

OMRON

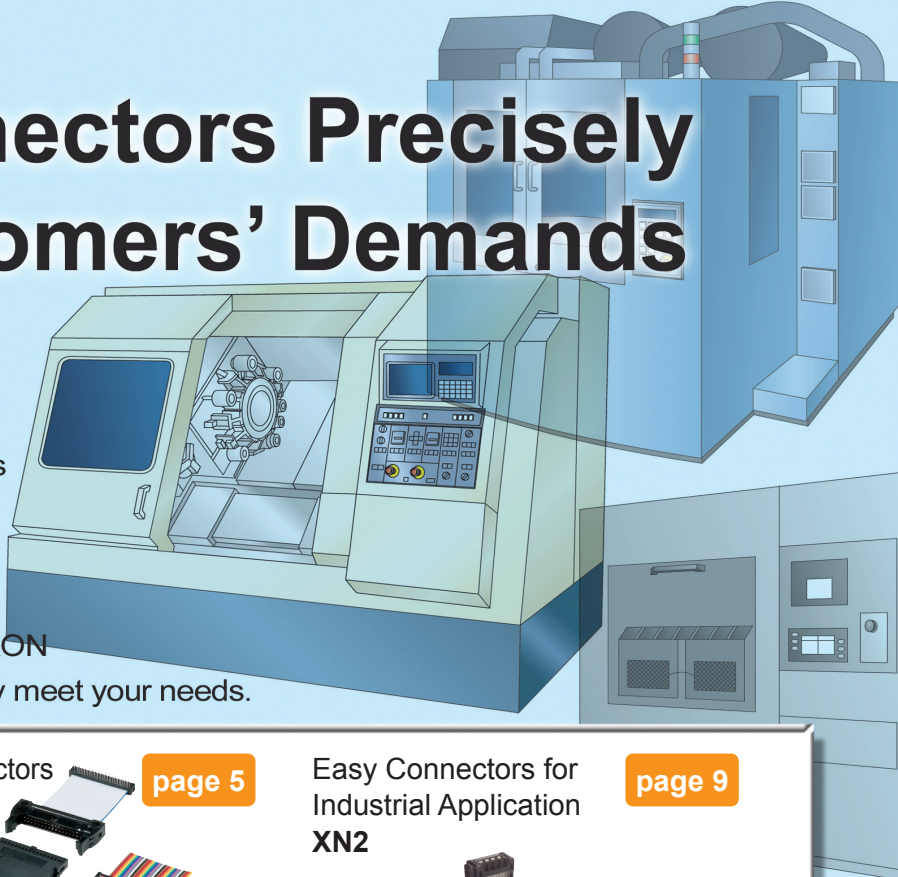
OMRON Connector Selection



OMRON Connectors Precisely Meeting Customers' Demands

OMRON's highly reliable PCB connectors support the high-density mounting of PCB components.

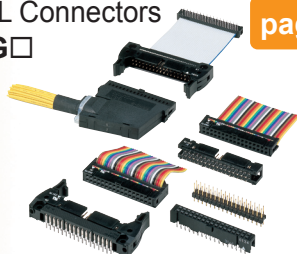
These series include Half-pitch Connectors with a contact pitch of 1.27mm, Flat Cable Connectors conforming to MIL standards, D-sub/DVI/USB Connectors, and PCB Terminal Block as well. Contact your OMRON representative for connectors that precisely meet your needs.



For PCB-to-Cable Connection

MIL Connectors
XG□

page 5



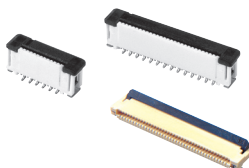
Easy Connectors for Industrial Application
XN2

page 9



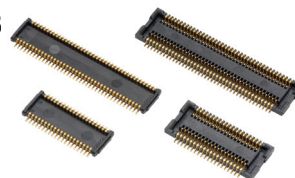
FPC Connectors
XF□

page 11



Board to FPC Connector
XB4A / XB4B

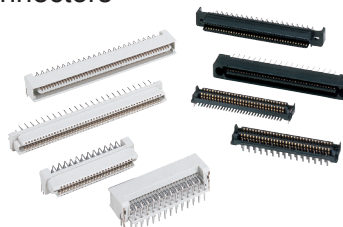
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For PCB-to-PCB Connection

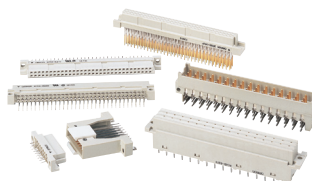
Half-pitch Connectors
XH□

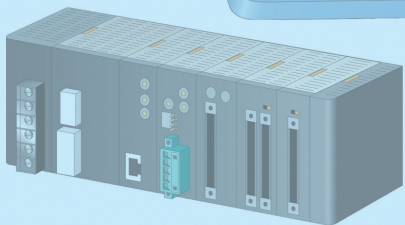
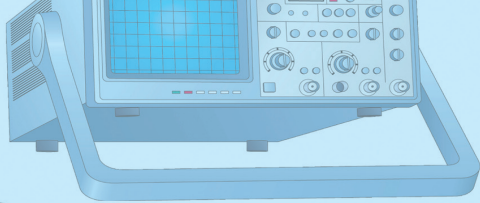
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DIN Connectors
XC□

page 19





For Interface Connection

DVI Connectors
XM4M

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USB Connectors
XM7

page 26



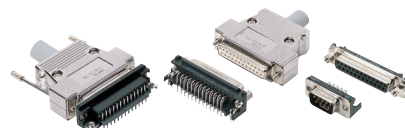
High-density D-sub
Connectors
XM4K/L

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D-sub Connectors
XM2/XM3

page 29



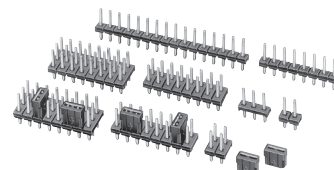
Jump Sockets
(natural color)
XJ8A

page 6



Jump Connectors
XJ8

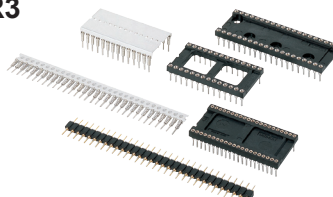
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Others

IC Sockets
XR2/XR3

page 31



OMRON's highly operable connectors are

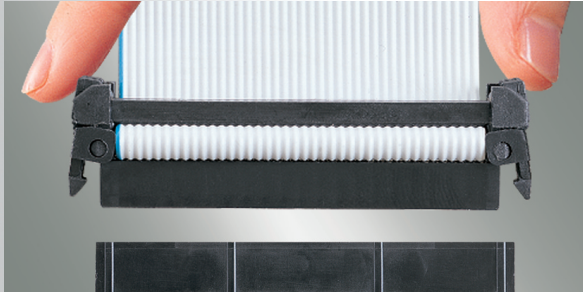
● **"Easy-to-use"** OMRON connectors

● **Excellent operatability and workability**

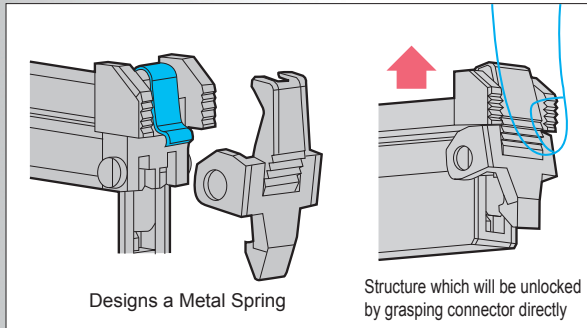
Improves Workability in "PCB-to-Wire" Connection.

XG4M-U MIL Connectors with lock

■ Easy to Connect and Disconnect with One Hand



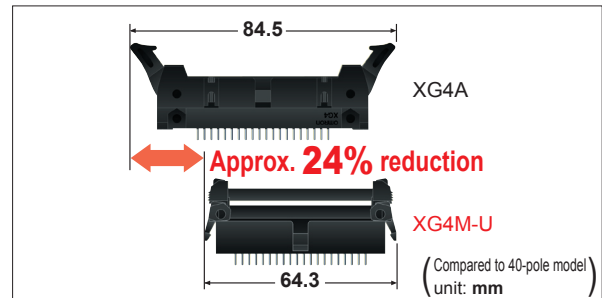
■ Improves Lock Lever Operatability.



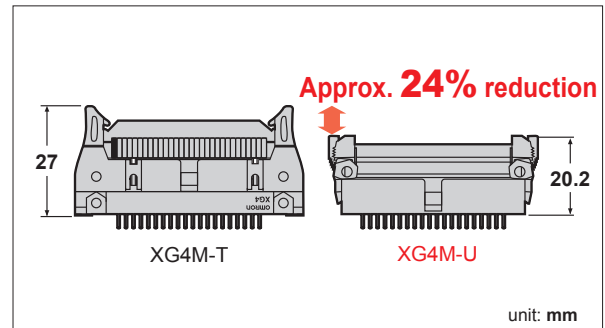
Designs a Metal Spring

Structure which will be unlocked by grasping connector directly

■ Up to 24% Less Mounting Area



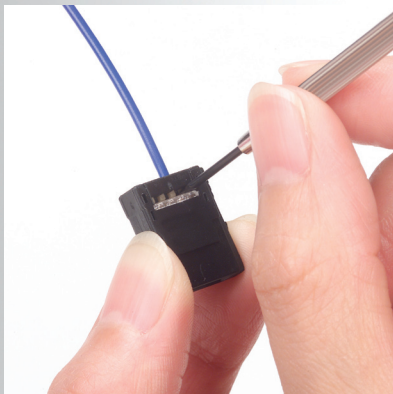
■ Approx. 24% reduction of Mounting Height.



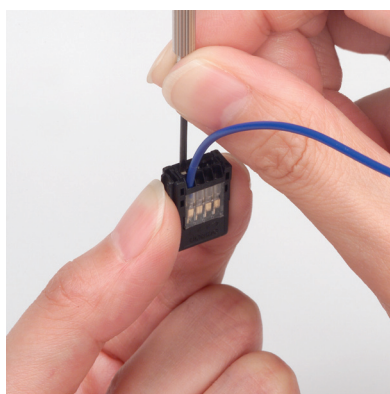
Easy Connectors Most Suitable for Sensor Connection.

XN2 Easy Connector for Industrial Application

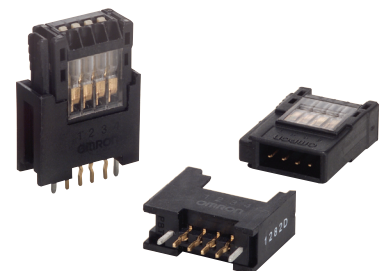
■ Easy Wire Connection
Requires No Special Tools.



■ Repeat Wire Connection
(Repair) Possible



■ A Piece Connector Accepts
a Variety of Wire Size.



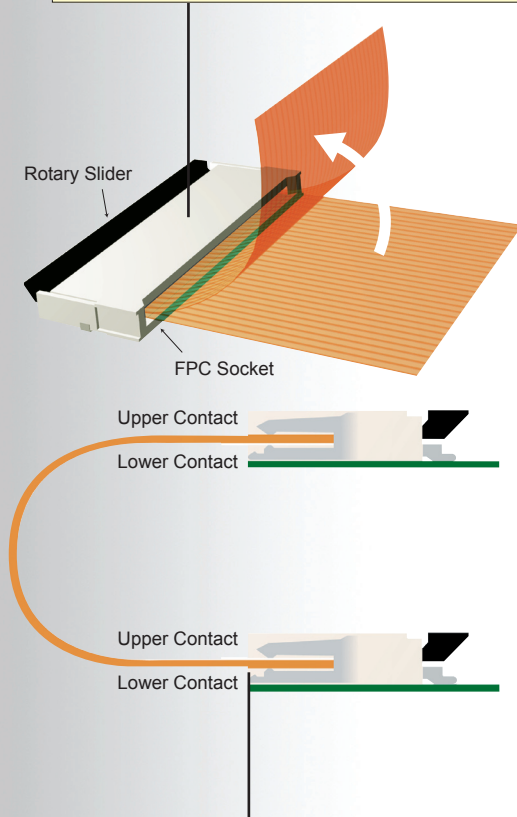
designed considering on-site work thoroughly

XF Series FPC Connectors

Improvement 1

Rotary slider independent of the FPC socket

➔ Slider does not disconnect if the FPC is lifted.
High reliability-A mounted FPC will not come off if excess force is applied to it.



Improvement 3

Dual contact

Note: Except the XF3A, XF2C Series and XF2B-61 pin.

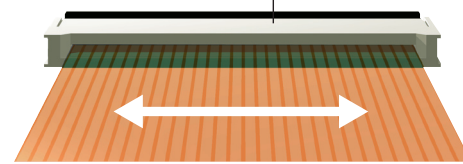
➔ No need to discriminate between the upper and lower FPC contacts.

Connectors are the same, so it's not necessary to distinguish between the upper and lower contacts when connecting upper and lower PCBs.

Improvement 2

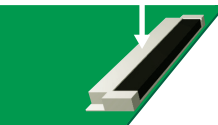
Four-sided FPC housing

➔ Construction prevents FPC displacement.
Mounting reliability is enhanced because the FPC is held in a four-sided housing and is unaffected by the slider operation.

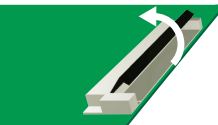


Traditional Rotary Connector

1. Mount the connector.



2. Release the rotary slider.



3. Insert the FPC.

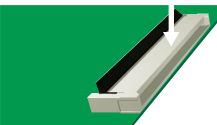


4. Lock the rotary slider.

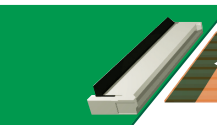


XF Series

1. Mount the connector.



2. Insert the FPC.



3. Lock the rotary slider.



Improvement 4

Delivered with the rotary slider open.

➔ Reduces the labor required to mount FPCs.
Assembly speed is improved over the conventional rotary locking type because the rotary slider does not need to be released.

Natural Color Connector helps you to Improve Circuit Recognition.

XJ8A Jump Sockets (natural color)

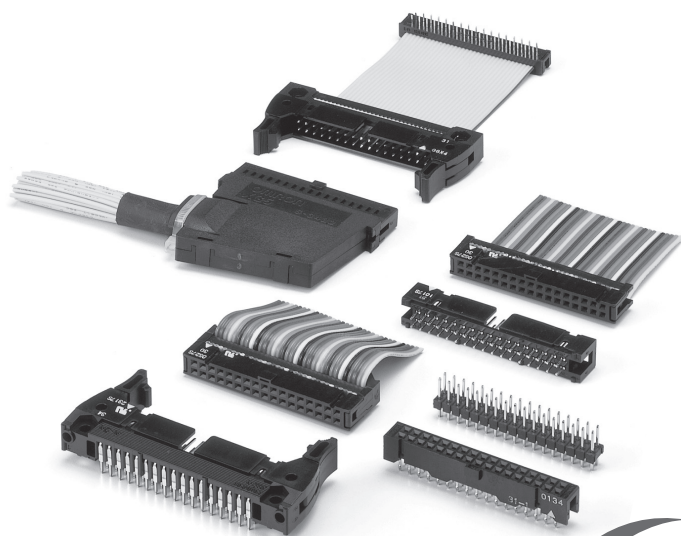
- Easy to Recognize in Inspection Process, or by Circuits.
- Remains the structure of "Easy-to-connect" and "Hard-to-disconnect".



XG□ and XJ8

Flat Cable Connectors and Jump Connectors

Flat Cable Connectors Responding to a Variety of Needs for Connecting Wires to PCBs



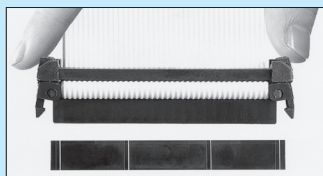
■ Connection Examples

● "Easy-to-use" OMRON connectors

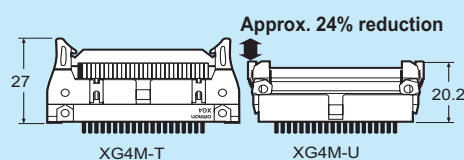
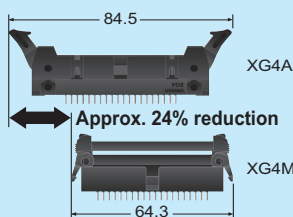
XG4T-□□□5
Socket pull-out tab

● XG4M-U Socket Connectors with lock

Connection and Disconnection with One Hand



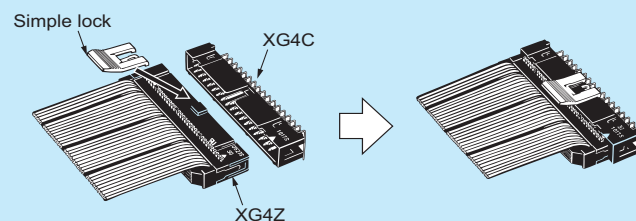
Space Saving



(compared to 40-mm models; unit: mm)

● XG4Z/XG5Z Simple Lock (for Box Plug)

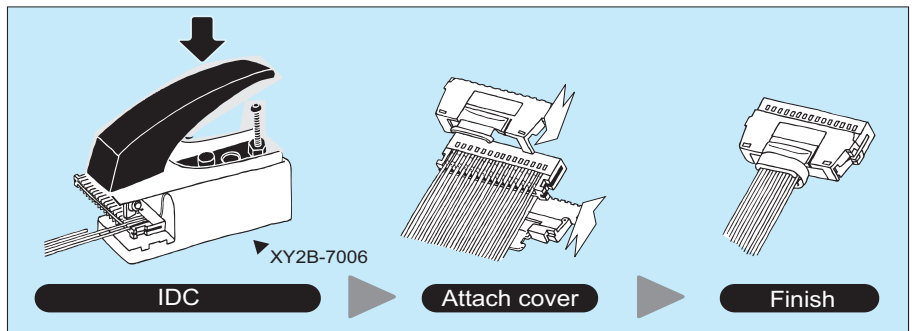
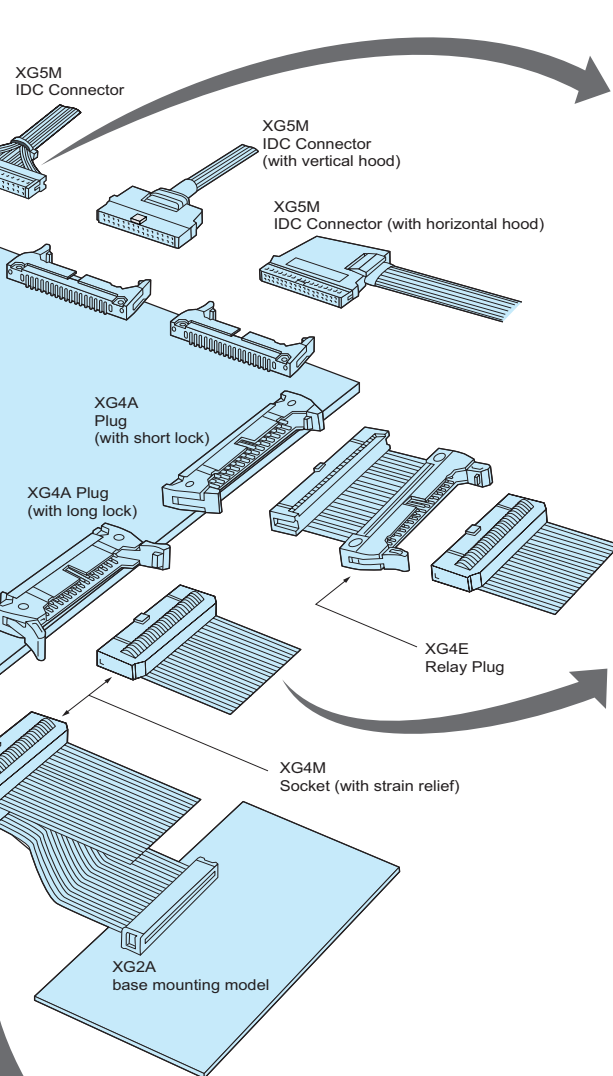
The Simple Lock for the Box Plug makes it possible to lock the Connector securely.



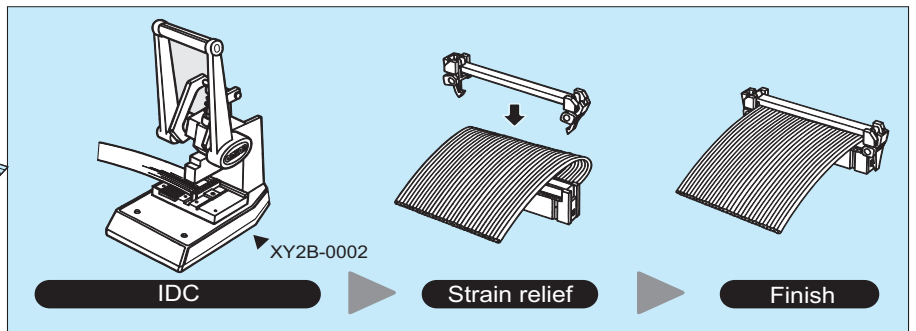
IDC:Insulation Displacement Connection

●XG5M IDC Connectors

Wiring performed with special tool, eliminating the need for wire-end stripping  or crimping. 

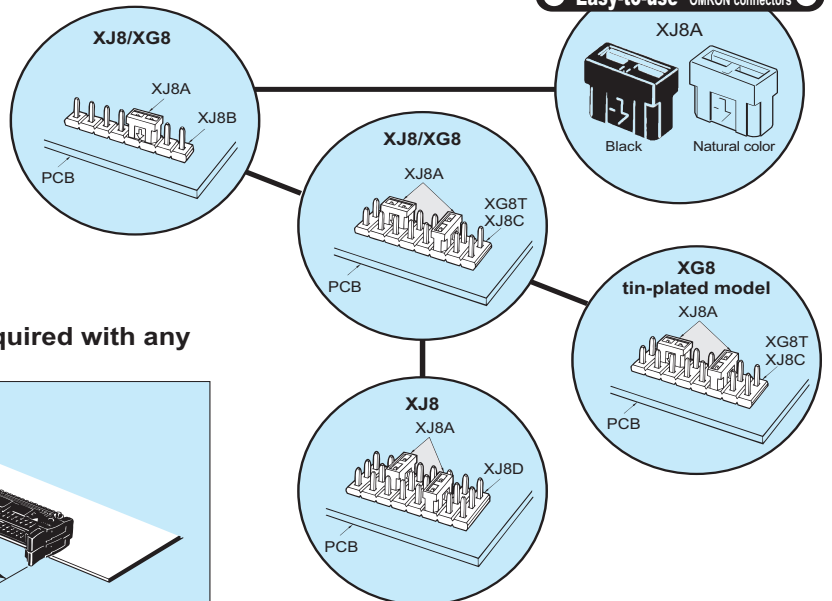


●XG4M IDC Connectors



■A Variety of Jump Connectors

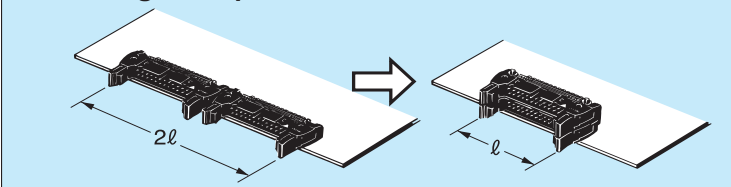
●“Easy-to-use” OMRON connectors●



●XG4A-A 2-tier Plugs

2-tier plugs occupying half the space required with any conventional model.

●Mounting Example



XG□ and XJ8

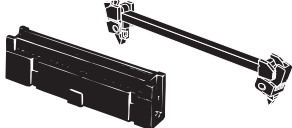
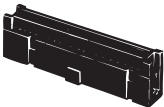
Flat Cable Connectors and Jump Connectors

Ordering Information

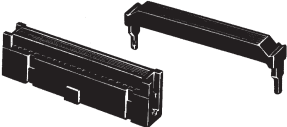
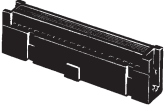
●XG4M Socket connectors with lock

XG4M-□□30-U

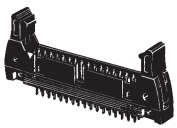
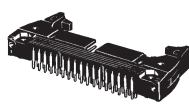
XG4M-□□31-U

Shape	Set Model XG4M-□□30-U *1 XG4M-□□31-U *2 	Socket (with open-end cover) XG4M-□□30 *1 XG4M-□□31 *2 	Strain relief (with lock) XG4U-□□04 
Number of contacts			
*1: 1 Polarizing guide	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64
*2: 2 Polarizing guide	50, 60, 64	50, 60, 64	
*2: 0 Polarizing guide	10	10	

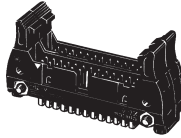
●XG4M Socket connectors

Shape	Set Model XG4M-□□30-T *1 XG4M-□□31-T *2 	Socket (with open-end cover) XG4M-□□30 *1 XG4M-□□31 *2 	Strain relief (for XG4M) XG4T-□□04 
Number of contacts			
*1: 1 Polarizing guide	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64
*2: 2 Polarizing guide	50, 60, 64	50, 60, 64	
*2: 0 Polarizing guide	10	10	

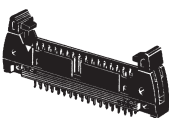
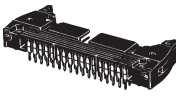
●XG4A Plug connectors with long lock

Shape	Straight terminal XG4A-□□31 *1 XG4A-□□71 *2 	Right angle terminal XG4A-□□34 *1 XG4A-□□74 *2 
Number of contacts		
*1: 1 Polarizing guide	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64
*2: 2 Polarizing guide	50, 60, 64	50, 60, 64
*2: 0 Polarizing guide	10	10

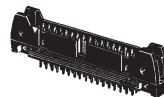
●XG4A 2-tier Plugs with long lock

Shape	Right angle terminal XG4A-□□39-A *1 XG4A-□□79-A *2 
Number of contacts	
*1: 1 Polarizing guide	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64
*2: 2 Polarizing guide	50, 60, 64
*2: 0 Polarizing guide	10

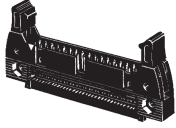
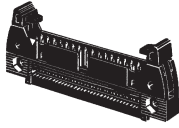
●XG4A Plug Connectors with short lock

Shape	Straight terminal XG4A-□□32 *1 XG4A-□□72 *2 	Right angle terminal XG4A-□□35 *1 XG4A-□□75 *2 
Number of contacts		
*1: 1 Polarizing guide	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64
*2: 2 Polarizing guide	50, 60, 64	50, 60, 64
*2: 0 Polarizing guide	10	10

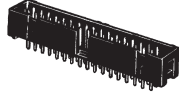
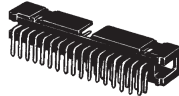
●XG4A Plugs without lock lever

Shape	Straight terminal XG4A-□□33 *1 XG4A-□□73 *2 	Right angle terminal XG4A-□□36 *1 XG4A-□□76 *2 
Number of contacts		
*1: 1 Polarizing guide	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64	10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64
*2: 2 Polarizing guide	50, 60, 64	50, 60, 64
*2: 0 Polarizing guide	10	10

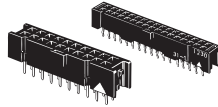
●XG4E Relay plug connectors

Shape	Long lock XG4E-□□31 *1 XG4E-□□71 *2	Short lock XG4E-□□32 *1 XG4E-□□72 *2	Strain relief (for XG4E) XG4S-□□04
			
	Number of contacts		
	*1: Polarizing guide 1	10,14,16,20,26,30,34,40,50,60,64	10,14,16,20,26,30,34,40,50,60,64
	*2: Polarizing guide 2	50,60,64	50,60,64
*2: Polarizing guide 0	10	10	10,14,16,20,26,30,34,40,50,60,64

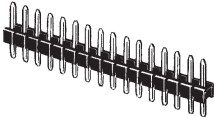
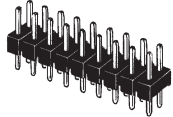
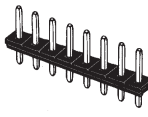
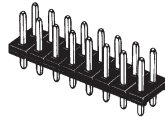
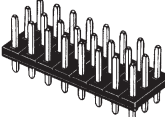
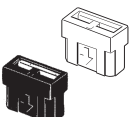
●XG4C Box type plug connectors

Shape	Straight terminal XG4C-□□31 *1 XG4C-□□71 *2	Right angle terminal XG4C-□□34 *1 XG4C-□□74 *2
		
	Number of contacts	
	*1: 1 Polarizing guide	10,14,16,20,26,30,34,40,50,60,64
	*2: 2 Polarizing guide	50,60,64
*2: 0 Polarizing guide	10	10

●XG4H Socket for board to board connectors

Shape	Straight terminal XG4H-□□31 *1 XG4H-□□71 *2	Right angle terminal XG4H-4034
		
	Number of contacts	
	*1: 1 Polarizing guide	10,14,16,20,26,30,34,40,50,60,64
	*2: 2 Polarizing guide	50,60,64
		40

●XG8/XJ8 Jump connectors

Shape	XG8S-□□31 XG8S-□□41	XG8T-□□31 XG8T-□□41	XJ8B-□□11	XJ8C-□□11	XJ8D-□□11	XJ8A-0211 XJ8A-0241 XJ8A-0214
						
Number of contacts	2,3,4,6,8,16,18	2,4,6,8,10,12,14,16,18,20	2,3,4,6,8,16	2,3,4,6,8,10,12,14,16	3,6,9,12,15,18,21,24	2

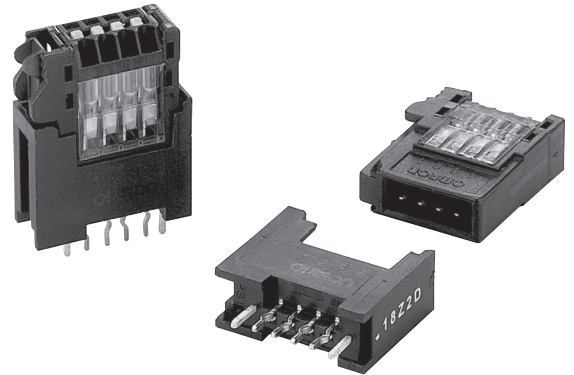
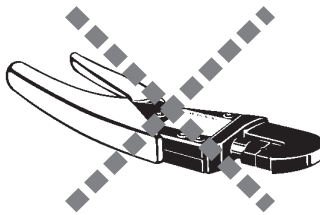
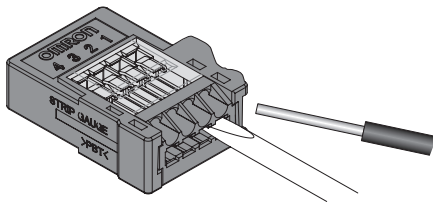
●XG8 Original plugs

Shape	1-Row type Straight terminal XG8A-5031	1-Row type Right angle terminal XG8A-5034	2-Row type Straight terminal XG8B-0131	2-Row type Right angle terminal XG8B-0134	Straight terminal XG8W-□□31(Au) XG8W-□□41(Sn)	Right angle terminal XG8W-□□34(Au) XG8W-□□44(Sn)
						
Number of contacts	50	50	100	100	10,14,16,20,26,30,34,40,50,60	20,26,30,34,40,50

Easy-wire Connectors With *e-CON** Specifications, Ideal for connecting Sensors

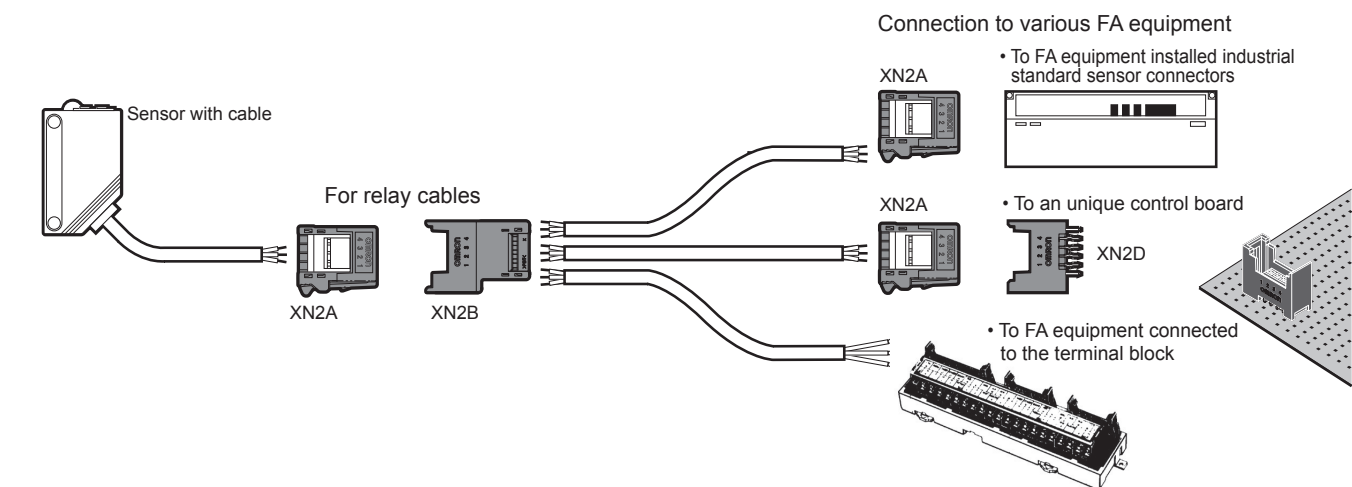
- Use industry— proven spring clamps for wiring.
- Rewiring (reparing) is possible.
- Each connector accepts any wire size from AWG28 (0.08 mm²) to AWG20 (0.5mm²).
(External sheath diameter: 1.5mm max).

No special tools required for easy wiring



* *e-CON* Specifications are currently being promoted for Standardization by manufacturers of FA Components and Connections.

■Example of Wiring Form



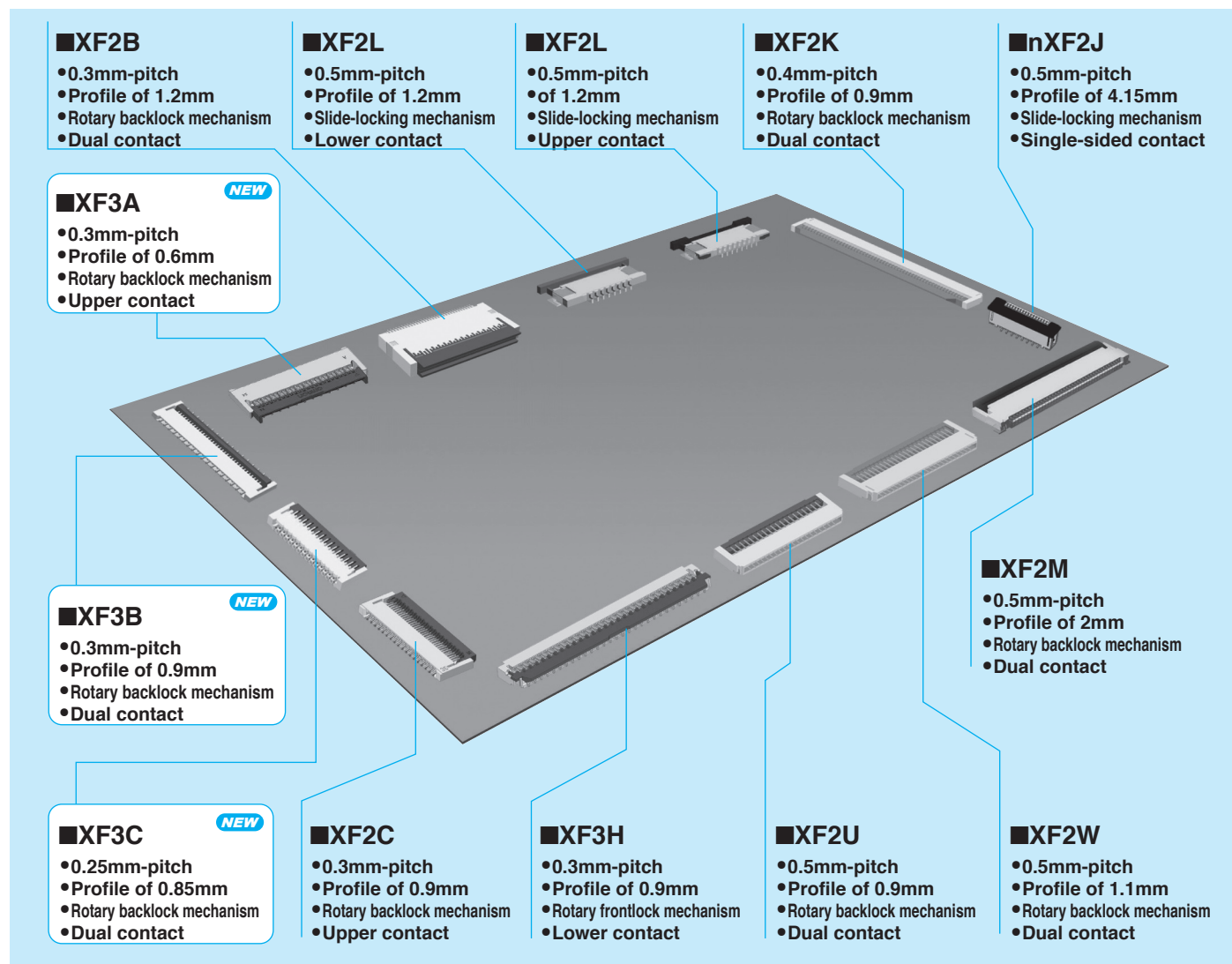
■Ordering Information

Type	Cable Plug Connector	Cable Socket Connector	Single-socket PCB Socket Connector	Four-socket PCB Socket Connector
Appearance				
No. of contacts	Model	Model	Model	Model
3	XN2A-1370	---	XN2D-1371	---
4	XN2A-1470	XN2B-1470	XN2D-1471	XN2D-4471
5	XN2A-1570	---	XN2D-1571	---
6	XN2A-1670	---	XN2D-1671	---
8	XN2A-1870	---	XN2D-1871	---

XF Series

FPC Connectors

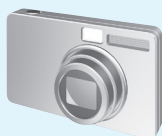
FPC Connectors must offer easy operation and secure mounting in tight working spaces. The rotary backlock construction of the XF Series solves FPC mounting problems and significantly enhances work efficiency and reliability.



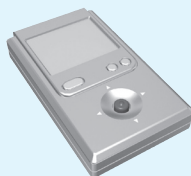
Applications



I Mobile phones



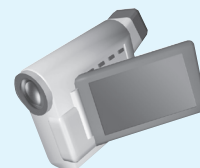
I Digital cameras



I Portable audio devices



I DVD drives



I Digital video cameras

Product Overview

Model	Lock mechanism	Pitch	On-board height	Depth (*4)	Applicable FPC thickness	Contact type
XF3C	 Rotary backlock	0.25mm	0.85mm	3.8mm	0.12mm	Dual contact
XF3A	 Rotary backlock	0.3mm	0.6mm	3.8mm	0.12mm	Upper contact
XF3B	 Rotary backlock	0.3mm	0.9mm	4.0mm*3	0.2mm	Dual contact
XF2C	 Rotary backlock	0.3mm	0.9mm	4.0mm	0.12mm	Upper contact
XF2B	 Rotary backlock	0.3mm	1.2mm	5.5mm	0.2mm	Dual contact*1
XF3H	 Rotary frontlock	0.3mm	0.9mm	3.5mm	0.2mm	Lower contact
XF2K	 Rotary backlock	0.4mm	0.9mm	4.0mm	0.2mm	Dual contact
XF2U	 Rotary backlock	0.5mm	0.9mm	3.5mm	0.2mm	Dual contact
XF2W	 Rotary backlock	0.5mm	1.1mm	3.5mm*3	0.3mm	Dual contact
XF2M	 Rotary backlock	0.5mm	2.0mm*2	5.9mm*2	0.3mm	Dual contact
XF2L	 Slide lock	0.5mm	1.2mm	3.45mm	0.3mm	Upper/lower contact
XF2J	 Slide lock	0.5mm	4.15mm	3.4mm	0.3mm	Single-sided contact

*1: Models with 61 pins have upper contacts. *2: 55 and 60 pins are different specifications.

*3: Dimensions differ for the long-lock type. *4: These are latch closed dimension.

Model Number Legend

XF -

(1) Classification in Series

2B, 2C, 2J, 2K, 2L,
2M, 2U, 2W, 3A, 3B, 3C,
3H

(2) Number of Signal Contact Pins

(3) Signal Contact Arrangement

1: One-row, double-sided contact
2: One-row, single-sided contact
(including upper contact
and top entry)
3: One-row, single-sided contact
(lower contact)

(4) Terminal Shape

4: SMT terminals
(top entry)
5: SMT terminals
(side entry)

(5) Applicable FPC thickness

1: 0.3mm
3: 0.2mm

4: Two-row, double-sided
contact

5: Two-row, single-sided
contact

4: 0.12mm

5: 0.15mm

(6) Terminal Arrangement

□: Standard
1: Staggered arrangement
(forward arrangement)
2: Staggered arrangement
(backward arrangement)

(7) Plating

A: Au

(8) Special

Correspondence

E: Easy lock type
H: For multiple pins

(7) Plating

A: Au

(8) Special Correspondence

E: Easy lock type
H: For multiple pins

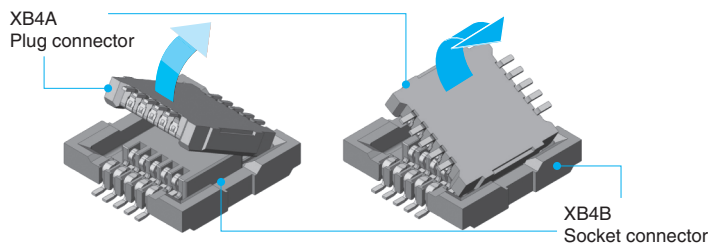
XB4A/B

0.4mm Pitch Board to FPC Connectors

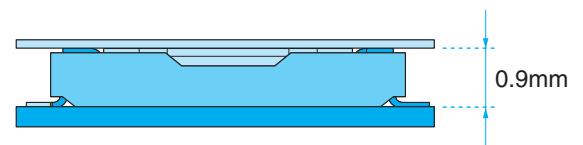
Ultra-low profile connector with a stacking height of 0.9mm, guarantees easy operation and high contact reliability.

- The low-profile shape, a sharp “click” and a high retention force
- Possible to remove any direction
- Easy insertion performance by self-alignment
- Double contacts ensure highly reliable contact

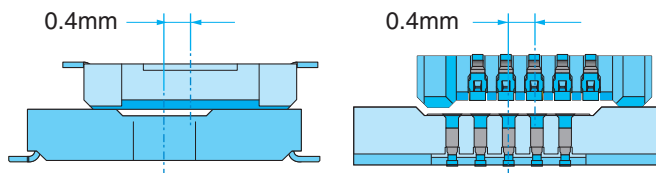
● Twist-resistant design allows removal in all directions



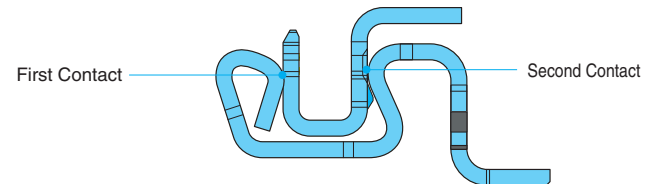
● Low-profile type with a stacking height of just 0.9 mm



● Featuring the self-alignment structure



● Double contacts ensure highly reliable contact



Product Overview

Model	Part name	Pitch	Stacking height	Width
 XB4A	Plug	0.4mm	0.9mm	4.1mm
 XB4B	Socket			5.0mm

Model Number Legend * Use this legend when determining the product specifications from the model number.
Choose from the model numbers listed in this catalog when ordering.

XB4 - **35-D**

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

(1) Series Name
0.4-mm Pitch Board to
FPC Connector

(2) Classification in Series

A: Plug
B: Socket

(3) Number of Signal Contact Pins

(4) Plating

3: Au

(5) Terminal Shape
SMT terminals

(6) Accessories

D: Without boss and
hold down

Ordering Information

Type	Pin No.	Quantity per reel (See Note 1)	Model
Plug	24	3,000	XB4A-2435-D
	40	3,000	XB4A-4035-D
	80	3,000	XB4A-8035-D
Socket	24	3,000	XB4B-2435-D
	40	3,000	XB4B-4035-D
	80	3,000	XB4B-8035-D

Note: 1. Please order a multiple of the quantity per reel.

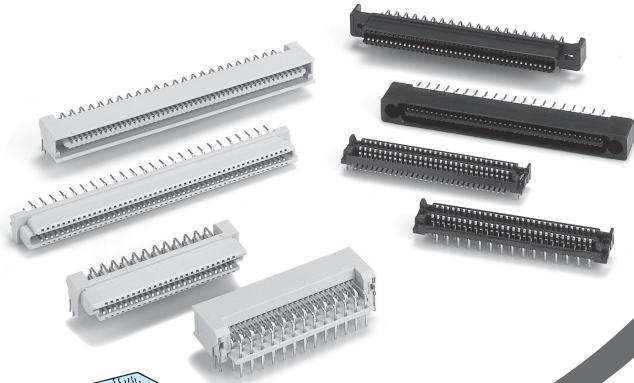
XH3/XH4/XH2

Half-pitch Connectors Series

1.27-mm Contact Pitch

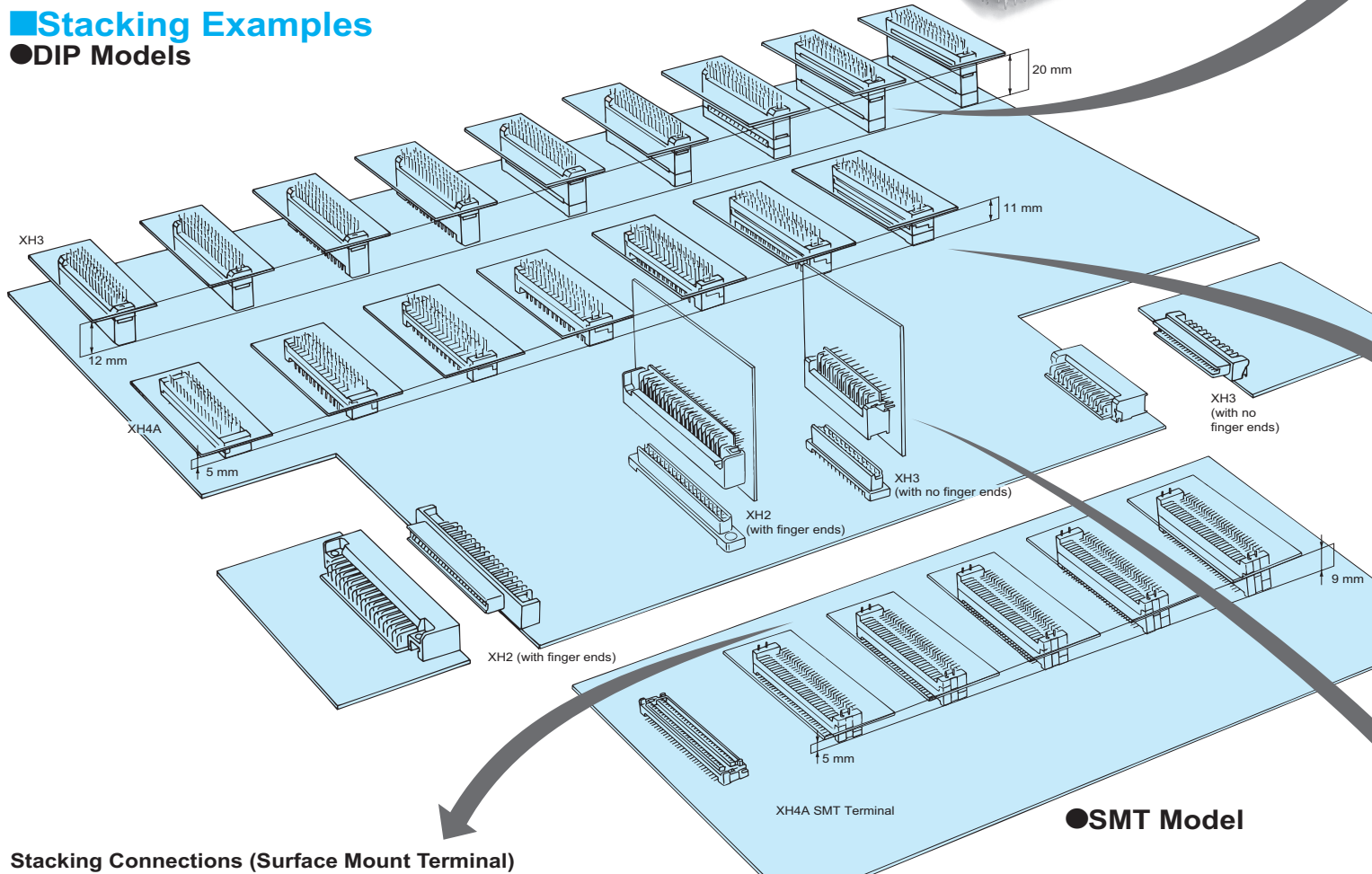
Greatly Contributing to High-density Mounting of Electronic Components and Miniaturization of Electronic Devices

- Stacking heights supported in the range 5 to 20 mm at 1-mm increments.
- Leaf contact structure ensures high resistance to twisting force and smooth connection and disconnection.
- XH2/XH3: Au/Pd-plated contacts with an engagement length of 3.1 mm ensure high contact reliability.
- Snap-on terminal for easy connection to the PCB.
- Housing with standoff construction for improved soldering quality and easier cleaning (except 1 and 2-mm increment models).
- XH2/XH3/XH4 DIP model: Approved by EN, IEC, UL, and CSA standards.
- Product lineup includes fine-fit models that are mounted to PCBs with ease with no soldering.



Stacking Examples

●DIP Models



●SMT Model

Stacking Connections (Surface Mount Terminal)

Stacking Height	5 mm	6 mm	7 mm	8 mm	9 mm
Engagement					

Engagement

Stacking Connections

Stacking Height	12 mm	13 mm	14 mm	15 mm	16 mm
Engagement					
Stacking Height	17 mm	18 mm	19 mm	20 mm	
Engagement					

Stacking Connections (Straight Terminal)

Stacking Height	5 mm	6 mm	7 mm	8 mm
Engagement				
Stacking Height	9 mm	10 mm	11 mm	
Engagement				

Vertical/Horizontal/Stacking

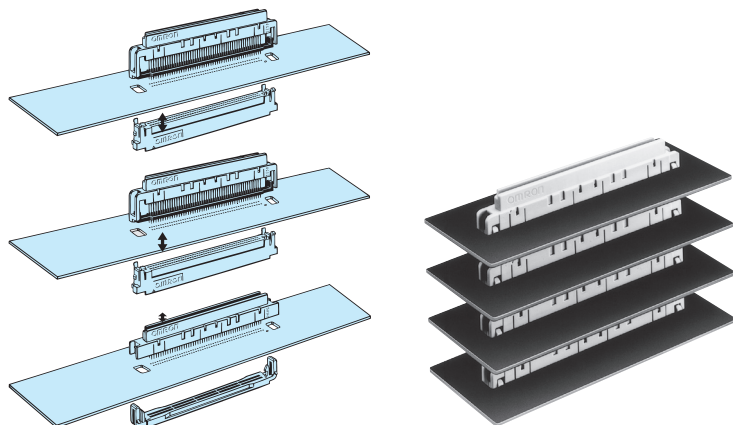
Vertical (Standard) (See note.)	Vertical (Reverse)	Horizontal

XH3/XH4/XH2

Half-pitch Connectors Series

■ Connection Examples

● Multi-tier Stacking of Fine-fit Models



● Fine Fit

The term "fine fit" (generally known as "press fit") refers to the technique where the connector terminal are pressed into the through holes of the PCB to connect the PCB and connector electrically and mechanically with the spring pressure of the terminal.

The connector is connected with no solder, eliminating the soldering stage usually required with connectors. Furthermore the PCB is free of thermal load or flux, thus contributing to cost reductions and improvements in contact reliability.

■ Engagement

● Stacking Fine-fit Plain Models with Straight Terminal

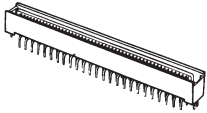
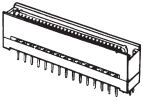
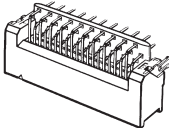
XH3A -□□41(-A) XH3B -□□3P-D32 XH3C -□□12 XH3B -□□3P-D32 XH3C -□□12 XH3B -□□41(-A)	XH3A -□□41-2A XH3B -□□3P-D32 XH3C -□□12 XH3B -□□3P-D32 XH3C -□□12 XH3B -□□41-1A	XH3A -□□41-2A XH3B -□□3P-D32 XH3C -□□12 XH3B -□□3P-D32 XH3C -□□12 XH3B -□□41-3A	XH3A -□□41-4A XH3B -□□3P-D32 XH3C -□□12 XH3B -□□3P-D32 XH3C -□□12 XH3B -□□41-4A
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■ Ordering Information

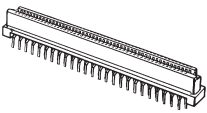
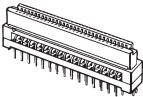
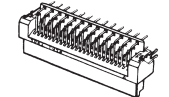
● XH3 Half-pitch Connectors (Fine-fit and Stacking Connection)

Shape	Socket (Backplane Model) XH3B-013P-D32 	Housing (Backplane Model) XH3C-0112 	Set model XH3B-013P-D32-C
Number of contacts	100	100	100
Shape	Connector with socket and short terminal XH3B-013P-D5F 	Cover for short terminal XH3S-0111 	Set model XH3B-013P-D5F-S
Number of contacts	100	100	100

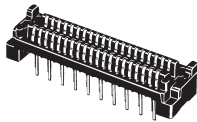
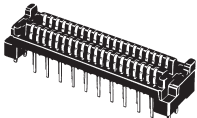
●XH3 Half-pitch Connectors (Board-to-Board Connection) Plugs

Shape	Plug with Straight terminal XH3A-□□41 XH3A-□□41-A	Plug with Straight terminal (models with stacking height adjustable in 2 or 4-mm increments) XH3A-□□41-2A XH3A-□□41-4A	Plug with Right angle terminal XH3A-□□42-A
			
Number of contacts	20,30,40,50,60,68,80,100,120	20,30,40,50,60,68,80,100,120	30,40,50,60,68,80,100

Sockets

Shape	Socket with Straight terminal XH3B-□□41 XH3B-□□41-A	Socket with Straight terminal (models with stacking height adjustable in 1, 3, or 4-mm increments) XH3B-□□41-1A XH3B-□□41-3A XH3B-□□41-4A	Socket with Right angle terminal (Provided with Lock Terminal) XH3B-□□42-A
			
Number of contacts	20,30,40,50,60,68,80,100,120	20,30,40,50,60,68,80,100,120	30,40,50,60,68,80,100

●XH4 Half-pitch Connectors (Low-profile Stacking Connection)

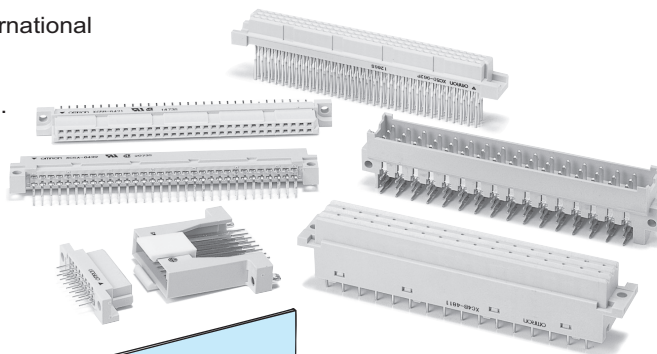
Shape	Half-pitch Connector with Straight terminal XH4A-□□31	Half-pitch Connector with Straight terminal (models other than standard models with stacking height adjustable in 1, 2, or 3-mm increments) XH4A-□□31-A XH4A-□□31-1A XH4A-□□31-2A XH4A-□□31-3A	Half-pitch Connector with SMT (models other than standard models with stacking height adjustable in 1 or 2-mm increments) XH4A-□□35-A XH4A-□□35-1A XH4A-□□35-2A
			
Number of contacts	40,50,60,80,100	40,50,60,80,100	40,50,60,80,100

XC5/XC6/XC7/XC2/XC4

DIN Connectors Series

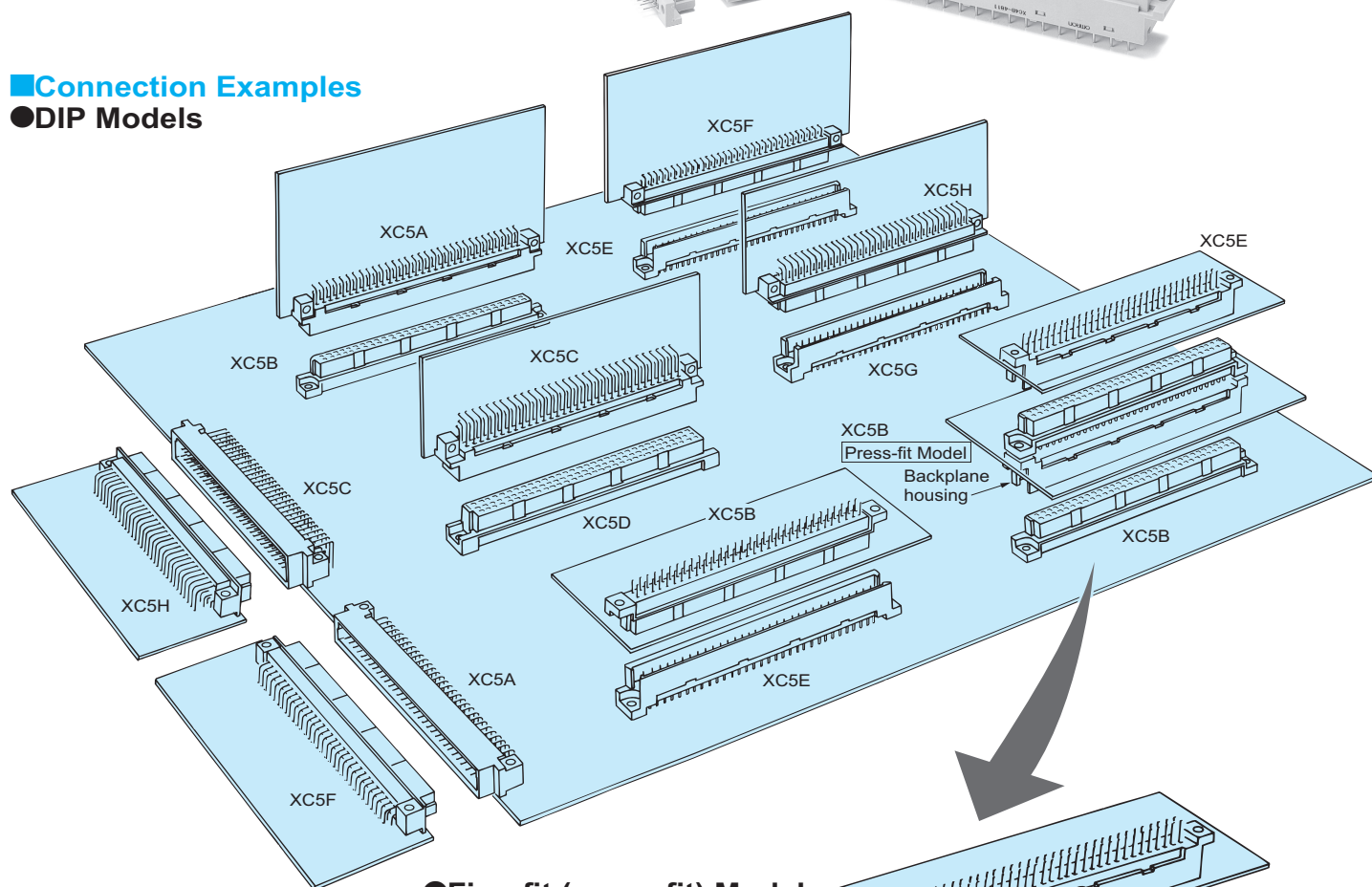
A Wide Variety of High-density Connectors Conform to International Standards, are Highly Reliable, and Support a Wide Range of Applications

- Lineup includes versatile DIN models that meet international DIN standards, such as standard DIN, DIN-style, and DIN fine-fit models.
- These connectors meet a variety of industrial needs.
- A comprehensive selection of accessories are available.

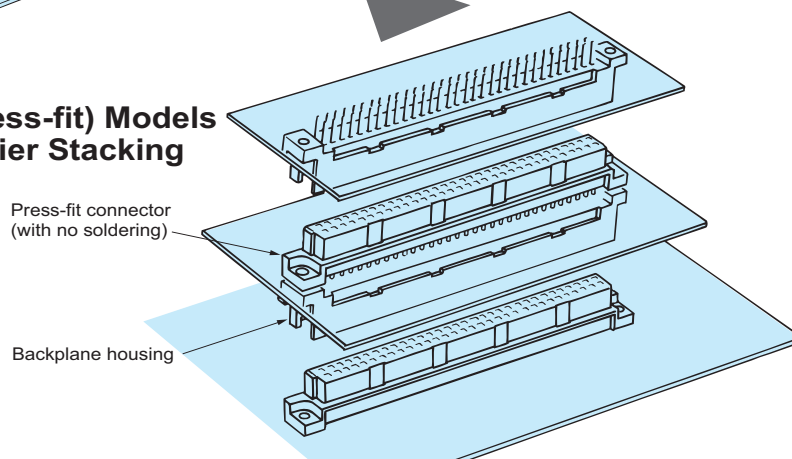


■ Connection Examples

● DIP Models

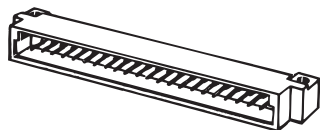


● Fine-fit (press-fit) Models with Multi-tier Stacking



■A wide variety of DIN connectors are available in addition to the following models.

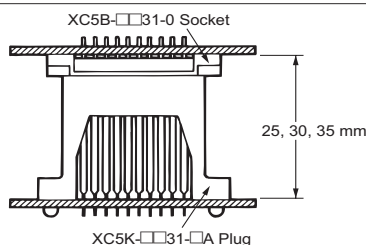
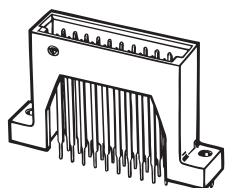
XC5 DIN-style Connectors



	Standard DIN	DIN style 1	DIN style 2
PCB mounting	 Fixed at PCB edge	 PCB surface mounting	 PCB surface mounting

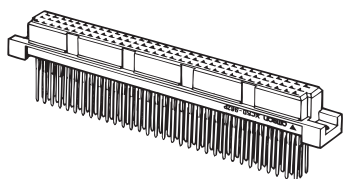
- Designed for PCB surface mounting and ideal for automatic soldering.

XC5K High-profile Stacking Connectors



- Corresponding to a stacking height of 25, 30, or 35 mm.

XC5 Fine-fit (press-fit) Connectors



■Construction of Solderless Connecting Part (Fine-fit Part)

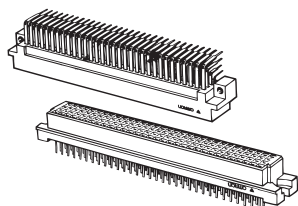


Cross Section

The cross section is in the shape of the letter W.
The two points on the bottom work as guide rails, preventing the pins from becoming twisted.
The fin parts on the upper part change shape to fit into the through hole of the PCB.

- Press-fitted to PCBs and so soldering or cleaning is required.
- Mounting method more efficient than manual soldering.
- Ideal for backplane systems.

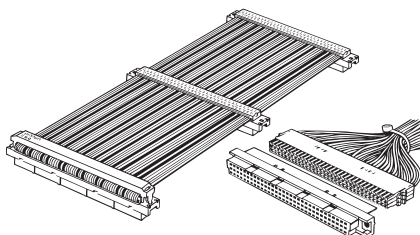
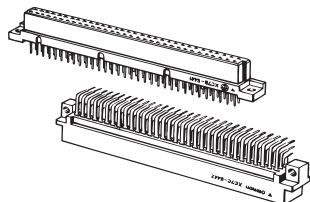
XC5M DIN Connectors in 4 Lines with 128 Connector Poles



	XC5M standard DIN model	XC5M-1 DIN style 1	XC5N DIN style 3
Shape	Plug Right angle terminal 	Plug Right angle terminal 	Socket Straight terminal

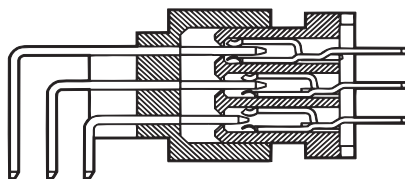
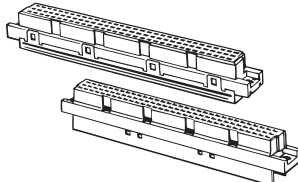
- Multi-pole connectors in 4 lines with 128 poles based on the DIN concept.

XC6 Cable Connectors



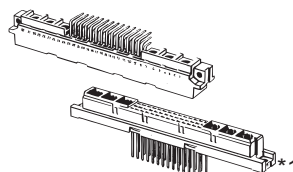
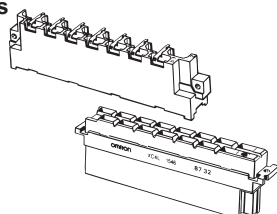
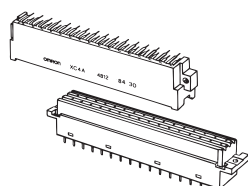
- Ideal for connecting to a variety of bus lines for rack systems.
- Allow backplanes to be constructed with ease.
- Models with 96 connector poles and models with 64 connector poles and a center-holed construction are available.

XC7 Sequence Connectors



- Active lines can be connected to daughter boards after connecting power lines, and can be disconnected before disconnecting the power lines.
- High reliability ensured with an engagement length of 4 mm and the durability to withstand 5,000 insertions.
- Three-step sequential operation.

XC4 Mid- and High-current Connectors



- Carry 6 to 40 A for PCB-to-PCB or PCB-to-wire applications.

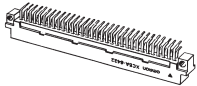
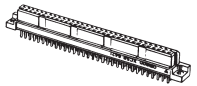
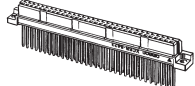
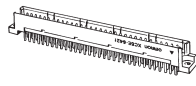
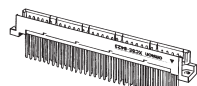
*1(high frequency model available)

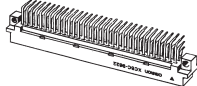
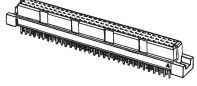
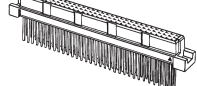
XC5/XC6/XC7/XC2/XC4

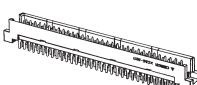
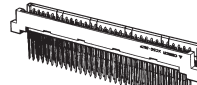
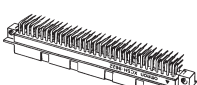
DIN Connectors Series

Ordering Information

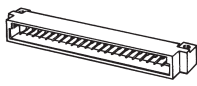
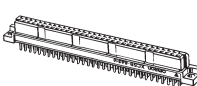
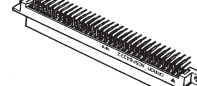
●XC5 DIN Connectors

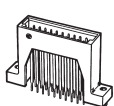
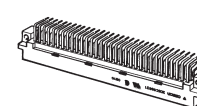
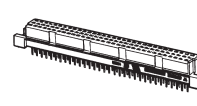
	XC5A 2-Row Plugs (DIN-B Standard Models)	XC5B 2-Row Sockets (DIN-B Standard Models)		XC5E DIP Plugs (DIN-Q Reverse Models)	
Shape	Right angle terminal XC5A-□□22 	Straight terminal XC5B-□□21 	Straight wrapping terminal XC5B-□□23 	Straight terminal XC5E-□□21 	Straight wrapping terminal XC5E-□□23 
Number of contacts	20,32,44,50,64,100	20,32,44,50,64,100		20,32,44,50,64,100	

	XC5F 2-Row Sockets (DIN-Q Reverse Models)	XC5C 3-Row Plugs (DIN-C Standard Models)	XC5D 3-Row Sockets (DIN-C Standard Models)	
Shape	Right angle terminal XC5F-□□22 	Right angle terminal XC5C-□□22 	Straight terminal XC5D-□□21 	Straight wrapping terminal XC5D-□□23 
Number of contacts	20,32,44,50,64,100	32,48,64,96	32,48,64,96	

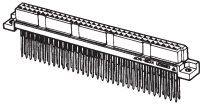
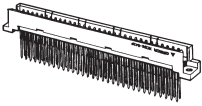
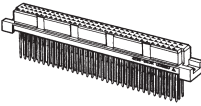
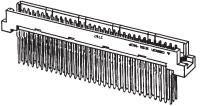
	XC5G 3-Row Plugs (DIN-R Reverse Models)		XC5H 3-Row Sockets (DIN-R Reverse Models)
Shape	Straight terminal XC5G-□□21 	Straight wrapping terminal XC5G-□□23 	Right angle terminal XC5H-□□22 
Number of contacts	48,64,96		48,64,96

●XC5 DIN-style Connectors

	XC5A 2-Row Plugs (DIN Style 1)	XC5B 2-Row Sockets (DIN-style Compatible Models)	XC5E 2-Row Plugs (DIN Style 2)	XC5F 2-Row Sockets (DIN Style 2)
Shape	Right angle terminal XC5A-□□82-1 	Straight terminal XC5B-□□31-0(with coding key) XC5B-□□31-3 	Straight terminal XC5E-□□81-2 XC5E-□□81-3 * 	Right angle terminal XC5F-□□32-2 
Number of contacts	20,24,30,32,44,50,64,100	10,14,16,20,24,30,32,44,50,64,100	10*,14*,20,24*,30,32,44,50,64,100	20,30,32,44,50,64,100

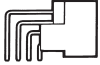
	XC5K High-profile Stacking Plugs	XC5C 3-Row Plugs (DIN Style 1)	XC5D 3-Row Sockets (DIN Style Compatible)
Shape	XC5K-□□31-3A with 30-mm-pitch Straight terminal XC5K-□□31-2A with 25-mm-pitch Straight terminal 	Right angle terminal XC5C-□□82-1 	Straight terminal XC5D-□□31-0 
Number of contacts	16,20,32	64,96	64,96

●XC5 DIN Connectors (Fine-fit, W-shaped terminal type)

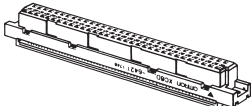
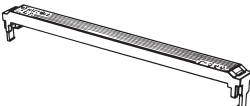
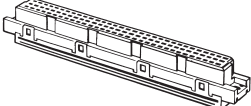
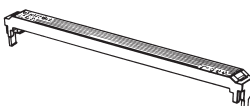
	XC5B 2-Row Sockets (DIN-B Fine-fit, W-terminal Models)	XC5E 2-Row Plugs (DIN-Q Fine-fit, W-terminal Models)	XC5D 3-Row Sockets (DIN-C Fine-fit, W-terminal Models)	XC5G 3-Row Plugs (DIN-R Fine-fit, W-terminal Models)
Shape	Straight terminal XC5B-□□2P-1140 *1 XC5B-□□2P-1131 *2 XC5B-□□2P-1132 *3 	Straight terminal XC5E-□□2P-1140 *1 XC5E-□□2P-1131 *2 XC5E-□□2P-1132 *3 	Straight terminal XC5D-□□2P-1140 *1 XC5D-□□2P-1131 *2 XC5D-□□2P-1132 *3 	Straight terminal XC5G-□□2P-1140 *1 XC5G-□□2P-1131 *2 XC5G-□□2P-1132 *3 
Number of contacts	32,64,100	32,64,100	48,64,96	48,64,96

*1: Terminal type/ Straight, 4mm *2: Terminal type/ Straight, 13mm *3: Terminal type/ Straight, 17mm

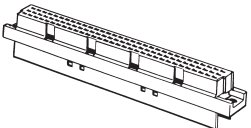
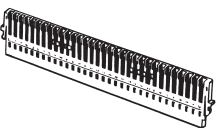
●XC5 DIN Connectors (4-Rows and 128 Contacts type)

	XC5M 4-Row Plugs		XC5N 4-Row Sockets
Shape	Standard DIN Right angle type terminal XC5M-0222 	DIN Style Right angle terminal XC5M-0222-1 	DIN Style 3 Straight terminal XC5N-0221 
Number of contacts	128		128

●XC6 DIN Connectors (Cable Connecting type)

	XC6D Center-holed 2-Row Flat Cables (DIN-C Models)		XC6H 3-Row Flat Cable (DIN-C Models)	
Shape	Socket XC6D-6421 	Strain relief XC6T-644 	Socket XC6H-9621 	Strain relief XC6T-644 
Number of contacts	64		96	

●XC6V DIN Connectors (IDC Connectors for Discretedwire)

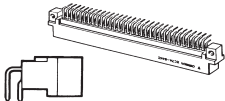
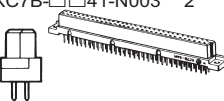
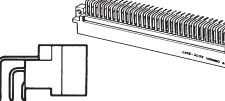
	Unit housing XC6M-96 	Housing without contacts XC6T-32 
Shape		

XC5/XC6/XC7/XC2/XC4

DIN Connectors Series

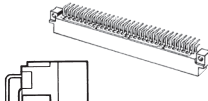
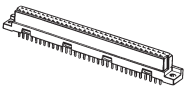
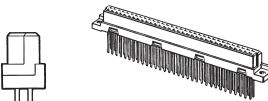
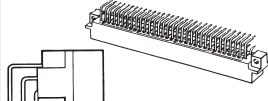
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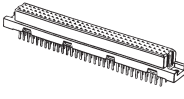
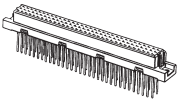
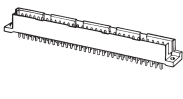
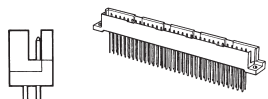
●XC7 DIN Socket Sequence Connectors

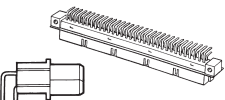
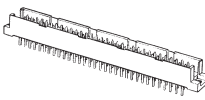
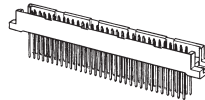
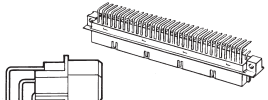
	XC7A 2-Row Plugs	XC7B 2-Row Sockets	XC7C 3-Row Plugs	XC7D 3-Row Sockets
Shape	Right angle terminal XC7A-□□42-N001 *1 	Straight terminal XC7B-□□41-N001 *1 XC7B-□□41-N003 *2 	Right angle terminal XC7C-9642-N001 *1 	Straight terminal XC7D-9641-N001 *1 
Number of contacts	64,90,100	64,90,100	96	96

*1:N001→Normal *2:N003→Sequence

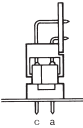
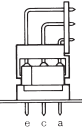
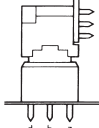
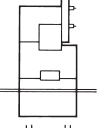
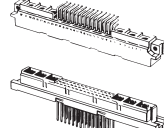
●XC2 DIN Connectors

	XC2A 2-Row Plugs (DIN-B standard models)	XC2B 2-Row Sockets (DIN-B standard models)	XC2C 3-Row Plugs (DIN-C standard models)
Shape	Right angle terminal XC2A-6412 	Straight terminal XC2B-6411  Straight wrapping terminal XC2B-6413 	Right angle terminal XC2C-□□12 
Number of contacts	64	64	64,96

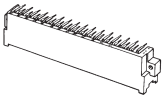
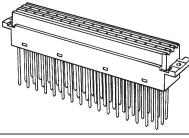
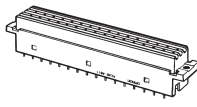
	XC2D 3-Row Sockets (DIN-C standard)	XC2E 2-Row Plugs (DIN-Q Reverse model)
Shape	Straight terminal XC2D-□□11  Straight wrapping terminal XC2D-□□13 	Straight terminal XC2E-6411  Straight wrapping terminal XC2E-6413 
Number of contacts	64,96	64

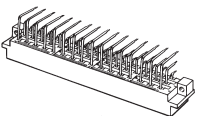
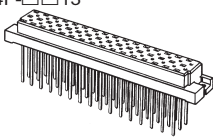
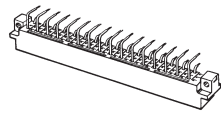
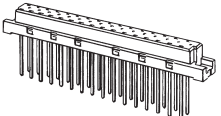
	XC2F 2-Row Sockets (DIN-Q Reverse model)	XC2G 3-Row Plugs (DIN-R Reverse model)	XC2H 3-Row Sockets (DIN-R Reverse model)
Shape	Right angle terminal XC2F-6412 	Straight terminal XC2G-□□11  Straight wrapping terminal XC2G-□□13 	Right angle terminal XC2H-□□12 
Number of contacts	64	64,96	64,96

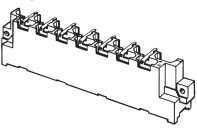
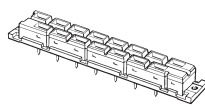
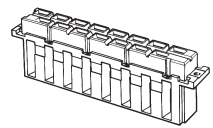
●XC4 DIN types

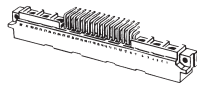
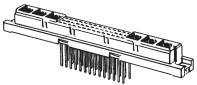
Models	XC4G/H	XC4E/F	XC4A/B	XC4K/L	XC4M/N
DIN	D	E	F	H	M
Shape					

●XC4 DIN Connectors (Medium and High-current Connectors)

Shape	XC4A Plugs (DIN-F)	XC4B Sockets (DIN-F)	
	Right angle terminal XC4A-4812 	Straight terminal XC4B-4813 	Wrapping terminal XC4B-4811 
Number of contacts	48	48	

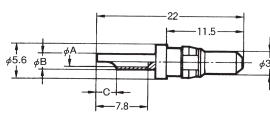
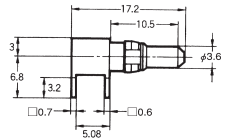
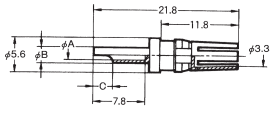
Shape	XC4E Plugs (DIN-E)	XC4F Sockets (DIN-E)	XC4G Plugs (DIN-D)	XC4H Sockets (DIN-D)
	Right angle terminal XC4E-□□12 	Wrapping terminal XC4F-□□13 	Right angle terminal XC4G-3212 	Wrapping terminal XC4H-3213 
Number of contacts	32,48	32,48	32	32

Shape	XC4K Plugs (DIN-H)	XC4L Sockets (DIN-H)	XC4L Sockets(with Fastening Terminals)(DIN-H)
	Right angle terminal XC4K-1542 	Straight terminal XC4L-1541 	with Fasten Terminal XC4L-1546 
Number of contacts	15	15	15

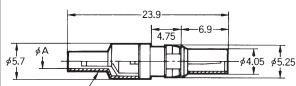
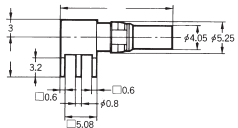
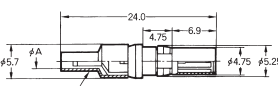
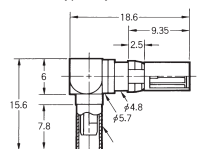
Shape	XC4M Plugs (DIN-M)	XC4N Sockets (DIN-M)
	Right angle terminal XC4M-□□12 	Straight wrapping terminal XC4N-□□13 
Number of contacts	2/78, 4/60, 6/42 *	2/78, 4/60, 6/42 *

*: contacts/ Number of signal circuit poles

●XC4W High-current Contacts (for XC4M/XC4N)

Shape	Plug with Solder Cup Terminal XC4W-□□11 	Plug with L-shaped Solder Terminal XC4W-0412 	Receptacle with Solder Cup Terminal XC4W-□□11 

●XC4W Co-axial Contacts for XC4M/XC4N

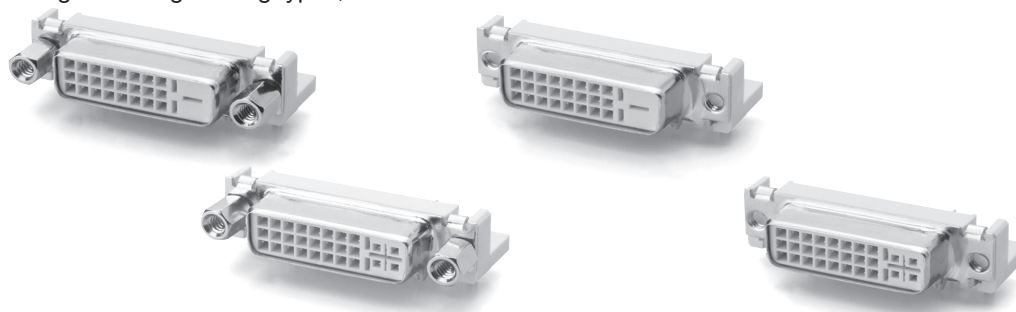
Shape	XC4W-2111(φ2.2) XC4W-2211(φ3.2) 	XC4W-2014 	XC4W-3111(φ2.2) XC4W-3211(φ3.2) 	XC4W-3112(φ2.2) XC4W-3212(φ3.2) 

DVI Connectors

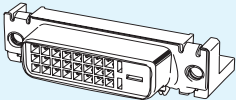
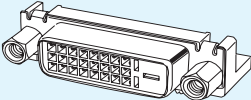
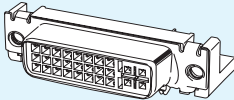
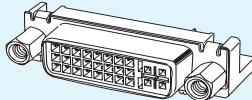
XM4M

OMRON DVI Connectors, Conforming to Digital Visual Interface (DVI) Standards, Transmit High-resolution Video Signals.

- Support not only the Transition Minimized Differential Signaling (TMDS), but also the conventional analog RGB transmission simultaneously.
- OMRON DVI connectors provide a bandwidth performance of maximum 2.5 GHz over analog interface.
- Support high bandwidth data transfer of maximum 9.9Gbps over digital dual link, addressing the bandwidth requirements of the next generation broadband.
- EMI shield indispensable to high-speed data transfer is fully prepared.
- Two types, digital and digital/analog sharing types, are available.



Ordering Information

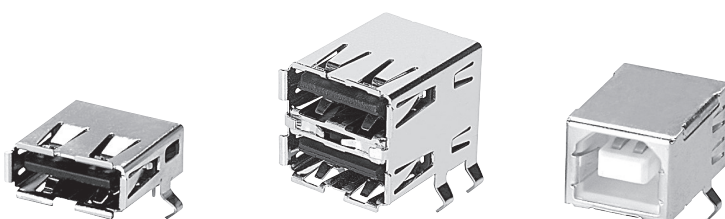
Type	Digital type		Digital/analog sharing type	
Accessories	Without Anchor	Inch screw (5.8 mm)	Without Anchor	Inch screw (5.8 mm)
Series	XM4M-2432-5012	XM4M-2432-1312	XM4M-2932-5012	XM4M-2932-1312
Shape				

USB Connectors

XM7

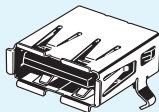
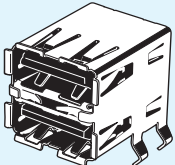
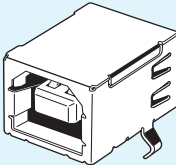
New Compact Interface Connectors Conforming to USB Standards

- Allows connecting or disconnecting of active lines with power supplied to devices
- Structure of high resistance to twisting force during connecting or disconnecting
- Socket model A is for personal computers and USB hubs while socket model B is for peripheral devices, such as the modem, scanner, or mouse of a personal computer.

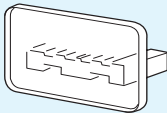
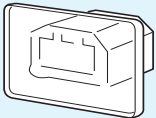


Ordering Information

■Sockets

Item	Type	A type with 1-tier	A type with 2-tier	B type
Shape		DIP Right Angle Terminal with kink terminal 	DIP Right Angle Terminal with kink terminal 	DIP Right Angle Terminal with kink terminal 
Series		XM7A-0442	XM7A-0442-A	XM7B-0442

■Dust Covers

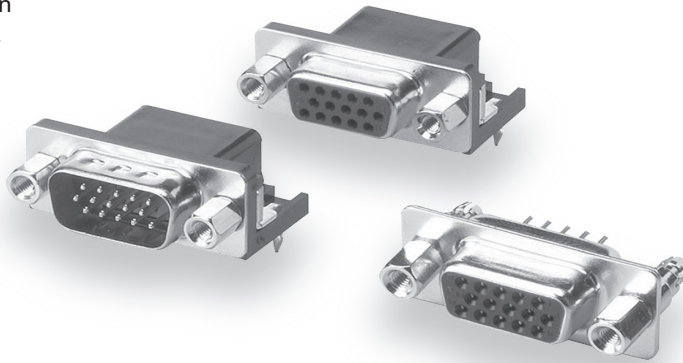
Item	Type	For A type	For B type
Shape			
Series		XM7Z-0001	XM7Z-0002

XM4K/L

High-density D-sub Connectors

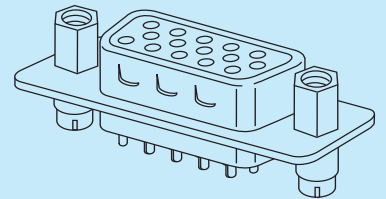
High-density Connectors Ideal for Interfacing with Electronic Devices

- High-density construction with 15 poles in a standard 9-pole general-purpose shell.
- Shielded connectors that prevent EMI.

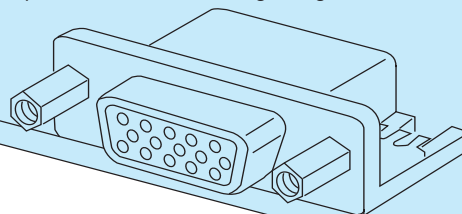


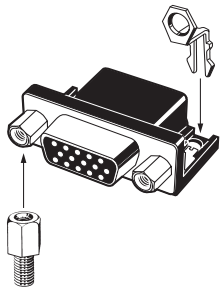
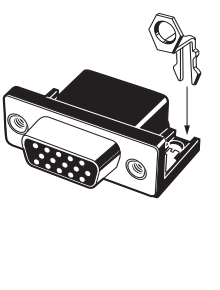
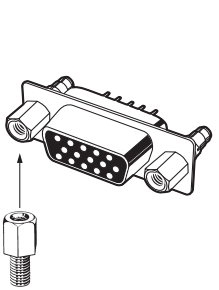
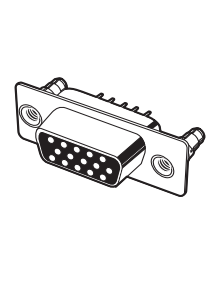
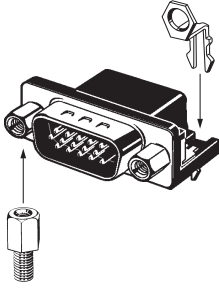
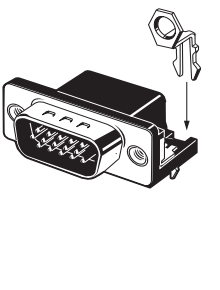
■ Connection Examples

XM4L-1541-□□□
15 Poles, Socket with DIP Straight Terminal

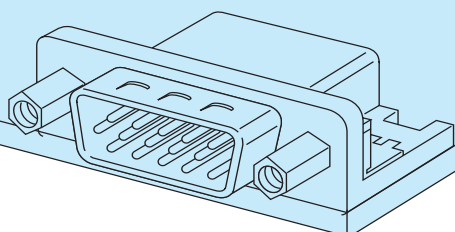


XM4L-1542-□□□
15 poles, Socket with DIP Right Angle Terminal



Shape	Socket right angle terminal XM4L-1542-132 	Socket right angle terminal XM4L-1542-502 	Socket straight terminal XM4L-1541-132 	Socket straight terminal XM4L-1541-502 
	Plug right angle terminal XM4K-1542-132 	Plug right angle terminal XM4K-1542-502 		

XM4K-1542-□□□
 15 poles, Plug with DIP Right Angle Terminal



XM2/XM3

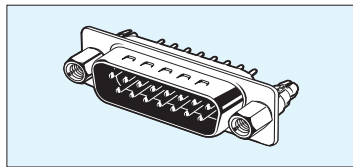
D-sub Connectors

D-sub Connectors Ideal for Interfacing with OA Equipment

- D-sub Connectors Ideal for Interfacing with OA Equipment.
- Shielded connectors that prevent EMI.
- Noise can be suppressed effectively by using the XM2S Plastic Hood with metallic finish.
- XM3B-F multi-hole ferrite-core models are also available. Use these models to suppress high-frequency noise and save PCB mounting space.
- Compact and tough structure with a metal shell provided.
- A wide variety of mounting brackets and grounding metals are available.

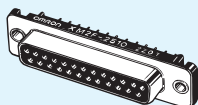
■ Connection Examples

■ XM2E Plug with straight terminal

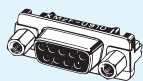


■ XM2F Socket with straight terminal

With no anchor and no grounding fixture

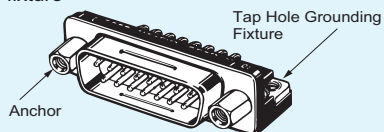


With anchor and lock pin grounding fixture

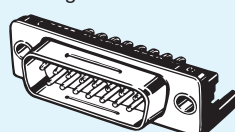


■ XM2C Plug with right angle terminal

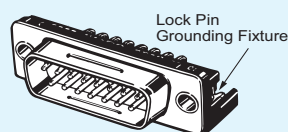
With anchor and tap hole grounding fixture



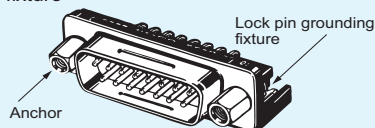
With no anchor and no grounding fixture



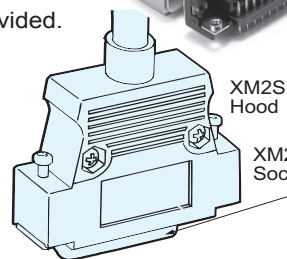
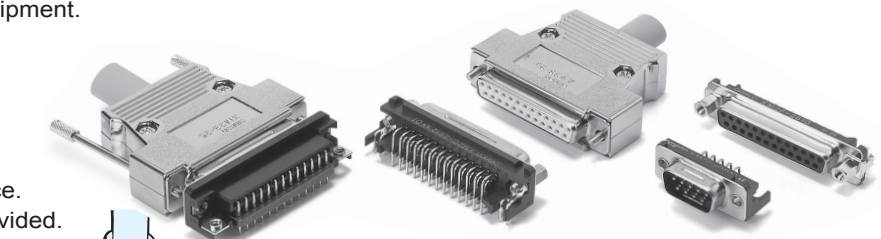
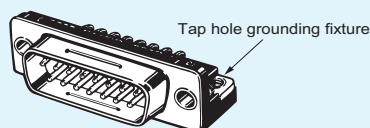
With lock pin grounding fixture



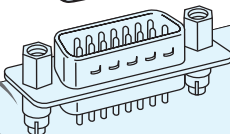
With anchor and lock pin grounding fixture



With tap hole grounding fixture

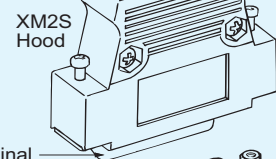


XM2S Hood
XM2D Socket with solder cup terminal

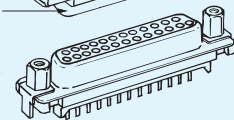


XM2E Plug with straight terminal

XM2A Plug with solder cup terminal

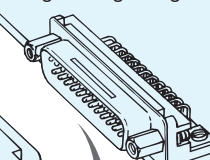


XM2S Hood

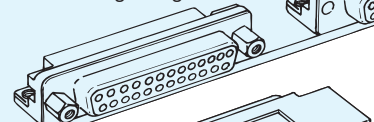


XM2F Socket with straight terminal

XM2C Plug with right angle terminal

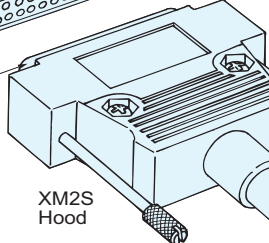


XM3B Socket with right angle terminal



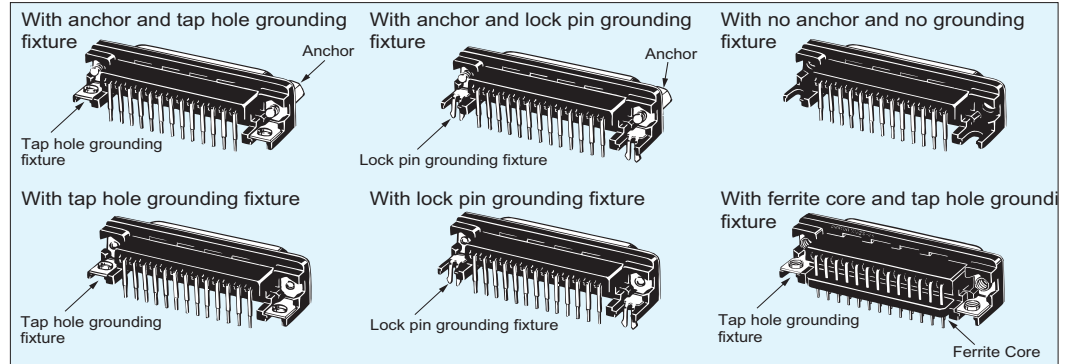
XM2S Hood

XM2A Plug with solder cup terminal



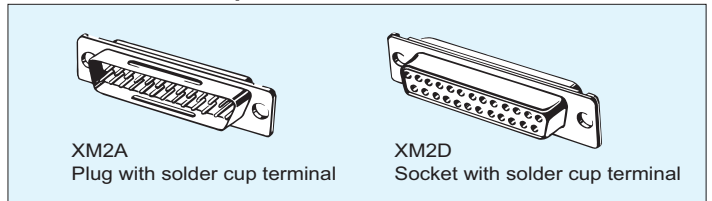
XM2S Hood

■XM2B Socket with right angle terminal



XM3B-F
Socket with right
angle terminal
and ferrite core

■XM2A/D Solder cup terminal



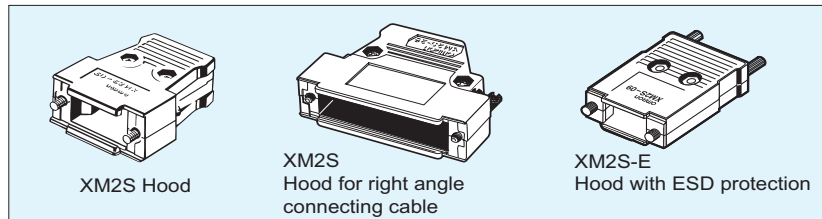
■XM4Z Anchoe

● "Easy-to-use" OMRON connectors ●

Shape			
Type of lock screw	M2.6 × 0.45	M3 × 0.5	#4-40 UNC

It can be identified type of lock screw by the appearance

■XM4S Hood



XR2/XR3

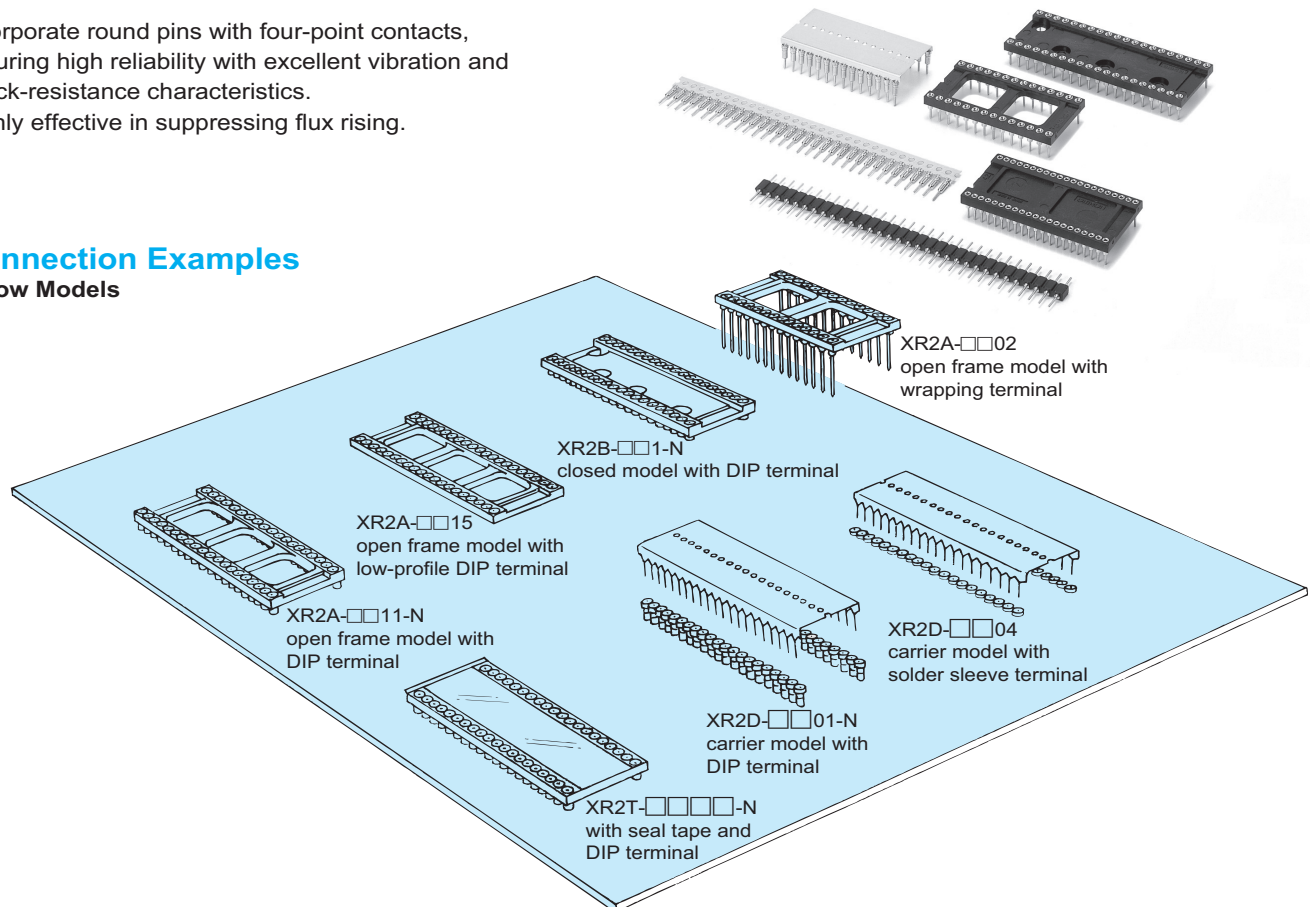
IC Sockets

Highly Reliable Sockets That Withstand Instantaneous Signal Failures - Ideal for High-speed Data Processing Circuits

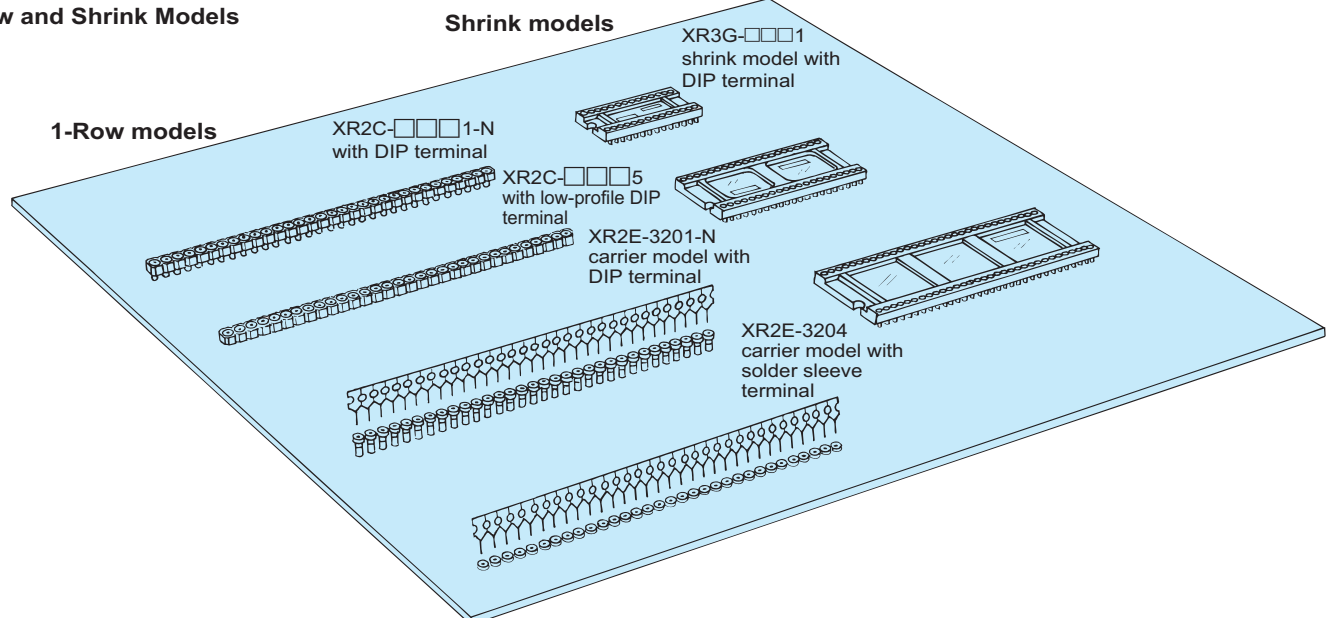
- Incorporate round pins with four-point contacts, ensuring high reliability with excellent vibration and shock-resistance characteristics.
- Highly effective in suppressing flux rising.

Connection Examples

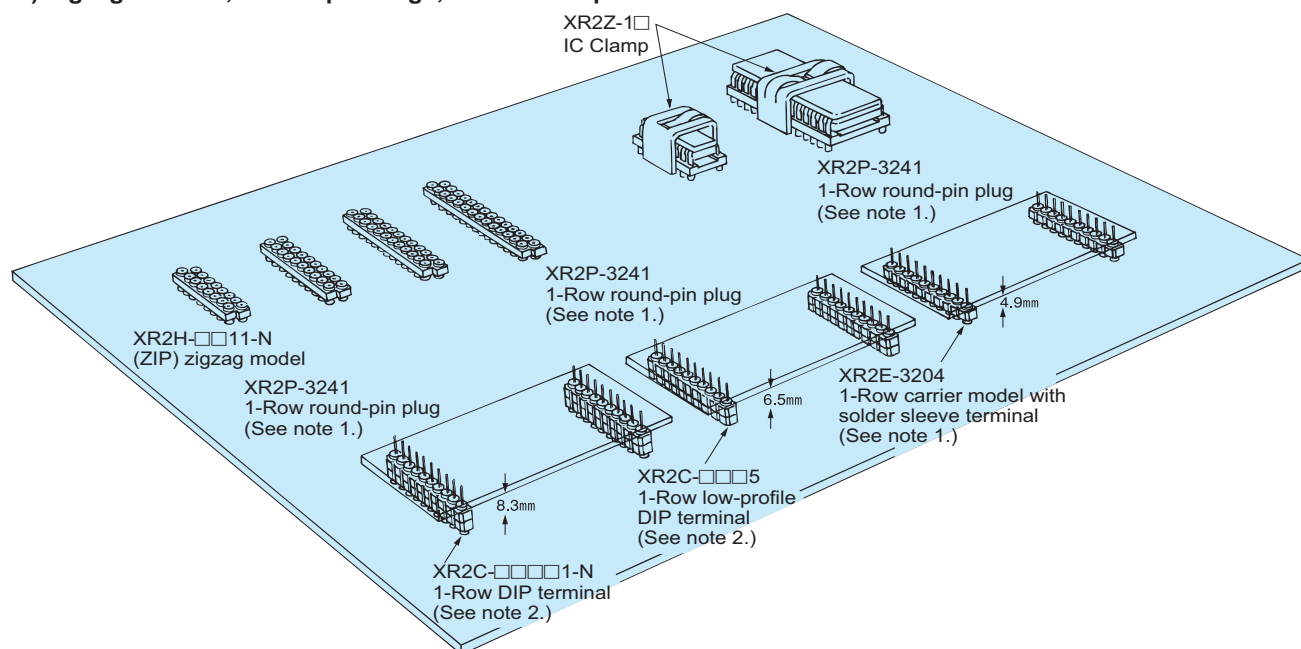
● 2-Row Models



● 1-Row and Shrink Models



●(ZIP) Zigzag Sockets, Round-pin Plugs, and IC Clamps



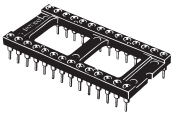
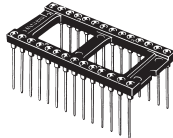
Note 1: A standard model has 32 poles. Cut the plug to the appropriate number of poles.
 2: A standard model has 32 or 20 poles. Cut the plug to the appropriate number of poles.

XR2/XR3

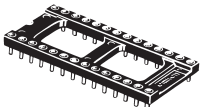
IC Sockets

Ordering Information

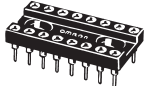
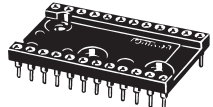
●XR2A Open frame models

Shape	DIP terminal XR2A-□□11-N *1 XR2A-2463-N *1 (See Note 1) XR2A-2473-N *1 (See Note 2) XR2A-□□01-N *2 XR2A-2461-N *2 (See Note 1) XR2A-2471-N *2 (See Note 2) XR2A-□□21-N *3 XR2A-2467-N *3 (See Note 1) XR2A-2477-N *3 (See Note 2)	Wrapping terminal XR2A-□□02
		
Number of contacts	8, 14, 16, 18, 20, 22, 24, 28, 32, 40, 42, 48, 50, 64	

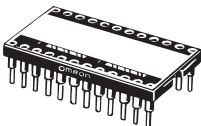
●XR2A Open frame models (Low-profile DIP terminal)

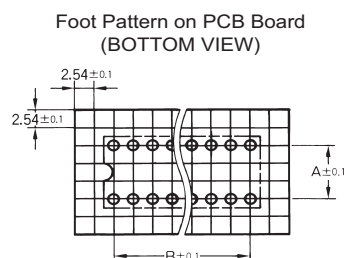
Shape	Low-profile DIP terminal XR2A-□□15 *1 XR2A-2466 *1 (See Note 1) XR2A-2476 *1 (See Note 2) XR2A-□□05 *2 XR2A-2465 *2 (See Note 1) XR2A-2475 *2 (See Note 2) XR2A-□□25 *3 XR2A-2468 *3 (See Note 1) XR2A-2478 *3 (See Note 2)
	
Number of contacts	8, 14, 16, 18, 20, 22, 24, 28, 32, 40, 42, 48, 64

●XR2B Closed models

Shape	DIP terminal XR2B-1611-N *1 XR2B-1601-N *2	DIP terminal XR2B-□□11-N *1 XR2B-□□01-N *2
		
Number of contacts	16, 24, 28, 32, 40	

●XR2T Open frame models with sealing tape

Shape	DIP terminal XR2T-□□11-N *1 XR2T-2463-N *1 (See Note 1) XR2T-2473-N *1 (See Note 2) XR2T-□□01-N *2 XR2T-2461-N *2 (See Note 1) XR2T-2471-N *2 (See Note 2) XR2T-□□21-N *3 XR2T-2467-N *3 (See Note 1) XR2T-2477-N *3 (See Note 2)
	
Number of contacts	8,14,16,18,20,22,24,28,32,40,48



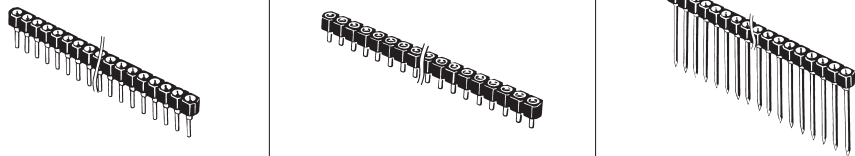
Dimension Table

Number of contacts	Pitch (mm)	A	B
8		7.62	7.62
14		7.62	15.24
16		7.62	17.78
18		7.62	20.32
20		7.62	22.86
22		10.16	25.40
24		15.24	27.94
24*		10.16	27.94
24**		7.62	27.94
28		15.24	33.02
32		15.24	38.10
40		15.24	48.26
42		15.24	50.80
48		15.24	58.42
50		22.86	60.96
64		22.86	78.74

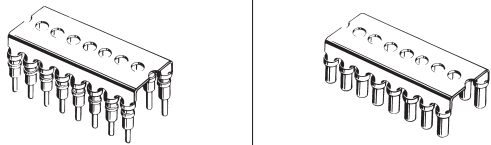
Note 1: Please refer to 24* in Dimension Table.
Note 2: Please refer to 24** in Dimension Table.

*1: Au 0.25μm *2: Au 0.75μm *3: Au flash

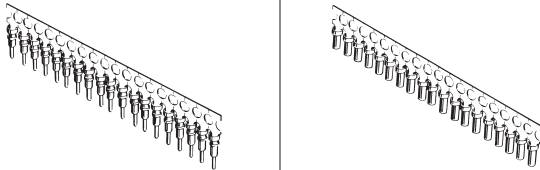
●XR2C 1-Row Connectors

Shape	DIP terminal XR2C-□□11-N *1 XR2C-□□01-N *2 XR2C-□□21-N *3	Low-profile DIP terminal XR2C-□□15 *1 XR2C-□□05 *2 XR2C-□□25 *3	Wrapping terminal XR2C-□□02 *2
			
Number of contacts	10,16,20,32	20,32	20,32

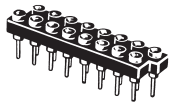
●XR2D 2-Row carrier models

Shape	DIP terminal XR2D-□□01-N *2	Solder sleeve terminal XR2D-□□04 *2
		
Number of contacts	8,14,16,18,20,24,28,32,40	

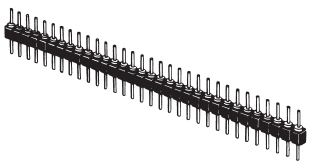
●XR2E 1-Row carrier models

Shape	DIP terminal XR2E-3201-N *2	Solder sleeve terminal XR2E-3204 *2
		
Number of contacts	32	

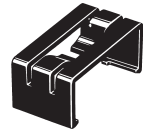
●XR2H ZIP (Zigzag) connectors

Shape	DIP terminal XR2H-□□11-N *1
	
Number of contacts	16,20,24,28

●XR2P 1-Row round-pin plugs

Shape	Straight terminal XR2P-□□41
	
Number of contacts	10,16,20,32

●Accessory

Shape	IC Clamps XR2Z-11	IC Clamps XR2Z-13	IC Puller XY2C-0101 XY2C-0103
			

Safety Standard

UL(Underwriters Laboratories Inc.)



●Connectors

Model	Number of contacts	Rating	Standard No.	File No.
XH2A XH2B	20,30,40,50,60,68,80,100	0.5A AC 125V	UL1950	E103202
XH3A XH3B	20,30,40,50,60,68,80,100,120			
XH4A	40,60,80,100 (not including SMT pins)			
XC5A	20,32,44,50,64,100	2A AC 300V	UL478	E103202
XC5B	20,32,44,50,64,100			
XC5C XC5D	32,48,64,96			
XC5E	20,32,44,50,64,100			
XC5F	20,32,44,50,64,100			
XC5G XC5H	48,64,96			
XG4A XG4C	10,14,16,20,26,30,34,40,50,60,64			
XG4S XG4T	10,14,16,20,26,30,34,40,50,60,64	1A AC 250V		
XG4E XG4M	10,14,16,20,26,30,34,40,50,60,64	2A AC 300V		
XG5M XJ8A	10,14,16,20,26,30,34,40,50,60,64,02			
XJ8B	02,03,04,05,06,07,08,09,10,11,12,13,14,15,16			
XJ8C	02,04,06,08,10,12,14,16			
XJ8D	03,06,09,12,15,18,21,24	5A AC 300V		
XM3B	09,15,25,37			
XR2A XR2B	08,14,16,18,20,22,24,28,32,40,42,48,50,64,16,24,28,40	1A AC 300V		
XR2C	03,04,05,06,07,08,09,10,11,12,13,14,15,16,18,20,21,22,23,24,26,28,30,32,64			
XR2D	08,14,16,18,20,24,28,32,40			
XR2E	02,04,08,30,32			
XR2T	08,14,16,18,20,22,24,28,32,40,48			

■CSA(Canadian Standards Association)



●Connectors

Model	Number of contacts	Rating	File No.
XC5A	20,32,44,50,64,100	2A AC 300V	LR62678
XC5B	20,32,44,50,64,100		
XC5C,XC5D	32,48,64,96		
XC5E	20,32,44,50,64,100		
XC5F	20,32,44,50,64,100		
XC5G,XC5H	48,64,96		

Omron Electronic Components, LLC

Terms and Conditions of Sales

I. GENERAL

- Definitions:** The words used herein are defined as follows.
 - Terms:** These terms and conditions
 - Seller:** Omron Electronic Components LLC and its subsidiaries
 - Buyer:** The buyer of Products, including any end user in section III through VI
 - Products:** Products and/or services of Seller
 - Including:** Including without limitation
- Offer/Acceptance:** These Terms are deemed part of all quotations, acknowledgments, invoices, purchase orders and other documents, whether electronic or in writing, relating to the sale of Products by Seller. Seller hereby objects to any Terms proposed in Buyer's purchase order or other documents which are inconsistent with, or in addition to, these Terms.
- Distributor:** Any distributor shall inform its customer of the contents after and including section III of these Terms.

II. SALES

- Prices; Payment:** All prices stated are current, subject to change without notice by Seller. Buyer agrees to pay the price in effect at the time the purchase order is accepted by Seller. Payments for Products received are due net 30 days unless otherwise stated in the invoice. Buyer shall have no right to set off any amounts against the amount owing in respect of this invoice.
- Discounts:** Cash discounts, if any, will apply only on the net amount of invoices sent to Buyer after deducting transportation charges, taxes and duties, and will be allowed only if (a) the invoice is paid according to Seller's payment terms and (b) Buyer has no past due amounts owing to Seller.
- Interest:** Seller, at its option, may charge Buyer 1.5% interest per month or the maximum legal rate, whichever is less, on any balance not paid within the stated terms.
- Orders:** Seller will accept no order less than 200 U.S. dollars net billing.
- Currencies:** If the prices quoted herein are in a currency other than U.S. dollars, Buyer shall make remittance to Seller at the then current exchange rate most favorable to Seller; provided that if remittance is not made when due, Buyer will convert the amount to U.S. dollars at the then current exchange rate most favorable to Seller available during the period between the due date and the date remittance is actually made.
- Governmental Approvals:** Buyer shall be responsible for all costs involved in obtaining any government approvals regarding the importation or sale of the Products.
- Taxes:** All taxes, duties and other governmental charges (other than general real property and income taxes), including any interest or penalties thereon, imposed directly or indirectly on Seller or required to be collected directly or indirectly by Seller for the manufacture, production, sale, delivery, importation, consumption or use of the Products sold hereunder (including customs duties and sales, excise, use, turnover and license taxes) shall be charged to and remitted by Buyer to Seller.
- Financial:** If the financial position of Buyer at any time becomes unsatisfactory to Seller, Seller reserves the right to stop shipments or require satisfactory security or payment in advance. If Buyer fails to make payment or otherwise comply with these Terms or any related agreement, Seller may (without liability and in addition to other remedies) cancel any unshipped portion of Products sold hereunder and stop any Products in transit until Buyer pays all amounts, including amounts payable hereunder, whether or not then due, which are owing to it by Buyer. Buyer shall in any event remain liable for all unpaid accounts.
- Cancellation; Etc:** Orders are not subject to rescheduling or cancellation unless Buyer indemnifies Seller fully against all costs or expenses arising in connection therewith.
- Force Majeure:** Seller shall not be liable for any delay or failure in delivery resulting from causes beyond its control, including earthquakes, fires, floods, strikes or other labor disputes, shortage of labor or materials, accidents to machinery, acts of sabotage, riots, delay in or lack of transportation or the requirements of any government authority.
- Shipping; Delivery:** Unless otherwise expressly agreed in writing by Seller:
 - All sales and shipments of Products shall be FOB shipping point (unless otherwise stated in writing by Seller), at which point title to and all risk of loss of the Products shall pass from Seller to Buyer, provided that Seller shall retain a security interest in the Products until the full purchase price is paid by Buyer;
 - Delivery and shipping dates are estimates only; and
 - Seller will package Products as it deems proper for protection against normal handling and extra charges apply to special conditions.
- Claims:** Any claim by Buyer against Seller for shortage or damage to the Products occurring before delivery to the carrier or any claim related to pricing or other charges must be presented in detail in writing to Seller within 30 days of receipt of shipment.

III. PRECAUTIONS

- Suitability:** IT IS THE BUYER'S SOLE RESPONSIBILITY TO ENSURE THAT ANY OMRON PRODUCT IS FIT AND SUFFICIENT FOR USE IN A MOTORIZED VEHICLE APPLICATION. BUYER SHALL BE SOLELY RESPONSIBLE FOR DETERMINING APPROPRIATENESS OF THE PARTICULAR PRODUCT WITH RESPECT TO THE BUYER'S APPLICATION INCLUDING (A) ELECTRICAL OR ELECTRONIC COMPONENTS, (B) CIRCUITS, (C) SYSTEM ASSEMBLIES, (D) END PRODUCT, (E) SYSTEM, (F) MATERIALS OR SUBSTANCES OR (G) OPERATING ENVIRONMENT. Buyer acknowledges that it alone has determined that the Products will meet their requirements of the intended use in all cases. Buyer must know and observe all prohibitions of use applicable to the Product/s.
- Use with Attention:** The followings are some examples of applications for which particular attention must be given. This is not intended to be an exhaustive list of all possible use of any Product, nor to imply that any use listed may be suitable for any Product:
 - Outdoor use, use involving potential chemical contamination or electrical interference.
 - Use in consumer Products or any use in significant quantities.

- Energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
 - Systems, machines, and equipment that could present a risk to life or property.
- Prohibited Use:** NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.
 - Motorized Vehicle Application:** USE OF ANY PRODUCT/S FOR A MOTORIZED VEHICLE APPLICATION MUST BE EXPRESSLY STATED IN THE SPECIFICATION BY SELLER.
 - Programmable Products:** Seller shall not be responsible for the Buyer's programming of a programmable Product.

IV. WARRANTY AND LIMITATION

- Warranty:** Seller's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Seller (or such other period expressed in writing by Seller). SELLER MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT ALL OTHER WARRANTIES, NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS.
- Buyer Remedy:** Seller's sole obligation hereunder shall be to replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product or, at Seller's election, to repay or credit Buyer an amount equal to the purchase price of the Product; provided that there shall be no liability for Seller or its affiliates unless Seller's analysis confirms that the Products were correctly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be approved in writing by Seller before shipment.
- Limitation on Liability:** SELLER AND ITS AFFILIATES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY. FURTHER, IN NO EVENT SHALL LIABILITY OF SELLER OR ITS AFFILIATES EXCEED THE INDIVIDUAL PRICE OF THE PRODUCT ON WHICH LIABILITY IS ASSERTED.
- Indemnities:** Buyer shall indemnify and hold harmless Seller, its affiliates and its employees from and against all liabilities, losses, claims, costs and expenses (including attorney's fees and expenses) related to any claim, investigation, litigation or proceeding (whether or not Seller is a party) which arises or is alleged to arise from Buyer's acts or omissions under these Terms or in any way with respect to the Products.

V. INFORMATION; ETC.

- Intellectual Property:** The intellectual property embodied in the Products is the exclusive property of Seller and its affiliates and Buyer shall not attempt to duplicate it in any way without the written permission of Seller. Buyer (at its own expense) shall indemnify and hold harmless Seller and defend or settle any action brought against Seller to the extent that it is based on a claim that any Product made to Buyer specifications infringed intellectual property rights of another party.
- Property; Confidentiality:** Notwithstanding any charges to Buyer for engineering or tooling, all engineering and tooling shall remain the exclusive property of Seller. All information and materials supplied by Seller to Buyer relating to the Products are confidential and proprietary, and Buyer shall limit distribution thereof to its trusted employees and strictly prevent disclosure to any third party.
- Performance Data:** Performance data is provided as a guide in determining suitability and does not constitute a warranty. It may represent the result of Seller's test conditions, and the users must correlate it to actual application requirements.
- Change In Specifications:** Product specifications and descriptions may be changed at any time based on improvements or other reasons. It is Seller's practice to change part numbers when published ratings or features are changed, or when significant engineering changes are made. However, some specifications of the Product may be changed without any notice.
- Errors And Omissions:** The information on Seller's website or in other documentation has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.
- Export Controls:** Buyer shall comply with all applicable laws, regulations and licenses regarding (a) export of the Products or information provided by Seller; (b) sale of Products to forbidden or other proscribed persons or organizations; (c) disclosure to non-citizens of regulated technology or information.

VI. MISCELLANEOUS

- Waiver:** No failure or delay by Seller in exercising any right and no course of dealing between Buyer and Seller shall operate as a waiver of rights by Seller.
- Assignment:** Buyer may not assign its rights hereunder without Seller's written consent.
- Law:** These Terms are governed by Illinois law (without regard to conflict of laws). Federal and state courts in Cook County, Illinois have exclusive jurisdiction for any dispute hereunder.
- Amendment:** These Terms constitute the entire agreement between Buyer and Seller relating to the Products, and no provision may be changed or waived unless in writing signed by the parties.
- Severability:** If any provision hereof is rendered ineffective or invalid, such provision shall not invalidate any other provision.



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Note: Specifications subject to change without notice.