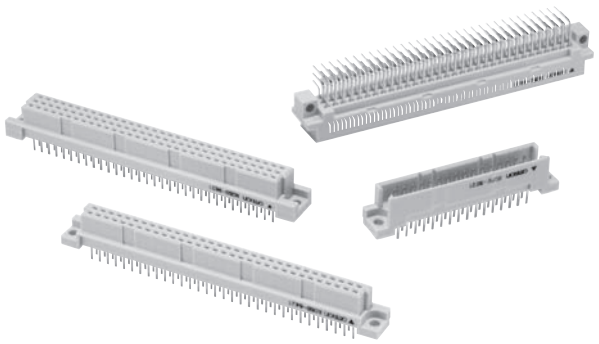
OMRON

DIN Twin-contact Connectors

XC5

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.



■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	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.

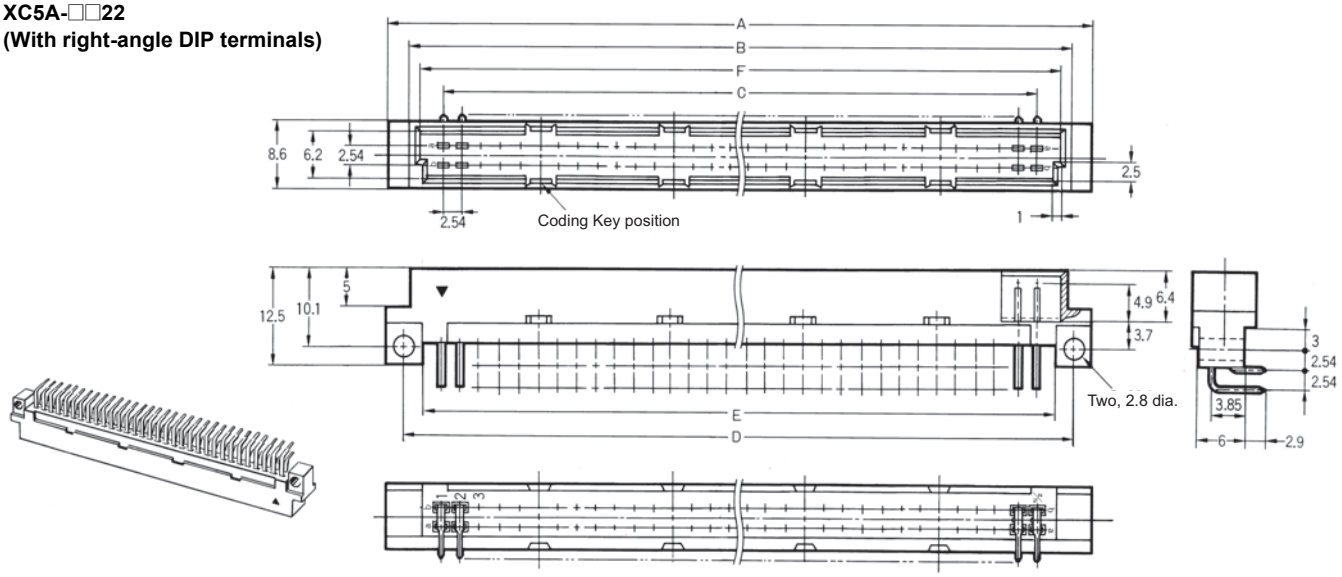
Downloaded from Arrow.com.

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

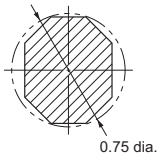
■Dimensions

(unit: mm)

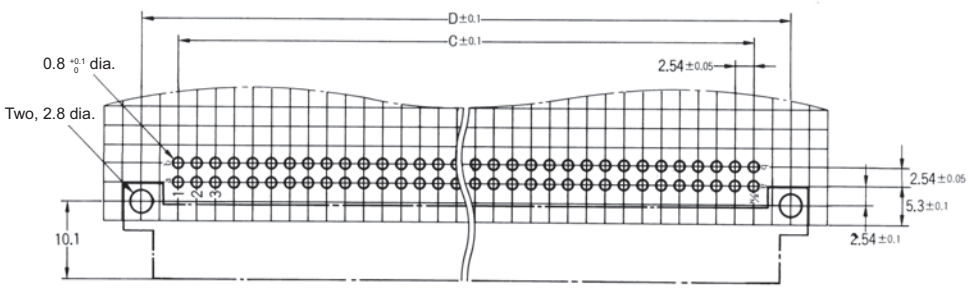
XC5A-□□22
(With right-angle DIP terminals)



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.

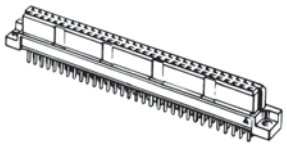
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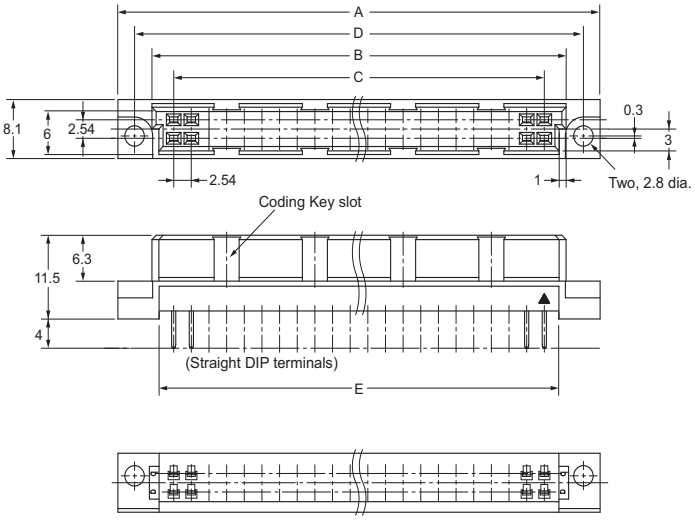
XC5B Double-row Sockets, DIN B-type (Standard)

■Dimensions

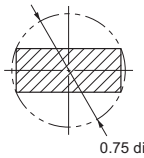
(unit: mm)

XC5B-□□21
(With straight DIP terminals)

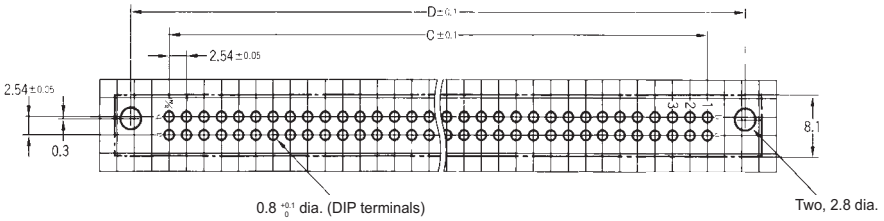




XC5B
DIP terminal cross-section view



Mounting holes (bottom 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
	Model
20*	XC5B-2021
32	XC5B-3221
44*	XC5B-4421
50*	XC5B-5021
64	XC5B-6421
100*	XC5B-0121

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

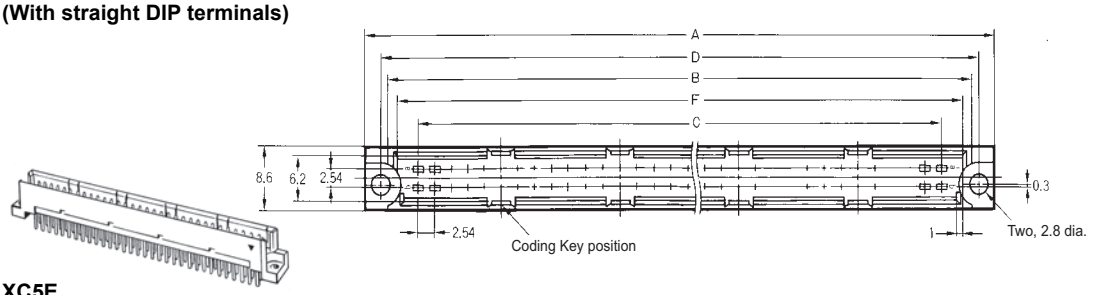
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XC5E Double-row Plugs, DIN Q-type (Reverse)

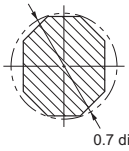
■Dimensions

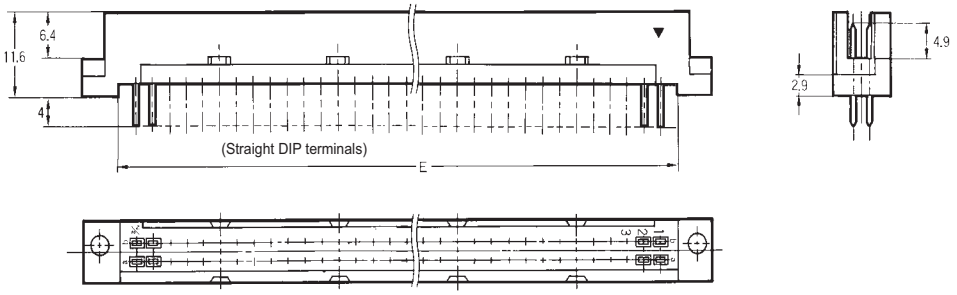
(unit: mm)

XC5E-□□21
(With straight DIP terminals)

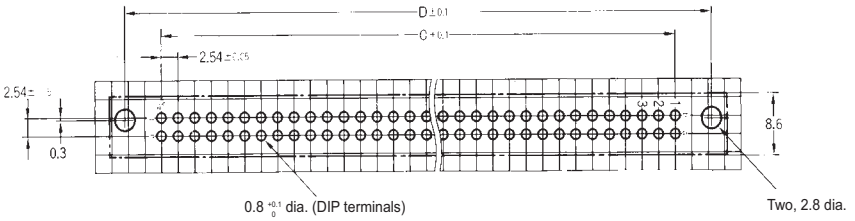


XC5E
DIP terminal cross-section view





Mounting holes (bottom view)



Dimensions

No. of contacts	Dimensions (mm)						Coding Key positions (contact No.)
	A	B	C	D	E	F	
20	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
	Model
20*	XC5E-2021
32	XC5E-3221
44*	XC5E-4421
50*	XC5E-5021
64	XC5E-6421
100*	XC5E-0121

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

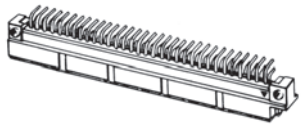
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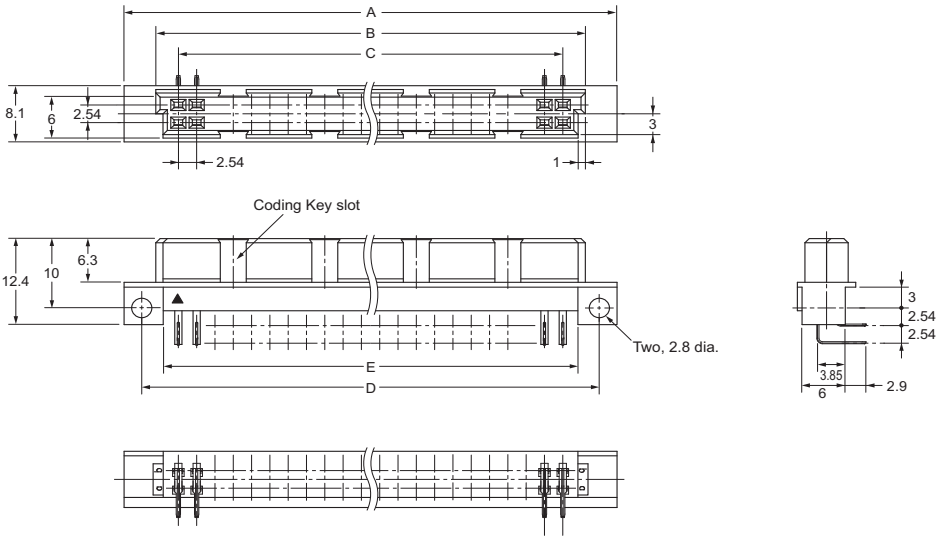
XC5F Double-row Sockets, DIN Q-type (Reverse)

■Dimensions

(unit: mm)

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

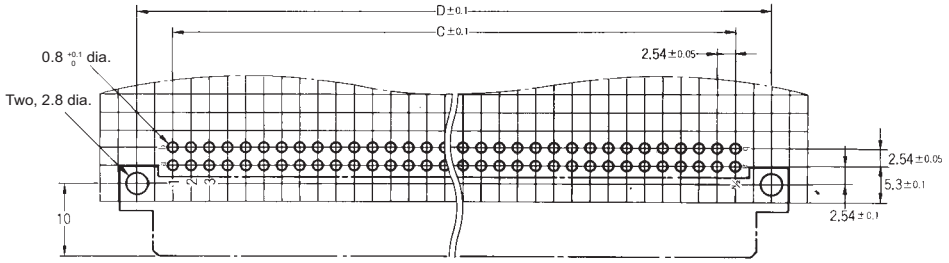




XC5F
DIP terminal cross-section view



Mounting holes (bottom 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.

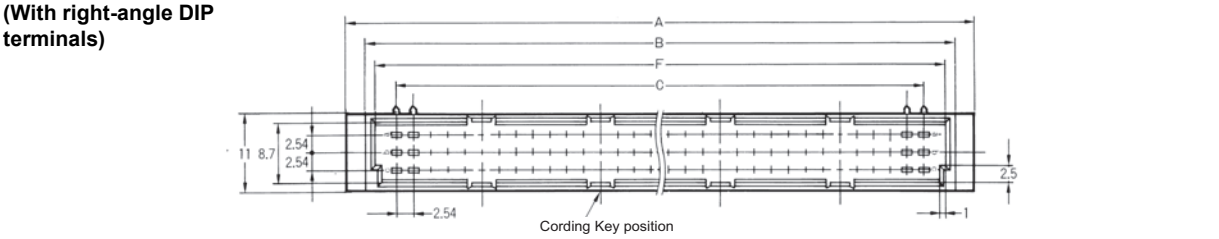
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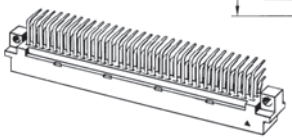
XC5C Triple-row Plugs, DIN C-type (Standard)

■Dimensions

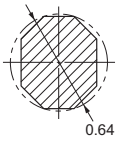
(unit: mm)

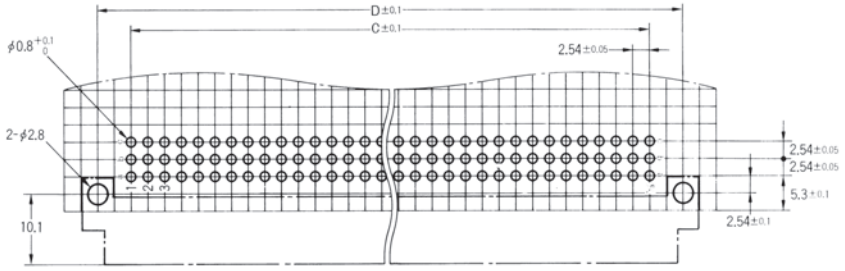
XC5C-□□22
(With right-angle DIP terminals)





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).

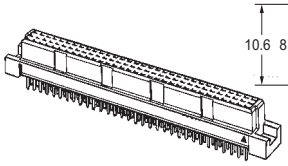
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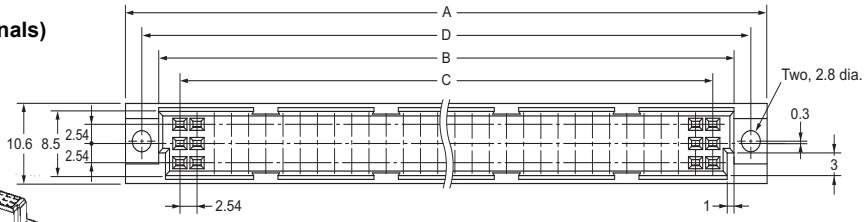
XC5D Triple-row Sockets, DIN C-type (Standard)

■Dimensions

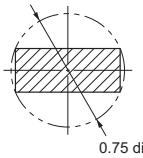
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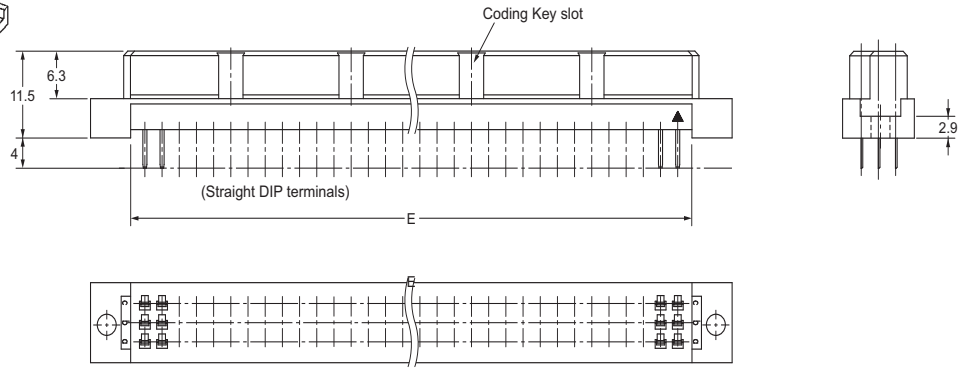
XC5D-□□21
(With straight DIP terminals)

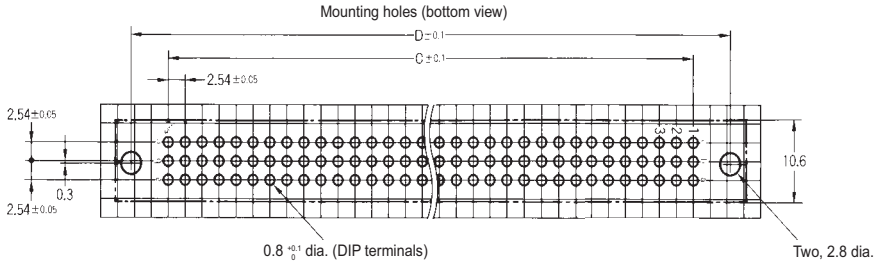




XC5D
DIP terminal cross-section view







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
	Model
32*	XC5D-3221
48	XC5D-4821
64*	XC5D-6421
96	XC5D-9621

*Has no center row (row b).

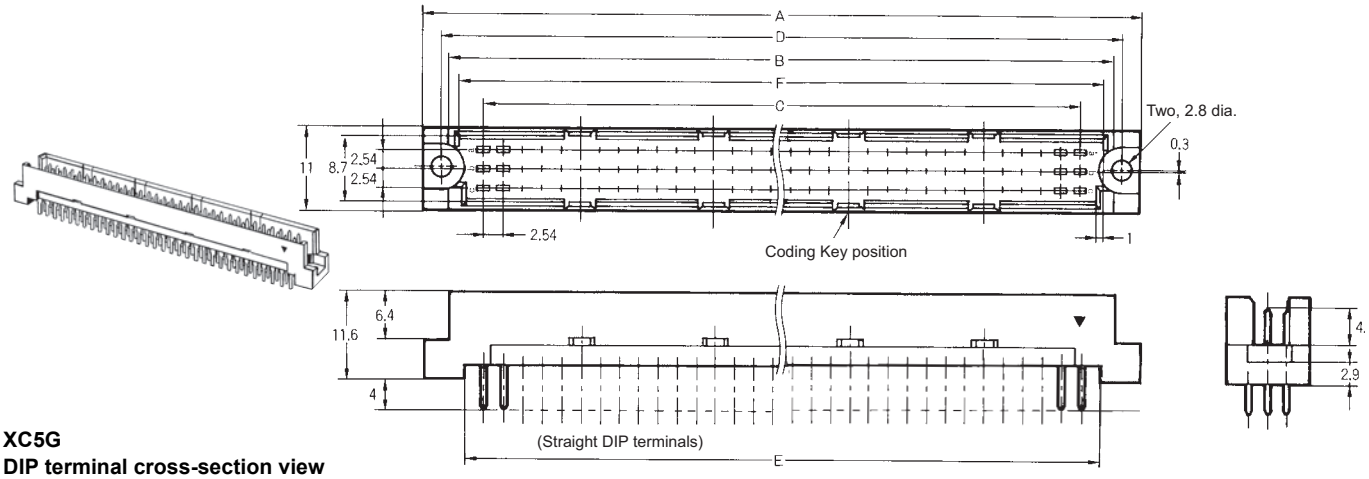
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XC5G Triple-row Plugs, DIN R-type (Reverse)

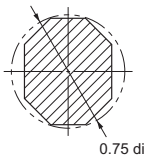
■Dimensions

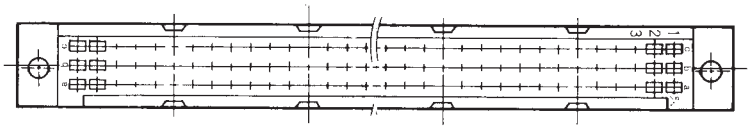
(unit: mm)

XC5G-□□21
(With straight DIP terminals)

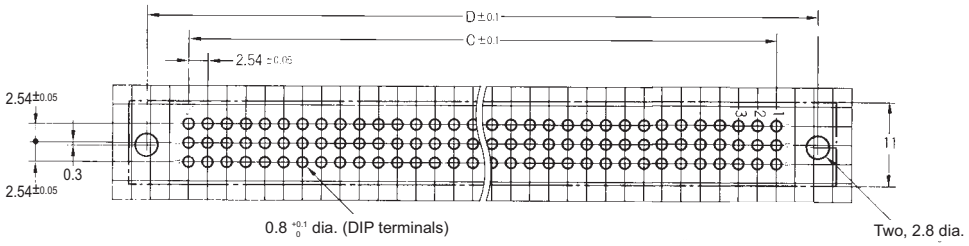


XC5G
DIP terminal cross-section view





Mounting holes (bottom view)



Dimensions

No. of contacts	Dimensions (mm)						Coding Key positions (contact No.)
	A	B	C	D	E	F	
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
	Model
48	XC5G-4821
64*	XC5G-6421
96	XC5G-9621

*Has no center row (row b).

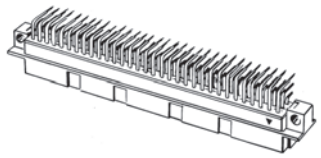
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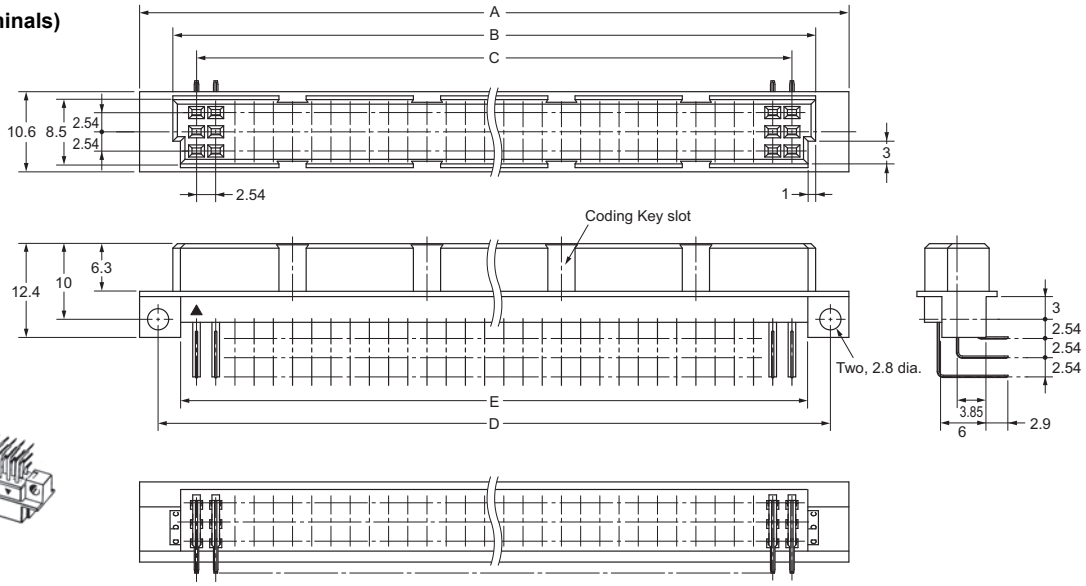
XC5H Triple-row Sockets, DIN R-type (Reverse)

■Dimensions

(unit: mm)

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

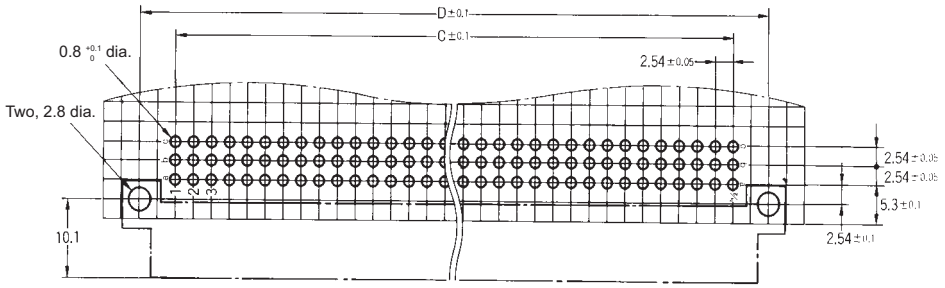




XC5H
DIP terminal cross-section view



Mounting holes (bottom 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

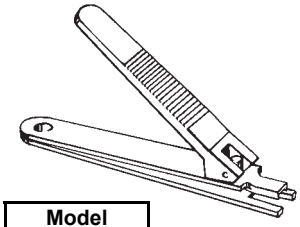
No. of contacts	Terminal type	Model
48	**Right-angle DIP terminals**	XC5H-4822
64*		XC5H-6422
96		XC5H-9622

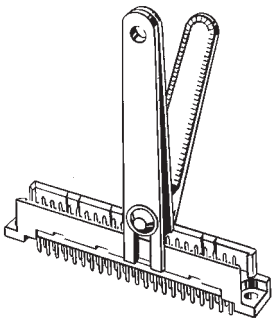
*Has no center row (row b).

Downloaded from Arrow.com.

■Tools and Accessories (Sold Separately)

Coding Cutter
XY2D-0001



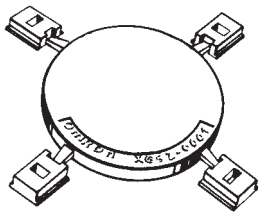


Model
XY2D-0001

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

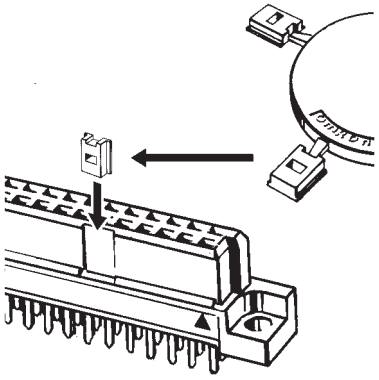
Note: Coding Cutters may not work with some DIN-style connector combinations. In that case, contact your OMRON representative.

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.

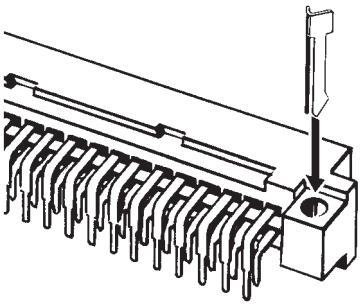
Temporary Fastening Pins
XC5Z-0002

(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.

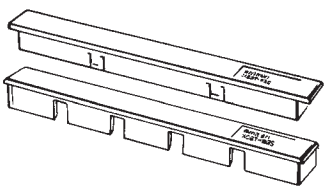
2. Temporary fastening pins cannot be used with DIN-style connectors.

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)



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

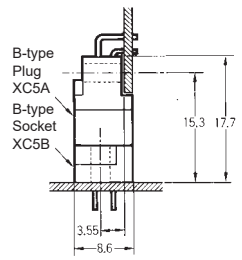
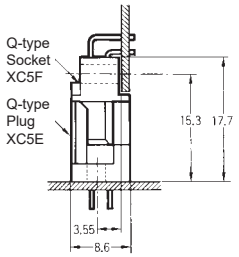
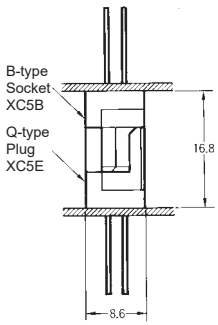
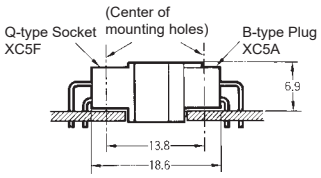
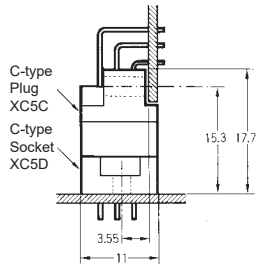
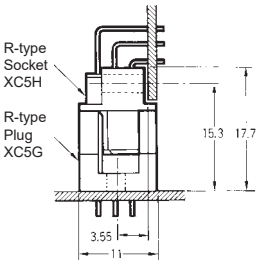
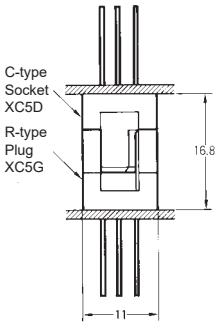
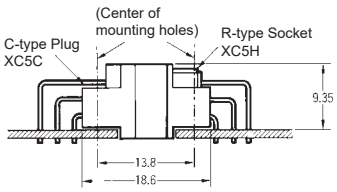
Model
XC5T-962
XC5T-963

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

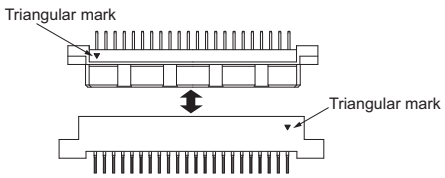
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■Mating Diagrams

(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.



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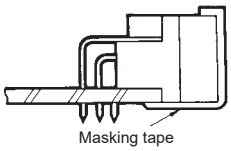
■Precautions

Correct Use

Soldering

Automated Soldering

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



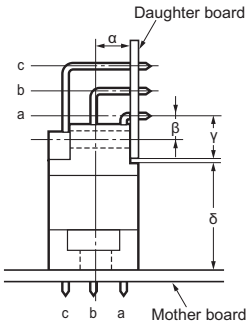
(Recommended tape: 3M Sumitomo #214)

Automated Soldering Conditions (Jet Flow)

1. Soldering temperature: 250±5°C
2. Continuous soldering time: Within 5±1 s

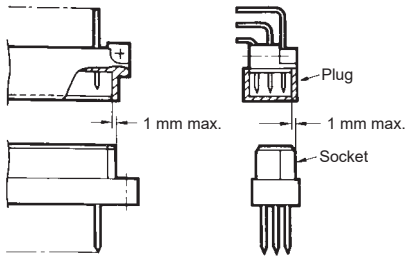
Basic Mating Dimensions

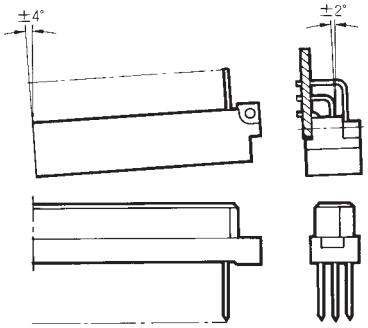
Mating dimensions for all Connectors should be as shown in the following diagram.



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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■Approval Standard

The approval rating values for overseas standards are different from the performance values determined individually. Confirm the values before use.

Model	Standard	File No.	Rating
XC5A-□□22	UL certified product (Recognized) CSA certified product (Certified)	E103202 LR 62678	300 V, 2 A
XC5B-□□21	UL certified product (Recognized) CSA certified product (Certified)	E103202 LR 62678	300 V, 2 A
XC5E-□□21	UL certified product (Recognized) CSA certified product (Certified)	E103202 LR 62678	300 V, 2 A
XC5F-□□22	UL certified product (Recognized) CSA certified product (Certified)	E103202 LR 62678	300 V, 2 A
XC5C-□□22	UL certified product (Recognized) CSA certified product (Certified)	E103202 LR 62678	300 V, 2 A
XC5D-□□21	UL certified product (Recognized) CSA certified product (Certified)	E103202 LR 62678	300 V, 2 A
XC5G-□□21	UL certified product (Recognized) CSA certified product (Certified)	E103202 LR 62678	300 V, 2 A
XC5H-□□22	UL certified product (Recognized) CSA certified product (Certified)	E103202 LR 62678	300 V, 2 A
XY2D-0001	Non Approved Models	---	---
XC5Z-0001	Non Approved Models	---	---
XC5Z-0002	Non Approved Models	---	---
XC5T-962	Non Approved Models	---	---
XC5T-963	Non Approved Models	---	---

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