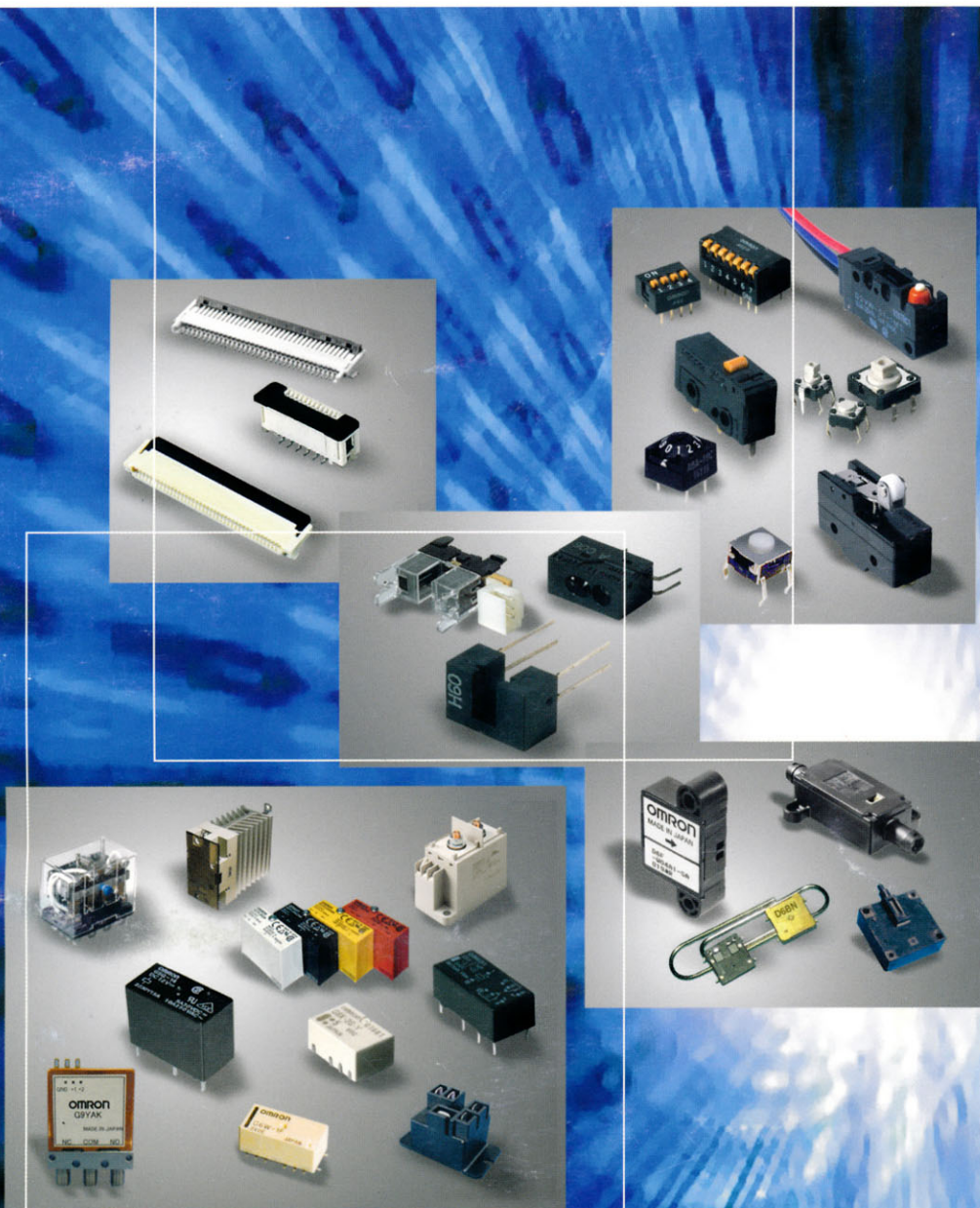


# Electronic Components

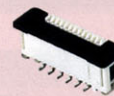
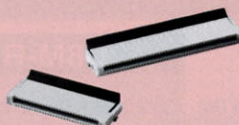
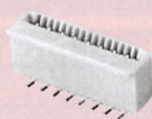
## Master Selection Guide



Relays  
Switches  
Photomicrosensors  
Micro Sensors  
Connectors



# Connectors - FPC (Flexible Printed Circuit)



**XF2G**

**XF2U**

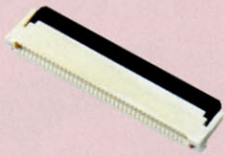
**XF2J**

**XF2L**

<b>Pitch mm</b>	0.3mm	0.5mm	0.5mm	0.5mm
<b>Insertion type</b>	non-ZIF	ZIF	ZIF	ZIF
<b>Cable lock type</b>	Rear rotary lock	Rear rotary lock	Slide Lock	Slide Lock
<b>PCB mounting</b>	SMT	SMT	SMT	SMT
<b>Cable insertion</b>	Horizontal	Horizontal	Vertical	Horizontal
<b>Contact type(s)</b>	Top	Double sided	Vertical	Top & Bottom
<b>Dimensions mm (in)</b>	9.1W x 3.8D x 0.9H (0.4 x 0.15 x 0.04) for 29 circuits	12.6W x 3.5D x 0.9H (0.5 x 0.14 x 0.04) for 24 circuits	19.5 W x 3.4 D x 4.15 H (0.77 x 0.13 x 0.16) for 30 circuits	18.9 W x 3.5 D x 1.2 H (0.74 x 0.14 x 0.05) for 30 circuits
<b>Available circuits</b>	17, 21, 25, 29, 35, 39, & 51	4, 11, 14, 20, 24, 27, 30, 32, & 40	6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30	4, 5, 6, 7, 8, 10, 12, 13, 15, 18, 19, 20, 21, 22, 24, 26, 30
<b>Packaging</b>	Tape & reel	Tape & reel	Tape & reel	Tape & reel
<b>Features</b>	<ul style="list-style-type: none"> <li>• Low 4.15mm on-board profile</li> <li>• Applicable FPC thickness of t=0.3mm</li> <li>• Top-entry</li> <li>• Upper contacts</li> <li>• Wide molding wall on bottom allows greater board design freedom</li> </ul>	<ul style="list-style-type: none"> <li>• Low on-board profile of 0.9mm</li> <li>• Ultra-slim with 3.5mm depth</li> <li>• Wide molding wall on bottom allows greater board design freedom</li> </ul>	<ul style="list-style-type: none"> <li>• Low profile, top entry</li> <li>• 0.3mm FPC thickness</li> </ul>	<ul style="list-style-type: none"> <li>• Low profile, small size</li> <li>• 0.3mm FPC thickness</li> </ul>
<b>Specifications</b>				
<b>Rated current</b>	0.2A	0.5A	0.5A	0.5A
<b>Rated voltage</b>	50VDC	50VDC	50VDC	50VDC
<b>Contact resistance (@ 20mV, 100mA)</b>	80mΩ max.	60mΩ max.	30mΩ max.	30mΩ max.
<b>Insulation resistance (min.)</b>	100MΩ @ 250VAC	100MΩ @ 250VAC	100MΩ @ 250VDC	100MΩ @ 250VDC
<b>Withstand voltage</b>	250VAC 1 min. (leakage current: 1mA max.)	250VAC 1 min. (leakage current: 1mA max.)	250VAC 1min. (leakage current: 1mA max.)	250VAC 1min. (leakage current: 1mA max.)
<b>Circuit insertion or service life</b>	10 times	20 times	20 times	20 times
<b>Ambient operating temperature</b>	-30°C to + 85°C	-30°C to + 85°C	-30°C to + 85°C	-30°C to + 85°C



# Connectors - FPC (Flexible Printed Circuit)



	XF2M	XF2R	XF2B
<b>Pitch mm</b>	0.5mm	0.5mm	0.3mm
<b>Insertion type</b>	ZIF	ZIF	ZIF
<b>Cable lock type</b>	Rear rotary lock	Rear rotary lock	Rear rotary lock
<b>PCB mounting</b>	SMT	SMT	SMT
<b>Cable insertion</b>	Horizontal	Horizontal	Horizontal
<b>Contact type(s)</b>	Double Sided	Double Sided	Double Sided
<b>Dimensions mm (in)</b>	18.5 W x 4.9 D x 2.0 H (0.73 x 0.19 x 0.08) for 30 circuits	19 W x 4.95 D x 0.9 H (0.75 x 0.18 x 0.04) for 34 circuits	8.8 W x 5.2 D x 1.2 H (0.35 x 0.2 x 0.05) for 23 circuits
<b>Available circuits</b>	10, 12, 14, 18, 20, 22, 24, 26, 30, 32, 33, 34, 35, 36, 38, 40, 42, 45, 50	6, 9, 18, 24, 34, 40	17, 21, 23, 25, 27, 31, 33, 35, 39, 41, 45, & 51
<b>Packaging</b>	Tape & reel	Tape & reel	Tape & reel
<b>Features</b>	<ul style="list-style-type: none"> <li>• Low profile (2mm H)</li> <li>• Short body</li> <li>• 0.3mm FPC thickness</li> </ul>	<ul style="list-style-type: none"> <li>• Low profile (0.9mm H)</li> <li>• 0.12mm FPC thickness</li> </ul>	<ul style="list-style-type: none"> <li>• Low profile (1.2mm H)</li> <li>• Ultra-fine pitch</li> <li>• 0.2mm FPC thickness</li> </ul>
<b>Specifications</b>			
<b>Rated current</b>	0.2A	0.3A	0.2A
<b>Rated voltage</b>	50VDC	50VDC	50VDC
<b>Contact resistance (@ 20mV, 100mA)</b>	50mΩ max.	40mΩ max.	50mΩ max.
<b>Insulation resistance (min.)</b>	100MΩ @ 250VDC	100MΩ @ 250VDC	100MΩ @ 250VDC
<b>Withstand voltage</b>	250VAC 1min. (leakage current: 1mA max.)	250 VAC 1min. (leakage current: 1mA max.)	250VAC 1min. (leakage current: 1mA max.)
<b>Circuit insertion or service life</b>	20 times	20 times	20 times
<b>Ambient operating temperature</b>	-30°C to +85°C	-30°C to +85°C	-30°C to +85°C



# Connectors FFC (Flat Flexible Cable)

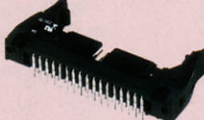
**NEW!**



**NEW!**



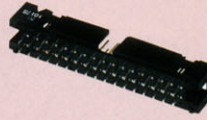
**NEW!**



**NEW!**



**NEW!**



**XG4U**

**XG4M**

**XG4A**

**XG4E**

**XG4C**

**Description**

Strain relief

MIL-type socket

MIL-type socket

IDC plug

Box type plug

**Pitch mm**

2.54

2.54

2.54

2.54

2.54

**Socket / Plug**

Socket

Socket

Plug

Plug

Plug

**Plating on contacts**

Au plating

Au plating

Au plating

Au plating

Au plating

**PCB mounting**

Thru-hole

Thru-hole

Thru-hole

Thru-hole

Thru-hole

**Cable insertion**

Vertical or horizontal

Vertical or horizontal

Vertical or horizontal

Vertical or horizontal

Vertical or horizontal

**Contact type(s)**

IDC flat ribbon cable

IDC flat ribbon cable

IDC flat ribbon cable

IDC flat ribbon cable

IDC flat ribbon cable

**Dimensions mm (in)**

Please consult product specifications for more information

Please consult product specifications for more information

Please consult product specifications for more information

Please consult product specifications for more information

Please consult product specifications for more information

**Available circuits**

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

10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64

10, 14, 16, 20, 26, 30, 34, 40, 50, 60, 64

**Packaging**

Bag

Bag

Bag

Bag

Bag

**Features**

- Can connect & disconnect with one hand
- Save board space
- Reduced mounting height
- High-reliability, low cost

- Can connect & disconnect with one hand
- Save board space
- Reduced mounting height
- High-reliability, low cost

- Can connect & disconnect with one hand
- Save board space
- Reduced mounting height
- High-reliability, low cost
- Available in short lock, long lock and dual port models

- Solderless plug
- Can connect & disconnect with one hand
- Save board space
- Reduced mounting height
- High-reliability, low cost

- Available in straight DIP & right-angle DIP terminals
- Can connect & disconnect with one hand
- Save board space
- Reduced mounting height
- High-reliability, low cost

## Specifications

**Rated current**

1A

1A

1A

1A

1A

**Rated voltage**

250VAC

250VAC

250VAC

250VAC

250VAC

**Contact resistance**

20mΩ max.

20mΩ max.

20mΩ max.

20mΩ max.

20mΩ max.

**Insulation resistance**

100MΩ @ 500VDC

100MΩ @ 500VDC

100MΩ @ 500VDC

100MΩ @ 500VDC

100MΩ @ 500VDC

**Withstand voltage (leakage current: 1mA max.)**

500VAC for 1 minute

500VAC for 1 minute

500VAC for 1 minute

500VAC for 1 minute

500VAC for 1 minute

**Circuit insertion or service life**

50 times

50 times

50 times

50 times

50 times

**Ambient operating temperature**

-55°C to +105°C

-55°C to +105°C

-55°C to +105°C

-55°C to +105°C

-55°C to +105°C



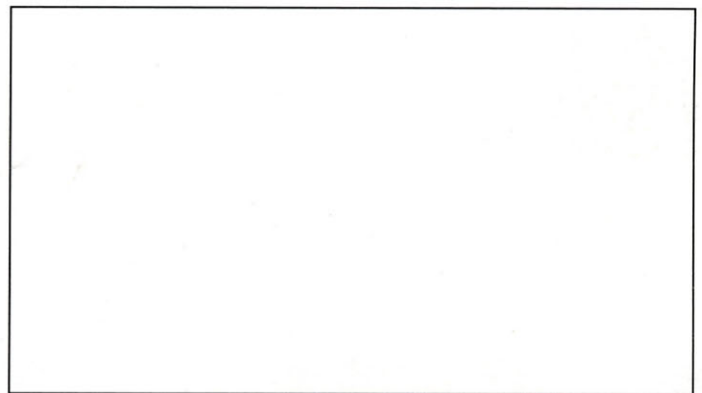
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