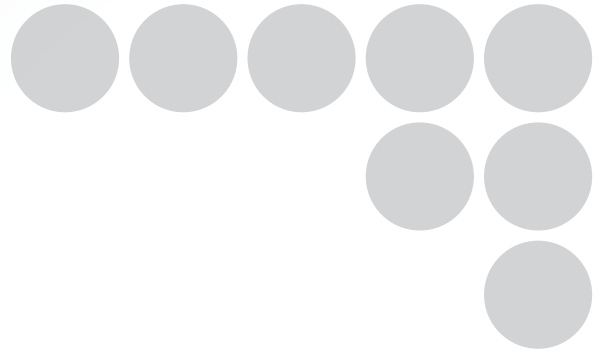


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CONNECTOR SELECTION



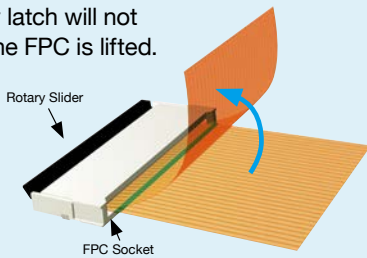
OMRON Connectors: A Perfect Match for Your Requirements

Boards to FPC/FFC Connections **FPC/FFC Connectors**

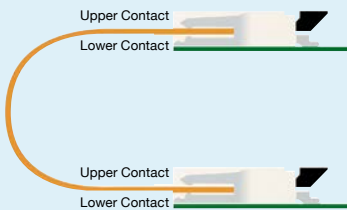


Features of Rotary Backlock Mechanism

1 Rotary latch is independent of the FPC socket. The Rotary latch will not release if the FPC is lifted.



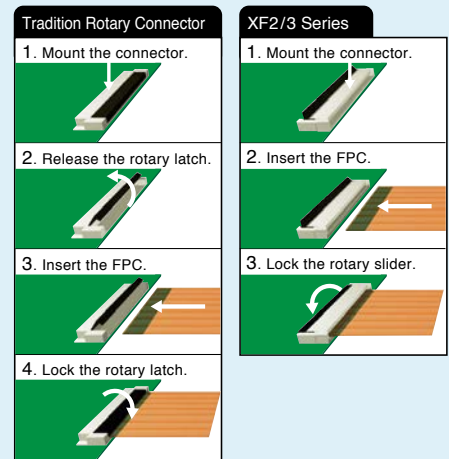
2 Dual contact. There is no need to distinguish between the upper and lower FPC connection.



3 Four-sided housing. Construction prevents FPC displacement.



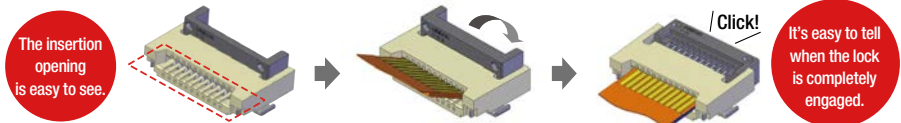
4 Delivered with the rotary latch open. Less work required for FPC Mounting.



Improved insertion into FPC/FFC cable connectors with sure lock feeling to confirm proper connection.

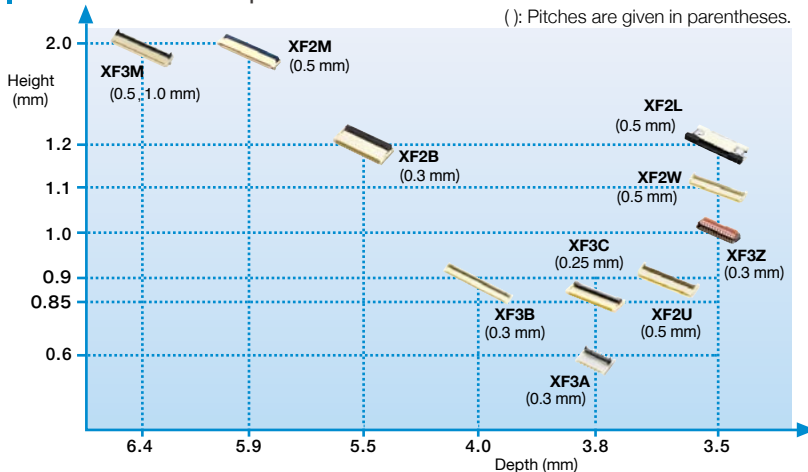
XF3M FPC/FFC Connectors

Improved FPC/FFC Insertion and Lock Feeling

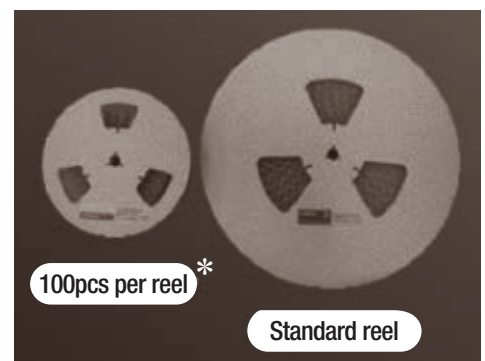


Wide Product Lineup with Pitches from 0.25 to 1 mm

(): Pitches are given in parentheses.



Small Reels Are Available with Only 100 Connectors to Fit Small-scale Applications



* Applicable Connectors : XF2M, XF2J, XF2W, XF3M

OMRON provides PCB Connector Series that meet the MIL, DIN, D-sub, and USB international standards. We also provide PCB Terminal Block Connectors and other Connectors that help increase mounting density and reliability of PCB. Let OMRON handle your connector needs. You will find a model that perfectly matches your requirements.

Board to Wire Connections Flat Cable Connectors

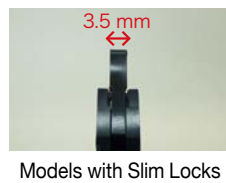
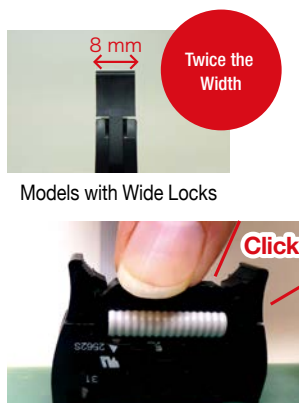


OMRON Flat Cable Connectors are compliant with MIL standards and provide high reliability and workability to support a broad range of requirements for board-to-wire connections.

Flat cable connectors plugs

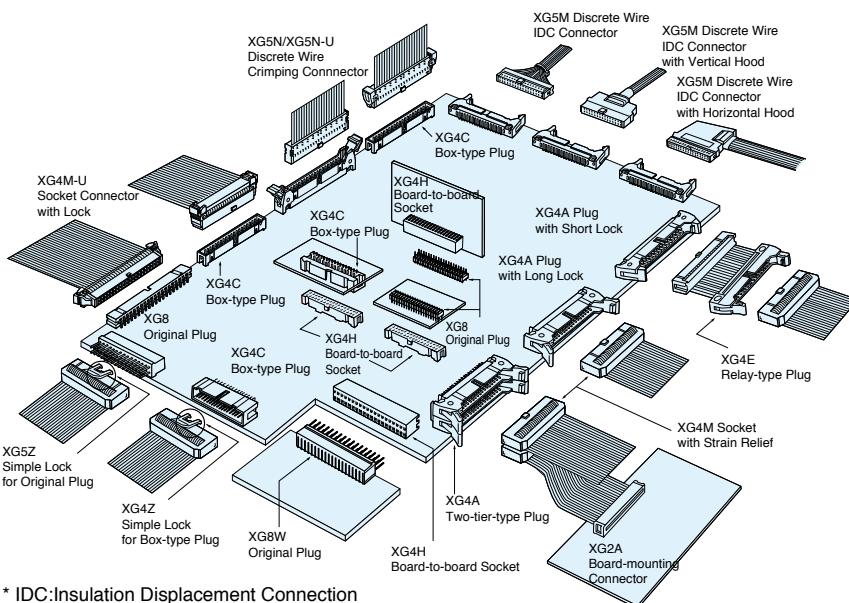
XG4A

The wide lock is wide enough to use your entire finger for connection and disconnection, making it easier on your finger and increasing workability while providing a strong reliable connection.



It's easy to tell when the lock is completely engaged.

Select from Many Easy-to-Use Variations to Match Your Connection Applications

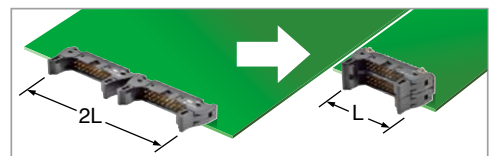


* IDC:Insulation Displacement Connection

Easy-to-Use Lock Levers for One-Hand Insertion and Removal



Stacked Connectors for High-density mounting



XG4A 2-tier Plugs

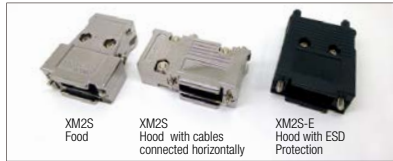


D-sub Connectors Are Ideal for Office Automation Interfacing.

XM2/XM3 D-sub Connectors

Hood Assemblies

- Shielded against EMI.
- Metallized plastic Hood provides excellent noise protection.
- Connectors are available with cables connected horizontally to enable using the space behind the Connectors more effectively.

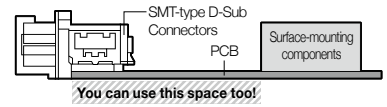


Surface-mounting 9-pin and 25-pin SMT Connectors (XM3K/L) Are Also Available

Use the Back Surface to Increase PCB Surface Usage

Tapping holes and processing through holes, such as is required for DIP terminals, is not necessary, so you can use the back of the PCBs as well.

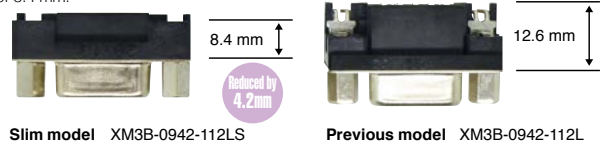
And reflow soldering is possible in the same way as for other surface-mounted components, which reduces mounting work.



Footprint on board reduced by 33% over previous models.

Space-saving 9-pin Slim D-sub Connectors for Boards

Board mounting area is reduced by 33% (compared with previous models) using depth of 8.4 mm.



Easy-wire Connectors for Industrial Components



Easy-wire Connectors with *e-con* Specifications; Ideal for Connecting Sensors.

XN2 Easy-wire Connectors for Industrial Components

- Use industry-proven spring clamps for wiring.
- No special tools required for easy wiring.
- Rewiring (repairing) is possible.
- Each Connector accepts any wire size from stranded wire AWG28 (0.08 mm²) to AWG20 (0.5 mm²). (External sheath diameter: 1.5 mm max.)
- With the simple tool Jig (XW2Z-0001), assembly can be completed for 4 wires simultaneously, is available.



PCB Terminal Blocks

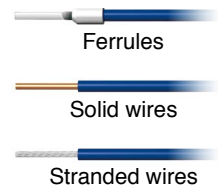


PCB Terminal Blocks That Are Ideal for Control Device Interfaces

- Both Push-in Connectors and Screw Terminals are available.
- With Push-in Connectors, all you have to do is insert solid wires or ferrules to complete the connections.
- With twisted wires, all you need is a standard screwdriver.



Connect any of 3 types of wires.



DIN Connectors

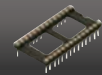


High-density High-reliability Connectors Compliant with International Standards

Connectors with twin contacts provide both contacts on one surface to reduce insertion force and increase reliability with a wiping effect.

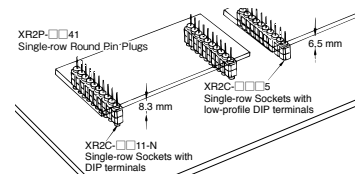
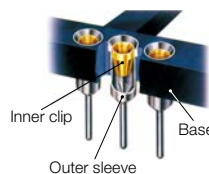


IC Sockets


















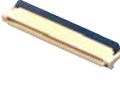







IC Connectors Have Excellent Reliability and Can Tolerate Momentary Interruptions in Power. Ideal for Highspeed Data Processing.

- Round pins and 4-point (4-finger) contact construction ensure long life and excellent shock and vibration durability.
- One-row Connectors allow you to freely adjust the pitch between rows and can be divided into the required number of contacts.
- Low-profile stacking possible in combination with Single-row IC Sockets (XR2C and XR2P).




Comprehensive Lineup of OMRON Connectors

Classification	FPC/FFC Connectors						
Model	XF3C	XF3A	XF3B	XF2B	XF3Z *	XF2U	XF2W
Appearance	 For FPC	 For FPC	 For FPC	 For FPC	 For FPC NEW	 For FPC	 For FPC/FFC Available 100pcs per reel
Contact pitch	0.25 mm	0.3 mm	0.3 mm	0.3 mm	0.3 mm	0.5 mm	0.5 mm
Type	Side-entry	Side-entry	Side-entry	Side-entry	Side-entry	Side-entry	Side-entry
No. of contacts	100 90 80 70 60 51 59 45 35 23 25 17 19	51	67 51	61 51	41 45 31 33 35 39 21 23 25 27 17	40 30 32 20 24 27 10 11 14 18 4 6 8	60 64 50 55 40 45 20 24 26 10 14 16 18 4 5 6 7 8 9
Rated current	0.2 A AC/DC	0.2 A AC/DC	0.2 A AC/DC	0.2 A AC/DC	0.2 A AC/DC	0.5 A AC/DC	0.5 A AC/DC
Rated voltage	50 V AC/DC	50 V AC/DC	50 V AC/DC	50 V AC/DC	50 V AC/DC	50 V AC/DC	50 V AC/DC
Ambient operating temperature	-30 to +85°C	-30 to +85°C	-30 to +85°C	-30 to +85°C	-55 to 85°C	-30 to +85°C	-30 to +85°C
Applicable FPC/FFC thickness and applicable wire	0.12±0.03 mm	0.12±0.03 mm	0.2±0.03 mm	0.2±0.03 mm	0.2±0.03 mm	0.2±0.03 mm	0.3±0.05 mm
Applicable board thickness	-	-	-	-	-	-	-
Terminal shape							
International standards	-	-	-	-	-	-	-
RoHS Compliant	Compliant						

Classification	FPC/FFC Connectors										Miniature Battery Connectors										
Model	XF3M *					XF2M	XF2L	XF2J		XD2B											
Appearance	 For FPC/FFC Available 100pcs per reel					 For FPC/FFC Available 100pcs per reel	 For FPC	 For FPC/FFC Available 100pcs per reel													
Contact pitch	0.5 mm		1.0 mm			0.5 mm	0.5 mm	0.5 mm		0.5 mm											
Type	Dual Contact Au flash		Dual Contact Sn		Upper Contact Au flash	Dual Contact Au flash	Dual Contact Sn	Side-entry		Standard terminal type	Reverse terminal type										
No. of contacts	100 90 80 70 60 50 (53) 40 41 45				40	30	(20)	(20) 22 24	20 22 26	(20)	20 22 24	60 50 54 55 40 42 45 35 36 38 30 32 33 34	30 30	30	40	26 28 20 22 24	20 22 24	15 18 19 10 12 13	16 18 10 12 14	10 12 16 18	6 7 8
Rated current	0.5 A AC/DC					0.5 A AC/DC	0.5 A AC/DC	0.5 A AC/DC		2 A, 3 A	5 V DC										
Rated voltage	50 V AC/DC					50 V AC/DC	50 V AC/DC	50 V AC/DC		50 V AC/DC	5 V DC										
Ambient operating temperature	-30 to +85°C					-30 to +85°C	-30 to +85°C	-30 to +85°C		-30 to +85°C	-30 to +85°C										
Applicable FPC/FFC thickness and applicable wire	0.3±0.05 mm					0.3±0.05 mm	0.3±0.03 mm	0.3±0.05 mm		-	-										
Applicable board thickness	-					-	-	-		-	-										
Terminal shape										-	-										
International standards	-					-	-	-		-	-										
RoHS Compliant	Compliant																				

Note. Inquire about the compliant standards for individual models.
* Consult your OMRON representative for the marketing dates for the numbers of contacts in parentheses in the No. of contacts row.

Terminal shape  SMT terminals

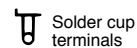
Comprehensive Lineup of OMRON Connectors

Classification	Flat Cable Connectors										Easy-wire Connectors for Industrial Components		
	MIL sockets with lock	Flat cable connector		Box-type plugs	IDC plugs	Board-to-board sockets	Flat Cable Connectors for PCBs		IDC socket for Discrete Wires	Crimped Sockets for Discrete Wires		Original Plugs	
Model	XG4M-U	XG4A/M		XG4C	XG4E	XG4H	XG2		XG5M	XG5N	XG8		XN2
Appearance													
Contact pitch	2.54 mm	2.54 mm		2.54 mm	2.54 mm	2.54 mm	2.54 mm		2.54 mm	2.54 mm	2.54 mm		2 mm
Type	—	MIL Sockets	MIL Plugs	—	With long lock With short lock	—	Standard Terminal Arrangement	Reverse Terminal Arrangement	Two-row Sockets	Two-row Sockets	One-row Plugs	Two-row Plugs	—
No. of contacts	100 90 80 70 60 50 40 30 20 10	60 64 50 40 30 34 20 26 10 14 16	60 64 50 40 30 34 20 26 10 14 16	60 64 50 40 30 34 20 26 10 14 16	60 64 50 40 30 34 20 26 10 14 16	60 64 50 40 30 34 20 26 10 14 16	60 64 50 40 30 34 20 26 10 14 16	60 64 50 40 30 34 20 26 10 14 16	60 64 50 40 30 34 20 26 10 14 16	60 64 50 40 30 34 20 26 10 14 16	15 16 17 10 12 13 6 7 8 2 3 4 5	100 60 50 30 34 20 26 10 14 16	3 4 5 6 8
Rated current	1 A	1 A	3 A	3 A	1 A	3 A	1 A	3 A max	3 A	3 A	3 A	0.5 to 3 A	
Rated voltage	250 V AC	250 V AC	300 V AC	300 V AC	250 V AC	300 V AC	250 V AC	300 V AC	250 V AC	300 V AC	300 V AC	32 V DC	
Ambient operating temperature	−55 to +105°C	−55 to +105°C		−55 to +105°C	−55 to +105°C	−55 to +105°C	−55 to +85°C	−55 to +85°C	−55 to +105°C	−55 to +105°C	−55 to +105°C	−30 to +75°C	
Applicable Wires	1.27-mm pitch flat cable incorporating AWG28	1.27-mm pitch flat cable incorporating AWG28		—	1.27-mm pitch flat cable incorporating AWG28	—	1.27-mm pitch flat cable incorporating AWG28	Discrete Wires AWG24,26,28	Discrete Wires AWG22,24,26,28	—	—	Stranded wire AWG28 (0.08 mm ²) to AWG20 (0.5 mm ²).	
Applicable board thickness	—	1.6 mm		1.6 mm	—	1.6 mm	1.6 mm	—	—	1.6 mm	1.6 mm	1.6 mm	
Terminal shape	(T)	(T) (T) (T)		(T)	(T)	(T)	(T) (T)	(T) Sockets	(T) Sockets	(T) (T)	—	—	
International standards	—	UL		UL	UL	UL	—	UL	UL/cUL	UL	UL	UL/cUL	
RoHS Compliant	Compliant												

Classification	PCB Terminal Blocks										Half-pitch Connectors								
	PCB Terminal Blocks					Connector Terminal Blocks					Board-to-Board Connectors	Low-profile Stacking Connectors	Board-to-Board Connectors						
Model	XW4C		XW4E			XW4A/B				XH3	XH4A	XH2							
Appearance																			
Contact pitch	3.5 mm		5.0 mm		3.81 mm		5.08 mm			3.81 mm		5.08 mm		1.27 mm	1.27 mm	1.27 mm			
Type	Horizontal	Vertical	Horizontal	Vertical	Small Terminal Blocks	Inclined Terminal Blocks	Two-row Terminal Blocks	Small Terminal Blocks	Inclined Terminal Blocks	Two-row Terminal Blocks	Line Terminal Blocks (Sockets)	PCB Terminal Blocks (Plugs)	Line Terminal Blocks (Sockets)	PCB Terminal Blocks (Plugs)	—	—	—		
No. of contacts	100 90 80 70 60 50 40 30 20 10	10 10	10 10	10 10	20 18 14 16 10 12	10	10	4 6	2 3 4 5 6 7 8 9	100 (Straight only) 80 60 68 50 40 30 20 (Straight only)	100 80 60 50 40 30 20	100 80 60 68 50 40 30 20							
Rated current	17.5 A / 10 A		24 A / 10 A		10 A / 10 A		8 A / 10 A			13.5 A / 10 A		14 A / 10 A		8 A / 8 A	12 A / 10 A		0.5 A	0.5 A	0.5 A
Rated voltage	200 V AC / 300 V AC		400 V AC / 300 V AC		160 V AC / 300 V AC		250 V AC / 300 V AC			160 V AC / 300 V AC		250 V AC / 300 V AC		125 V AC	125 V AC	125 V AC	125 V AC	125 V AC	
Ambient operating temperature	−40 to +100°C		−40 to +100°C		−40 to +100°C			−40 to +100°C					−55 to +105°C	−55 to +105°C	−55 to +105°C				
Applicable Wires	—		AWG26 to AWG16			AWG26 to AWG16			AWG28 to AWG16	—	AWG24 to AWG14	—	—	—	—	—	—	—	
Applicable board thickness	1.6 mm		1.6 mm		1.6 mm			—	1.6 mm	—	1.6 mm	1.6 mm	1.6 mm	1.6 mm	1.6 mm	1.6 mm	1.6 mm		
Terminal shape	(T)		(T)			(T)			—	(T) (T)	—	(T) (T)	(T) (T)	(T) (T)	(T) (T)	(T) (T)	(T) (T)	(T) (T)	
International standards	—		UL/cUL,CSA			UL/cUL,CSA			UL/cUL,CSA					UL	UL	UL			
RoHS Compliant	Compliant																		

6 Note. Inquire about the compliant standards for individual models.

Terminal shape



Classification	DIN Connectors								D-Sub Connectors						
	Twin-contact type (DIN-standard)	Twin-contact type (DIN-style)	Fine-fit W-pin type	Four-row, 128-contact type	Cable-connected-type			Sequence type	Mid-current and High-current-type	Cable-connected type	SMT-type D-Sub Connectors				
Model	XC5	XC5	XC5	XC5	XC6			XC7	XC4	XM3	XM3K/XM3L				
Appearance															
Contact pitch	2.54 mm	2.54 mm	2.54 mm	2.54 mm	2.54 mm			2.54 mm	2.54 mm, 5.08 mm	2.74 mm, 2.76 mm	2.74 mm, 2.76 mm				
Type	Two-row Plugs	Three-row Plugs	Two-row Plugs	Three-row Plugs	Two-row Plugs	Three-row Plugs	Four-row Plugs	Flat Cable IDC Connectors with double rows	Flat Cable IDC Connectors with triple rows	Discrete-wire IDC Connectors	Two-row Plugs	Three-row Plugs	Mid-current type High-current-type M-type(Mixed)	Shielded-type	SMT Type
No. of contacts	100 90 80 70 60 50 40 30 20 10	96 ^{*1}	100 96	96	100 96	96	128		96	96	100 90 96		78 60	37 25 15	25 9
Rated current	2 A	2 A	2 A	2 A	1 A	0.65 A	3 A max	2 A	2 A	2 A, 6 A, 15 A	3 A /5 A	3 A			
Rated voltage	300 V AC	300 V AC	300 V AC	300 V AC	250 V AC	100 V AC	300 V AC	300 V AC	300 V AC	300 V AC / 380 V AC / 500 V AC	300 V AC	300 V AC			
Ambient operating temperature	-55 to +125°C	-55 to +125°C	-55 to +125°C	-55 to +125°C	-55 to +105°C			-55 to +125°C	-55 to +125°C	-55 to +125°C	-55 to +105°C	-55 to +105°C	-55 to +105°C		
Applicable Wires	-	-	-	-	1.27-mm pitch flat cable incorporating AWG26	0.847-mm pitch flat cable incorporating AWG30	Discrete Wires AWG 24,26,28	-	-	Faston tab #250	AWG22 max.	-			
Applicable board thickness	1.6 mm	1.6 mm	1.6 to 3.2 mm	1.6 mm	-			1.6 mm	1.6 mm	1.6 mm	1.6 mm	-			
Terminal shape															
International standards	UL, CSA	UL, CSA	UL, CSA	-	-			-	-	UL	UL/cUL	-			
RoHS Compliant	Compliant														

Classification	D-Sub Connectors						USB Connector	LAN Modular Jack Connectors	Jumper Plugs	IC Sockets		
	D-sub Connector Assembly Hood	D-sub connector assembly hood with cables connected horizontally	D-sub Connector Assembly Hood with ESD Protection	D-Sub Connector	High-density D-sub Connectors	Slim D-Sub Connector				Round Pin Sockets	Round Pin Plugs	
Model	XM2S	XM2S	XM2S-E	XM2-L/XM3-L	XM4K/XM4L	XM3-LS	XM7	XM9B	XJ8/XG8S/XG8T	XR2	XR2P	
Appearance												
Contact pitch	-	-	-	2.77 mm	2.29 mm	2.74 mm	2.0 mm, 2.5 mm	2.04 mm	2.54 mm	2.54 mm	2.54 mm	
Type	-	-	-	Shielded type	Shielded type	Slim-type	SMT Type Straight DIP terminals Right-angle DIP terminals	Right-angle DIP terminals	One-row, Two-row, and Three-row Plugs/Sockets	Open-frame Sockets, Closed-frame Sockets, Open-frame Sockets with Seal Tape	Round Pin Plugs	
No. of contacts	100 90 80 70 60 50 40 30 20 10	37 25 15 9	25 9	25 15 9	25 15	15	4 5 1 A	8 1.5 A	20 21 24 2 3 4 5 6 7 8 9 2 A	64 50 40 42 48 32 20 22 24 28 8	32 20 10 16	
Rated current	-	-	-	3 A	3 A	3 A	30 V AC	250 V AC	300 V AC	1 A		
Rated voltage	-	-	-	300 V AC	300 V AC	300 V AC	30 V AC	250 V AC	300 V AC	300 V AC		
Ambient operating temperature	-25 to +85°C	-25 to +85°C	-25 to +85°C	-25 to +105°C	-25 to +105°C	-25 to +105°C	*2	-45 to +80°C	-55 to +105°C	-55 to +125°C		
Applicable Wires	-	-	-	-	-	-	-	-	-	-		
Applicable board thickness	-	-	-	1.6 mm	1.6 mm	1.0 mm, 1.6 mm	1.0 mm, 1.6 mm	1.6 mm	1.6 mm	1.6 mm		
Terminal shape	-	-	-									
International standards	-	-	-	UL	UL	-	-	-	-	UL	-	
RoHS Compliant	Compliant											

* 1. DIN 41612 and IEC 603-2 compliant.
* 2. USB 2.0, -40 to 60°C.
USB 2.0 or mini USB, 0 to 50°C.

OMRON Support System

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in
26 Countries

Easily Available Across the Globe!

**You get reliable
procurement.**



OMRON Connector Catalogs



XF2, XF3

FPC/FPC Connectors
Cat. No. G011

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

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

OMRON Corporation

Electronic and Mechanical Components Company

Contact: www.omron.com/ecb

Cat. No. Y109-E1-04
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