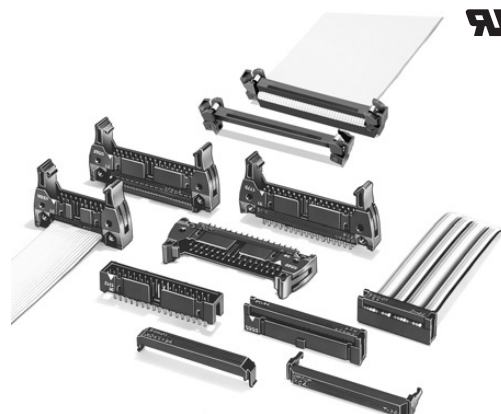


# Flat Cable Connectors

## XG4

### Industry Standard Circuit Board Connectors Conform to MIL Standards

- XG4M-U: Unique locking system, with lock levers on strain relief / socket instead of on plug, saves 24% of space
- Space-saving Box-type Plugs (XG4C) available.
- Can be used with XG5 IDC Connectors for discrete wires, XG8 Original PCB Plugs, and the XG2 IDC Bus Connectors for PCBs.
- The Original Plugs (XG8) and the Box-type Plugs (XG4C) can be locked using External XG5Z and XG4Z Lock Levers.
- Conforms to MIL standards (MIL-C-83503).
- UL recognition (file No. E103202)



## Ordering Information

| Connector     | Cable                          |                                   |                          | PCB                  |                         |               |                       |
|---------------|--------------------------------|-----------------------------------|--------------------------|----------------------|-------------------------|---------------|-----------------------|
|               | Socket                         |                                   | Plug                     | Plug                 |                         |               | Socket                |
|               | XG4M                           |                                   | XG4E                     | XG4A                 | XG4A                    | XG4C          | XG4H                  |
| Strain relief | XG4U                           | XG4T                              | XG4S                     | ---                  | ---                     | ---           | ---                   |
| Feature       | Strain relief with lock levers | Strain relief without lock levers | Lock levers on connector | Integral lock levers | 2-tier with lock levers | Box type plug | Board to Board Socket |
| Appearance    |                                |                                   |                          |                      |                         |               |                       |

- Note:** 1. XG4M can be provided with or without the strain reliefs;  
 ⇒ XG4M-U consists of XG4M-□□3□ socket + XG4U-□□04 strain relief  
 ⇒ XG4M-T consists of XG4M-□□3□ socket + XG4T-□□04 strain relief
2. XG4H PCB mount socket mates with XG4C and XG8W (see XG8 Datasheet) for board to board connectivity without cables.
3. XG5 connectors (see XG5 Datasheet) use discrete wire instead of flat ribbon cable.
4. XG4A PCB mount sockets are available with Long, Short or no Lock Levers.
5. Optional XG4Z-001□ side-lock levers, purchased separately, are available for use with right-angle XG4A versions that don't include them.
6. Optional XG4Z-0002 and XG5Z-0002 top-lock levers are available for mating XG4M(-T) sockets to XG4C and XG8 plugs.

## Ratings and Characteristics

| Item                  | MIL Sockets: XG4M<br>Cable Plug: XG4E          | MIL Plugs: XG4A<br>Box-type PCB Plugs: XG4C<br>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.) |                                                                             |
| Connector insertion   | 1.96 N max. per contact                        |                                                                             |
| Contact removal       | 0.39 N min. (with test gauge, t= 0.64 mm)      |                                                                             |
| Insertion durability  | 50 times (See note 2.)                         |                                                                             |
| Ambient temperature   | Operating: -55 to 105°C (with no icing)        |                                                                             |

- Note:** 1. The rated current will depend on the Socket you are using. It is 1 A using the XG4M for example.
2. For standard 0.15-μm gold plating.

## Materials and Finish

| Item           |                    | MIL Plugs: XG4A<br>Box-type Plugs: XG4C                   | Cable Plugs: XG4E<br>(Strain Relief: XG4S) | MIL Sockets: XG4M<br>(Strain Relief: XG4T)                          | Board-to-board<br>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- $\mu$ m gold plating (See note.) |                                            | Phosphor bronze/nickel base, 0.15- $\mu$ m gold plating (See note.) |                                   |
|                | Terminal Press fit | Brass/nickel base, tin plating                            |                                            | Phosphor bronze/nickel base, tin plating                            |                                   |
| Strain Reliefs |                    | —                                                         | Polyamide resin (UL94V-0)/black            | Fiber-glass reinforced PBT resin (UL94V-0)/black                    | —                                 |

**Note:** For non-standard plating, contact your OMRON representative.

## Applicable Wires

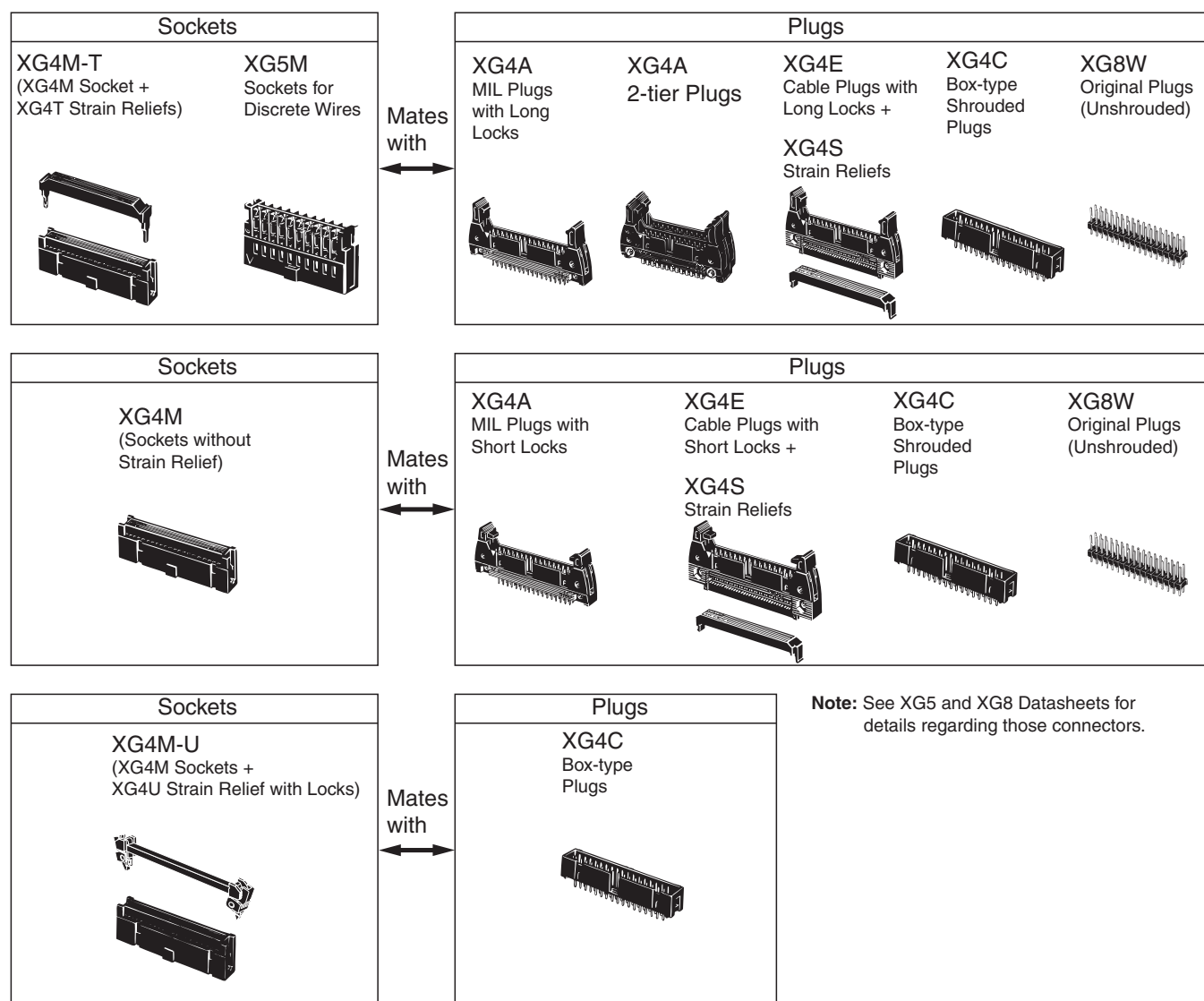
1.27-mm pitch, 7-strand flat cable

• UL2651 (standard cable)

• UL20012 (folding cable)

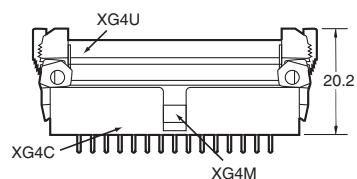
• UL20028 (color-coded cable)

## Mating Combinations for XG4, XG5 and XG8

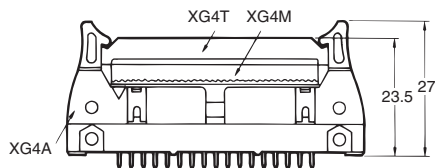


# Mating Diagrams for XG4M

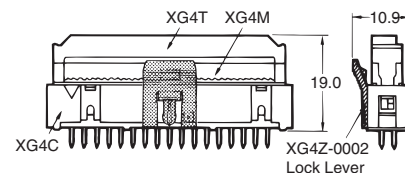
**XG4U + XG4M + XG4C**  
(With straight terminals)



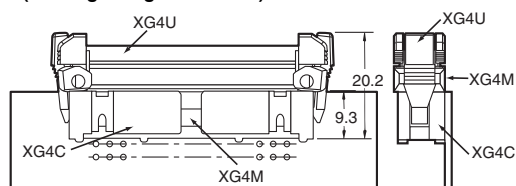
**XG4T + XG4M + XG4A**



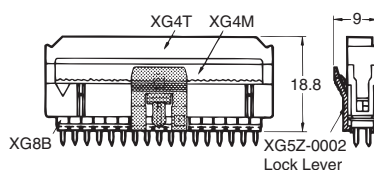
**XG4T + XG4M, + XG4C + XG4Z Lock Lever**



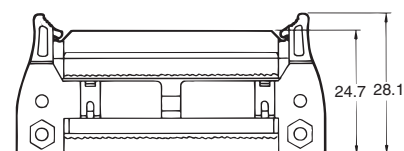
**XG4U + XG4M + XG4C**  
(With right-angle terminals)



**XG4T + XG4M + XG8 (Unshrouded Plug) + XG5Z Lock Lever**



**XG4T + XG4M + XG4E**



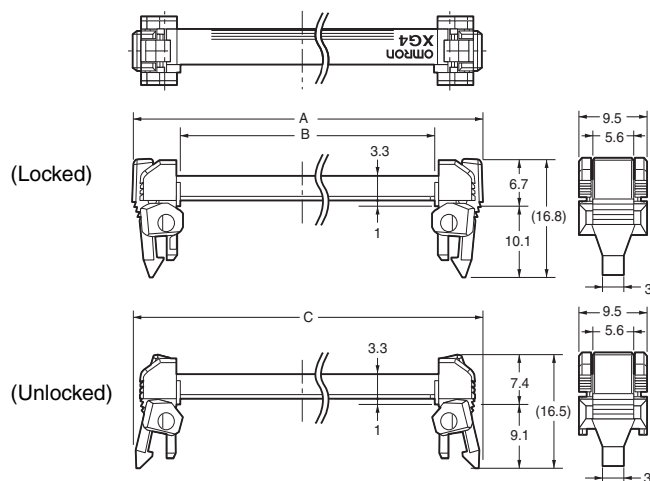
# Cable Mount Connectors

## ■ XG4M-U Sockets (Uses XG4U Strain Relief with Lock Levers)

### Dimensions

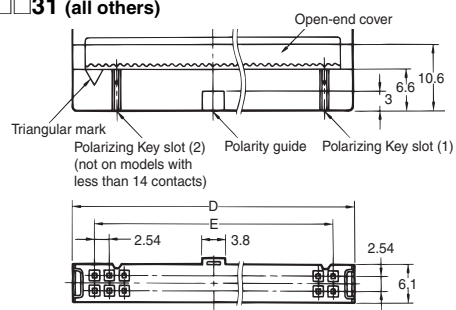
XG4U-□□04

Strain Reliefs with Locks



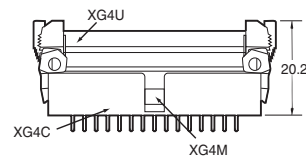
XG4M-□□30 (one polarity guide)

XG4M-□□31 (all others)

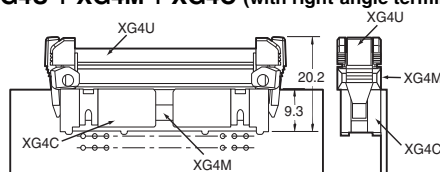


### Mating Diagrams for XG4M-U

XG4U + XG4M + XG4C (with straight terminals)



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



| 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+Strain Relief Sets (See notes 1 and 2.) | Socket with Open-end Cover (See note 3.) | 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 4.)        | XG4M-5031-U                                    | XG4M-5031                                |                          |
| 60              | 1                      | XG4M-6030-U                                    | XG4M-6030                                | XG4U-6004                |
|                 | 2 (See note 4.)        | XG4M-6031-U                                    | XG4M-6031                                |                          |
| 64              | 1                      | XG4M-6430-U                                    | XG4M-6430                                | XG4U-6404                |
|                 | 2 (See note 4.)        | XG4M-6431-U                                    | XG4M-6431                                |                          |

**Note:** 1. Sets include the connector and strain relief.

2. With open-end cover.

3. Strain Relief sold separately.

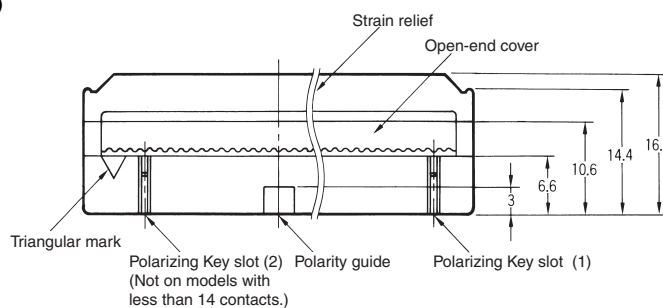
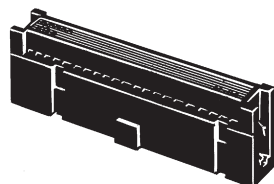
4. Polarity guide pitch is 22.86 mm.

# ■ XG4M-T Sockets (Uses XG4T Strain Relief without Lock Levers)

## Dimensions

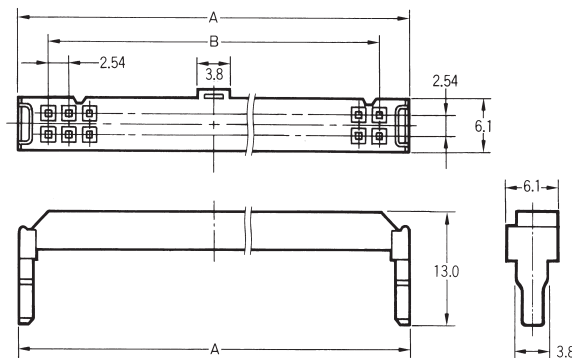
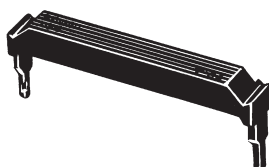
XG4M-□□30 (one polarizing guide)

XG4M-□□31 (all others)



XG4T-□□04

Strain Relief



| 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+Strain Relief Set (See notes 1 and 2.) | Socket with Open-end Cover (See note 3.) | 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 4.)        | XG4M-5031-T                                   | XG4M-5031                                |                            |
| 60              | 1                      | XG4M-6030-T                                   | XG4M-6030                                | XG4T-6004                  |
|                 | 2 (See note 4.)        | XG4M-6031-T                                   | XG4M-6031                                |                            |
| 64              | 1                      | XG4M-6430-T                                   | XG4M-6430                                | XG4T-6404                  |
|                 | 2 (See note 4.)        | XG4M-6431-T                                   | XG4M-6431                                |                            |

- Note:** 1. Sets include the connector and strain relief.  
2. With open-end cover.  
3. Strain Relief sold separately.  
4. Polarity guide pitch is 22.86 mm

# ■ XG4E Plugs and XG4S Strain Relief (Locking Levers on Connector)

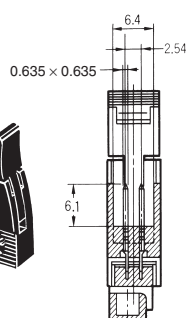
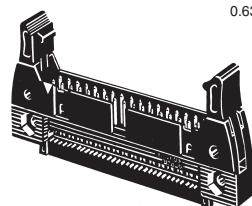
## Dimensions

**XG4E-□□31/-□□71**

(With long locks)

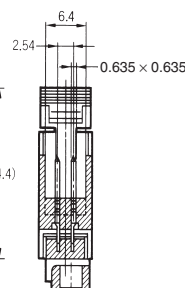
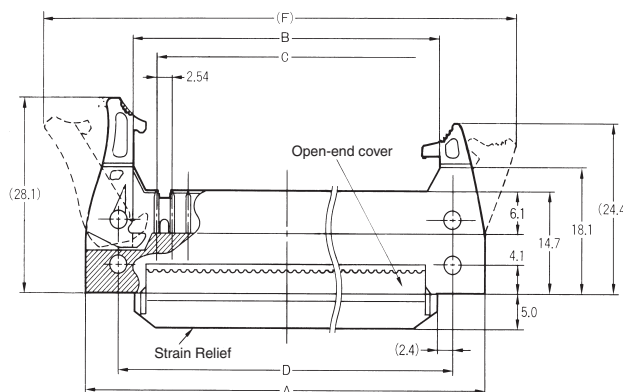
**XG4E-□□32/-□□72**

(With short locks)

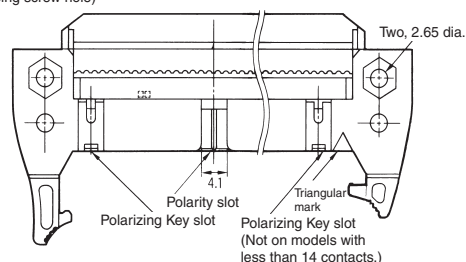


(Long locks)

(Short locks)

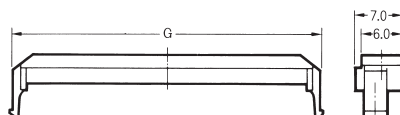


Two, 2.6 dia.  
(M3 tapping screw hole)



**XG4S-□□04**

Strain Relief



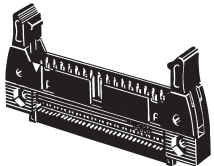
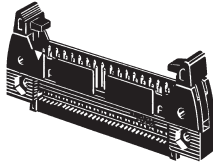
## Dimensions

| 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      | 46.0       | 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 “Polarity Slot and Polarizing Key Slot Number and Position” section for details on the availability (10-contact Connectors) and pitch (with 50, 60, or 64-contact Connectors) of polarity slots.

## Ordering Information

Use Long-lock Plugs to mate with XG4M-T Strain-relief Sockets, and use Short-lock Plugs to mate with XG4M that does not have a strain relief installed.

| 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                       | <b>XG4E-1071</b>                                                                  | <b>XG4E-1072</b>                                                                   | <b>XG4S-1004</b>                                                                    |
|                 | 1                       | <b>XG4E-1031</b>                                                                  | <b>XG4E-1032</b>                                                                   |                                                                                     |
| 14              | 1                       | <b>XG4E-1431</b>                                                                  | <b>XG4E-1432</b>                                                                   | <b>XG4S-1404</b>                                                                    |
| 16              | 1                       | <b>XG4E-1631</b>                                                                  | <b>XG4E-1632</b>                                                                   | <b>XG4S-1604</b>                                                                    |
| 20              | 1                       | <b>XG4E-2031</b>                                                                  | <b>XG4E-2032</b>                                                                   | <b>XG4S-2004</b>                                                                    |
| 26              | 1                       | <b>XG4E-2631</b>                                                                  | <b>XG4E-2632</b>                                                                   | <b>XG4S-2604</b>                                                                    |
| 30              | 1                       | <b>XG4E-3031</b>                                                                  | <b>XG4E-3032</b>                                                                   | <b>XG4S-3004</b>                                                                    |
| 34              | 1                       | <b>XG4E-3431</b>                                                                  | <b>XG4E-3432</b>                                                                   | <b>XG4S-3404</b>                                                                    |
| 40              | 1                       | <b>XG4E-4031</b>                                                                  | <b>XG4E-4032</b>                                                                   | <b>XG4S-4004</b>                                                                    |
| 50              | 1                       | <b>XG4E-5031</b>                                                                  | <b>XG4E-5032</b>                                                                   | <b>XG4S-5004</b>                                                                    |
|                 | 2 (See note 2.)         | <b>XG4E-5071</b>                                                                  | <b>XG4E-5072</b>                                                                   |                                                                                     |
| 60              | 1                       | <b>XG4E-6031</b>                                                                  | <b>XG4E-6032</b>                                                                   | <b>XG4S-6004</b>                                                                    |
|                 | 2 (See note 2.)         | <b>XG4E-6071</b>                                                                  | <b>XG4E-6072</b>                                                                   |                                                                                     |
| 64              | 1                       | <b>XG4E-6431</b>                                                                  | <b>XG4E-6432</b>                                                                   | <b>XG4S-6404</b>                                                                    |
|                 | 2 (See note 2.)         | <b>XG4E-6471</b>                                                                  | <b>XG4E-6472</b>                                                                   |                                                                                     |

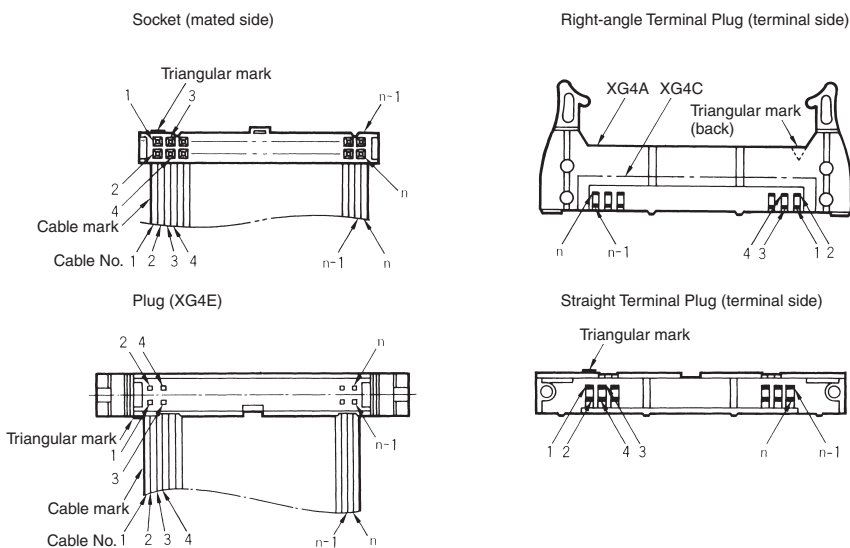
**Note:** 1. Strain Relief sold separately.  
2. Polarity slot pitch is 22.86 mm.

## Cable Numbers 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.





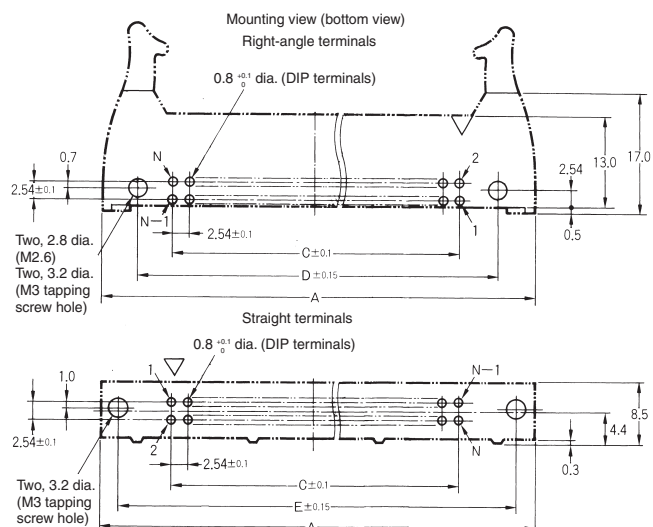
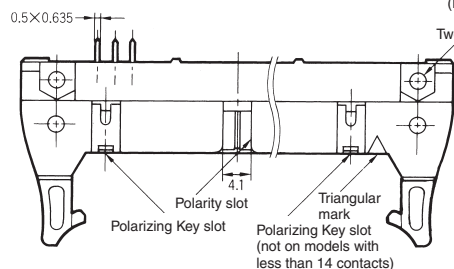
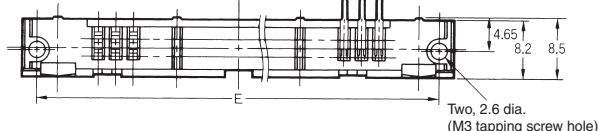
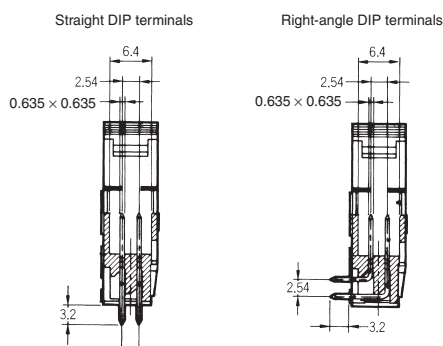
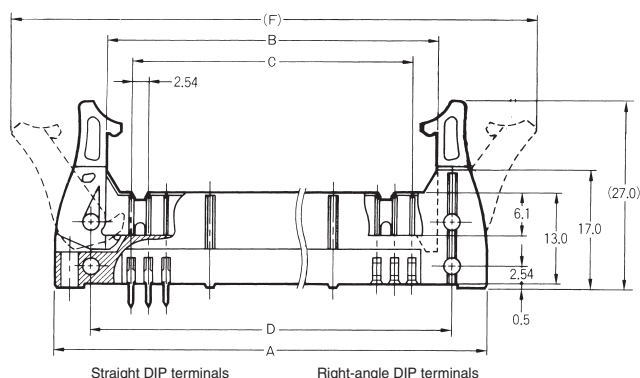
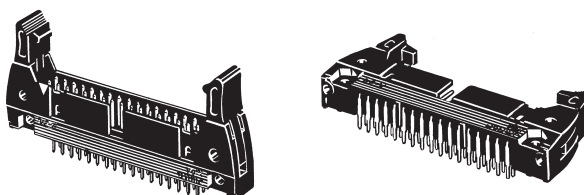
# PCB Mount Connectors

## ■ XG4A Plugs with Long Lock levers

### Dimensions

XG4A-□□31/-□□71 (With straight DIP terminals)

XG4A-□□34/-□□74 (With right-angle DIP terminals)



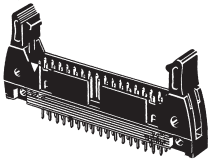
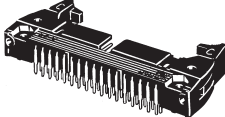
| No. of contacts | Dimensions (mm) |      |       |      |      |       |
|-----------------|-----------------|------|-------|------|------|-------|
|                 | A               | B    | C     | D    | E    | F     |
| 10              | 32.0            | 17.5 | 10.16 | 21.8 | 27.9 | 46.4  |
| 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 the "Polarity Slot and Polarizing Key Slot Number and Position" section 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 XG4M-T cable mount Sockets with strain relief or XG5M Sockets for discrete wire.

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

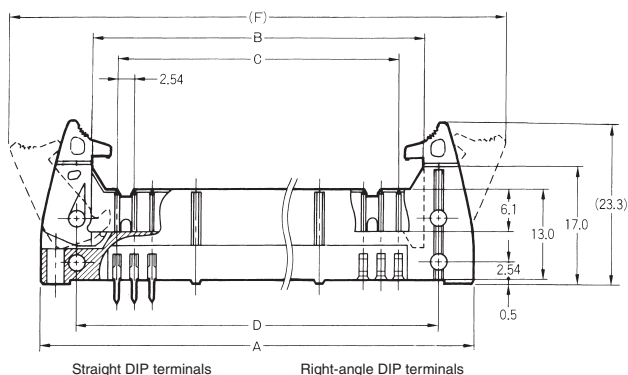
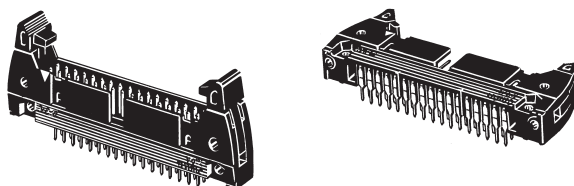
**Note:** Polarizing slot pitch is 22.86 mm.

## ■ XG4A Plugs with Short Locks

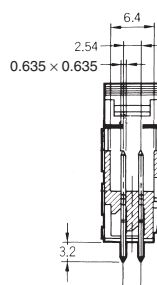
## Dimensions

**XG4A-□□32/-□□72 (With straight DIP terminals)**

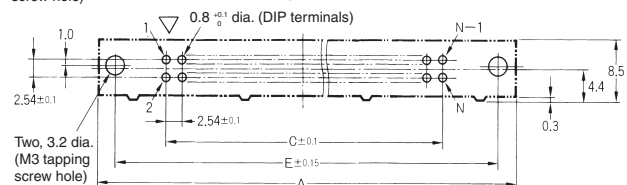
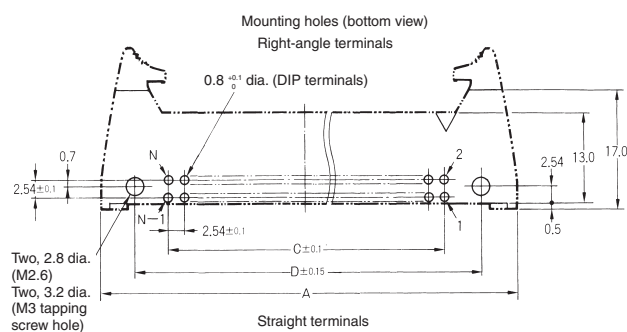
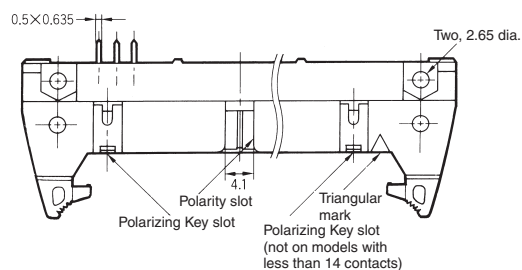
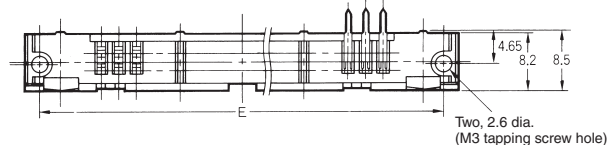
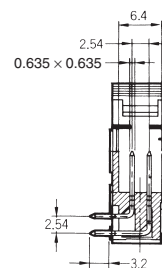
**XG4A-□□35/-□□75 (With right-angle DIP terminals)**



### Straight DIP terminals



Right-angle DIP terminals

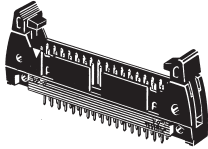
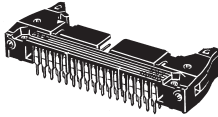


| No. of contacts | Dimensions (mm) |      |       |      |      |       |
|-----------------|-----------------|------|-------|------|------|-------|
|                 | A               | B    | C     | D    | E    | F     |
| 10              | 32.0            | 17.5 | 10.16 | 21.8 | 27.9 | 40.4  |
| 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 the “Polarity Slot and Polarizing Key Slot Number and Position” section 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 XG4M cable mount Sockets without strain relief.

| No. of contacts | No. of polarizing slots | Plugs with straight DIP terminals                                                              | Plugs with right-angle DIP terminals                                                            |
|-----------------|-------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 10              | 0                       | <br>XG4A-1072 | <br>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.

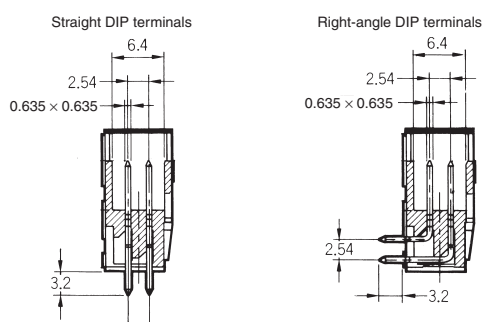
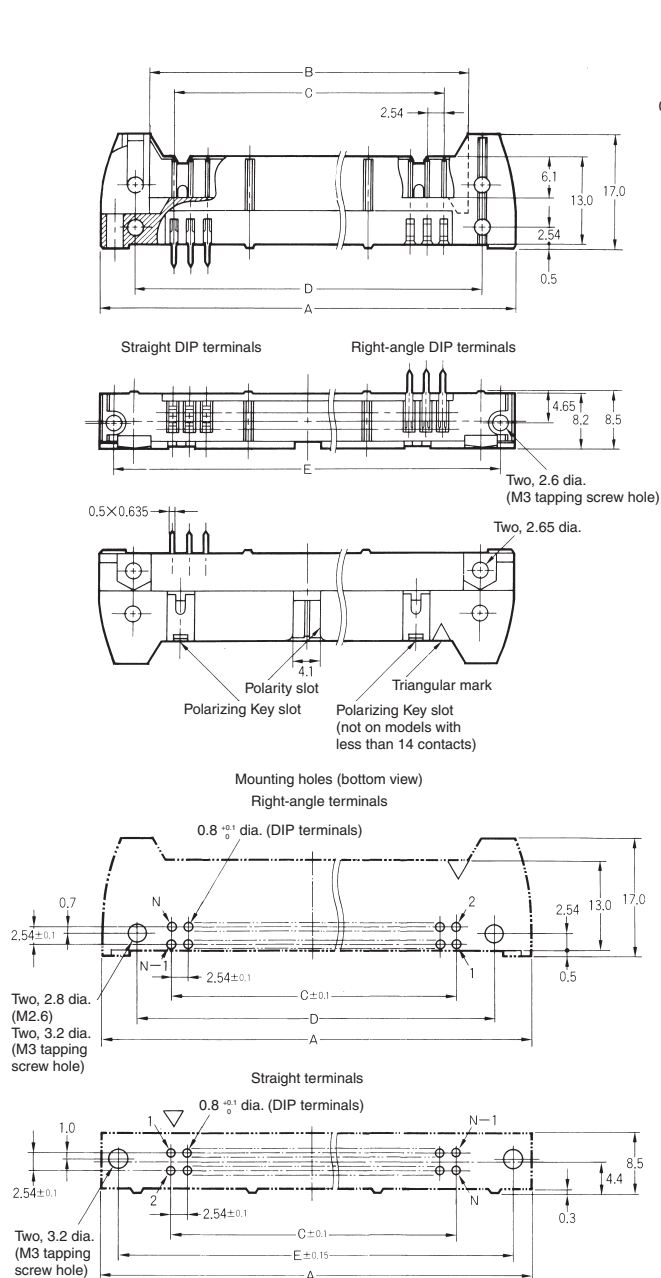
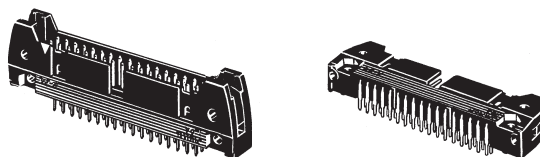
## ■ XG4A Plugs without Lock Levers

**Note:** XG4Z-001□ Lock Levers that can be installed after PCB assembly may be purchased separately. (See the following page.)

## Dimensions

**XG4A-□□33/-□□73 (With straight DIP terminals)**

**XG4A-□□36/-□□76 (With right-angle DIP terminals)**



| 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 the “Polarity Slot and Polarizing Key Slot Number and Position” section for details on the availability (10-contact Connectors) and pitch (with 50, 60, or 64-contact Connectors) of polarity slots.

## Ordering Information

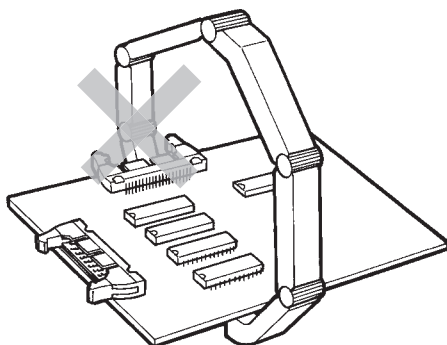
| No. of contacts | No. of polarizing slots | Plugs with straight DIP terminals | Plugs right-angle DIP terminals |
|-----------------|-------------------------|-----------------------------------|---------------------------------|
| 10              | 0                       | XG4A-1073                         | 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 for XG4A-□□3□/7□

### 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.



- These versions of the XG4A connector 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.
- Lock Levers can be used with either Straight or Right Angle versions of the XG4A.

## Ordering Information



XG4Z-0010  
Long Lock Lever



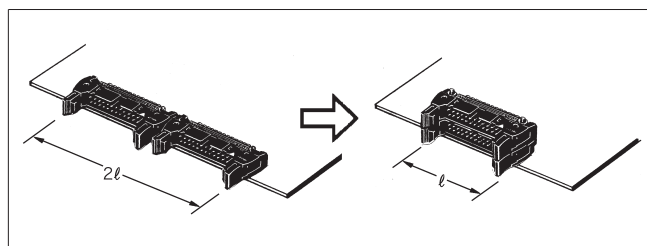
XG4Z-0011  
Short Lock Lever

| Type                   | Model     | Min. order |
|------------------------|-----------|------------|
| Long Lock Levers       | XG4Z-0010 | 20         |
| Short Lock Levers      | XG4Z-0011 |            |
| Slim Long Lock Levers  | XG4Z-0012 |            |
| Slim Short Lock Levers | XG4Z-0013 |            |

- Note:**
- The left and right Lock Levers are identical. One pair is needed for each Plug.
  - Use Long Lock Levers when mating XG4A plug to XG4M-T cable mount socket with strain relief or XG5M sockets for discrete wires.
  - Use Short Lock Levers when mating XG4A plug to XG4M without strain relief attached.



## 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 Mating Sockets

| No. of contacts | No. of polarity slots | 2-tier Plug Model No. | Mating Socket                     |                                        |
|-----------------|-----------------------|-----------------------|-----------------------------------|----------------------------------------|
|                 |                       |                       | 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                         |                                        |

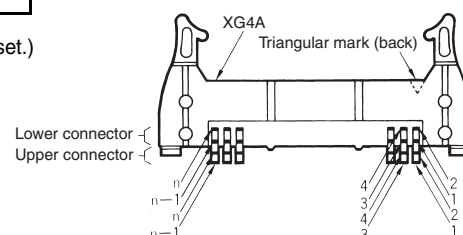
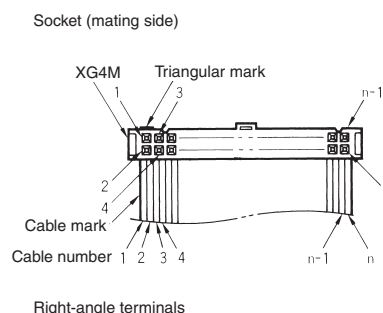
- Note:** 1. Use with the XG4T strain relief. (XG4M-T includes the connector and strain relief as a set.)  
 2. Use with the XG5S Semi-cover. XG5S Hood Cover cannot be used. (See XG5 Datasheet).  
 3. Polarity slot pitch is 22.86 mm.

## 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.



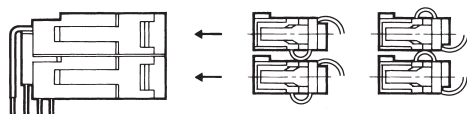
## Correct Use of XG4A 2-tier Plug

### 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 an XG5S Semi-cover before connecting the XG5M-N. It is not possible to use an XG5S Hood Cover. (See XG5 Datasheet)



### Soldering

- Automated Soldering Conditions (Jet Flow)
1. Soldering temperature: 250 ±5°C
  2. Continuous soldering time: Within 5 s

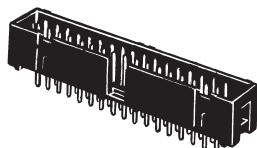


# ■ XG4C Box-type (Shrouded) Plugs

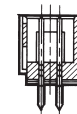
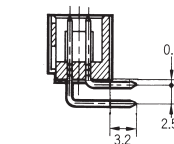
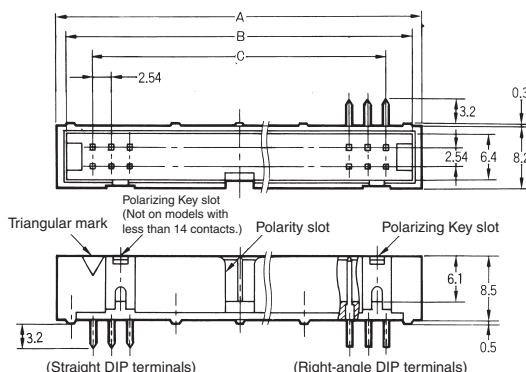
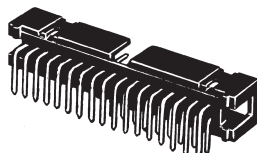
**Note:** See XG8 Datasheet for unshrouded PCB plugs / headers that mate with the XG4M-T cable mount sockets.

## Dimensions

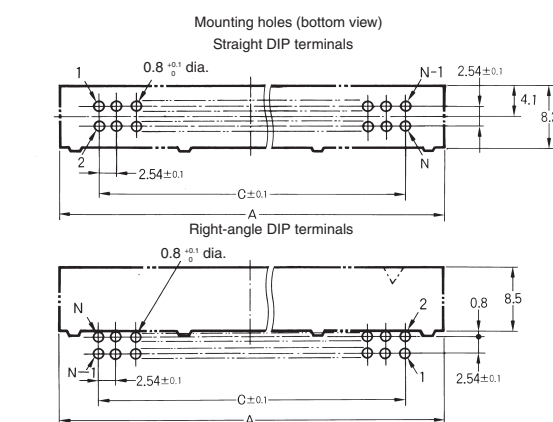
**XG4C-□□31/-□□71**  
(With straight DIP terminals)



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



Right-angle DIP terminals      Straight DIP terminals



| 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 "Polarity Slot and Polarizing Key Slot Number and Position" section 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                       | <b>XG4C-1071</b>                  | <b>XG4C-1074</b>                     |
|                 | 1                       | <b>XG4C-1031</b>                  | <b>XG4C-1034</b>                     |
| 14              | 1                       | <b>XG4C-1431</b>                  | <b>XG4C-1434</b>                     |
| 16              | 1                       | <b>XG4C-1631</b>                  | <b>XG4C-1634</b>                     |
| 20              | 1                       | <b>XG4C-2031</b>                  | <b>XG4C-2034</b>                     |
| 26              | 1                       | <b>XG4C-2631</b>                  | <b>XG4C-2634</b>                     |
| 30              | 1                       | <b>XG4C-3031</b>                  | <b>XG4C-3034</b>                     |
| 34              | 1                       | <b>XG4C-3431</b>                  | <b>XG4C-3434</b>                     |
| 40              | 1                       | <b>XG4C-4031</b>                  | <b>XG4C-4034</b>                     |
| 50              | 1                       | <b>XG4C-5031</b>                  | <b>XG4C-5034</b>                     |
|                 | 2 (See note 1.)         | <b>XG4C-5071</b>                  | <b>XG4C-5074</b>                     |
| 60              | 1                       | <b>XG4C-6031</b>                  | <b>XG4C-6034</b>                     |
|                 | 2 (See note 1.)         | <b>XG4C-6071</b>                  | <b>XG4C-6074</b>                     |
| 64              | 1                       | <b>XG4C-6431</b>                  | <b>XG4C-6434</b>                     |
|                 | 2 (See note 1.)         | <b>XG4C-6471</b>                  | <b>XG4C-6474</b>                     |

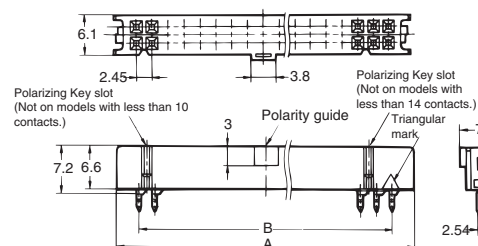
**Note:** 1. Polarizing slot pitch is 22.86 mm.

2. The Box-type Plug can be locked to XG4M and XG5 using the "XG4Z-0002" Lock Lever II (sold separately).

# XG4H Board-to-Board Sockets

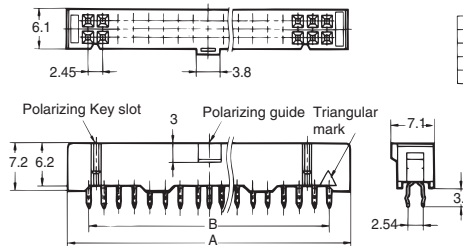
## Dimensions

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

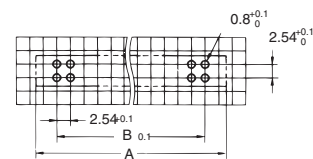


**XG4H-3431-1**  
**XG4H-4031-1**  
(With straight DIP terminals)

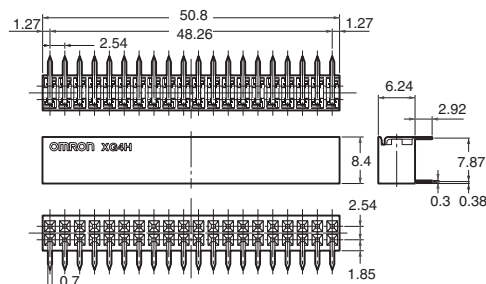
\*Sockets with model numbers ending in -1 are available only with 34 or 40 contacts (provide kinked terminals and standoff to prevent the Sockets from falling over).



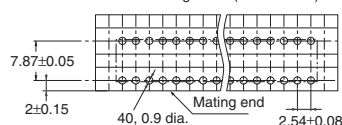
Mounting holes (bottom view)



**XG4H-4034**  
(With right-angle DIP terminals)



Mounting holes (bottom view)



## 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 |

## Ordering Information

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

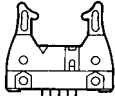
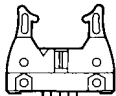
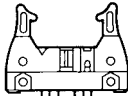
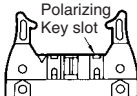
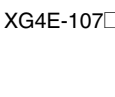
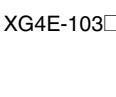
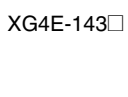
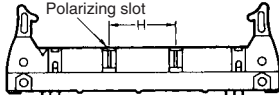
| No. of contacts | Sockets with right-angle DIP terminals |
|-----------------|----------------------------------------|
| 40              | <b>XG4H-4034</b>                       |

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

# Mating Diagrams for XG4H

| Plug                                                                     | XG8W Original Plugs<br>(See XG8 Datasheet)                                                  | XG4C Box-type Plugs             |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------|
| <b>Socket</b><br><b>XG4H-□□31/-□□71</b><br>(With straight DIP terminals) | <p>Stacking</p> <p>Vertical</p>                                                             | <p>Stacking</p> <p>Vertical</p> |
| <b>XG4H-4034</b><br>(With right-angle DIP terminals)                     | <p>Horizontal (forward direction)</p> <p>Horizontal (reverse direction)</p> <p>Vertical</p> | <p>—</p>                        |

# 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                                                                                                                                                   |
| <b>XG4M<br/>Cable Socket</b>                                     | XG4M-1031<br> | XG4M-1030<br> | XG4M-1430<br> | XG4M-1630 to XG4M-6430<br><br>Polarizing Key slot |                                                                                                                                                                     |
|                                                                  |                                                                                                |                                                                                                |                                                                                                | —                                                                                                                                    | XG4M-5031, XG4M-6031, XG4M-6431<br><br>Polarizing guide                          |
| <b>XG4A<br/>PCB Plug<br/><br/>XG4E<br/>Cable Plug</b>            | XG4A-107□<br> | XG4A-103□<br> | XG4A-143□<br> | XG4A-163□ to XG4A-643□<br><br>Polarizing Key slot |                                                                                                                                                                     |
|                                                                  | XG4E-107□<br> | XG4E-103□<br> | XG4E-143□<br> | —                                                                                                                                    | XG4E-163□ to XG4E-643□<br><br>Polarizing slot<br>XG4E-507□, XG4E-607□, XG4E-647□ |
| <b>XG4C<br/>Box-type PCB Plug</b>                                | XG4C-107□<br> | XG4C-103□<br> | XG4C-143□<br> | XG4C-163□ to XG4C-643□<br><br>Polarizing slot    |                                                                                                                                                                     |
|                                                                  |                                                                                                |                                                                                                |                                                                                                | —                                                                                                                                    | XG4C-507□, XG4C-607□, XG4C-647□<br><br>Polarizing slot                         |
| <b>No. of polarizing<br/>guides (Polarizing<br/>Slots)</b>       | 0                                                                                              | 1                                                                                              | 1                                                                                              | 1                                                                                                                                    | 1                                                                                                                                                                   |
|                                                                  |                                                                                                |                                                                                                |                                                                                                |                                                                                                                                      | 2 (H = 22.86 mm)                                                                                                                                                    |
| <b>No. of Polarizing<br/>Key slot (Polarizing<br/>Key Slots)</b> | 1                                                                                              | 0                                                                                              | 1                                                                                              | 2                                                                                                                                    | 2                                                                                                                                                                   |

# Tools and Accessories (Sold Separately)

See "XG□ - Assembly Tooling and Accessories" datasheet from additional information about cable termination tooling.

## External Polarization Options

The following optional accessories can be used to provide polarization to sockets and plugs that do not have molded polarizing guides and slots built into their housings and shrouds.

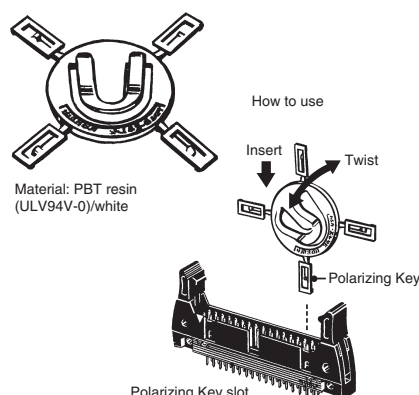
### Solutions for Shrouded Connectors

#### XG4Z-0004 Polarizing Key

Typically, 10 contact versions of the XG4A, XG4E and XG4C are available with or without polarizing guides.

Install the XG4Z-0004 polarizing key on XG4A, XG4E and XG4C plugs that do not have a polarizing slot, to prevent reverse connection with XG4M cable sockets that do not have a polarizing guide.

For all other versions, the molded polarity guides and slots can be used by themselves to help prevent reverse insertion. However, use the polarizing key with these versions as well for best results.

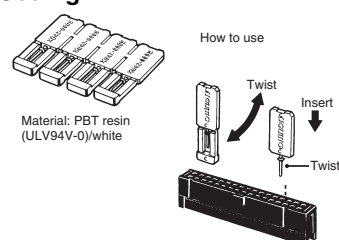


**Note:** Each XG4Z-0004 has 4 Polarizing Keys.

### Solutions for Unshrouded Connectors

Use the XG4Z-0005 coding pin to fill a specific hole in one of the XG4 or XG5 sockets. Then, use the XY2E-0002 cutting pin to remove the corresponding terminal from an XG8 unshrouded plug. (See XG5 and XG8 datasheets for details about those connectors.)

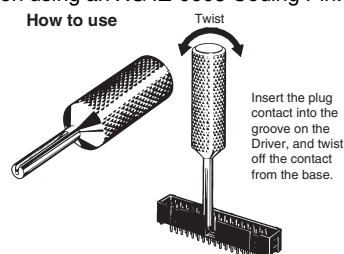
#### XG4Z-0005 Coding Pin



**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

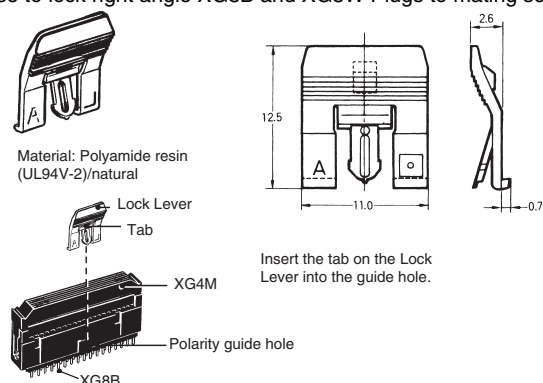
The Contact Cutting Driver is used to cut (twist off) a contact on the mating Plug when using an XG4Z-0005 Coding Pin.



## Top Lock Levers

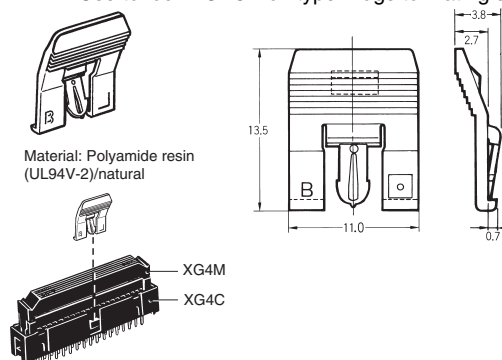
#### XG5Z-0002 - "Lock Lever"

Use to lock right angle XG8B and XG8W Plugs to mating sockets



#### XG4Z-0002 - "Lock Lever II"

Use to lock XG4C Box-type Plugs to mating sockets.



## Precautions - PCB Mount Sockets and Plugs

### Correct Use

#### Automated Soldering Conditions (Jet Flow)

1. Soldering temperature:  $250 \pm 5^\circ\text{C}$
2. Continuous soldering time: Within 5 s

**Note:** The coding pin and cutting tools can also be used to prevent incorrect wiring by removing different terminals from side-by-side connectors. For example, for connector set 1, remove terminal 1 and fill socket hole 1. Then, for connector set 2, remove terminal 2 and fill socket hole 2. This prevents socket 1 from mating with plug 2, ensuring correct wiring.



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