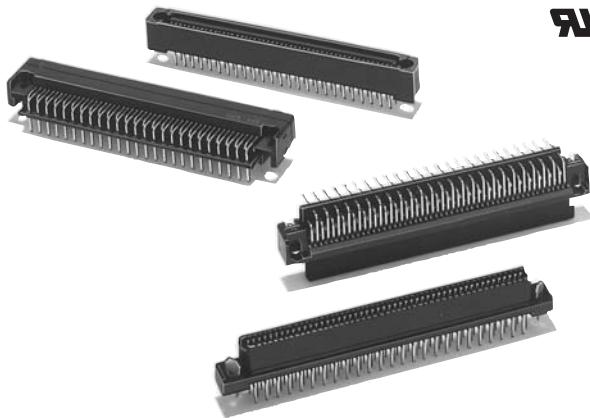


## Half-pitch Board-to-Board Connectors

XH2

**Allows High-density Mounting for Electronic Devices. A Half-Pitch Connector with a 1.27-mm Pitch for Compactness.**

- A pitch of 1.27 mm for high-density mounting of double-row arrangements.
- A quadruple-row staggered arrangement (1.27 mm x 1.905 mm) for board connection.
- Leaf contact construction enables smooth mating and resistance to bending.
- Space saving mating length of 3.1 mm.
- Press fitting assures long-term contact quality. The gold/palladium plating has been improved for better contact reliability.
- A special finish improves flux resistance (Straight Terminals only). Also it has fastening pins to standardize all the contacts.
- Can be mounted to boards with screws.
- The XH2 conforms to UL standards (file no. E103202).
- Not mated with XH3 and XH4 Half-pitch Connectors.

**RoHS Compliant****■ Ratings and Characteristics**

Rated current	0.5 A
Rated voltage	125 VAC
Contact resistance (See note.)	30 mΩ max. (20 mV max., 100 mA max.)
Insulation resistance	1,000 MΩ min. (at 500 VDC)
Dielectric strength	650 VAC for 1 min (leakage current: 1 mA max.)
Total insertion force	0.78 N max. per contact
Total removal force	0.10 N min. per contact
Insertion durability	400 times
Ambient operating temperature	–55 to 105°C (with no condensation or icing)

**Note:** The contact resistance is for the XH2A-□□42 combined with the XH2B-□□41.

**■ Materials and Finish**

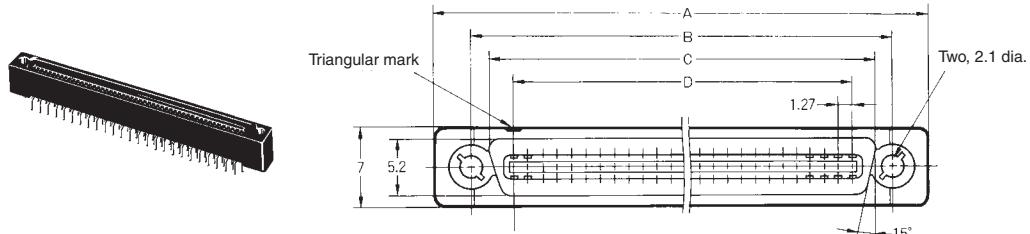
Type	Item	Plug	Socket
Housing	PBT (UL94 V-0)/black		
Locator	PBT (UL94 V-0)/black		
Contact	Mating end	Phosphor bronze/nickel base, gold/palladium plating	Phosphor bronze/nickel base, gold/palladium plating
	Terminal	Phosphor bronze/nickel base, tin plating	Phosphor bronze/nickel base, tin plating
Fastening pins	Copper alloy/tin plating		

# XH2A Plug, Straight DIP Terminals

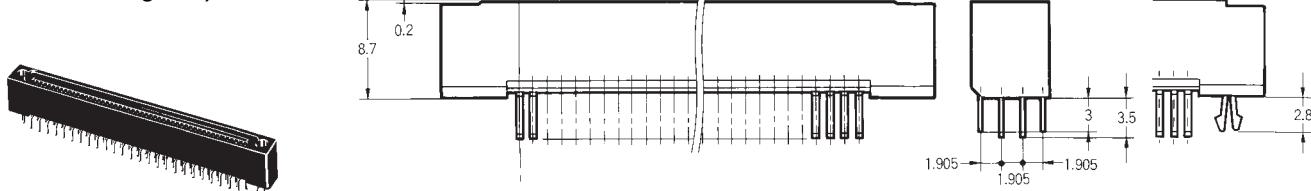
## ■ Dimensions

(unit: mm)

XH2A-□□41 (Straight DIP Terminals)

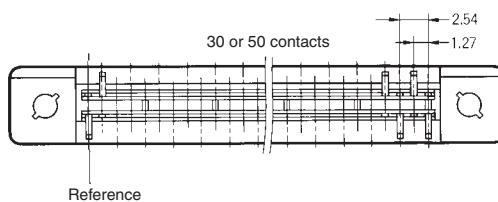


XH2A-□□41-A (Straight DIP Terminals with Fastening Pins)



### Dimensions

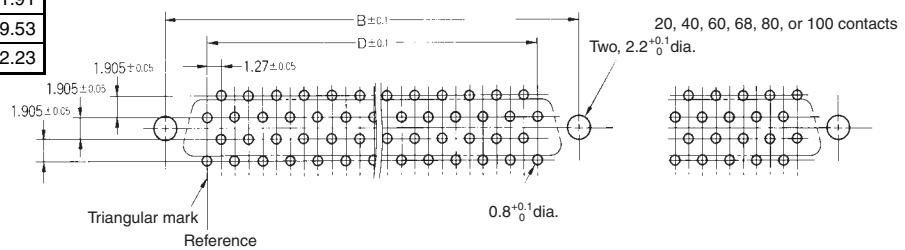
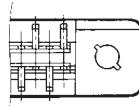
Dimensions (mm)	A	B	C	D
No. of contacts				
20	25.4	19.05	15.8	11.43
30	31.8	25.40	22.2	17.78
40	38.1	31.75	28.5	24.13
50	44.5	38.10	34.9	30.48
60	50.8	44.45	41.2	36.83
68	55.9	49.53	46.3	41.91
80	63.5	57.15	53.9	49.53
100	76.2	69.85	66.6	62.23



Mounting holes (bottom view)

30 or 50 contacts

20, 40, 60, 68, 80, or 100 contacts



## ■ Ordering Information

Model	Plug/Straight DIP Terminals	Plug/Straight DIP Terminals with fastening pins (See note.)
No. of contacts		
20	XH2A-2041	XH2A-2041-A
30	XH2A-3041	XH2A-3041-A
40	XH2A-4041	XH2A-4041-A
50	XH2A-5041	XH2A-5041-A
60	XH2A-6041	XH2A-6041-A
68	XH2A-6841	XH2A-6841-A
80	XH2A-8041	XH2A-8041-A
100	XH2A-0141	XH2A-0141-A

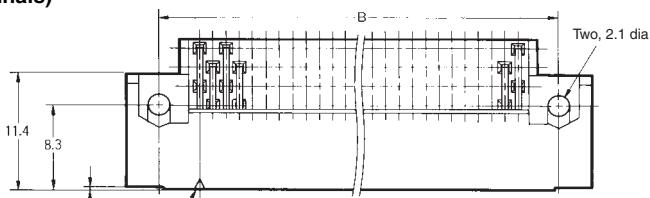
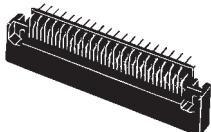
Note: Applicable board thickness is 1.6 mm.

# XH2A Plug, Right-angle DIP Terminals

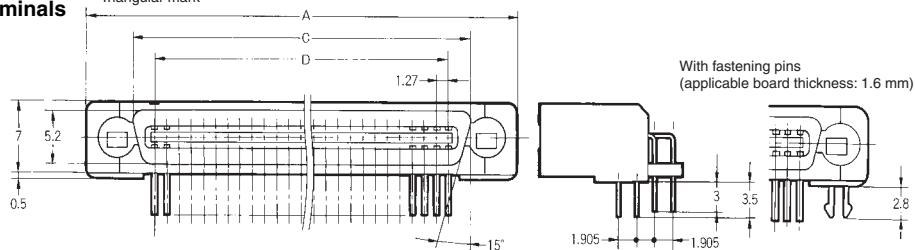
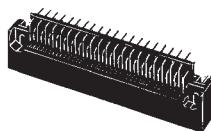
## ■ Dimensions

(unit: mm)

XH2A-□□42 (Right-angle DIP Terminals)

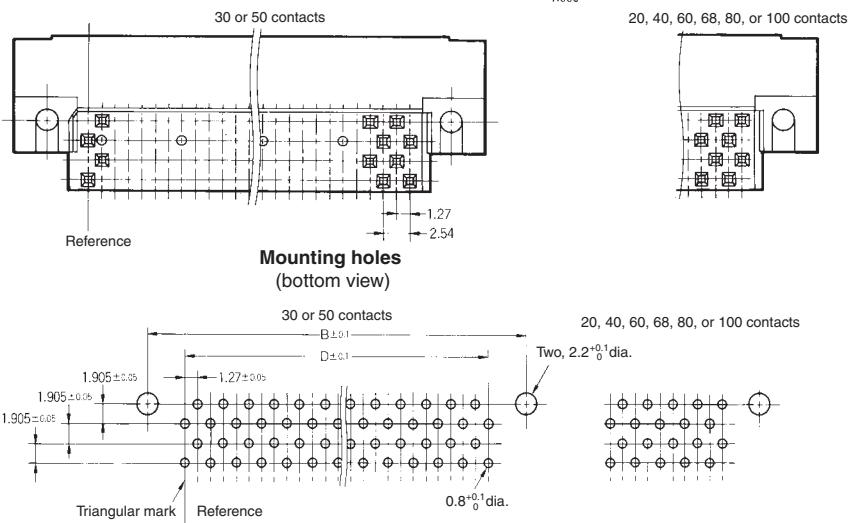


XH2A-□□42-A (Right-angle DIP Terminals with Fastening Pins)



### Dimensions

Dimensions (mm)	A	B	C	D
No. of contacts				
20	25.4	19.05	15.8	11.43
30	31.8	25.40	22.2	17.78
40	38.1	31.75	28.5	24.13
50	44.5	38.10	34.9	30.48
60	50.8	44.45	41.2	36.83
68	55.9	49.53	46.3	41.91
80	63.5	57.15	53.9	49.53
100	76.2	69.85	66.6	62.23



## ■ Ordering Information

Model	Plug/Right-angle DIP Terminals	Plug/Right-angle DIP Terminals with fastening pins (See note.)
No. of contacts		
20	XH2A-2042	XH2A-2042-A
30	XH2A-3042	XH2A-3042-A
40	XH2A-4042	XH2A-4042-A
50	XH2A-5042	XH2A-5042-A
60	XH2A-6042	XH2A-6042-A
68	XH2A-6842	XH2A-6842-A
80	XH2A-8042	XH2A-8042-A
100	XH2A-0142	XH2A-0142-A

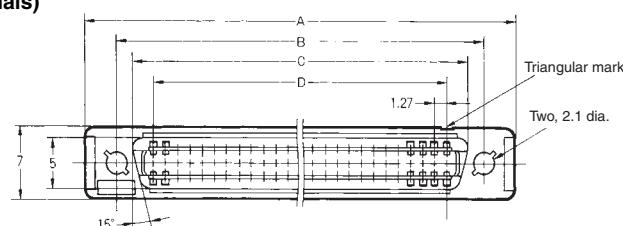
**Note:** Applicable board thickness is 1.6 mm.

# XH2B Socket, Straight DIP Terminals

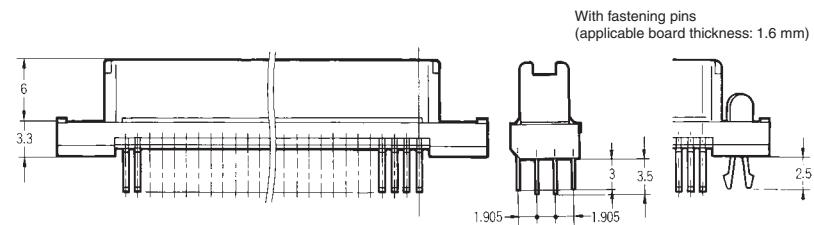
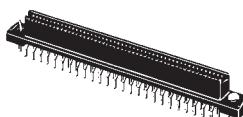
## ■ Dimensions

(unit: mm)

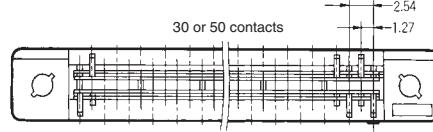
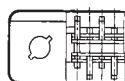
XH2B-□□41 (Straight DIP Terminals)



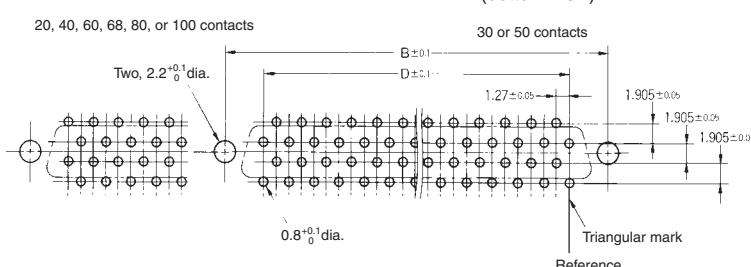
XH2B-□□41-A (Straight DIP Terminals with Fastening Pins)



20, 40, 60, 68, 80, or 100 contacts



Reference

Mounting holes  
(bottom view)

## Dimensions

Dimensions (mm)	A	B	C	D
No. of contacts				
20	25.4	19.05	15.7	11.43
30	31.8	25.40	22.1	17.78
40	38.1	31.75	28.4	24.13
50	44.5	38.10	34.8	30.48
60	50.8	44.45	41.1	36.83
68	55.9	49.53	46.2	41.91
80	63.5	57.15	53.8	49.53
100	76.2	69.85	66.5	62.23

## ■ Ordering Information

Model	Socket/Straight DIP Terminals	Socket/Straight DIP Terminals with fastening pins (See note.)
No. of contacts		
20	XH2B-2041	XH2B-2041-A
30	XH2B-3041	XH2B-3041-A
40	XH2B-4041	XH2B-4041-A
50	XH2B-5041	XH2B-5041-A
60	XH2B-6041	XH2B-6041-A
68	XH2B-6841	XH2B-6841-A
80	XH2B-8041	XH2B-8041-A
100	XH2B-0141	XH2B-0141-A

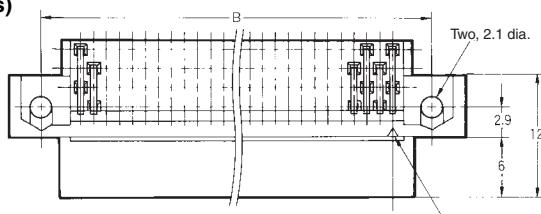
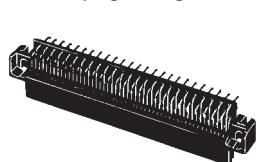
Note: Applicable board thickness is 1.6 mm.

# XH2B Socket, Right-angle DIP Terminals

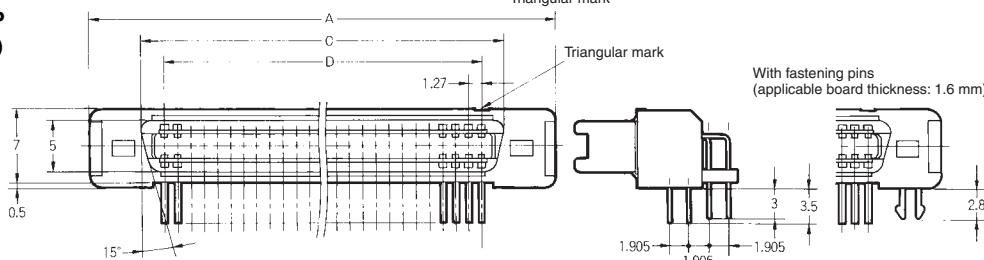
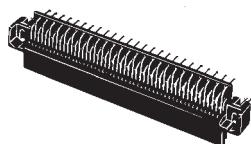
## ■ Dimensions

(unit: mm)

## XH2B-□□42 (Right-angle DIP Terminals)

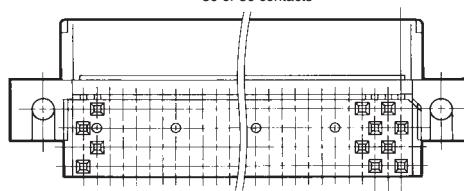
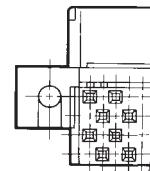


## XH2B-□□42-A (Right-angle DIP Terminals with Fastening Pins)



20, 40, 60, 68, 80, or 100 contacts

30 or 50 contacts

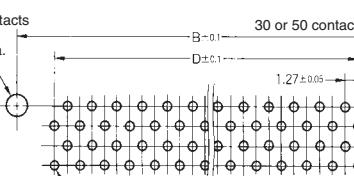
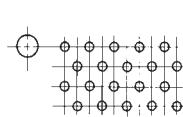


### Mounting holes

## Reference

20, 40, 60, 68, 80, or 100 contacts

Two, 2.2<sup>+0.1</sup><sub>0</sub> dia.



1

## Dimensions

Dimensions (mm)	A	B	C	D
No. of contacts				
20	25.4	19.05	15.7	11.43
30	31.8	25.40	22.1	17.78
40	38.1	31.75	28.4	24.13
50	44.5	38.10	34.8	30.48
60	50.8	44.45	41.1	36.83
68	55.9	49.53	46.2	41.91
80	63.5	57.15	53.8	49.53
100	76.2	69.85	66.5	62.23

## ■ Ordering Information

Model	Socket/Right-angle DIP Terminals	Socket/Right-angle DIP Terminals with fastening pins (See note.)
No. of contacts		
20	XH2B-2042	XH2B-2042-A
30	XH2B-3042	XH2B-3042-A
40	XH2B-4042	XH2B-4042-A
50	XH2B-5042	XH2B-5042-A
60	XH2B-6042	XH2B-6042-A
68	XH2B-6842	XH2B-6842-A
80	XH2B-8042	XH2B-8042-A
100	XH2B-0142	XH2B-0142-A

**Note:** Applicable board thickness is 1.6 mm.

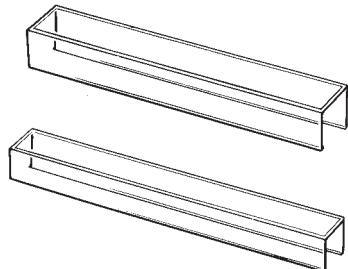
## ■ Accessories (Sold Separately)

(unit: mm)

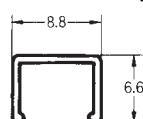
Dust Cover (material: ABS)

XH2T-□□01 (for Plug)

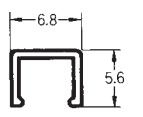
XH2T-□□02 (for Socket)



XH2T-□□01 (Transparent for Plug)



XH2T-□□02 (Blue for Socket)



Attach these Dust Covers to Connectors that are not in use. They do not protect the Connectors from flux during automated soldering.

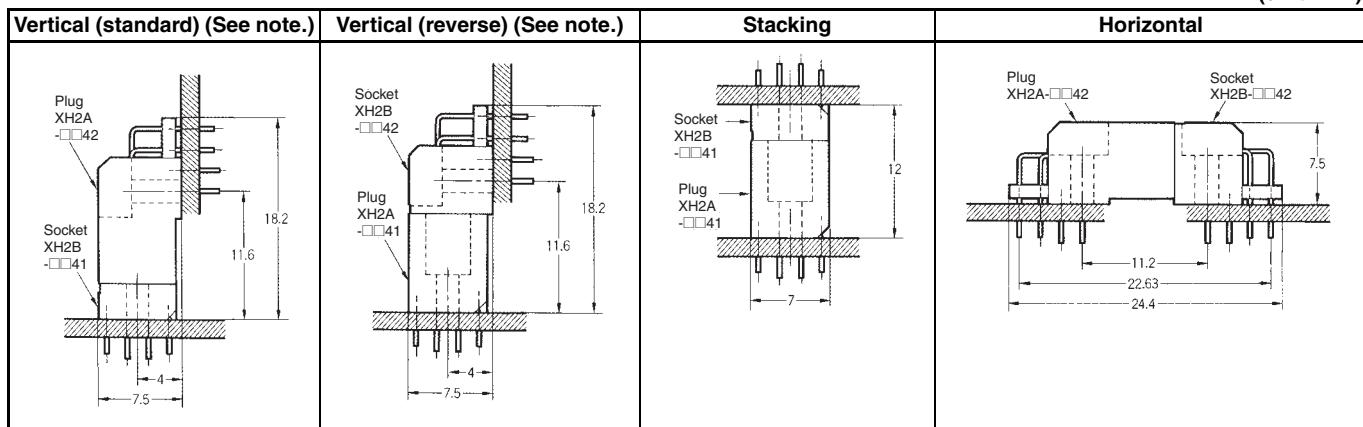
## ■ Ordering Information

Note: Order the following models in multiples of the minimum order.

Model No. of contacts	XH2A (for Plug)		XH2B (for Socket)	
	Model	Dimensions A (mm)	Model	Dimensions B (mm)
20	XH2T-2001	25	XH2T-2002	15
30	XH2T-3001	31	XH2T-3002	21
40	XH2T-4001	37	XH2T-4002	27
50	XH2T-5001	44	XH2T-5002	34
60	XH2T-6001	50	XH2T-6002	40
68	XH2T-6801	55	XH2T-6802	45
80	XH2T-8001	63	XH2T-8002	53
100	XH2T-0101	75	XH2T-0102	65

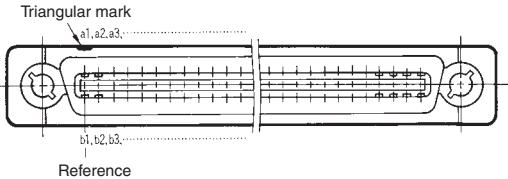
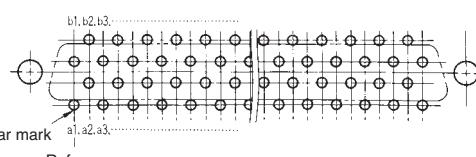
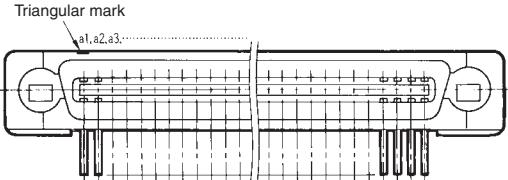
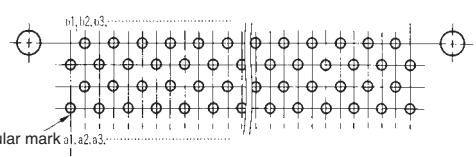
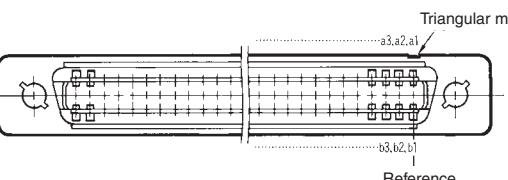
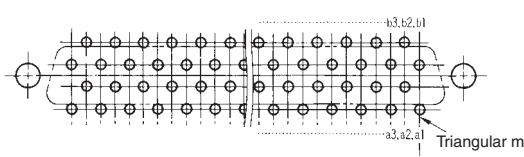
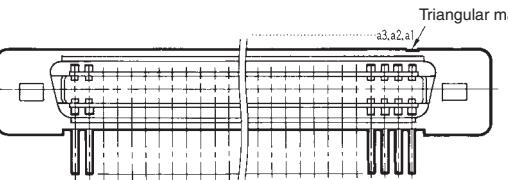
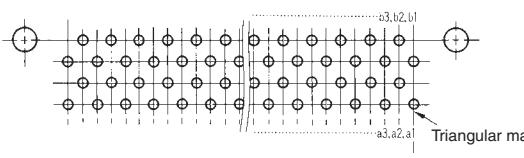
## ■ Mating Diagram (Vertical/Horizontal/Stacking)

(unit: mm)



Note: The function of the standard and reverse models is the same as that of the standard XC5 DIN Connector.

## ■ Contact Numbers

Item	Mated diagram	Mounting holes (bottom view)
Model		
Plug, Straight Terminals	 <p>Triangular mark a1,a2,a3 b1,b2,b3 Reference</p>	 <p>Triangular mark a1,a2,a3 Reference</p>
Plug, Right-angle Terminals	 <p>Triangular mark a1,a2,a3 b1,b2,b3 Reference</p>	 <p>Triangular mark a1,a2,a3 Reference</p>
Socket, Straight Terminals	 <p>Triangular mark a3,a2,a1 b3,b2,b1 Reference</p>	 <p>h3,b2,b1 a3,a2,a1 Reference</p>
Socket, Right-angle Terminals	 <p>Triangular mark a3,a2,a1 b3,b2,b1 Reference</p>	 <p>a3,b2,b1 a3,a2,a1 Reference</p>

- Contact numbers are not printed on the connectors. Use the triangular mark (▼) as a guide when designing and mounting to boards.

- On the mating side, the row of terminals on the triangular mark side are called row a, and the row on the other side is called row b. The numbers are in the order shown.

- The triangular marks on the plug and socket must be aligned when mated. The contact numbers on both sides must match.

## ■ Precautions

### Correct Use

#### Mating Compatibility

XH2 Half-pitch Connectors do not mate with XH3 or XH4 Half-pitch Connectors.

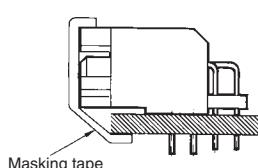
#### Special Finish for Preventing Flux Rise

XH2 Connectors (i.e., Straight Terminals) have a special finish that prevents flux rise. (The Connectors are designed for automated soldering. Brush coating flux from the back of the board applies too much flux and may nullify the special finish. Never use this method to apply flux.)

#### Soldering

##### Automated soldering

Use tape to mask the Right-angle Terminal Connector prior to automated soldering.



#### Automated Soldering Conditions (Jet Flow)

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

- 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.**

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[XH2B-3041-A](#) [XH2B-3042-A](#) [XH2B-4042-A](#) [XH2B-5042-A](#) [XH2B-6041](#) [XH2B-6041-A](#)