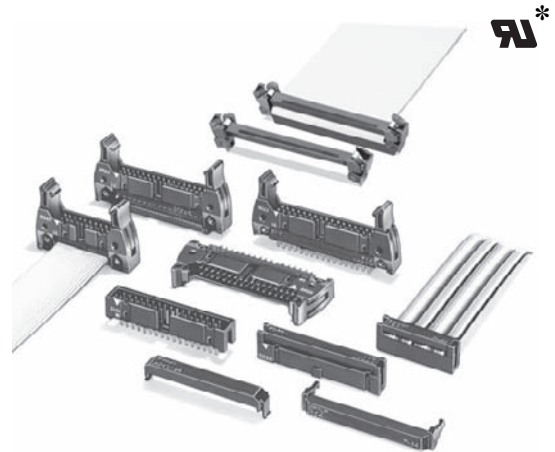# OMRON

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)

RoHS Compliant

✽ Excluding XG4U

■ 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.)
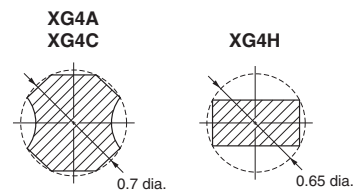
■ Ordering Information

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 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 Board-to-board Sockets: 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	−55 to 105°C (with no icing at low temperature)	

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

■ Cross-sectional View of Terminal

XG4A
XG4C

0.7 dia.

XG4H

0.65 dia.
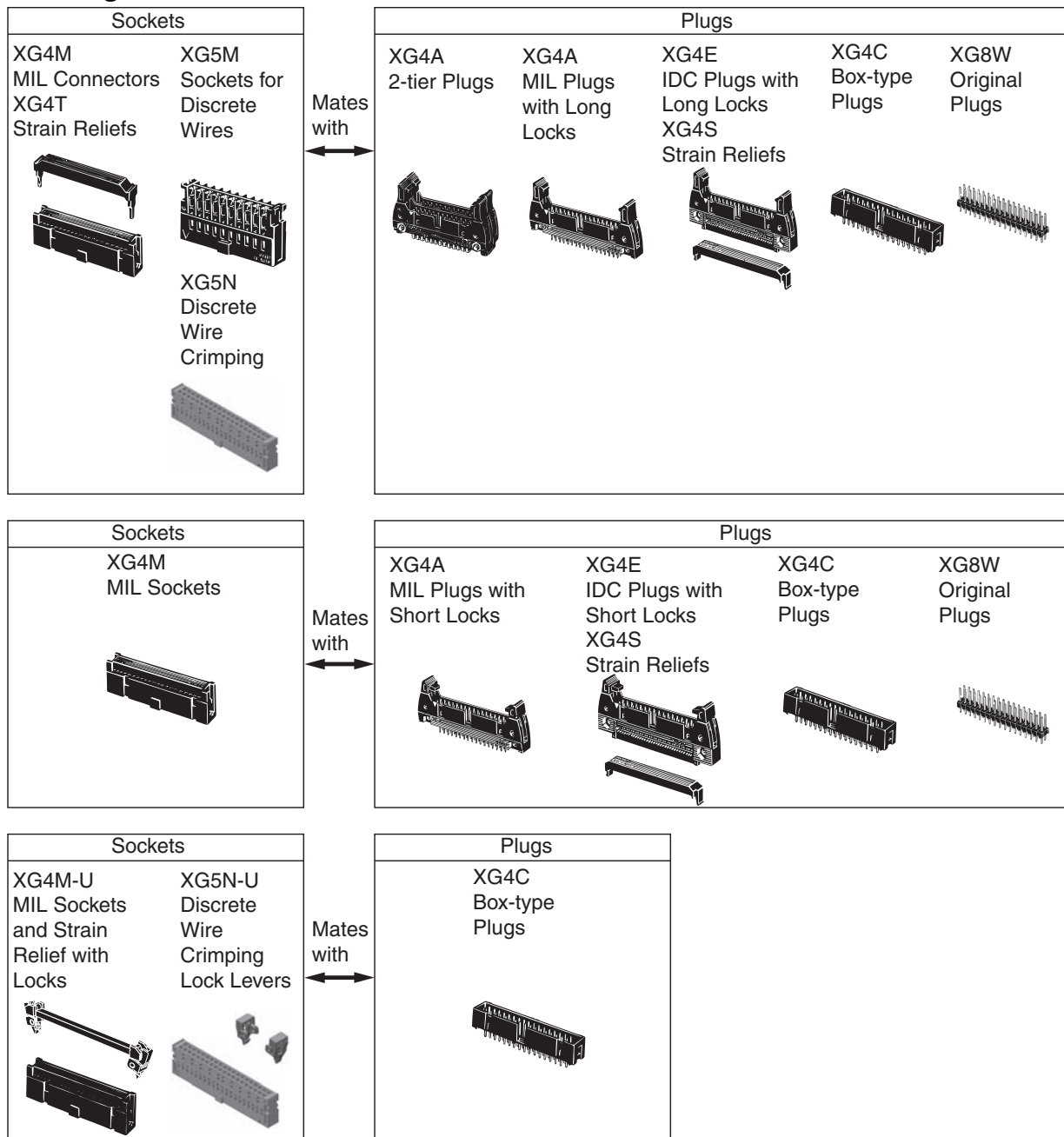
■ Materials and Finish

Item		MIL Plugs: XG4A Box-type Plugs: XG4C	IDC Plugs: XG4E (Strain Relief: XG4S)	MIL Sockets: XG4M (Strain Relief: XG4T)	Board-to-board Sockets: XG4H
Housings		Fiber-glass reinforced PBT resin (UL94 V-0)/black			
Covers		---	Polyamide resin (UL94 V-0)/black	Fiber-glass reinforced PBT resin (UL94 V-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 (UL94 V-0)/black	Fiber-glass reinforced PBT resin (UL94 V-0)/black	---

■ Applicable Wires

For pressing

1.27-mm pitch flat cable incorporating AWG28 wires
• UL2651(standard cable)
• UL20012 (folding cable)
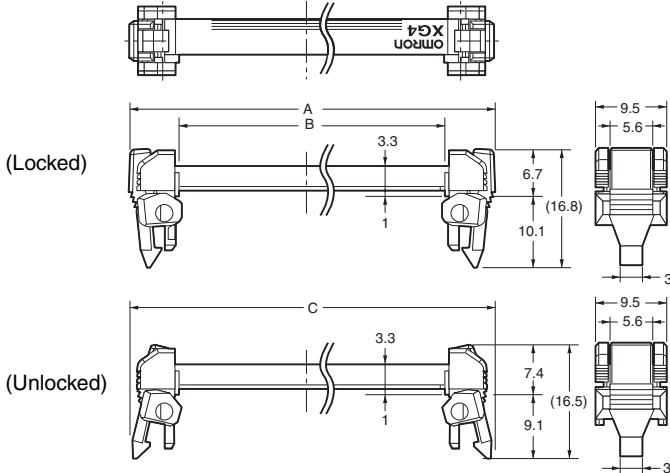• UL20028 (color-code cable)

■ Mating Combinations for XG4 and XG5

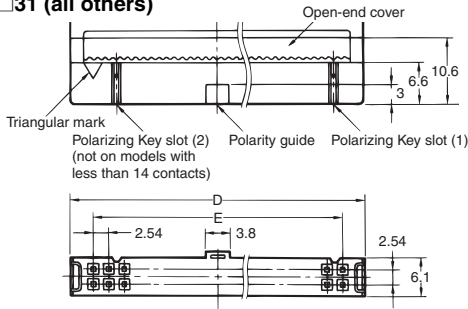| Sockets			Plugs				
XG4M MIL Connectors XG4T Strain Reliefs	XG5M Sockets for Discrete Wires	Mates with	XG4A 2-tier Plugs	XG4A MIL Plugs with Long Locks	XG4E IDC Plugs with Long Locks XG4S Strain Reliefs	XG4C Box-type Plugs	XG8W Original Plugs

XG5N Discrete Wire Crimping

Sockets		Plugs			
XG4M MIL Sockets	Mates with	XG4A MIL Plugs with Short Locks	XG4E IDC Plugs with Short Locks XG4S Strain Reliefs	XG4C Box-type Plugs	XG8W Original Plugs

Sockets		Plugs
XG4M-U MIL Sockets and Strain Relief with Locks XG5N-U Discrete Wire Crimping Lock Levers	Mates with	XG4C Box-type Plugs

XG4M-U MIL Connectors with Socket Locks

■ Dimensions

XG4U
Strain Reliefs with Locks

(Locked)

(Unlocked)

XG4M-□□30 (one polarity guide)
XG4M-□□31 (all others)

Open-end cover

Triangular mark
Polarizing Key slot (2)
(not on models with
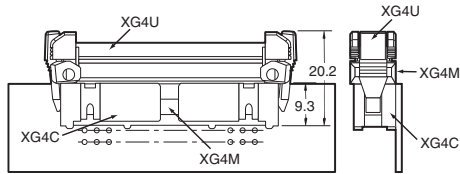less than 14 contacts)
Polarity guide   Polarizing Key slot (1)

■ Mating Diagrams for XG4M

XG4U + XG4M + XG4C (with straight terminals)
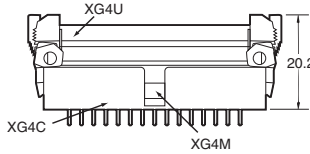
XG4U + XG4M + XG4C (with right-angle terminals)

Dimensions

No. of contacts	Dimensions (mm)				
	A	B	C	D	E
10	26.8	13.2	26.2	17.3	10.16
14	31.8	18.2	31.2	22.3	15.24
16	34.4	20.8	33.8	24.9	17.78
20	39.5	25.9	38.9	30.0	22.86
26	47.1	33.5	46.5	37.6	30.48
30	52.2	38.6	51.6	42.7	35.56
34	57.2	43.6	56.6	47.7	40.64
40	64.9	51.3	64.3	55.4	48.26
50	77.6	64.0	77.0	68.1	60.96
60	90.3	76.7	89.7	80.8	73.66
64	95.3	81.7	94.7	85.8	78.74

■ Ordering Information

No. of contacts	No. of polarity guides	Socket and Strain Relief Sets (See note 1.)	Socket with Open-end Cover (See note 2.)	Strain Relief with Locks
10	0	XG4M-1031-U	XG4M-1031	XG4U-1004
	1	XG4M-1030-U	XG4M-1030	
14	1	XG4M-1430-U	XG4M-1430	XG4U-1404
16	1	XG4M-1630-U	XG4M-1630	XG4U-1604
20	1	XG4M-2030-U	XG4M-2030	XG4U-2004
26	1	XG4M-2630-U	XG4M-2630	XG4U-2604
30	1	XG4M-3030-U	XG4M-3030	XG4U-3004
34	1	XG4M-3430-U	XG4M-3430	XG4U-3404
40	1	XG4M-4030-U	XG4M-4030	XG4U-4004
50	1	XG4M-5030-U	XG4M-5030	XG4U-5004
	2 (See note 3.)	XG4M-5031-U	XG4M-5031	
60	1	XG4M-6030-U	XG4M-6030	XG4U-6004
	2 (See note 3.)	XG4M-6031-U	XG4M-6031	
64	1	XG4M-6430-U	XG4M-6430	XG4U-6404
	2 (See note 3.)	XG4M-6431-U	XG4M-6431	

Note: 1. With open-end cover.
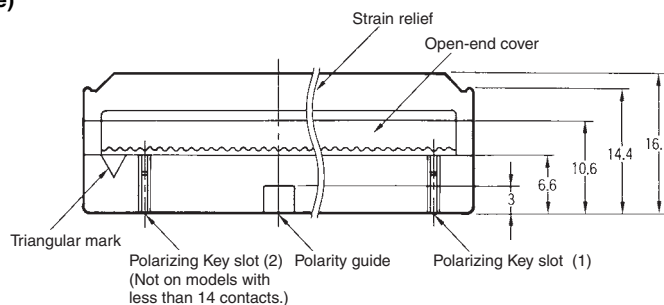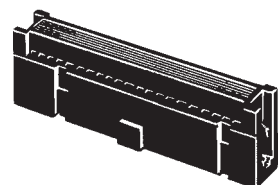**2.** Strain Relief sold separately.
3. Polarity guide pitch is 22.86 mm.

OMRON

XG4M MIL Sockets

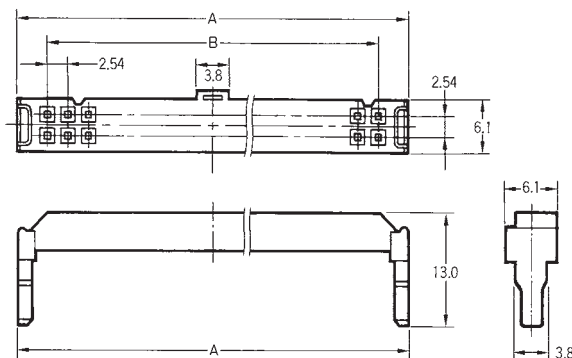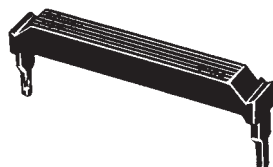## ■ Dimensions   (Unit: mm)

XG4M-□□30 (one polarizing guide)
XG4M-□□31 (all others)

Strain relief
Open-end cover

Triangular mark
Polarizing Key slot (2)   Polarity guide   Polarizing Key slot (1)
(Not on models with
less than 14 contacts.)

XG4T-□□04
Strain Relief

2.54   3.8   2.54

6.1

13.0

3.8

XG4M-□□30-T (XG4M-□□30 + XG4T-□□04)
XG4M-□□31-T (XG4M-□□31 + XG4T-□□04)
MIL Socket and Strain Relief Sets

Dimensions

No. of contacts	Dimensions (mm)	
	A	B
10	17.3	10.16
14	22.3	15.24
16	24.9	17.78
20	30.0	22.86
26	37.6	30.48
30	42.7	35.56
34	47.7	40.64
40	55.4	48.26
50	68.1	60.96
60	80.8	73.66
64	85.8	78.74

■ Ordering Information

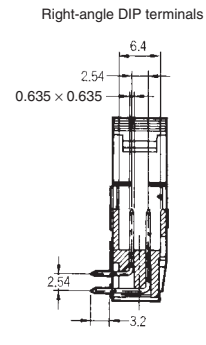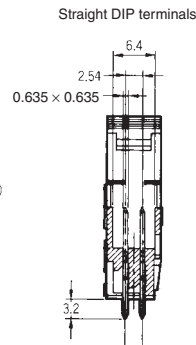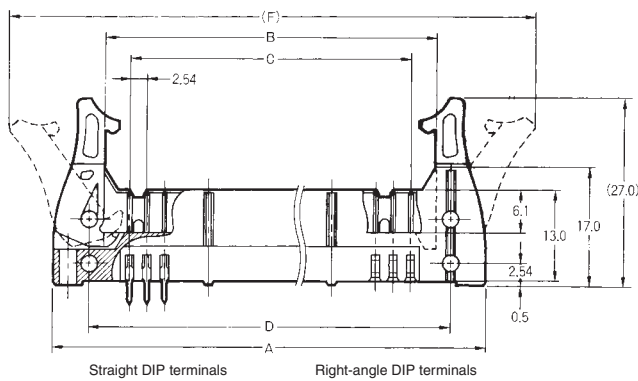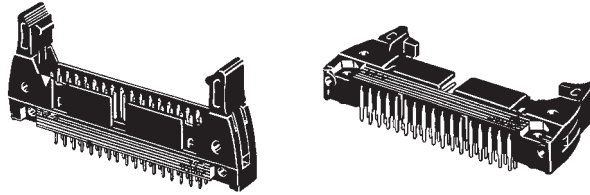| No. of contacts	No. of polarity guides	Socket and Strain Relief Set (See note 1.)	Socket with Open-end Cover (See note 2.)	Strain Relief for the XG4M
10	0	XG4M-1031-T	XG4M-1031	XG4T-1004
	1	XG4M-1030-T	XG4M-1030	
14	1	XG4M-1430-T	XG4M-1430	XG4T-1404
16	1	XG4M-1630-T	XG4M-1630	XG4T-1604
20	1	XG4M-2030-T	XG4M-2030	XG4T-2004
26	1	XG4M-2630-T	XG4M-2630	XG4T-2604
30	1	XG4M-3030-T	XG4M-3030	XG4T-3004
34	1	XG4M-3430-T	XG4M-3430	XG4T-3404
40	1	XG4M-4030-T	XG4M-4030	XG4T-4004
50	1	XG4M-5030-T	XG4M-5030	XG4T-5004
	2 (See note 3.)	XG4M-5031-T	XG4M-5031	
60	1	XG4M-6030-T	XG4M-6030	XG4T-6004
	2 (See note 3.)	XG4M-6031-T	XG4M-6031	
64	1	XG4M-6430-T	XG4M-6430	XG4T-6404
	2 (See note 3.)	XG4M-6431-T	XG4M-6431	

Note: 1. With open-end cover.
2. Strain Relief sold separately.
3. Polarity guide pitch is 22.86 mm

XG4A MIL Plugs with Long Locks (MIL Standards)

■ Dimensions

(Unit: mm)

XG4A-☐☐31/-☐☐71 (With straight DIP terminals)
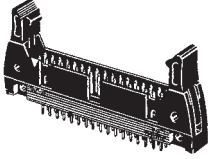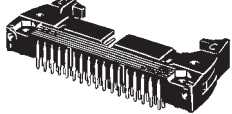**XG4A-☐☐34/-☐☐74 (With right-angle DIP terminals)**

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 view (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	46.4
14	37.1	22.6	15.24	26.9	33.0	51.5
16	39.6	25.2	17.78	29.5	35.6	54.1
20	44.7	30.2	22.86	34.5	40.6	59.1
26	52.3	37.9	30.48	42.2	48.3	66.8
30	57.4	42.9	35.56	47.2	53.3	71.8
34	62.5	48.0	40.64	52.3	58.4	76.9
40	70.1	55.6	48.26	59.9	66.0	84.5
50	82.8	68.3	60.96	72.6	78.7	97.2
60	95.5	81.0	73.66	85.3	91.4	109.9
64	100.6	86.1	78.74	90.4	96.5	115.0

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 Strain-relief Sockets.

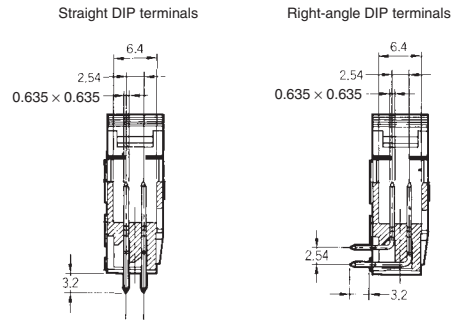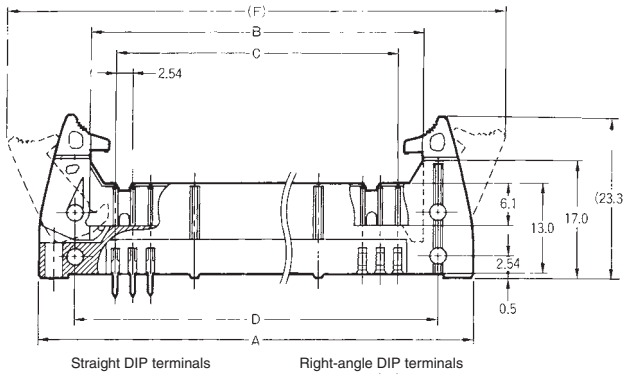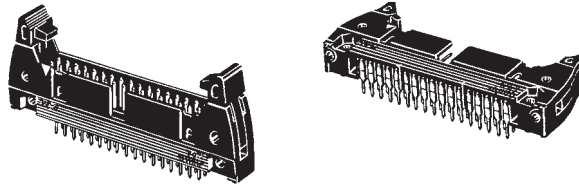| No. of contacts	No. of polarizing slots	Plugs with straight DIP terminals	Plugs with right-angle DIP terminals
10	0	XG4A-1071	XG4A-1074
	1	XG4A-1031	XG4A-1034
14	1	XG4A-1431	XG4A-1434
16	1	XG4A-1631	XG4A-1634
20	1	XG4A-2031	XG4A-2034
26	1	XG4A-2631	XG4A-2634
30	1	XG4A-3031	XG4A-3034
34	1	XG4A-3431	XG4A-3434
40	1	XG4A-4031	XG4A-4034
50	1	XG4A-5031	XG4A-5034
	2 (See note.)	XG4A-5071	XG4A-5074
60	1	XG4A-6031	XG4A-6034
	2 (See note.)	XG4A-6071	XG4A-6074
64	1	XG4A-6431	XG4A-6434
	2 (See note.)	XG4A-6471	XG4A-6474

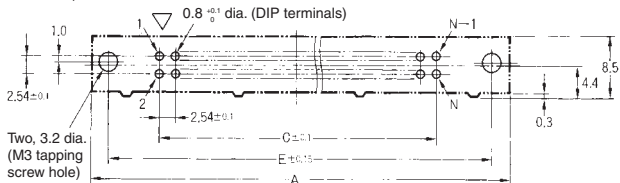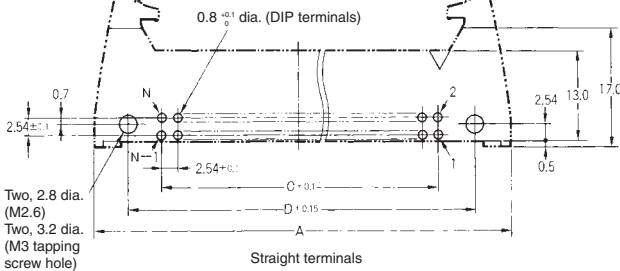**Note:** Polarizing slot pitch is 22.86 mm.

XG4A MIL Plugs with Short Locks

■ Dimensions

(Unit: mm)

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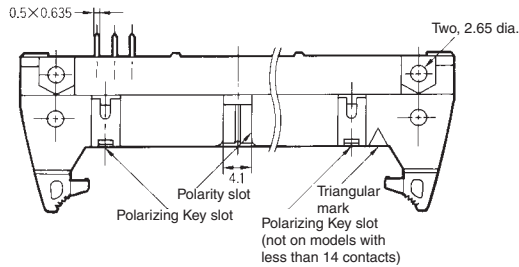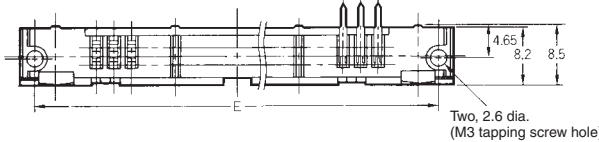
Straight DIP terminals   Right-angle DIP terminals

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 +0.1/0 dia. (DIP terminals)

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

Straight terminals
0.8 +0.1/0 dia. (DIP terminals)

Two, 3.2 dia.
(M3 tapping screw hole)
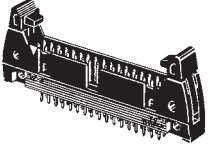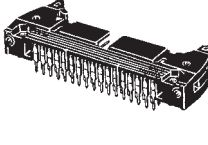
Dimensions

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.

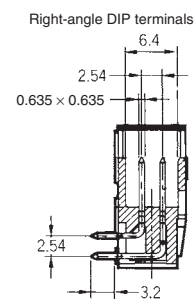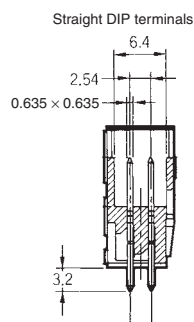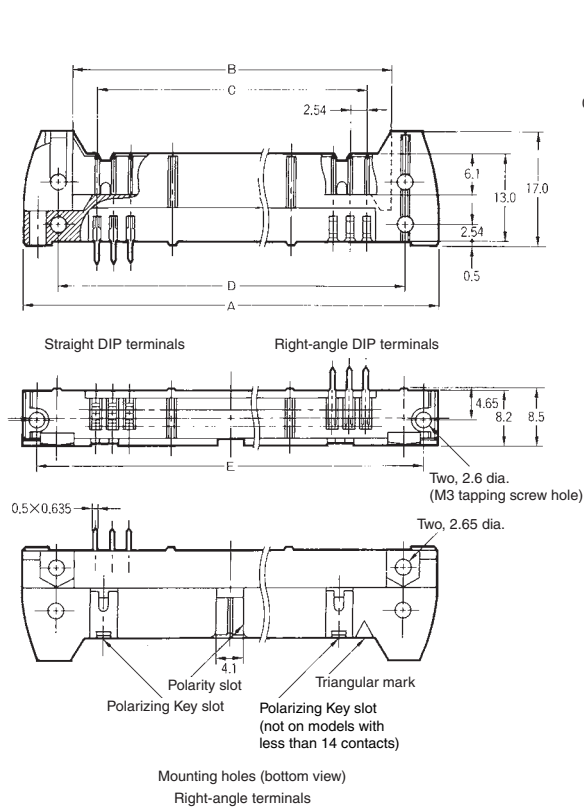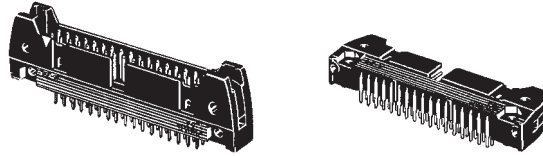| No. of contacts	No. of polarizing slots	Plugs with straight DIP terminals	Plugs with right-angle DIP terminals
10	0	XG4A-1072	XG4A-1075
	1	XG4A-1032	XG4A-1035
14	1	XG4A-1432	XG4A-1435
16	1	XG4A-1632	XG4A-1635
20	1	XG4A-2032	XG4A-2035
26	1	XG4A-2632	XG4A-2635
30	1	XG4A-3032	XG4A-3035
34	1	XG4A-3432	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.

XG4A MIL Plugs without Lock Levers (Lock Levers mounted later)
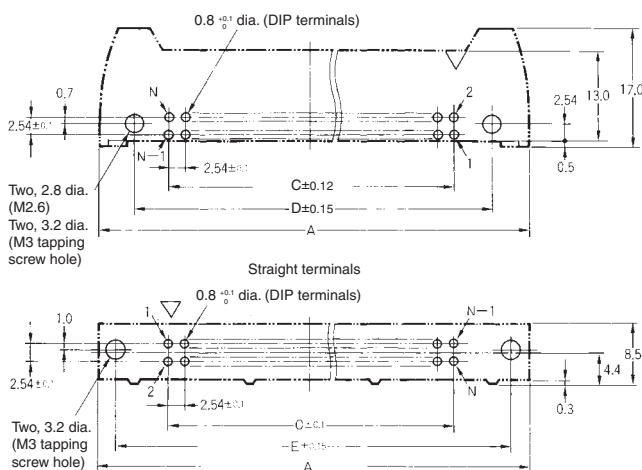
■ Dimensions

(Unit: mm)

XG4A-□□33/-□□73 (With straight DIP terminals)
XG4A-□□36/-□□76 (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 +0.1/0 dia. (DIP terminals)

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

Straight terminals

0.8 +0.1/0 dia. (DIP terminals)

Two, 3.2 dia. (M3 tapping screw hole)

Dimensions

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

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

■ Ordering Information

No. of contacts	No. of polarizing slots	Plugs with straight DIP terminals	Plugs right-angle DIP terminals
10	0	XG4A-1073	XG4A-1076
	1	XG4A-1033	XG4A-1036
14	1	XG4A-1433	XG4A-1436
16	1	XG4A-1633	XG4A-1636
20	1	XG4A-2033	XG4A-2036
26	1	XG4A-2633	XG4A-2636
30	1	XG4A-3033	XG4A-3036
34	1	XG4A-3433	XG4A-3436
40	1	XG4A-4033	XG4A-4036
50	1	XG4A-5033	XG4A-5036
	2 (See note.)	XG4A-5073	XG4A-5076
60	1	XG4A-6033	XG4A-6036
	2 (See note.)	XG4A-6073	XG4A-6076
64	1	XG4A-6433	XG4A-6436
	2 (See note.)	XG4A-6473	XG4A-6476

Note: Polarity slot pitch is 22.86 mm.

Lock Levers

- This series of Connectors allows you to attach Lock Levers on Right-angle Terminal Plugs after automated soldering is completed.
- Lock Levers can be easily mounted simply by manually pushing them in.

XG4Z-0010
Long Lock Lever

XG4Z-0011
Short Lock Lever

Type	Model
Long Lock Levers	XG4Z-0010
Short Lock Levers	XG4Z-0011

Note: The left and right Lock Levers are identical. One pair is needed for each Plug.

Attachment after Soldering

- Long Levers interfere with automated mounting.
- Long Levers are in the way when boards are packed.

↓

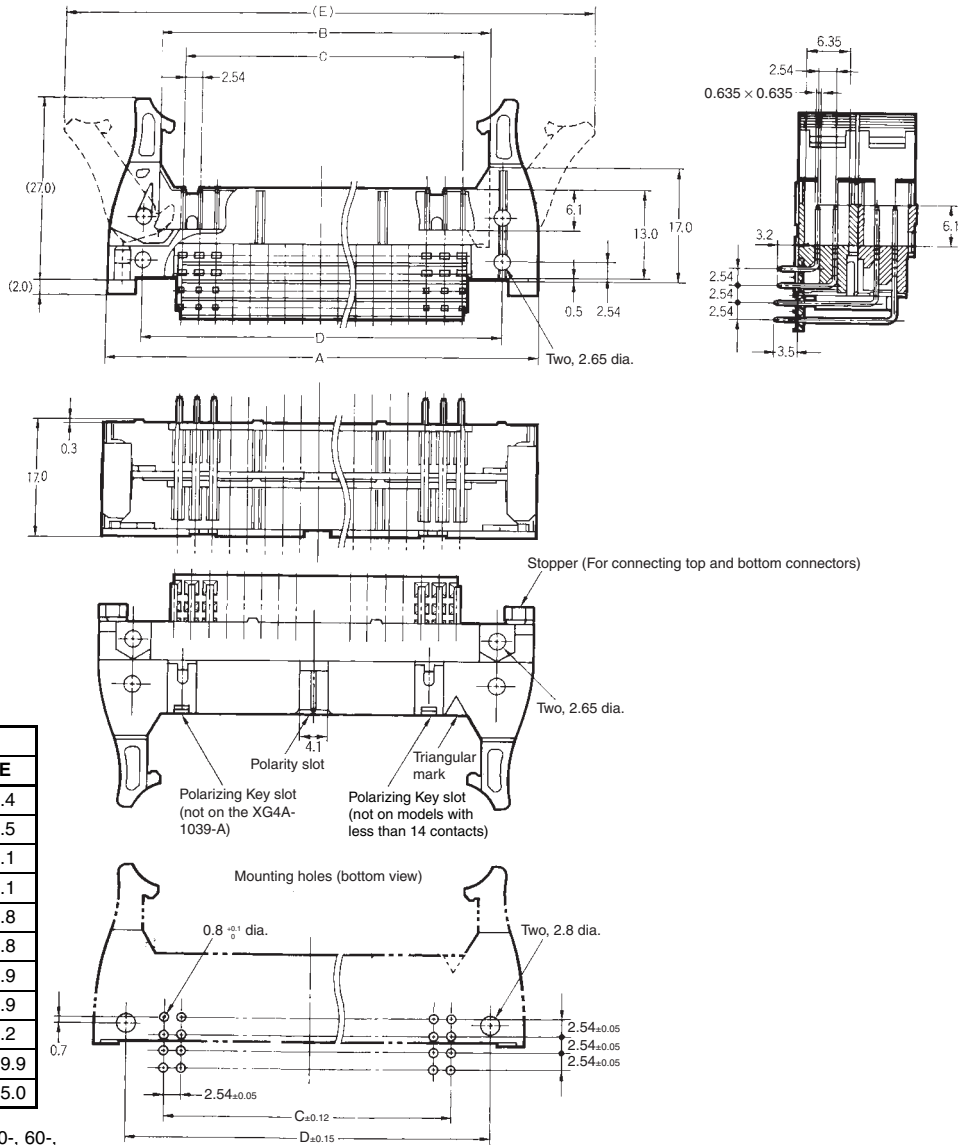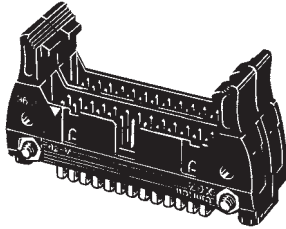- These problems are resolved using Connectors with Long Levers that can be attached after soldering is completed.
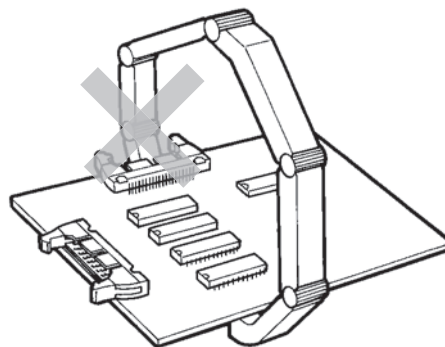
XG4A 2-tier Plugs with Long Lock

■ Dimensions

(Unit: mm)

XG4A-□□39-A/-□□79-A
(With long locks and right-angle DIP terminals)

Dimensions

No. of contacts	Dimensions (mm)				
	A	B	C	D	E
10 × 2	32.0	17.5	10.16	21.8	46.4
14 × 2	37.1	22.6	15.24	26.9	51.5
16 × 2	39.6	25.2	17.78	29.5	54.1
20 × 2	44.7	30.2	22.86	34.5	59.1
26 × 2	52.3	37.9	30.48	42.2	66.8
30 × 2	57.4	42.9	35.56	47.2	71.8
34 × 2	62.5	48.0	40.64	52.3	76.9
40 × 2	70.1	55.6	48.26	59.9	84.9
50 × 2	82.8	68.3	60.96	72.6	97.2
60 × 2	95.5	81.0	73.66	85.3	109.9
64 × 2	100.6	86.1	78.74	90.4	115.0

**Note:** Polarizing slot pitch is 22.86 mm for 50-, 60-, and 64-contact Connectors.

■ Ordering Information

No. of contacts	No. of polarizing slots	Model	No. of contacts	No. of polarity slots	Model
10 × 2	0	XG4A-1079-A	40 × 2	1	XG4A-4039-A
	1	XG4A-1039-A			
14 × 2	1	XG4A-1439-A	50 × 2	1	XG4A-5039-A
16 × 2	1	XG4A-1639-A		2 (See note 2.)	XG4A-5079-A
20 × 2	1	XG4A-2039-A	60 × 2	1	XG4A-6039-A
26 × 2	1	XG4A-2639-A		2 (See note 2.)	XG4A-6079-A
30 × 2	1	XG4A-3039-A	64 × 2	1	XG4A-6439-A
34 × 2	1	XG4A-3439-A		2 (See note 2.)	XG4A-6479-A

Note: 1. Set containing a stopper, mounting screw (assembled with washer) and nut. Screw size: M2.6 x 20 mm

2. Polarizing slot pitch is 22.86 mm.

■ Mounting Example
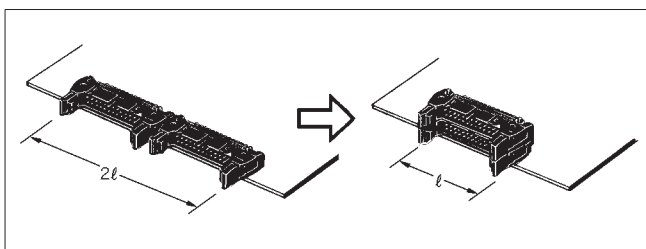
■ 2-tier Plug Features

- Recommended for high-density mounting.
- MIL-compliant cable ensures faster delivery times and lower cost than half-pitch board cable. The 2.54-mm pitch simplifies patterning.

■ Applicable Sockets

No. of contacts	No. of polarity slots	Model	XG4M for flat cable (See note 1.)	XG5M-N for discrete wire (See note 2.)
10 × 2	0	XG4A-1079-A	XG4M-1031	XG5M-103□-N
	1	XG4A-1039-A	XG4M-1030	XG5M-103□-N
14 × 2	1	XG4A-1439-A	XG4M-1430	XG5M-143□-N
16 × 2	1	XG4A-1639-A	XG4M-1630	XG5M-163□-N
20 × 2	1	XG4A-2039-A	XG4M-2030	XG5M-203□-N
26 × 2	1	XG4A-2639-A	XG4M-2630	XG5M-263□-N
30 × 2	1	XG4A-3039-A	XG4M-3030	XG5M-303□-N
34 × 2	1	XG4A-3439-A	XG4M-3430	XG5M-343□-N
40 × 2	1	XG4A-4039-A	XG4M-4030	XG5M-403□-N
50 × 2	1	XG4A-5039-A	XG4M-5030	XG5M-503□-N
	2 (See note 3.)	XG4A-5079-A	XG4M-5031	
60 × 2	1	XG4A-6039-A	XG4M-6030	XG5M-603□-N
	2 (See note 3.)	XG4A-6079-A	XG4M-6031	
64 × 2	1	XG4A-6439-A	XG4M-6430	XG5M-643□-N
	2 (See note 3.)	XG4A-6479-A	XG4M-6431	

Note: 1. Use with the supplied Strain Relief.
  2. Use with the supplied Semi-cover. Hood Cover cannot be used.
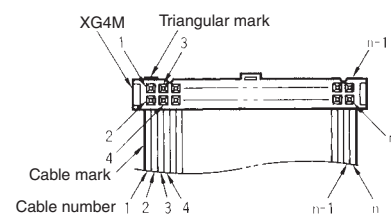 **3.** Polarity slot pitch is 22.86 mm.

■ Cable Number and Contact Position
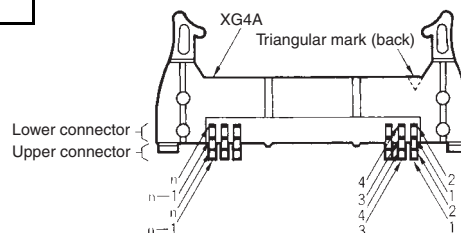
Cable and Corresponding Contact Number

The contact numbers are not marked on the Connector. Use the triangular mark as a guide when wiring and designing circuit boards.

For the cable number, count starting from the cable mark side as shown below.

Socket (mating side)

Right-angle terminals (terminal side)

■ Precautions

Correct Use

Mounting

- Be sure to anchor the board with screws before mounting.
- Note that a Polarizing Key cannot be mounted on the lower Plug.

Connecting the Socket

- Before connecting the XG4M with Strain Relief, remove as much slack from the cable as possible. Insert as shown below.
- Attach the Semi-cover before connecting the XG5M-N. It is not possible to use the Hood Cover.
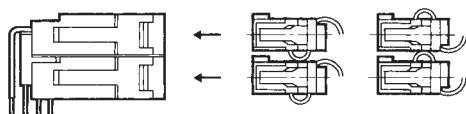
Soldering

- **Automated Soldering Conditions (Jet Flow)**

1. Soldering temperature: 250 ±5°C
2. Continuous soldering time: Within 5 ± 1 s

Lock Lever Operation

When you operate the lock lever, do not force it past the movable range.
The connector may be damaged.
Do not use any type of tool to operate the lock lever. Operate it only with your hand.
The connector may be damaged.
Always release the lock mechanism before you disconnect the connector from the connected socket.
The connector may be damaged.
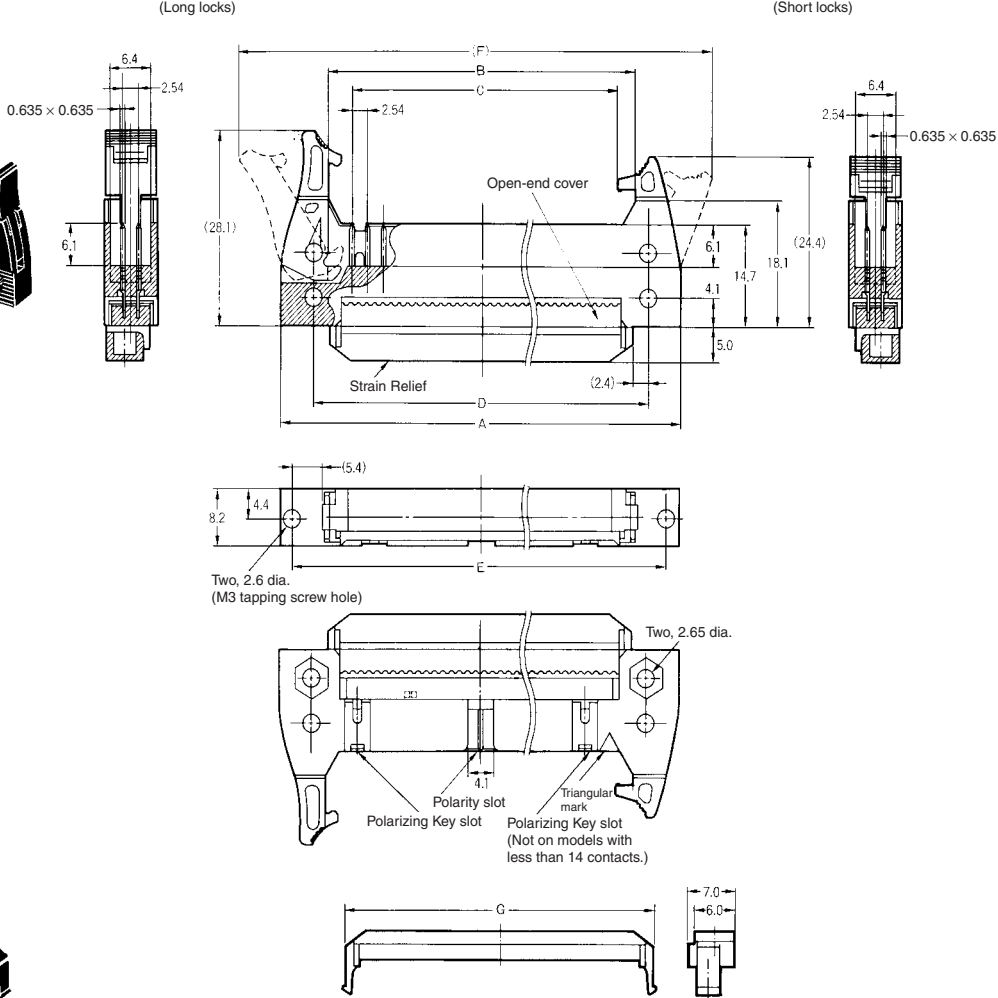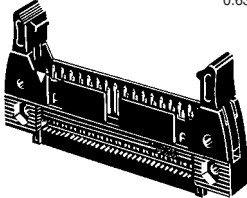
XG4E IDC Plugs

■ Dimensions

(Unit: mm)

XG4E-□□31/-□□71
(With long locks)
XG4E-□□32/-□□72
(With short locks)

(Long locks)

(Short locks)

Open-end cover

Strain Relief

Two, 2.6 dia.
(M3 tapping screw hole)

Two, 2.65 dia.

XG4S-□□04
Strain Relief

Polarity slot
Polarizing Key slot

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

Dimensions

No. of contacts	Dimensions (mm)							
	A	B	C	D	E	F		G
						Long Lock	Short Lock	
10	32.0	17.5	10.16	21.8	27.9	46.4	40.4	16.9
14	37.1	22.6	15.24	26.9	33.0	51.5	45.5	22.0
16	39.6	25.2	17.78	29.5	35.6	54.1	48.0	24.6
20	44.7	30.2	22.86	34.5	40.6	59.1	53.1	29.6
26	52.3	37.9	30.48	42.2	48.3	66.8	60.7	38.0
30	57.4	42.9	35.56	47.2	53.3	71.8	65.8	42.3
34	62.5	48.0	40.64	52.3	58.4	76.9	70.9	47.4
40	70.1	55.6	48.26	59.9	66.0	84.5	78.5	55.0
50	82.8	68.3	60.96	72.6	78.7	97.2	91.2	67.7
60	95.5	81.0	73.66	85.3	91.4	109.9	103.9	80.4
64	100.6	86.1	78.74	90.4	96.5	115.0	109.0	85.5

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

■ Ordering Information

IDC Plugs

Use Long-lock Plugs together with Strain-relief Sockets, and use Short-lock Plugs together with Non-strain-relief Sockets.

No. of contacts	No. of polarizing slots	Long-lock Plugs with Open-end Covers (See note 1.)	Short-lock Plugs with Open-end Covers (See note 1.)	Strain Reliefs for XG4E
10	0	XG4E-1071	XG4E-1072	XG4S-1004
	1	XG4E-1031	XG4E-1032	
14	1	XG4E-1431	XG4E-1432	XG4S-1404
16	1	XG4E-1631	XG4E-1632	XG4S-1604
20	1	XG4E-2031	XG4E-2032	XG4S-2004
26	1	XG4E-2631	XG4E-2632	XG4S-2604
30	1	XG4E-3031	XG4E-3032	XG4S-3004
34	1	XG4E-3431	XG4E-3432	XG4S-3404
40	1	XG4E-4031	XG4E-4032	XG4S-4004
50	1	XG4E-5031	XG4E-5032	XG4S-5004
	2 (See note 2.)	XG4E-5071	XG4E-5072	
60	1	XG4E-6031	XG4E-6032	XG4S-6004
	2 (See note 2.)	XG4E-6071	XG4E-6072	
64	1	XG4E-6431	XG4E-6432	XG4S-6404
	2 (See note 2.)	XG4E-6471	XG4E-6472	

Note: 1. Strain Relief sold separately.
2. Polarity slot pitch is 22.86 mm.

■ Cable Number and Contact Position

Cable and Corresponding Contact Number

The contact numbers are not marked on the Connector. Use the triangular mark as a guide when wiring and designing circuit boards.

For the cable number, count starting from the cable mark side as shown on the right.
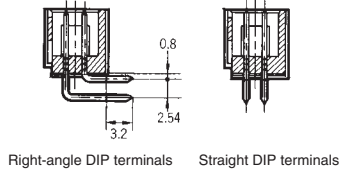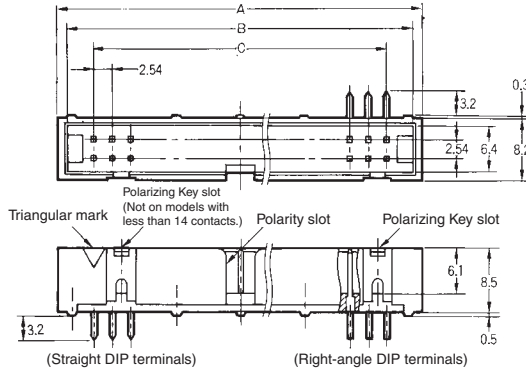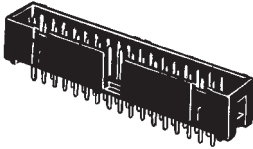
Socket (mated side)

Right-angle Terminal Plug (terminal side)

Plug (XG4E)

Straight Terminal Plug (terminal side)
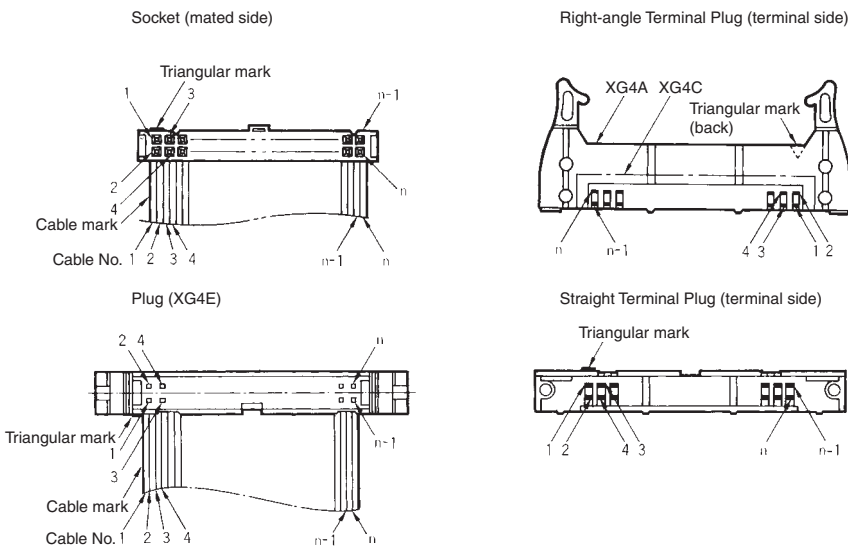
XG4C Box-type Plugs

■ Dimensions

(Unit: mm)

XG4C-□□31/-□□71
(With straight DIP terminals)

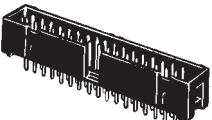**XG4C-□□34/-□□74**
(With right-angle DIP terminals)

Triangular mark | Polarizing Key slot (Not on models with less than 14 contacts.) | Polarity slot | Polarizing Key slot

(Straight DIP terminals)   (Right-angle DIP terminals)

Right-angle DIP terminals   Straight DIP terminals

Mounting holes (bottom view)
Straight DIP terminals

0.8 +0.1/0 dia.

Right-angle DIP terminals

0.8 +0.1/0 dia.
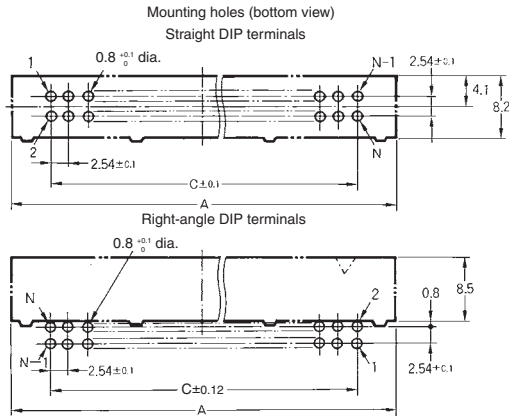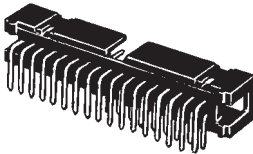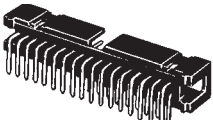
Dimensions

No. of contacts	Dimensions (mm)		
	A	B	C
10	20.0	17.5	10.16
14	25.1	22.6	15.24
16	27.6	25.2	17.78
20	32.7	30.2	22.86
26	40.3	37.9	30.48
30	45.4	42.9	35.56
34	50.5	48.0	40.64
40	58.1	55.6	48.26
50	70.8	68.3	60.96
60	83.5	81.0	73.66
64	88.6	86.1	78.74

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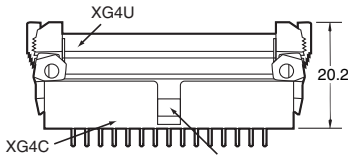
■ Ordering Information

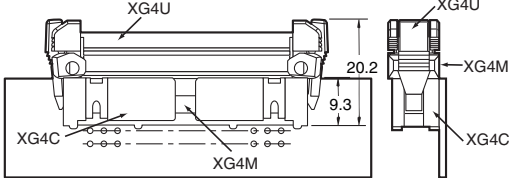| No. of contacts	No. of polarizing slots	Plugs with straight DIP terminals	Plugs with right-angle DIP terminals
10	0	XG4C-1071	XG4C-1074
	1	XG4C-1031	XG4C-1034
14	1	XG4C-1431	XG4C-1434
16	1	XG4C-1631	XG4C-1634
20	1	XG4C-2031	XG4C-2034
26	1	XG4C-2631	XG4C-2634
30	1	XG4C-3031	XG4C-3034
34	1	XG4C-3431	XG4C-3434
40	1	XG4C-4031	XG4C-4034
50	1	XG4C-5031	XG4C-5034
	2 (See note 1.)	XG4C-5071	XG4C-5074
60	1	XG4C-6031	XG4C-6034
	2 (See note 1.)	XG4C-6071	XG4C-6074
64	1	XG4C-6431	XG4C-6434
	2 (See note 1.)	XG4C-6471	XG4C-6474

Note: 1. Polarizing slot pitch is 22.86 mm.

2. The Box-type Plug can be locked using Lock Lever II (sold separately). (See XG4Z-0002 on page 19.)
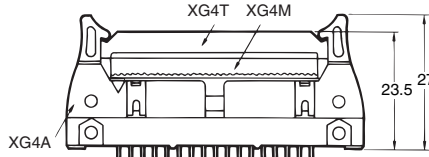
■ Mating Diagrams for XG4M

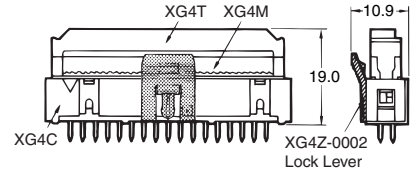**XG4U + XG4M + XG4C**
(With straight terminals)

XG4U
20.2
XG4C
XG4M

XG4T + XG4M + XG4A

XG4T   XG4M
23.5 27
XG4A

XG4T + XG4M + XG4C + Lock Lever

XG4T   XG4M
19.0
10.9
XG4C
XG4Z-0002
Lock Lever

XG4U + XG4M + XG4C
(With right-angle terminals)

XG4U
XG4U
XG4M
20.2
9.3
XG4C
XG4M
XG4C

XG4T + XG4M + XG8B (Original Plug) + Lock Lever

XG4T   XG4M
18.8
9
XG8B
XG5Z-0002
Lock Lever

XG4T + XG4M + XG4E
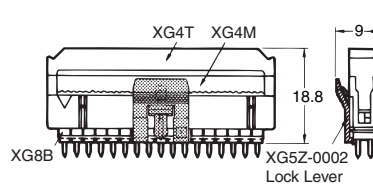
XG4T   XG4M
24.7 28.1
XG4E
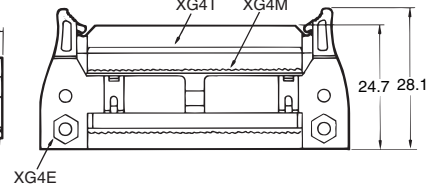
■ Polarity Slot and Polarizing Key Slot Number and Position

Classification	No. of contacts			
	10 contacts		**14 contacts**	**16 to 40 contacts**	**50 to 64 contacts**
XG4M MIL Sockets	XG4M-1031	XG4M-1030	XG4M-1430	XG4M-1630 to XG4M-6430 Polarizing Key slot
				---	XG4M-5031, XG4M-6031, XG4M-6431 Polarizing guide
XG4A MIL Plugs XG4E IDC Plugs	XG4A-107☐ XG4E-107☐	XG4A-103☐ XG4E-103☐	XG4A-143☐ XG4E-143☐	XG4A-163☐ to XG4A-643☐ Polarizing Key slot XG4E-163☐ to XG4E-643☐
				---	XG4A-507☐, XG4A-607☐, XG4A-647☐ Polarizing slot XG4E-507☐, XG4E-607☐, XG4E-647☐
XG4C Box-type Plugs	XG4C-107☐	XG4C-103☐	XG4C-143☐	XG4C-163☐ to XG4C-643☐ Polarizing slot
				---	XG4C-507☐, XG4C-607☐, XG4C-647☐ Polarizing slot
No. of polarizing guides (Polarizing Slots)	0	1	1	1	1
					2 (H = 22.86 mm)
No. of Polarizing Key slot (Polarizing Key Slots)	1	0	1	2	2

XG4H Board-to-Board Sockets
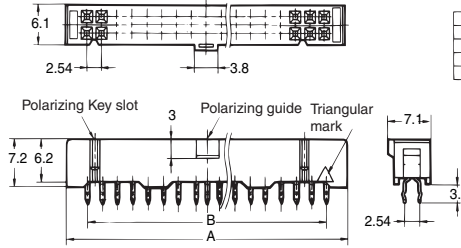
■ Dimensions

(Unit: mm)

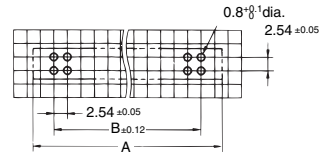**XG4H-□□31/-□□71**
(With straight DIP terminals)
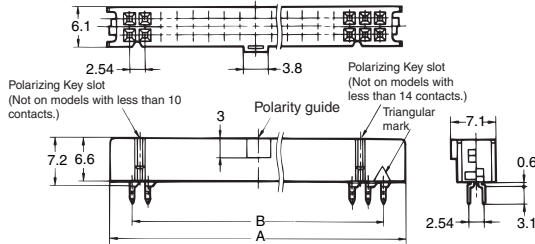
XG4H-3431-1
XG4H-4031-1
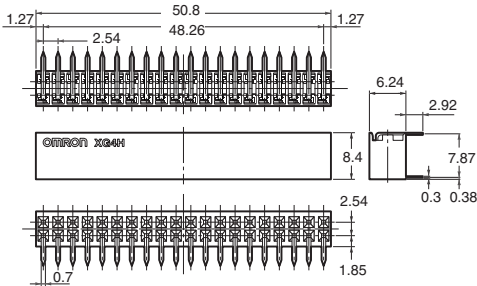**(With straight DIP terminals)**

*Sockets with model numbers ending in -1 are available only with 34 or 40 contacts (provide kinked terminals and standoff to prevent the Sockets from falling over).
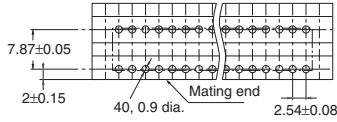
Mounting holes (bottom view)

0.8$^{+0.1}_{0}$dia.
2.54 ±0.05

2.54 ±0.05
B±0.12
A

Dimensions

No. of contacts	A	B
10	17.3	10.16
14	22.3	15.24
16	24.9	17.78
20	30.0	22.86
26	37.6	30.48
30	42.7	35.56
34	47.7	40.64
40	55.4	48.26
50	68.1	60.96
60	80.8	73.66
64	85.8	78.74

XG4H-4034
(With right-angle DIP terminals)

Mounting holes (bottom view)

7.87±0.05
2±0.15
40, 0.9 dia.   Mating end
2.54±0.08

50.8
48.26
1.27 / 1.27
2.54
6.24
2.92
8.4
7.87
OMRON XG4H
2.54
0.3 0.38
0.7
1.85

■ Ordering Information

No. of contacts	No. of polarizing slots	Sockets with straight DIP terminals
10	1	XG4H-1031
14	1	XG4H-1431
16	1	XG4H-1631
20	1	XG4H-2031
26	1	XG4H-2631
30	1	XG4H-3031
34	1	XG4H-3431-1
40	1	XG4H-4031-1
50	1	XG4H-5031
	2 (See note.)	XG4H-5071
60	1	XG4H-6031
	2 (See note.)	XG4H-6071
64	1	XG4H-6431
	2 (See note.)	XG4H-6471

No. of contacts	Sockets with right-angle DIP terminals
40	XG4H-4034

Note: Polarizing guide pitch is 22.86 mm.

■ Mating Diagrams for XG4H

Plug Socket	XG8W Original Plugs	XG4C Box-type Plugs
XG4H-☐☐31/-☐☐71 **(With straight DIP termi-nals)**	 Stacking / Vertical	 Stacking / Vertical
XG4H-4034 **(With right-angle DIP ter-minals)**	Horizontal (forward direction) / Horizontal (reverse direction) / Vertical	---

■ Tools and Accessories (Sold Separately)

XG4Z-0004 Polarizing Key

Polarity guides and slots can be used by themselves to help prevent reverse insertion. Use the Polarizing Key as well for best results.

Material: PBT resin
(UL94 V-0)/white

How to use

Insert   Twist

Polarizing Key

Polarizing Key slot
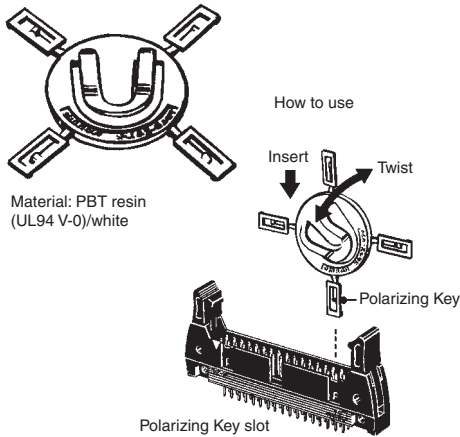
Note: Each XG4Z-0004 has 4 Polarizing Keys.

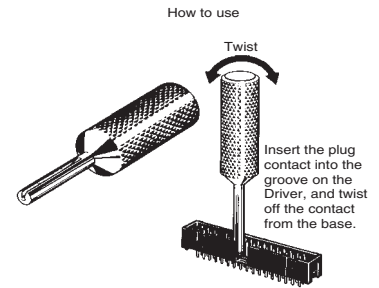### XG4Z-0005 Coding Pin

(To prevent erroneous insertion)

The Coding Pin is used to prevent confusion when many Connectors with the same number of contacts are lined up. It can also be used to prevent reverse insertion when using Connectors without a shroud like the XG8 Unshrouded Plug. The Coding Pin can also be used with XC5, and XC6 DIN Connectors as well as with XG5 Discrete-wire IDC Connectors.

Material: PBT resin
(UL94 V-0)/white

How to use
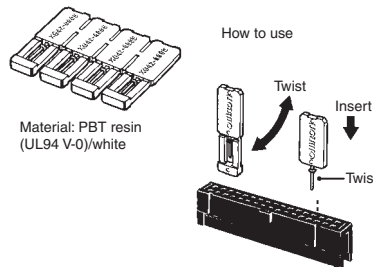
Twist

Insert

Twist

Note: 1. A contact with a Coding Pin inserted cannot be used.
2. Each XG4Z-0005 has 4 Polarizing Keys.

XY2E-0002 Contact Cutting Driver

The Contact Cutting Driver is used to cut (twist off) a contact on the mating Plug when using an XG4Z-0005 Coding Pin.
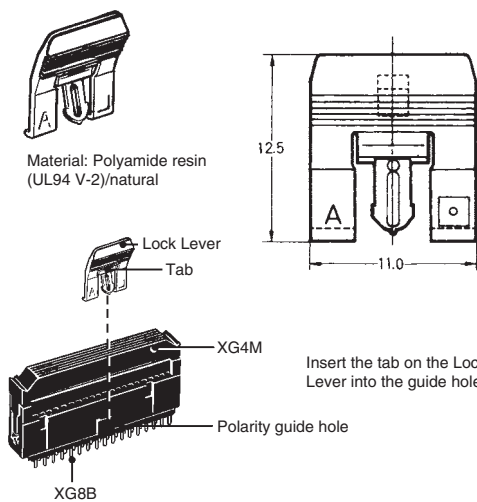
How to use

Twist

Insert the plug contact into the groove on the Driver, and twist off the contact from the base.

Model
XG4Z-0004
XG4Z-0005
XY2E-0002

Lock Lever for XG8B and XG8W Plugs (With Right-angle Terminals)

XG5Z-0002

Use to lock Unshrouded Plugs (for XG8B and XG8W Plugs with right-angle terminals).

Material: Polyamide resin
(UL94 V-2)/natural

2.6

12.5

A

11.0

0.7

Lock Lever
Tab

XG4M

Insert the tab on the Lock Lever into the guide hole.

Polarity guide hole

XG8B

Lock Lever II for XG4C Plugs

XG4Z-0002

Use to lock XG4C Box-type Plugs.

Material: Polyamide resin
(UL94 V-2)/natural

3.8

2.7

13.5

B

11.0

0.7

XG4M

XG4C

Model
XG5Z-0002
XG4Z-0002
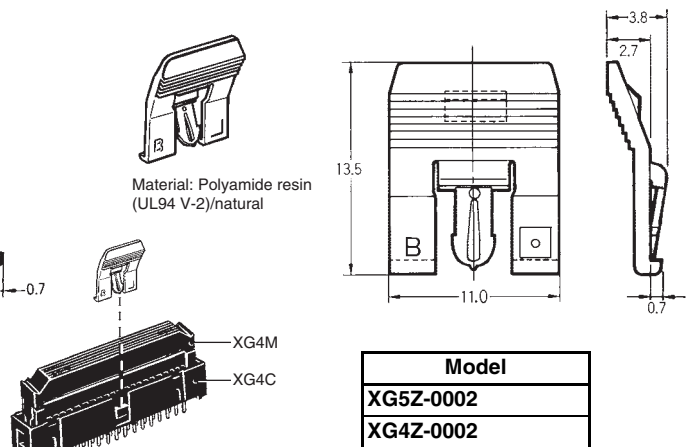
■ Precautions

Correct Use

• Automated Soldering Conditions (Jet Flow)

1. Soldering temperature: 250 ±5°C
2. Continuous soldering time: Within 5±1 s

• Soldering

Solder-mount the XG4A with the lock levers fully closed or fully open.

Solder-mounting the XG4A with the lock lever half-open may cause play in lock lever due to thermal deformation of the housing.

• Storage

If the lock levers of the XG4A or XG4E connector are left at an intermediate position for a long time, they may get to feel loose in operation due to deterioration of the plastic part. When the lock levers are not used, store the plug with the lock levers fully closed or fully open.

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

OMRON Corporation
Electronic and Mechanical Components Company   **Contact: www.omron.com/ecb**   Cat. No. G039-E1-02
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