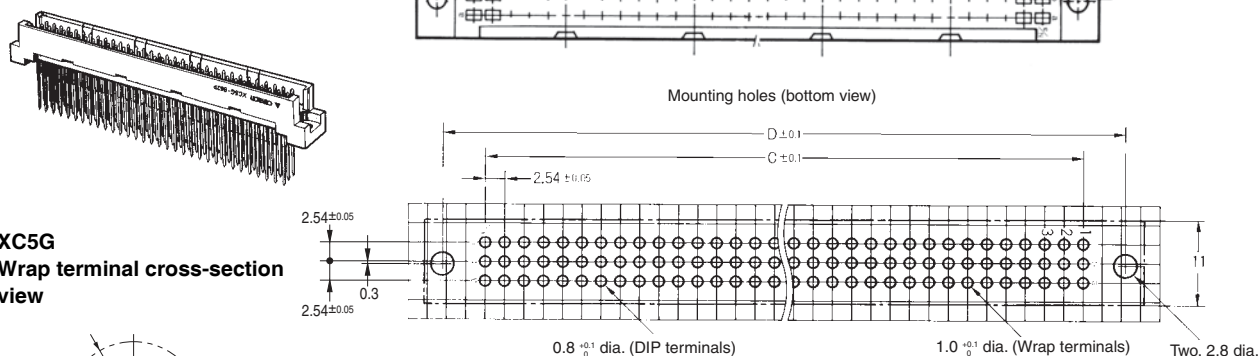
(unit: mm)

XC5G-□□21
(With straight DIP terminals)



XC5G
DIP terminal cross-section view

XC5D-□□23
(With straight wrap terminals)



XC5G
Wrap terminal cross-section view

Dimensions

| No. of contacts | Dimensions (mm) | | | | | | Coding Key positions (contact No.) |
|-----------------|-----------------|------|-------|-------|------|------|------------------------------------|
| | A | B | C | D | E | F | |
| 48 | 54.2 | 47.4 | 38.10 | 49.36 | 43.3 | 44.6 | 5, 12 |
| 64* | 94.8 | 88.0 | 78.74 | 90.00 | 83.9 | 85.2 | 6, 13, 20, 27 |
| 96 | 94.8 | 88.0 | 78.74 | 90.00 | 83.9 | 85.2 | 6, 13, 20, 27 |

*Has no center row (row b).

■ Ordering Information

| No. of contacts | Straight DIP terminals | Straight wrap terminals |
|-----------------|------------------------|-------------------------|
| | Model | Model |
| 48 | XC5G-4821 | XC5G-4823 |
| 64* | XC5G-6421 | XC5G-6423 |
| 96 | XC5G-9621 | XC5G-9623 |

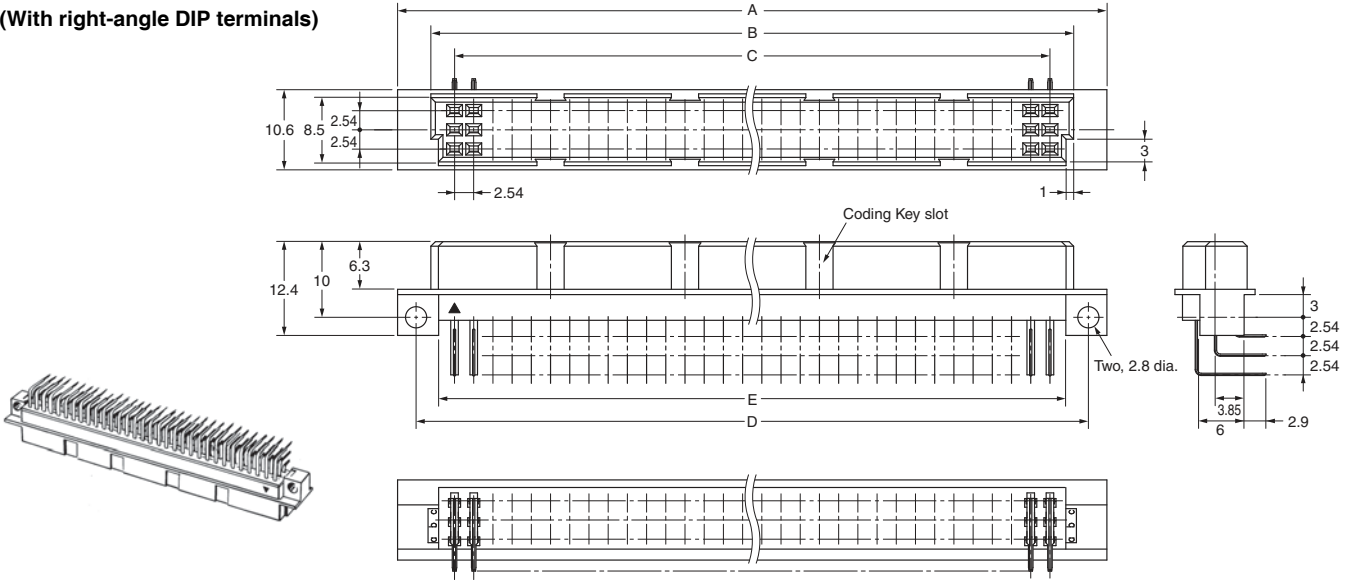
*Has no center row (row b).

XC5H Triple-row Sockets, DIN R-type (Reverse)

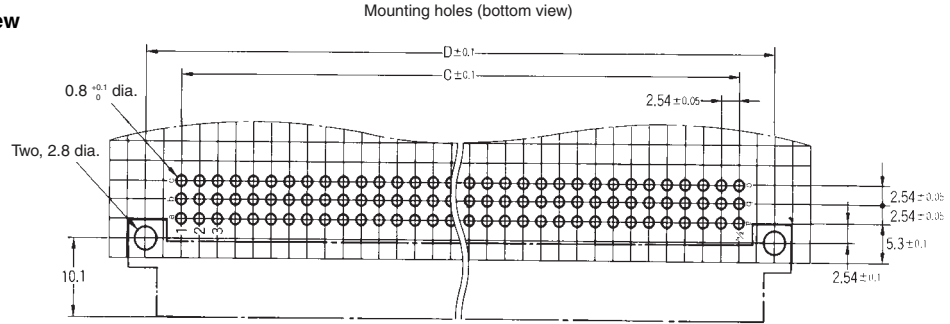
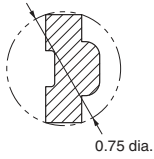
■ Dimensions

(unit: mm)

XC5H-□□22
(With right-angle DIP terminals)



XC5H
DIP terminal cross-section view



Dimensions

| No. of contacts | Dimensions (mm) | | | | | Coding Key slot positions (contact No.) |
|-----------------|-----------------|------|-------|-------|------|-----------------------------------------|
| | A | B | C | D | E | |
| 48 | 53.2 | 44.4 | 38.10 | 48.26 | 42.3 | 5, 12 |
| 64* | 93.8 | 85.0 | 78.74 | 88.90 | 82.9 | 6, 13, 20, 27 |
| 96 | 93.8 | 85.0 | 78.74 | 88.90 | 82.9 | 6, 13, 20, 27 |

*Has no center row (row b).

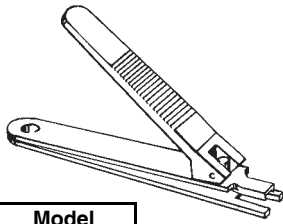
■ Ordering Information

| No. of contacts | Terminal type | Model |
|-----------------|---------------------------|-----------|
| 48 | Right-angle DIP terminals | XC5H-4822 |
| 64* | | XC5H-6422 |
| 96 | | XC5H-9622 |

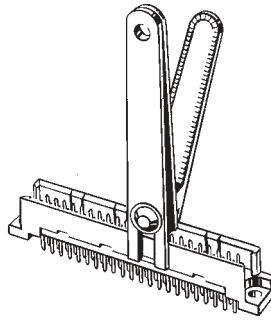
*Has no center row (row b).

■ Tools and Accessories (Sold Separately)

Coding Cutter XY2D-0001



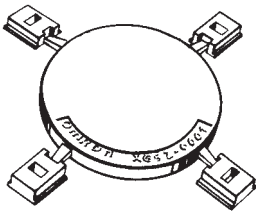
| |
|-----------|
| Model |
| XY2D-0001 |



1. Cut the Coding Key(s) in the slot in the plug housing wall with the special cutting tool (XY2D-0001).

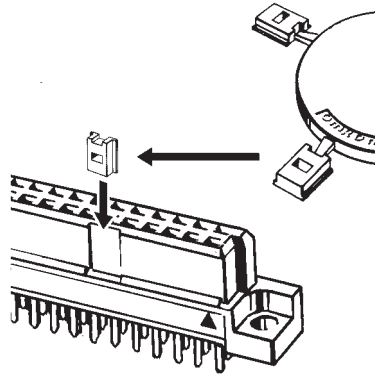
Note: Coding Cutters may not work with some DIN-style connector combinations. In that case, contact your OMRON representative.

Coding Key XC5Z-0001



Material: PBT resin (UL94HB)/white

| |
|-----------|
| Model |
| XC5Z-0001 |



2. Insert the special Coding Key (XC5Z-0001) into the Coding Key slots in the housing wall of the corresponding Socket.

Note: 1. Each XC5Z-0001 has four Coding Keys.
2. Coding Keys may not work with some DIN-style connector combinations. In that case, contact your OMRON representative.

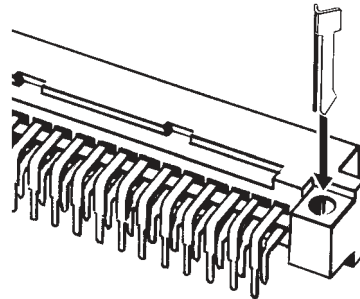
Temporary Fastening Pins XC5Z-0002

(For use with 1.6-mm boards)



Material: stainless steel

| |
|-----------|
| Model |
| XC5Z-0002 |



Fastening pins (XC5Z-0002) are used to keep the connector flush against the board during automated soldering.

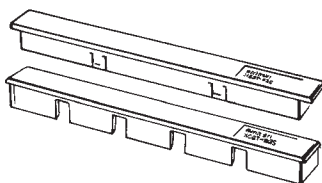
Note: 1. For the XC5A, XC5F, XC5C, and XC5H.
2. Temporary fastening pins cannot be used with DIN-style connectors.

Dust Cover XC5T-962

(For DIN41612 C- or R-type Triple-row Plugs with 64 or 96 contacts)

XC5T-963

(For DIN41612 C- or R-type Triple-row Sockets with 64 or 96 contacts)



| |
|----------|
| Model |
| XC5T-962 |
| XC5T-963 |

Material: Polyamide resin (UL94 V-2)/natural

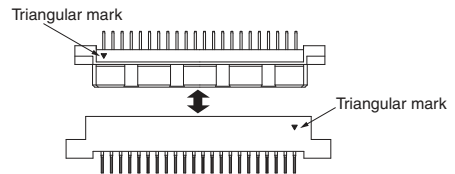
This is a dust-proof cover that is not used at the moment and not the one that protects against flux in automatic soldering.

Mating Diagrams

(unit: mm)

| | Vertical (Standard) | Vertical (Reverse) | Stacking (See note.) | Horizontal (See note.) |
|-----------------------|---------------------|--------------------|----------------------|------------------------|
| Double-row Connectors | | | | |
| Triple-row Connectors | | | | |

Note: By combining a Standard and a Reverse Connector, stacking and horizontal connections can be made. In this case, the triangular marks (terminal number 1) on the Plug and the Socket will not match.



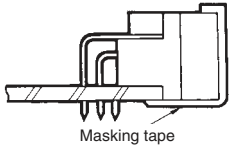
■ Precautions

Correct Use

Soldering

Automated Soldering

Use masking tape to mask Right-angle Connectors before automated soldering.



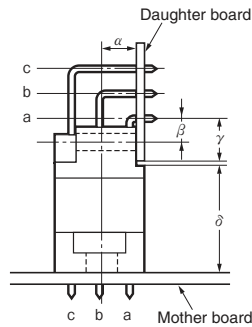
(Recommended tape: 3M Sumitomo #214)

Automated Soldering Conditions (Jet Flow)

1. Soldering temperature: $250 \pm 5^{\circ}\text{C}$
2. Continuous soldering time: Within 5 ± 1 s

Basic Mating Dimensions

Mating dimensions for all Connectors should be as shown in the following diagram.



α : 3.55 mm

The distance between the center line of the mounting holes on the mother board and the daughter board. (This center line is shifted 0.3 mm toward row a from row b.)

β : 2.54 mm

The distance between the mounting holes on the daughter board and row a.

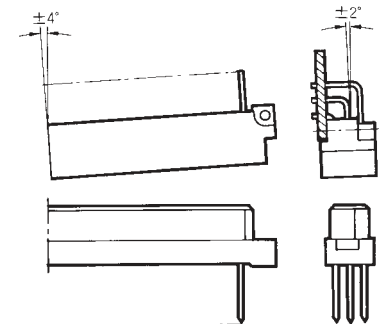
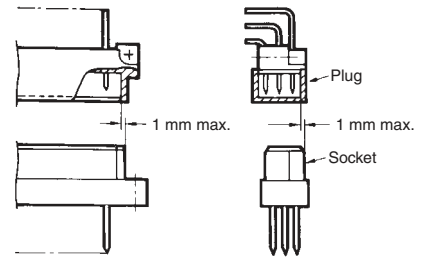
γ : 5.3 mm

The distance between the edge of the daughter board and row a.

δ : 12.4 to 14.2 mm

To ensure reliability, be sure to keep the Connectors within these dimensions when mounting.

The allowable margins for mating the Connectors are shown below.



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Cat. No. G049-E1-04
1021 (0412)