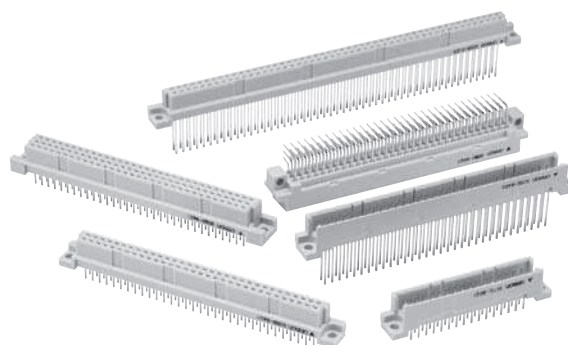


A Wide Variety of DIN Connectors That Conform to UL/CSA Standards.

- 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.
- Mates with OMRON's XC6-series connectors.
- Conform to UL standards (file no. E103202) and CSA standards (file no. LR 62678).



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

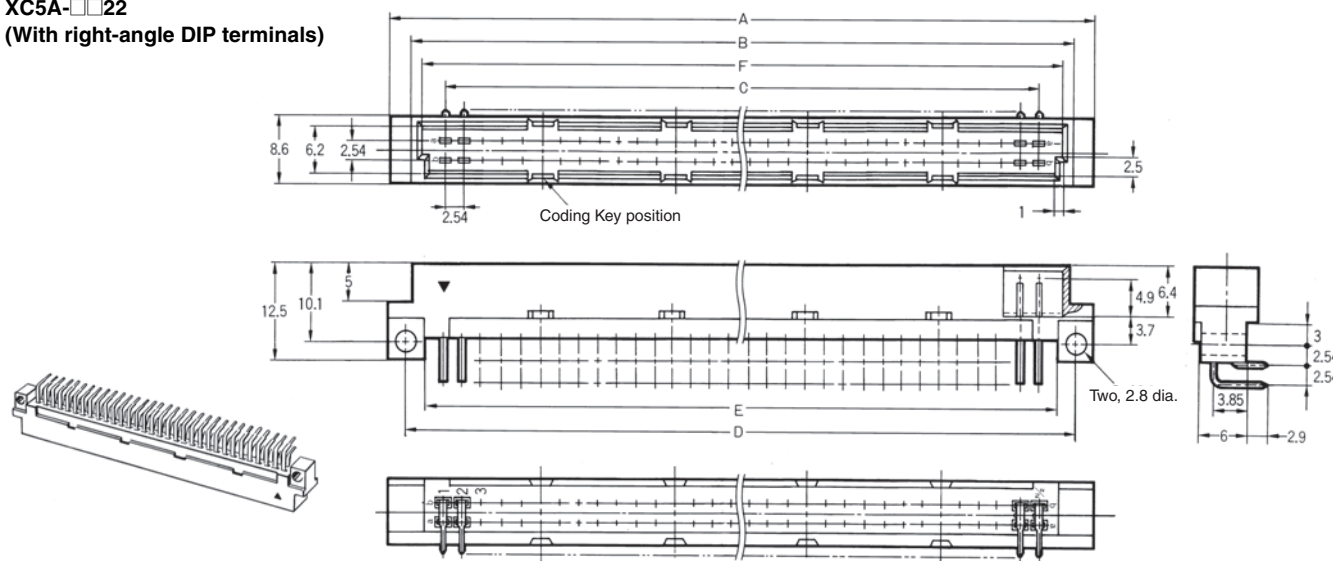
XC5A Double-row Plugs, DIN B-type (Standard)

■ Dimensions

(unit: mm)

XC5A-□□22

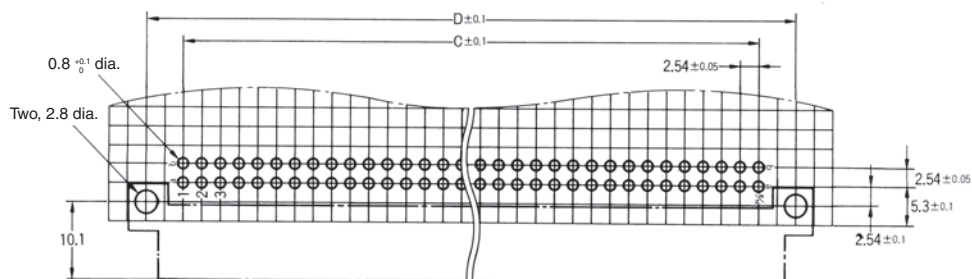
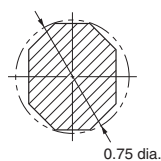
(With right-angle DIP terminals)



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.

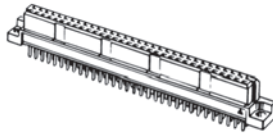
XC5B Double-row Sockets, DIN B-type (Standard)

■ Dimensions

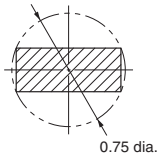
(unit: mm)

XC5B-□□21

(With straight DIP terminals)

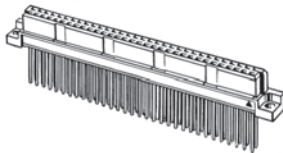


XC5B
DIP terminal cross-section view

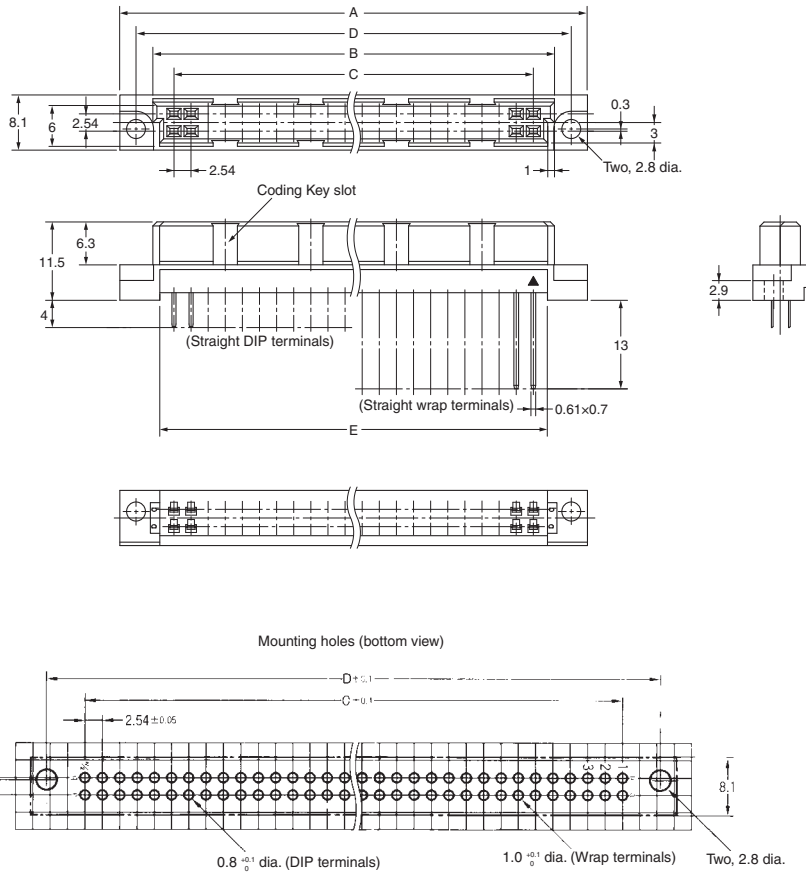
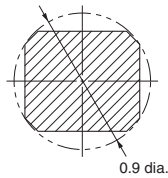


XC5B-□□23

(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.

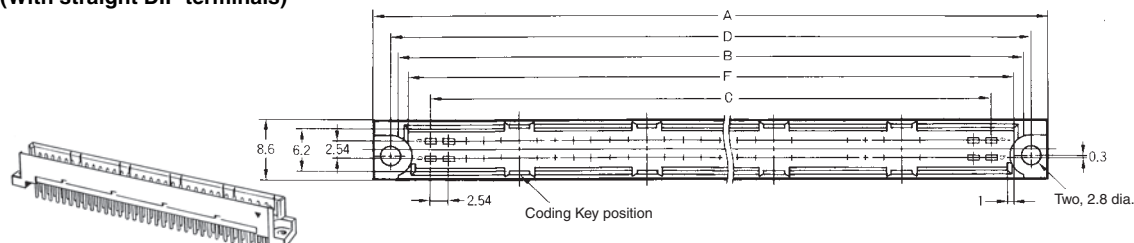
XC5E Double-row Plugs, DIN Q-type (Reverse)

■ Dimensions

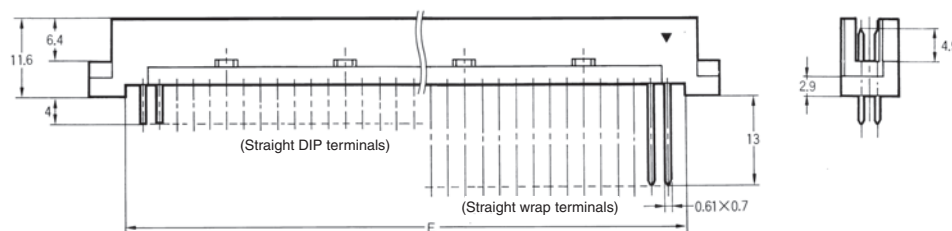
(unit: mm)

XC5E-□□21

(With straight DIP terminals)

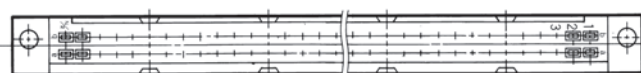
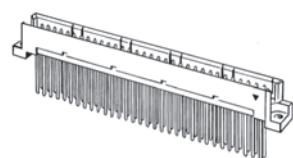


XC5E
DIP terminal cross-section
view

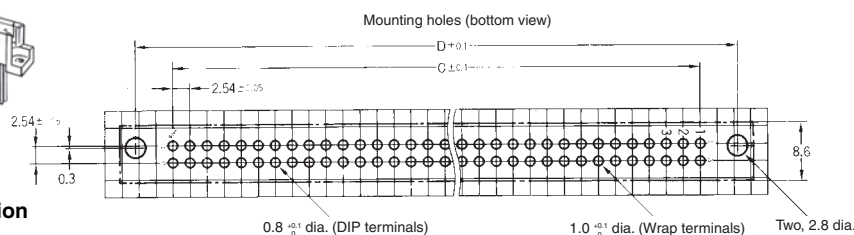
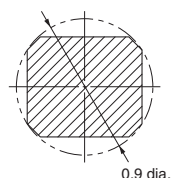


XC5E-□□23

(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

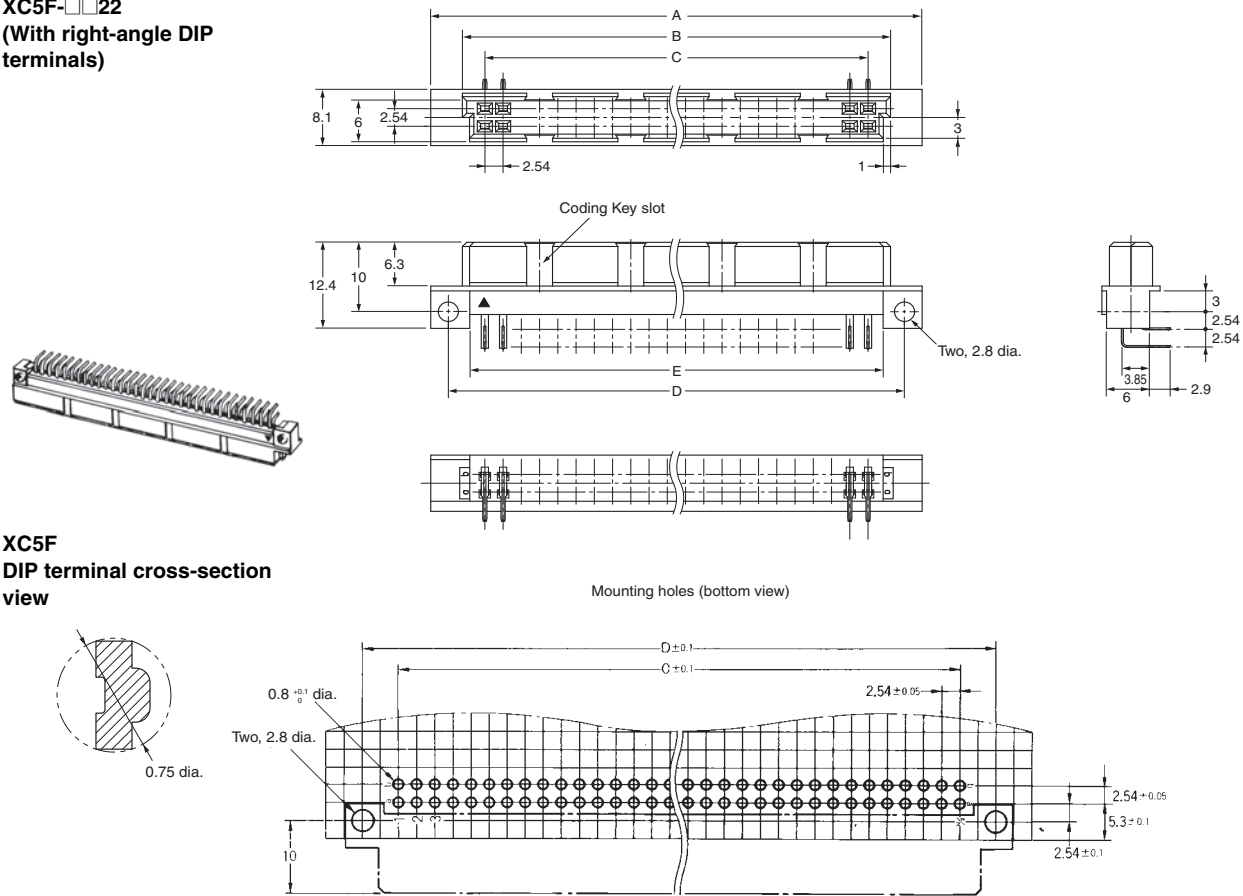
*Marked items have an increased number of contacts while following DIN standards.

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

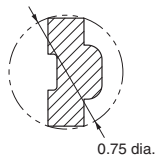
■ Dimensions

(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

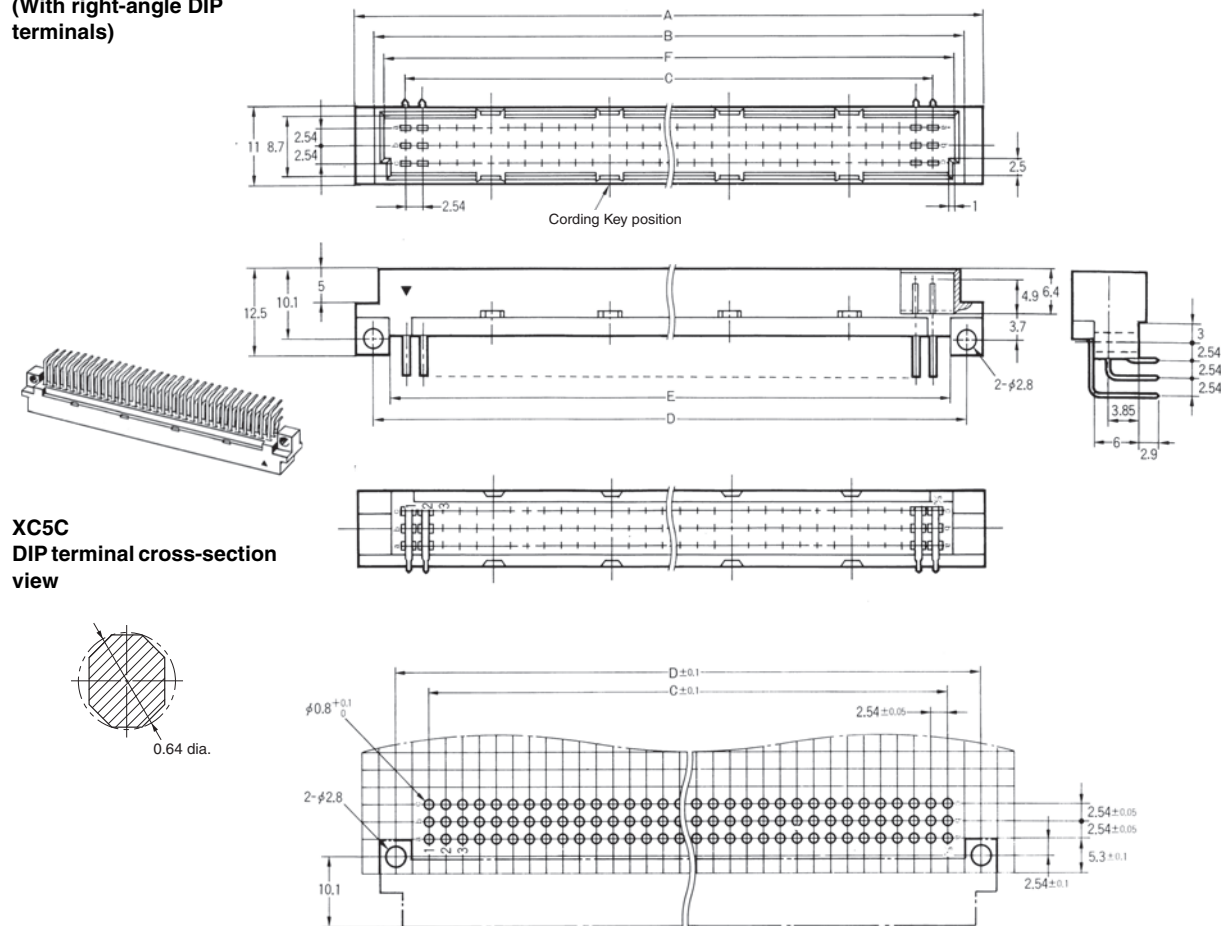
*Marked items have an increased number of contacts while following DIN standards.

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

■ Dimensions

(unit: mm)

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



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).

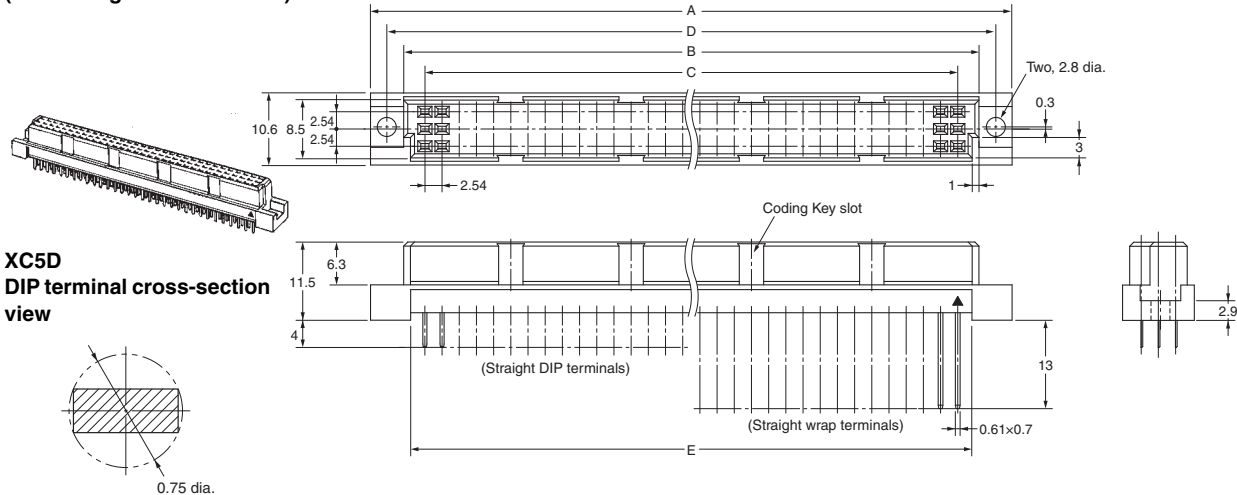
XC5D Triple-row Sockets, DIN C-type (Standard)

■ Dimensions

(unit: mm)

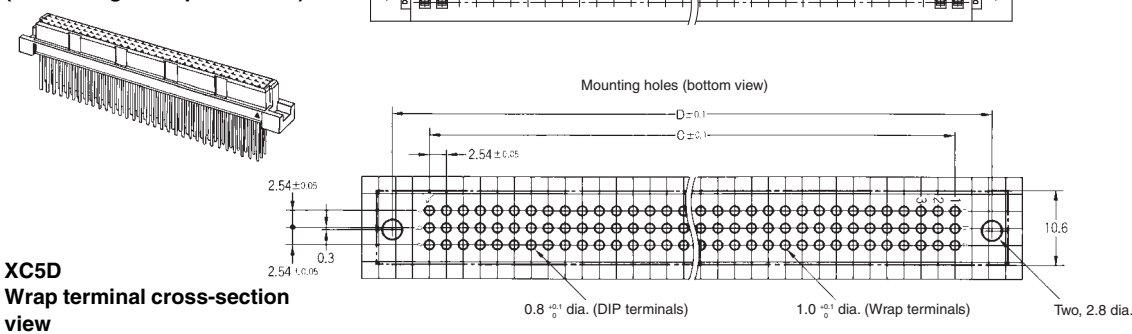
XC5D-□□21

(With straight DIP terminals)



XC5D-□□23

(With straight wrap terminals)



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).

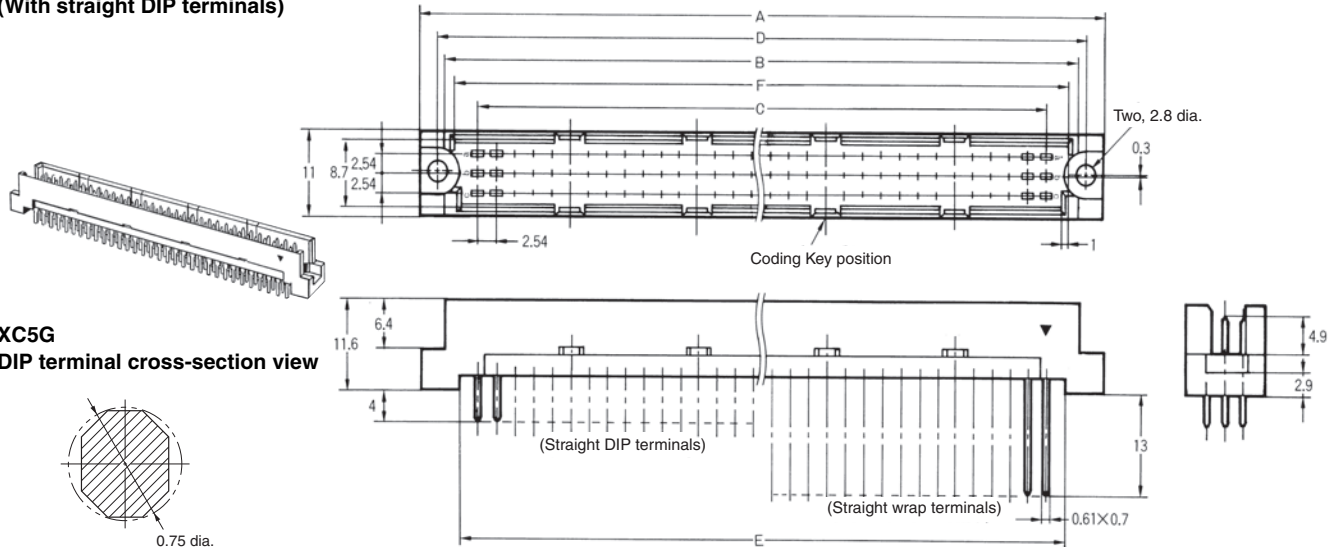
XC5G Triple-row Plugs, DIN R-type (Reverse)

■ Dimensions

(unit: mm)

XC5G-□□21

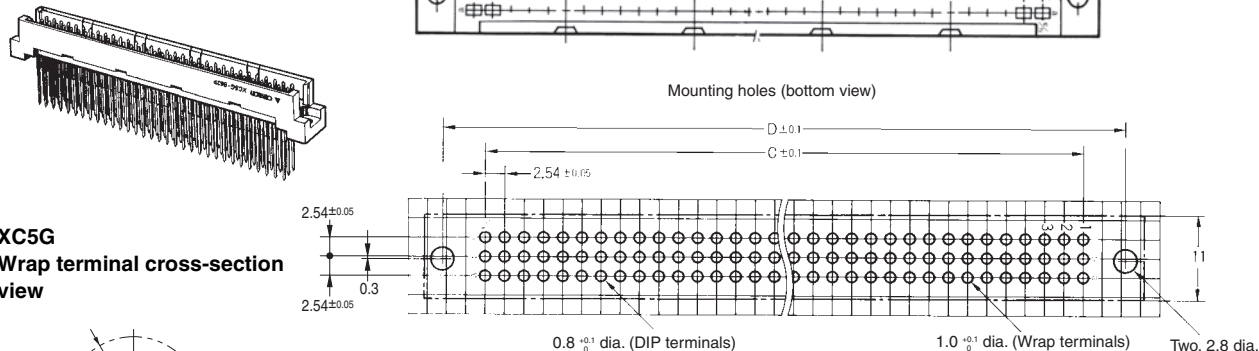
(With straight DIP terminals)



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).

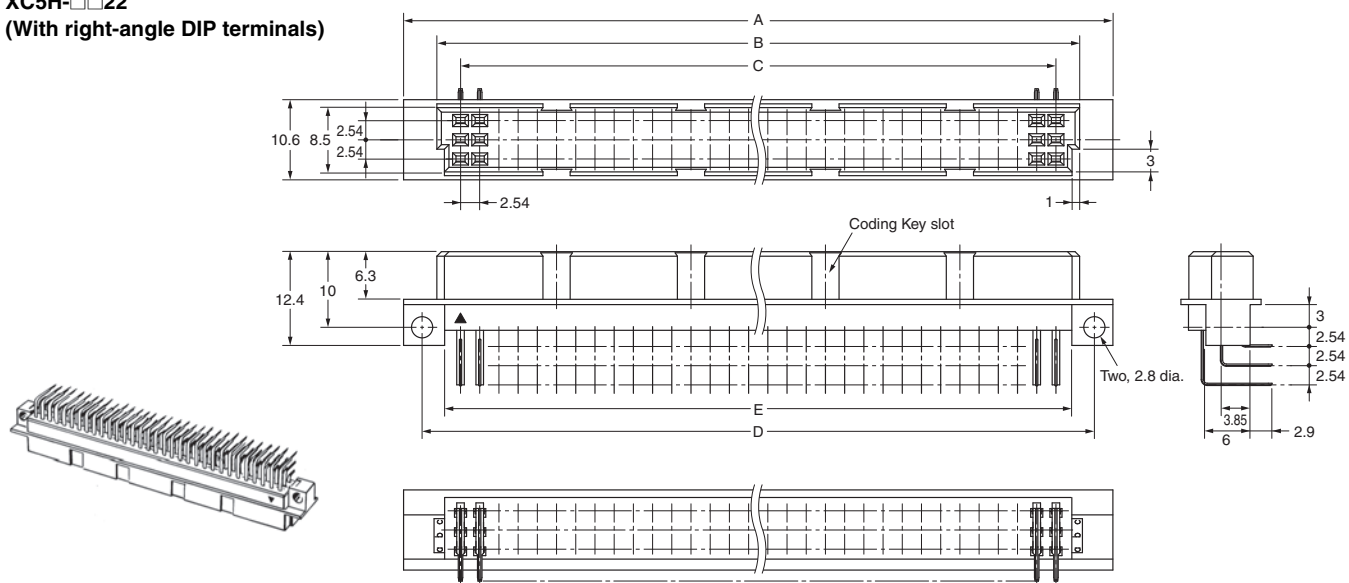
XC5H Triple-row Sockets, DIN R-type (Reverse)

■ Dimensions

(unit: mm)

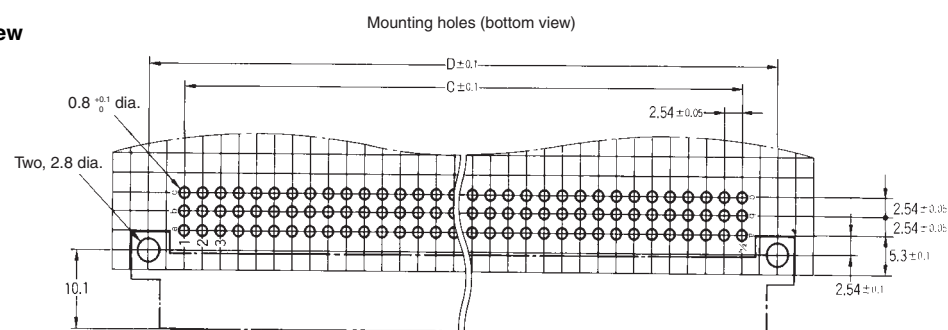
XC5H-□□22

(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).

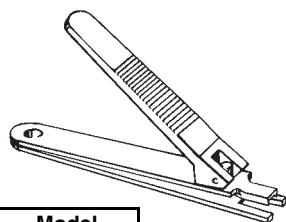
■ Ordering Information

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

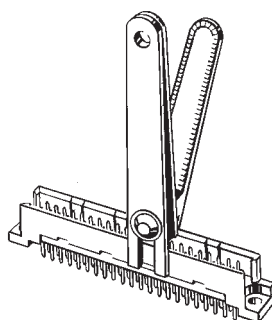
*Has no center row (row b).

■ Tools and Accessories (Sold Separately)

Coding Cutter XY2D-0001



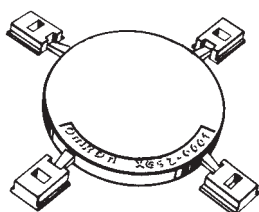
Model
XY2D-0001



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

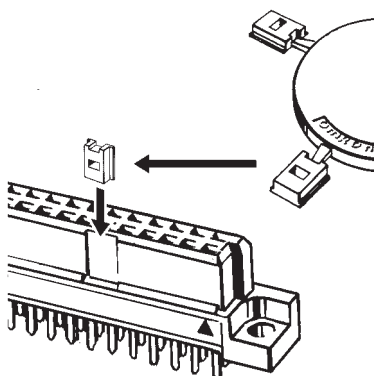
Note: Coding Cutters may not work with some DIN-style connector combinations. In that case, contact your OMRON representative.

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.

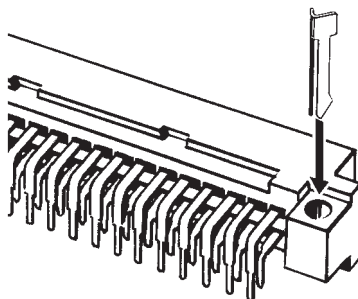
Temporary Fastening Pins XC5Z-0002

(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.

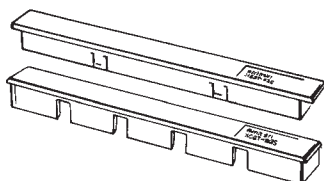
2. Temporary fastening pins cannot be used with DIN-style connectors.

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

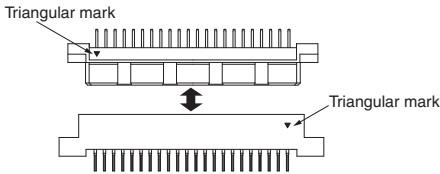
This is a dust-proof cover that is not used at the moment and not the one that protects against flux in automatic soldering.

■ 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.



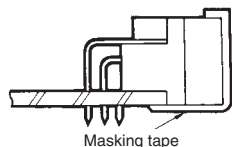
■ Precautions

Correct Use

Soldering

Automated Soldering

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



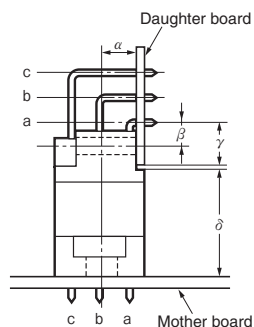
(Recommended tape: 3M Sumitomo #214)

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.

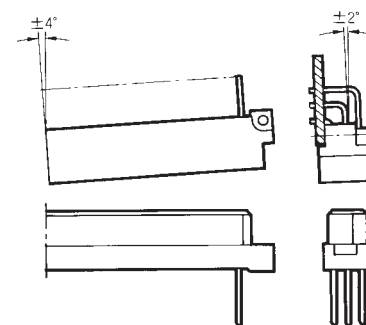
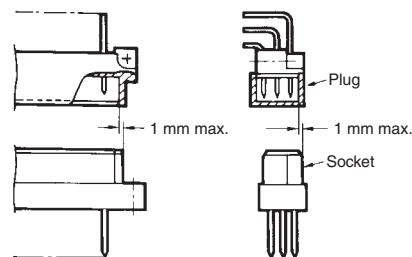
γ : 5.3 mm

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.



- Application examples provided in this document are for reference only. In actual applications, confirm equipment functions and safety before using the product.
- Consult your OMRON representative before using the product under conditions which are not described in the manual or applying the product to nuclear control systems, railroad systems, aviation systems, vehicles, combustion systems, medical equipment, amusement machines, safety equipment, and other systems or equipment that may have a serious influence on lives and property if used improperly. Make sure that the ratings and performance characteristics of the product provide a margin of safety for the system or equipment, and be sure to provide the system or equipment with double safety mechanisms.

Note: Do not use this document to operate the Unit.

OMRON Corporation

Electronic and Mechanical Components Company

Contact: www.omron.com/ecb

Cat. No. G049-E1-02
1014(0412)(O)