# OMRON

Flat Cable Connectors	XG4

The Mainstream of Circuit Board Connectors conforming MIL Standards with Improved Design.

■ Our new production system improves reliability.

■ Space-saving Box-type Plugs (XG4C) available.

■ IDC Plugs (XG4E) can be used for relaying.

■ An endless number of combinations can be made using the XG-5 IDC Connectors for discrete wires, XG8 Original Plugs, and the XG2 IDC Connectors for PCBs.

■ The Original Plugs (XG8) and the Box-type Plugs (XG4C) can be locked using Lock Levers.

■ Conform to MIL standards (MIL-C-83503).

■ UL standards (file No. E103202) (All XG4 models except those with XG4U and XG4H)
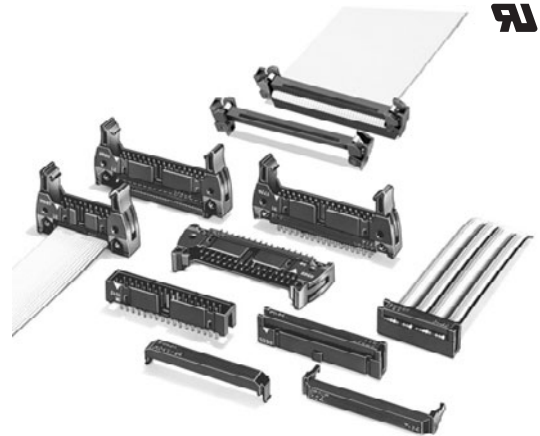
RoHS Compliant

■Terminology

● MIL standard

Abbreviation for Military Standard. To unify the compatibility and quality assurance condition of each company, MIL-C-83503 (applicable to connectors) was established in 1977.
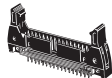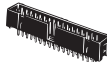
● Open-end cover

An open-end cover has a structure where a flat cable can be pulled out from both sides of the cover when a cable is attached to a connector. (The cover having a structure where a flat cable can be pulled out from only one side of the cover is called a "Closed-end cover.")

● Standoff

Part provided for lifting the housing from the board (This part improves airflow at the through-hole for better assembly.)

■Ordering Information

Model	XG4M XG4M-U	XG4M XG4T	XG4A	XG4A	XG4E XG4S	XG4C	XG4H
Appearance	MIL sockets with strain relief (with lock)	MIL sockets with strain relief	MIL plugs	Plugs with dual ports	IDC plugs with strain relief	Box-type plugs	Board-to-board connector sockets
Page	3	4	5 to 10	11 to 12	13 to 14	15 to 16	17 to 18

■Ratings and Characteristics

Item	MIL Sockets: XG4M Relay Plug: XG4E	MIL Plugs: XG4A Box-type Plugs: XG4C PCB-to-PCB Connectors: XG4H
Rated current	1 A	3 A (See note 1.)
Rated voltage	250 VAC	300 VAC
Contact resistance	20 mΩ max. (at 20 mV, 100 mA max.)	
Insulation resistance	1,000 MΩ min. (at 500 VDC)	
Dielectric strength	500 VAC for 1 min (leakage current: 1 mA max.)	
Total insertion force	1.96 N max. per contact	
Removal force	0.39 N min. (with test gauge, t= 0.64 mm)	
Insertion durability	50 times	
Ambient operating temperature	Operating: −55 to 105°C (with no icing)	

■Cross-sectional View of Terminal

XG4A
XG4C

0.7 dia.

XG4H

0.65 dia.
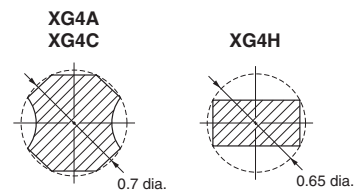
Note: 1. The rated current will depend on the Socket you are using. It is 1 A using the XG4M for example.

■ Materials and Finish

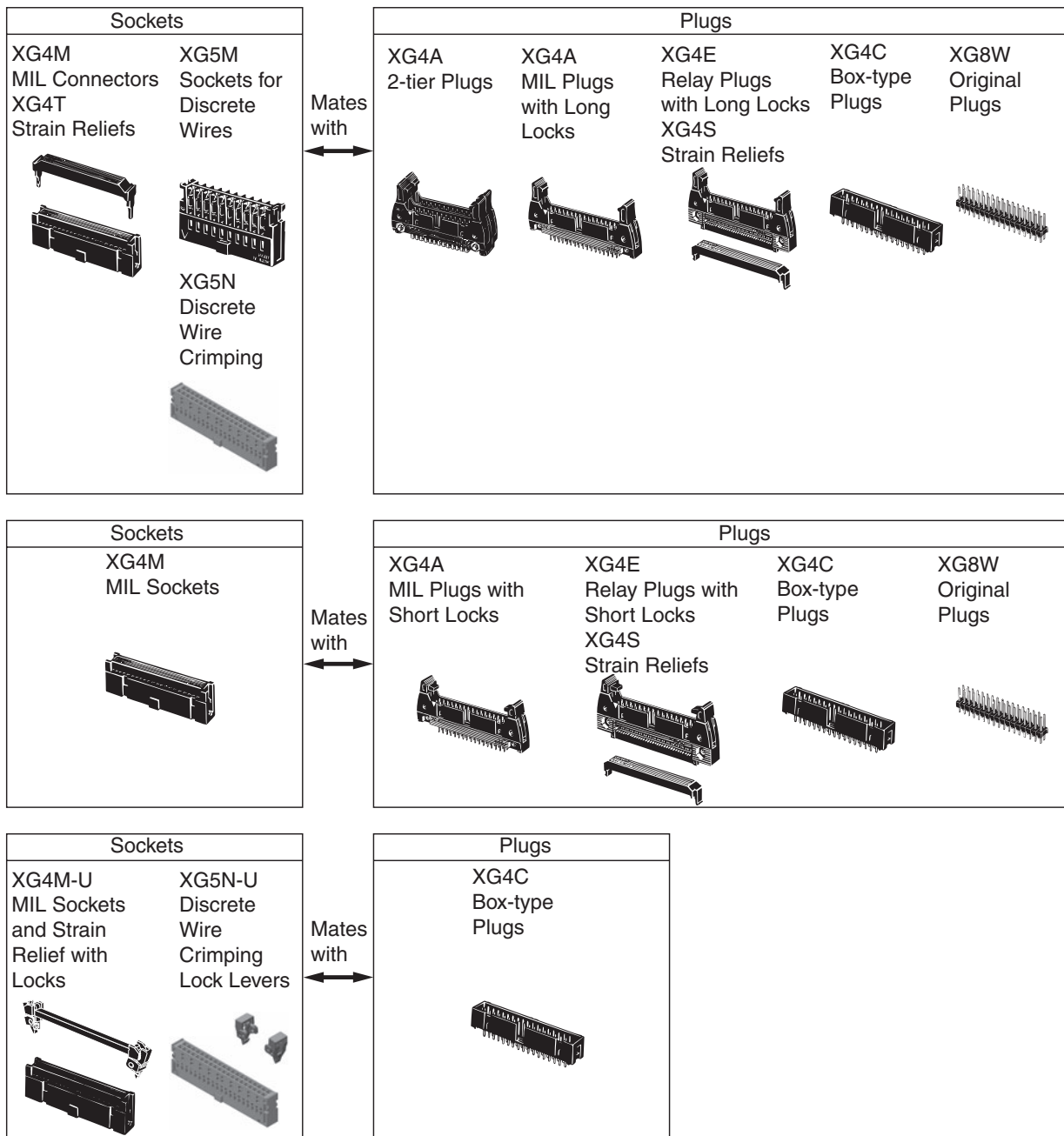| Item		MIL Plugs: XG4A Box-type Plugs: XG4C	Relay Plugs: XG4E (Strain Relief: XG4S)	MIL Sockets: XG4M (Strain Relief: XG4T)	Board-to-board Connector: XG4H
Housings		Fiber-glass reinforced PBT resin (UL94V-0)/black			
Covers		---	Polyamide resin (UL94V-0)/black	Fiber-glass reinforced PBT resin (UL94V-0)/black	---
Contacts	Mating end	Brass/nickel base, 0.15-μm gold plating	Phosphor bronze/nickel base, 0.15-μm gold plating		
	Terminal Press fit	Brass/nickel base, 2.0-μm tin plating	Phosphor bronze/nickel base, 2.0-μm tin plating		
Strain Reliefs		---	Polyamide resin (UL94V-0)/black	Fiber-glass reinforced PBT resin (UL94V-0)/black	---

■ Applicable Wires

For pressing

1.27-mm pitch flat cable incorporating AWG28 wires

- UL2651(standard cable)
- UL20012 (folding cable)
- UL20028 (color-coded cable)
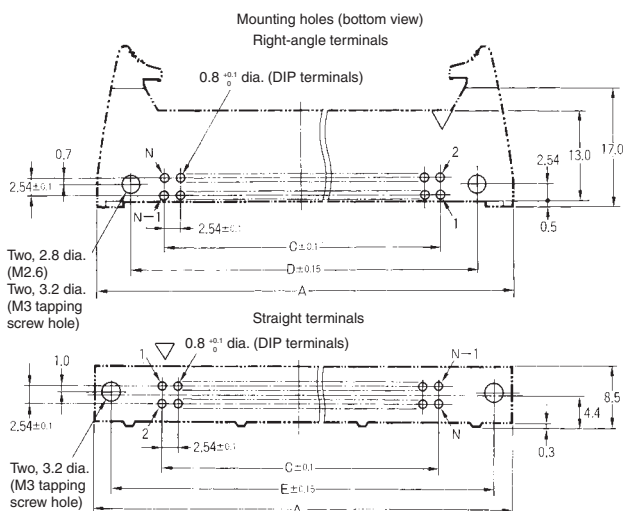
■ Mating Combinations for XG4 and XG5

Sockets
XG4M MIL Connectors XG4T Strain Reliefs   XG5M Sockets for Discrete Wires   XG5N Discrete Wire Crimping

Mates with

Plugs
XG4A 2-tier Plugs XG4A MIL Plugs with Long Locks XG4E Relay Plugs with Long Locks XG4S Strain Reliefs XG4C Box-type Plugs XG8W Original Plugs

Sockets
XG4M MIL Sockets

Mates with

Plugs
XG4A MIL Plugs with Short Locks XG4E Relay Plugs with Short Locks XG4S Strain Reliefs XG4C Box-type Plugs XG8W Original Plugs

Sockets
XG4M-U MIL Sockets and Strain Relief with Locks XG5N-U Discrete Wire Crimping Lock Levers

Mates with

Plugs
XG4C Box-type Plugs

XG4A MIL Plugs with Short Locks

■ Dimensions

(Unit: mm)

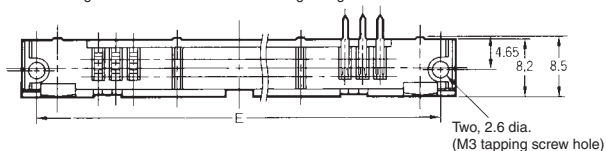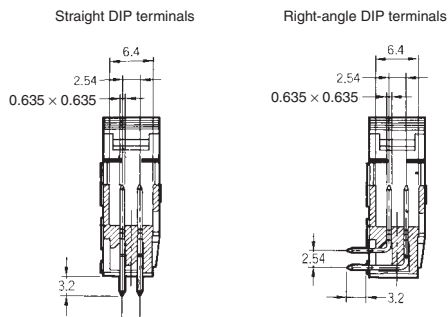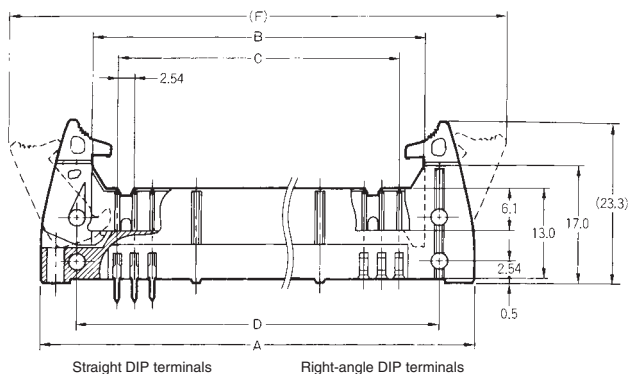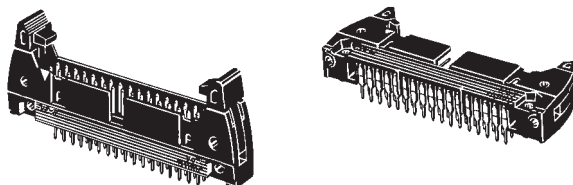**XG4A-□□32/-□□72 (With straight DIP terminals)**
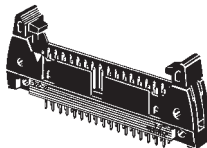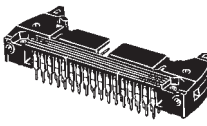**XG4A-□□35/-□□75 (With right-angle DIP terminals)**

Straight DIP terminals

Right-angle DIP terminals

Straight DIP terminals   Right-angle DIP terminals

Two, 2.6 dia.
(M3 tapping screw hole)

Two, 2.65 dia.

Polarity slot
Polarizing Key slot

Triangular mark
Polarizing Key slot
(not on models with less than 14 contacts)

Mounting holes (bottom view)
Right-angle terminals

0.8 ⁺⁰·¹₀ dia. (DIP terminals)

Two, 2.8 dia.
(M2.6)
Two, 3.2 dia.
(M3 tapping screw hole)

Straight terminals

0.8 ⁺⁰·¹₀ dia. (DIP terminals)

Two, 3.2 dia.
(M3 tapping screw hole)

Dimensions

No. of contacts	Dimensions (mm)					
	A	B	C	D	E	F
10	32.0	17.5	10.16	21.8	27.9	40.4
14	37.1	22.6	15.24	26.9	33.0	45.5
16	39.6	25.2	17.78	29.5	35.6	48.0
20	44.7	30.2	22.86	34.5	40.6	53.1
26	52.3	37.9	30.48	42.2	48.3	60.7
30	57.4	42.9	35.56	47.2	53.3	65.8
34	62.5	48.0	40.64	52.3	58.4	70.9
40	70.1	55.6	48.26	59.9	66.0	78.5
50	82.8	68.3	60.96	72.6	78.7	91.2
60	95.5	81.0	73.66	85.3	91.4	103.9
64	100.6	86.1	78.74	90.4	96.5	109.0

Note: See page 16 for details on the availability (10-contact Connectors) and pitch (with 50, 60, or 64-contact Connectors) of polarity slots.

■ Ordering Information

Use in combination with sockets without strain-relief.

No. of contacts	No. of polarizing slots	Plugs with straight DIP terminals	Plugs with right-angle DIP terminals
10	0	XG4A-1072	XG4A-1075
	1	XG4A-1032	XG4A-1035
14	1	XG4A-1432	XG4A-1435
16	1	XG4A-1632	XG4A-1635
20	1	XG4A-2032	XG4A-2035
26	1	XG4A-2632	XG4A-2635
30	1	XG4A-3032	XG4A-3035
34	1	XG4A-3432	XG4A-3435
40	1	XG4A-4032	XG4A-4035
50	1	XG4A-5032	XG4A-5035
	2 (See note.)	XG4A-5072	XG4A-5075
60	1	XG4A-6032	XG4A-6035
	2 (See note.)	XG4A-6072	XG4A-6075
64	1	XG4A-6432	XG4A-6435
	2 (See note.)	XG4A-6472	XG4A-6475

Note: Polarizing slot pitch is 22.86 mm.

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