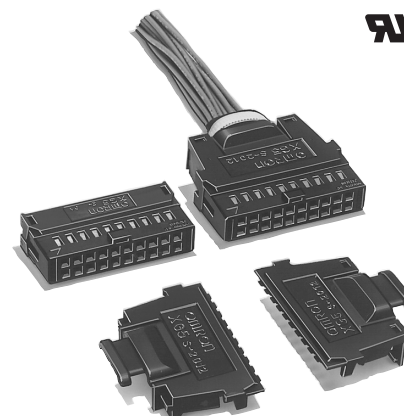


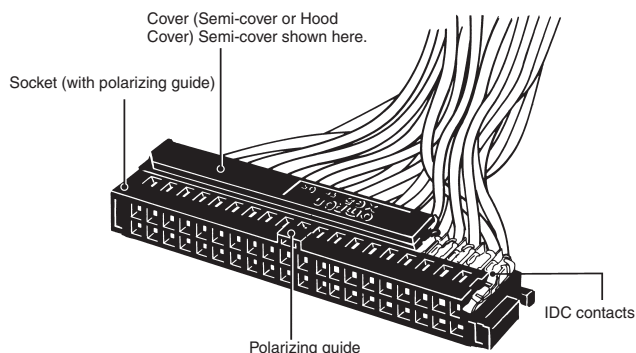
# IDC Sockets for Discrete Wires XG5

## Trouble-free discrete-wire termination with IDC Sockets that mate with XG4 and XG8 Plugs.

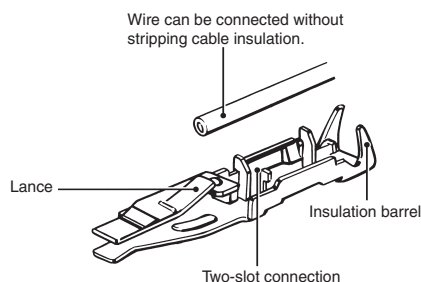
- Two-row, IDC construction and insulation barrel offers high reliability and large-current (3 A) discrete wiring capability.
- Adaptable to a variety of covers for space-saving and discrete wire termination.
- By using the simple, unique top lock-lever system, these Connectors can be locked to either the XG8W Unshrouded Plugs (with right-angle terminals) or XG4C Box-type Plugs.
- Conforms to UL standards (file no. E 103202) and CSA standards (file no. LR 62678).



## Construction



## Solderless Contact



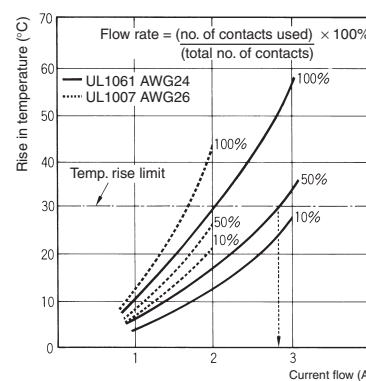
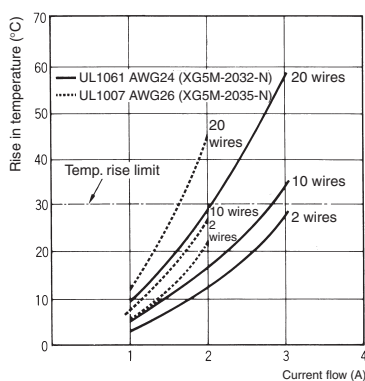
## Ratings and Characteristics

|   |  |
|---|--|
| <b>Rated current</b>                    | 3 A  |
| <b>Rated voltage</b>                    | 300 VAC  |
| <b>Contact resistance</b>               | 20 mΩ max. (at 20 mV, 100 mA max.)             |
| <b>Insulation resistance</b>            | 1,000 MΩ min. (at 500 VDC)                     |
| <b>Dielectric strength</b>              | 650 VAC for 1 min (leakage current: 1 mA max.) |
| <b>Connector insertion</b>              | 1.96 N max. per contact                        |
| <b>Contact removal</b>                  | 0.29 N min. (with test gauge, 0.64 x 0.64 mm)  |
| <b>Insertion durability (See note.)</b> | 50 times                                       |
| <b>Ambient temperature</b>              | Operating: -55 to 85°C (with no icing)         |

Note: For standard 0.15-mm gold plating.

## Current and Temperature Characteristics

Use the temperature data shown below as a reference for selecting current values and wires.



## Materials and Finish

|                  |                   |   |
|------------------|-------------------|---|
| <b>Housing</b>   |                   | Fiber-glass reinforced PBT resin (UL94V-0)/black                    |
| <b>Contacts</b>  | <b>Mating end</b> | Phosphor-bronze/nickel base, 0.15- $\mu$ m gold plating (See note.) |
|                  | <b>Terminals</b>  | Phosphor-bronze/nickel base, 2.0- $\mu$ m solder plating            |
| <b>Cover</b>     |                   | Fiber-glass reinforced polyamide resin (UL94V-0)/black              |
| <b>Cable tie</b> |                   | Polyamide resin (UL94V-0)/natural                                   |

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

## Applicable Wires and Contact Sizes

|         |                              |   |
|---------|------------------------------|---|
| Size #1 | AWG24 (For UL-1061)          | Insulation outside diameter: 1.1 to 1.3 mm<br>Core structure: 7 strands or more |
| Size #2 | AWG28 or AWG26 (For UL-1007) |   |

**Note:** The contact numbers are marked on the contact insulation barrels.

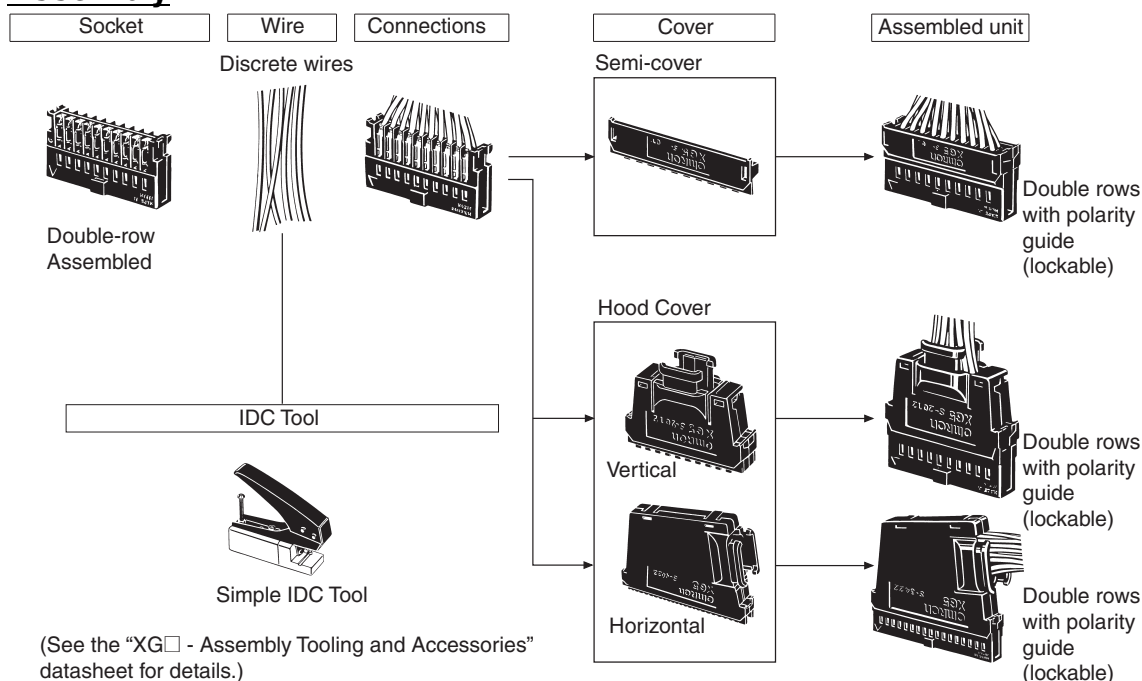
## Assembled Configuration

### Insulation Displacement (IDC) versus Crimp Termination

IDC termination provides the following advantages over crimp style termination, when using discrete wires;

- Overall cost is lower, because less manhours are required. Wire stripping is eliminated and inspection is easier.
- IDC termination provides consistent quality, improving yield.
- XG5 terminals are installed in the socket housing at the factory, simplifying the Bill of Material and parts control.
- Optional replacement IDC terminals facilitates re-configuration of wiring.

### Assembly



### Applicable Mating Plugs

|  |   |   |
|--|---|---|
| <b>XG4A</b><br>PCB Plugs with Long Locks | <b>XG4A</b><br>PCB Plugs w/o Lock Lever | <b>XG4A</b><br>PCB Double-row Plugs             |
|  | <br>(See Note 3)                        |   |
| <b>XG4E</b><br>IDC Flat Cable Plugs      | <b>XG4C</b><br>PCB Box-type Plugs       | <b>XG8W/XG8B</b><br>Double-row Unshrouded Plugs |
|  |   |   |

- Note:**
1. See XG4 and XG8 datasheets for plug dimensions.
  2. When using the XG4A or XG4C, the number of XG4A or XG4C's polarity slots must be the same as the number of XG5M-N polarity guides.
  3. Mount external Lock Levers after soldering.

# Double-row Sockets

## ■ XG5M-N

### Dimensions

#### Models with no polarizing guide

XG5M-1031-N (size #1)

XG5M-1034-N (size #2)

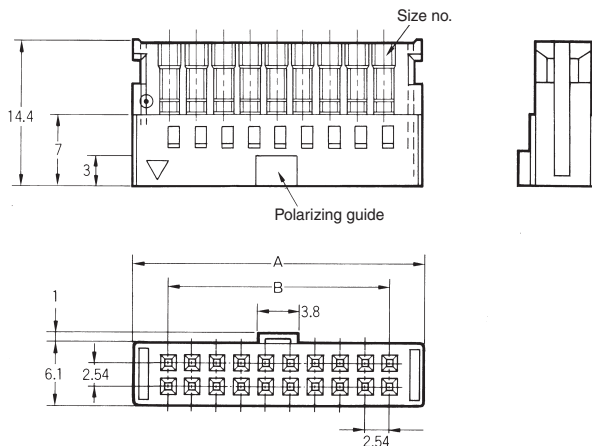
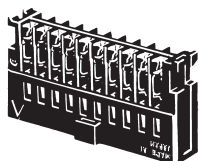
#### Models with polarizing guide

XG5M-□□32-N (size #1)

XG5M-□□33-N (size #1)

XG5M-□□35-N (size #2)

XG5M-□□36-N (size #2)



### 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

| Appearance      |                         |             |             |
|-----------------|-------------------------|-------------|-------------|
| No. of contacts | No. of polarizing guide | Size #1     | Size #2     |
| 10              | 0                       | XG5M-1031-N | XG5M-1034-N |
|                 | 1                       | XG5M-1032-N | XG5M-1035-N |
| 14              | 1                       | XG5M-1432-N | XG5M-1435-N |
| 16              | 1                       | XG5M-1632-N | XG5M-1635-N |
| 20              | 1                       | XG5M-2032-N | XG5M-2035-N |
| 26              | 1                       | XG5M-2632-N | XG5M-2635-N |
| 30              | 1                       | XG5M-3032-N | XG5M-3035-N |
| 34              | 1                       | XG5M-3432-N | XG5M-3435-N |
| 40              | 1                       | XG5M-4032-N | XG5M-4035-N |
| 50              | 1                       | XG5M-5032-N | XG5M-5035-N |
|                 | 2                       | XG5M-5033-N | XG5M-5036-N |
| 60              | 1                       | XG5M-6032-N | XG5M-6035-N |
|                 | 2                       | XG5M-6033-N | XG5M-6036-N |
| 64              | 1                       | XG5M-6432-N | XG5M-6435-N |
|                 | 2                       | XG5M-6433-N | XG5M-6436-N |

- Note:**
- The 10-contact XG5M-1031-N and XG5M-1034-N have no polarizing guides.
  - The distance between slots is 22.86 mm for the two guides on 50, 60, and 64-contact Connectors.
  - See the XG4 and XG8 datasheets for Mating Plug information.
  - Applicable discrete wire is AWG24 (UL1061) for size #1.
  - Applicable discrete wire is AWG28 to AWG26 (UL-1007) for size #2.

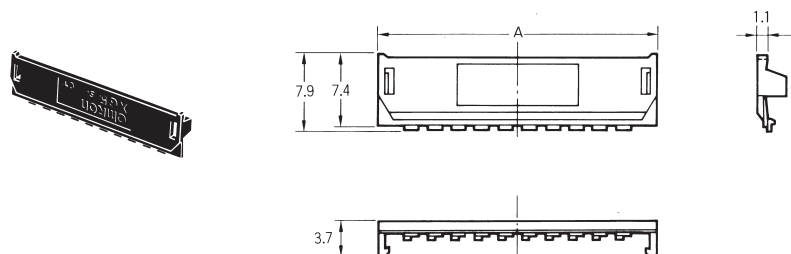
# Semi-covers

## ■ XG5S

Semi-covers are used to cover the IDC termination area and insulation barrels, after wiring is completed. If the entire socket needs to be covered, use XG5S Hood Covers.

### Dimensions

XG5S-□□□1



### Dimensions

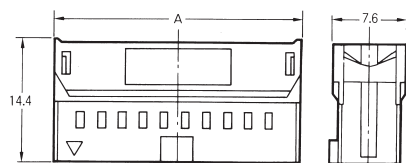
| No. of contacts | Dimensions (mm) |
|-----------------|-----------------|
|                 | A               |
| 5               | 17.3            |
| 7               | 22.3            |
| 8               | 24.9            |
| 10              | 30.0            |
| 13              | 37.6            |
| 15              | 42.7            |
| 17              | 47.7            |
| 20              | 55.4            |
| 25              | 68.1            |
| 30              | 80.8            |
| 32              | 85.8            |

### Ordering Information

| No. of contacts | Model     | Applicable Connector |
|-----------------|-----------|----------------------|
| 5               | XG5S-0501 | XG5M103□-N           |
| 7               | XG5S-0701 | XG5M-143□-N          |
| 8               | XG5S-0801 | XG5M-163□-N          |
| 10              | XG5S-1001 | XG5M-203□-N          |
| 13              | XG5S-1301 | XG5M-263□-N          |
| 15              | XG5S-1501 | XG5M-303□-N          |
| 17              | XG5S-1701 | XG5M-343□-N          |
| 20              | XG5S-2001 | XG5M-403□-N          |
| 25              | XG5S-2501 | XG5M-503□-N          |
| 30              | XG5S-3001 | XG5M-603□-N          |
| 32              | XG5S-3201 | XG5M-643□-N          |

**Note:** One Semi-cover is used per termination row. Each XG5M Connector requires two semi-covers. Semi-covers are not packaged in pairs.

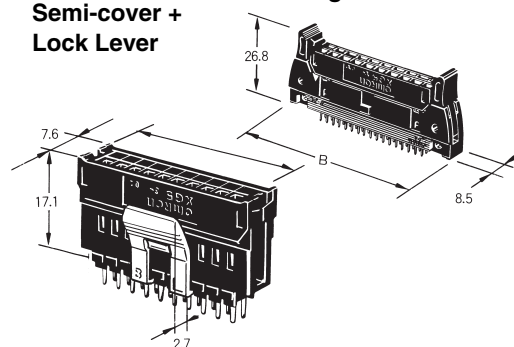
### Assembled Dimensions (Socket with Semi-cover)



### Dimensions

| No. of contacts | Dimensions (mm) |       |
|-----------------|-----------------|-------|
|                 | A               | B     |
| 10              | 17.3            | 32.0  |
| 14              | 22.3            | 37.1  |
| 16              | 24.9            | 39.6  |
| 20              | 30.0            | 44.7  |
| 26              | 37.6            | 52.3  |
| 30              | 42.7            | 57.4  |
| 34              | 47.7            | 62.5  |
| 40              | 55.4            | 70.1  |
| 50              | 68.1            | 82.8  |
| 60              | 80.8            | 95.5  |
| 64              | 85.8            | 100.6 |

Original Plug +  
Semi-cover +  
Lock Lever



# Hood Covers

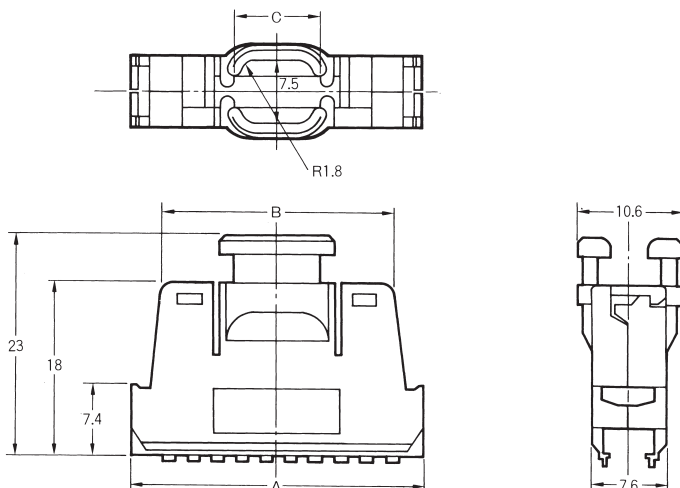
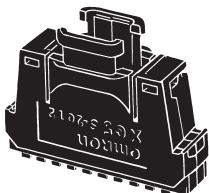
## ■ XG5S

### Dimensions

#### Vertical

XG5S-□□12

(Left and right halves)



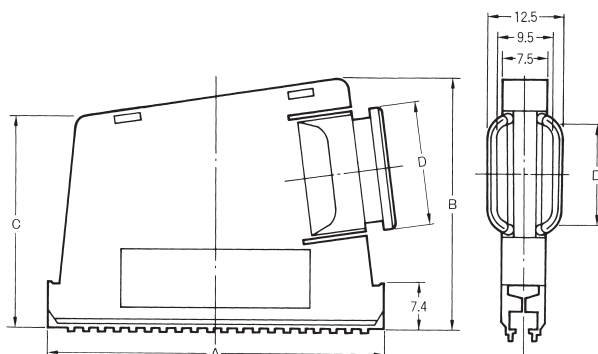
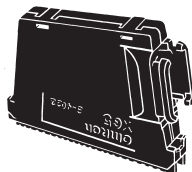
Dimensions

| No. of contacts | Dimensions (mm) |      |      |
|-----------------|-----------------|------|------|
|                 | A               | B    | C    |
| 20              | 30.0            | 23.8 | 8.8  |
| 26              | 37.6            | 31.4 | 11.4 |
| 30              | 42.7            | 36.5 | 15.1 |

#### Horizontal

XG5S-□□22

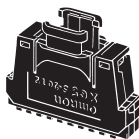
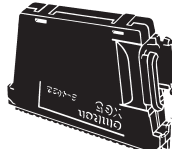
(Left and right halves)



Dimensions

| No. of contacts | Dimensions (mm) |      |      |      |
|-----------------|-----------------|------|------|------|
|                 | A               | B    | C    | D    |
| 34              | 47.7            | 38.7 | 32.0 | 14.6 |
| 40              | 55.4            | 40.7 | 34.0 | 16.6 |
| 50              | 68.1            | 44.1 | 39.4 | 20.0 |
| 60              | 80.8            | 47.4 | 42.8 | 23.4 |

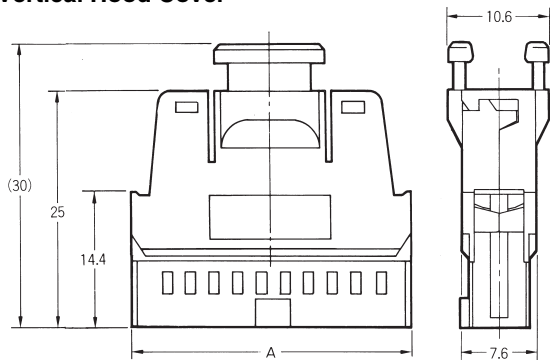
### Ordering Information

| Appearance                    | Vertical  | Horizontal  |
|-------------------------------|---|---|
|                               |  |  |
| No. of contacts (double rows) | Model (See note.)   | Model (See note.)   |
| 20                            | <b>XG5S-2012</b>  | —   |
| 26                            | <b>XG5S-2612</b>  | —   |
| 30                            | <b>XG5S-3012</b>  | —   |
| 34                            | —   | <b>XG5S-3422</b>  |
| 40                            | —   | <b>XG5S-4022</b>  |
| 50                            | —   | <b>XG5S-5022</b>  |
| 60                            | —   | <b>XG5S-6022</b>  |

Note: Hood Covers are packaged / shipped with left and right halves. Includes cable tie.

## Assembled Dimensions (Socket and Hood Cover)

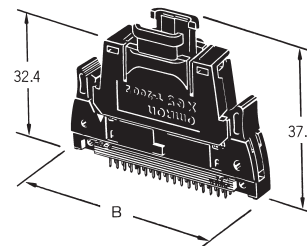
### Vertical Hood Cover



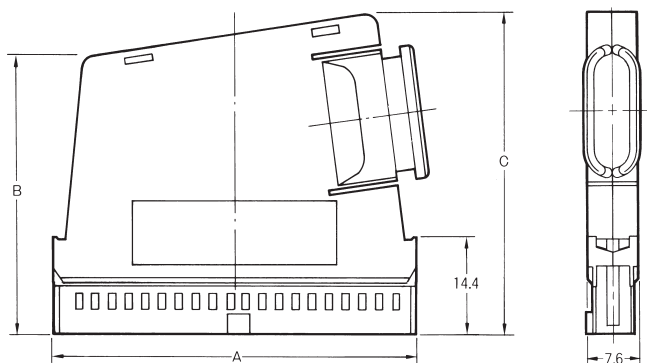
### Dimensions

| No. of contacts | Dimensions (mm) |      |
|-----------------|-----------------|------|
|                 | A               | B    |
| 20              | 30.0            | 44.7 |
| 26              | 37.6            | 52.3 |
| 30              | 42.7            | 57.4 |

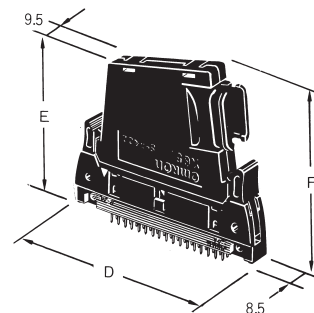
### Assembled Unit Plug + Vertical Hood Cover



### Horizontal Hood Cover



### Assembled Unit Plug + Horizontal Hood Cover

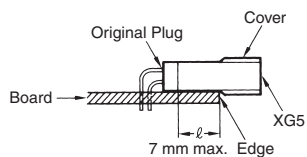


### Dimensions

| No. of contacts | Dimensions (mm) |      |      |      |      |      |
|-----------------|-----------------|------|------|------|------|------|
|                 | A               | B    | C    | D    | E    | F    |
| 34              | 47.7            | 39.0 | 45.7 | 62.5 | 46.4 | 53.1 |
| 40              | 55.4            | 41.0 | 47.7 | 70.1 | 48.4 | 55.1 |
| 50              | 68.1            | 46.4 | 51.1 | 82.8 | 53.8 | 58.5 |
| 60              | 80.8            | 49.8 | 54.4 | 95.5 | 57.2 | 61.8 |

## Applicable Plugs

- XG4A, XG4C, XG4E and XG8 are recommended.
- XG4C and XG8 Plugs do not have locks. To prevent accidental removal, use a Lock Lever (XG4Z-0002, XG5Z-0002). (Lock Levers cannot be used with XG8W Straight Terminal Connectors.)
- When mounting the XG8 Original Plug (with right-angle terminals) to a circuit board, be sure that the cover is positioned off the board as shown below.

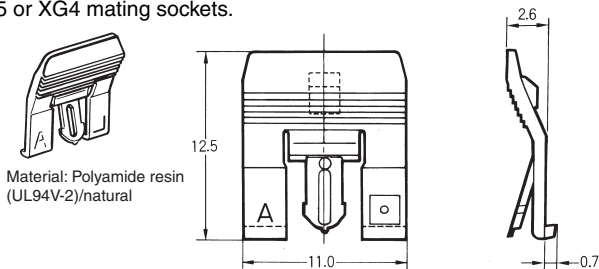


# XG5 Accessories

## Top Lock Levers

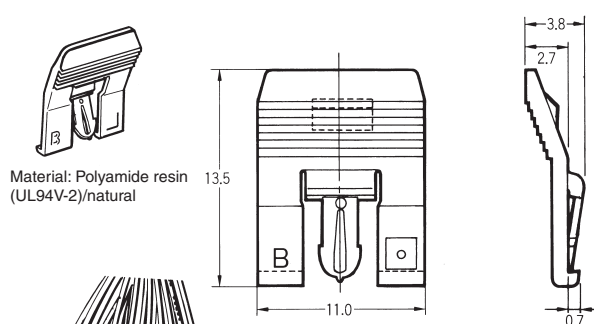
### XG5Z-0002 - "Lock Lever"

Use to lock unshrouded right-angle Plugs (XG8B and XG8W) to XG5 or XG4 mating sockets.



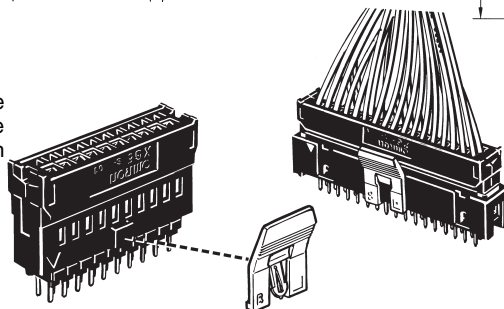
### XG4Z-0002 - "Lock Lever II"

Use to lock XG4C Box-type Plugs.



### Mounting the Lock Lever

For Sockets with polarity guides, mount the Lock Lever to the tab to lock the Socket to the Unshrouded Plug as shown in the diagram on the right.

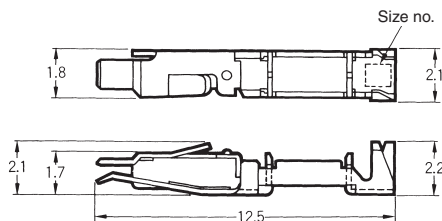


| Model     |
|-----------|
| XG5Z-0002 |
| XG4Z-0002 |

## Spare Contacts

XG5W-0031-N (Size #1)

XG5W-0034-N (Size #2)



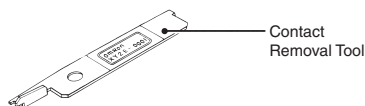
| Model       |
|-------------|
| XG5W-0031-N |
| XG5W-0034-N |

**Note: 1.** These Contacts can be used as replacements if a wrong connection is made.

**2.** The applicable wire for size No. 1 is AWG24 (UL-1061). The applicable wire for size No. 2 is AWG26 to AWG28 (UL-1007).

## Contact Removal Tool

XY2E-0001

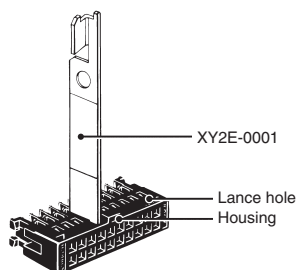


Used to remove from the housing, contacts which need to be replaced or reconfigured.

## Replacing Contacts

Use only this tool to remove incorrect IDC contacts.

1. Remove the cover.
2. Insert the tool into the housing lance holes and push the lance into the housing.
3. Pull out the contact while holding the lance down.
4. Insert a new contact.



## XG5 IDC Assembly Tools

See the "XG□ - Assembly Tooling and Accessories" datasheet for details regarding manual and automated IDC Termination tools (part numbers XY2B-7006 and XY2B-2104-N)



# Precautions

## Correct Use

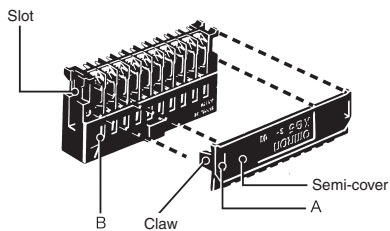
### IDC Connectors

- For best results, use only the XG5 IDC Tool. (See the “XG□ - Assembly Tooling and Accessories” datasheet.)
- Contact your OMRON representative for details on the XG5 IDC Tool.
- Check the Contact size (No. 1 or No 2) and wire size before connecting.
- OMRON has a IDC Tool Reference Manual. Contact your OMRON representative to request a copy.

### Mounting the Cover

- The cover is used to protect the connection position and prevent shorting out.

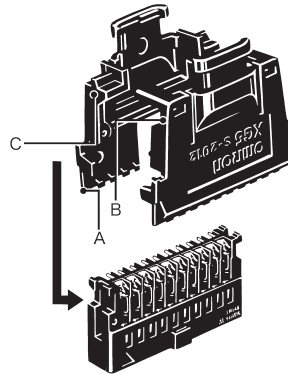
### Mounting the Semi-cover



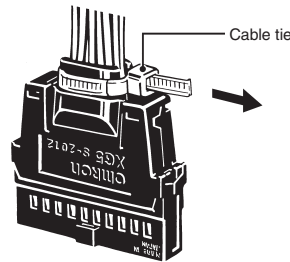
- See the above diagram.
1. Insert part A of the Semi-cover into part B of the Socket.
  2. Push the claws on both sides of the Semi-cover onto the Socket.
  3. Make sure the claws are firmly inserted in the slots.
  4. To protect the wires, use cable ties to bind wires that may be subject to tension even when a Semi-cover is used.

### Mounting the Hood Cover

#### Vertical Hood Cover



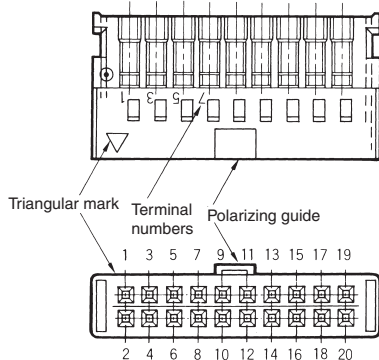
- See the above diagram.
1. Insert the claws of part A of the Hood Cover into the slots.
  2. Insert claws B on the Hood cover into part C on the other part of the Hood Cover.
  3. Wrap the wires with a cable tie.



#### Horizontal Hood Cover

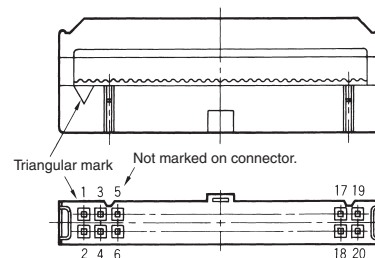
- Follow the mounting procedure for the vertical cover.
- The left and right parts of the cover are different. Assemble carefully.

### XG5M-N Double-row Socket Contact Numbers



- The Contact numbers on the Double-row Assembled Socket match the numbers on the XG4M Flat Cable MIL Socket. (See the above diagrams.)

### XG4M Terminal Numbers



- When making IDC connections on the Double-row Assembled Connector, use the polarity guide to distinguish the front and back. (Note: The 10-contact Connector does not have a guide.)



# Omron Electronic Components, LLC

## Terms and Conditions of Sales

### I. GENERAL

- Definitions:** The words used herein are defined as follows.
  - Terms:** These terms and conditions
  - Seller:** Omron Electronic Components LLC and its subsidiaries
  - Buyer:** The buyer of Products, including any end user in section III through VI
  - Products:** Products and/or services of Seller
  - Including:** Including without limitation
- Offer; Acceptance:** These Terms are deemed part of all quotations, acknowledgments, invoices, purchase orders and other documents, whether electronic or in writing, relating to the sale of Products by Seller. Seller hereby objects to any Terms proposed in Buyer's purchase order or other documents which are inconsistent with, or in addition to, these Terms.
- Distributor:** Any distributor shall inform its customer of the contents after and including section III of these Terms.

### II. SALES

- Prices; Payment:** All prices stated are current, subject to change without notice by Seller. Buyer agrees to pay the price in effect at the time the purchase order is accepted by Seller. Payments for Products received are due net 30 days unless otherwise stated in the invoice. Buyer shall have no right to set off any amounts against the amount owing in respect of this invoice.
- Discounts:** Cash discounts, if any, will apply only on the net amount of invoices sent to Buyer after deducting transportation charges, taxes and duties, and will be allowed only if (a) the invoice is paid according to Seller's payment terms and (b) Buyer has no past due amounts owing to Seller.
- Interest:** Seller, at its option, may charge Buyer 1.5% interest per month or the maximum legal rate, whichever is less, on any balance not paid within the stated terms.
- Orders:** Seller will accept no order less than 200 U.S. dollars net billing.
- Currencies:** If the prices quoted herein are in a currency other than U.S. dollars, Buyer shall make remittance to Seller at the then current exchange rate most favorable to Seller; provided that if remittance is not made when due, Buyer will convert the amount to U.S. dollars at the then current exchange rate most favorable to Seller available during the period between the due date and the date remittance is actually made.
- Governmental Approvals:** Buyer shall be responsible for all costs involved in obtaining any government approvals regarding the importation or sale of the Products.
- Taxes:** All taxes, duties and other governmental charges (other than general real property and income taxes), including any interest or penalties thereon, imposed directly or indirectly on Seller or required to be collected directly or indirectly by Seller for the manufacture, production, sale, delivery, importation, consumption or use of the Products sold hereunder (including customs duties and sales, excise, use, turnover and license taxes) shall be charged to and remitted by Buyer to Seller.
- Financial:** If the financial position of Buyer at any time becomes unsatisfactory to Seller, Seller reserves the right to stop shipments or require satisfactory security or payment in advance. If Buyer fails to make payment or otherwise comply with these Terms or any related agreement, Seller may (without liability and in addition to other remedies) cancel any unshipped portion of Products sold hereunder and stop any Products in transit until Buyer pays all amounts, including amounts payable hereunder, whether or not then due, which are owing to it by Buyer. Buyer shall in any event remain liable for all unpaid accounts.
- Cancellation; Etc:** Orders are not subject to rescheduling or cancellation unless Buyer indemnifies Seller fully against all costs or expenses arising in connection therewith.
- Force Majeure:** Seller shall not be liable for any delay or failure in delivery resulting from causes beyond its control, including earthquakes, fires, floods, strikes or other labor disputes, shortage of labor or materials, accidents to machinery, acts of sabotage, riots, delay in or lack of transportation or the requirements of any government authority.
- Shipping; Delivery:** Unless otherwise expressly agreed in writing by Seller:
  - All sales and shipments of Products shall be FOB shipping point (unless otherwise stated in writing by Seller), at which point title to and all risk of loss of the Products shall pass from Seller to Buyer, provided that Seller shall retain a security interest in the Products until the full purchase price is paid by Buyer;
  - Delivery and shipping dates are estimates only; and
  - Seller will package Products as it deems proper for protection against normal handling and extra charges apply to special conditions.
- Claims:** Any claim by Buyer against Seller for shortage or damage to the Products occurring before delivery to the carrier or any claim related to pricing or other charges must be presented in detail in writing to Seller within 30 days of receipt of shipment.

### III. PRECAUTIONS

- Suitability:** IT IS THE BUYER'S SOLE RESPONSIBILITY TO ENSURE THAT ANY OMRON PRODUCT IS FIT AND SUFFICIENT FOR USE IN A MOTORIZED VEHICLE APPLICATION. BUYER SHALL BE SOLELY RESPONSIBLE FOR DETERMINING APPROPRIATENESS OF THE PARTICULAR PRODUCT WITH RESPECT TO THE BUYER'S APPLICATION INCLUDING (A) ELECTRICAL OR ELECTRONIC COMPONENTS, (B) CIRCUITS, (C) SYSTEM ASSEMBLIES, (D) END PRODUCT, (E) SYSTEM, (F) MATERIALS OR SUBSTANCES OR (G) OPERATING ENVIRONMENT. Buyer acknowledges that it alone has determined that the Products will meet their requirements of the intended use in all cases. Buyer must know and observe all prohibitions of use applicable to the Product/s.
- Use with Attention:** The followings are some examples of applications for which particular attention must be given. This is not intended to be an exhaustive list of all possible use of any Product, nor to imply that any use listed may be suitable for any Product:
  - Outdoor use, use involving potential chemical contamination or electrical interference.

- Use in consumer Products or any use in significant quantities.
  - Energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
  - Systems, machines, and equipment that could present a risk to life or property.
- Prohibited Use:** NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.
  - Motorized Vehicle Application:** USE OF ANY PRODUCT/S FOR A MOTORIZED VEHICLE APPLICATION MUST BE EXPRESSLY STATED IN THE SPECIFICATION BY SELLER.
  - Programmable Products:** Seller shall not be responsible for the Buyer's programming of a programmable Product.

### IV. WARRANTY AND LIMITATION

- Warranty:** Seller's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Seller (or such other period expressed in writing by Seller). SELLER MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT ALL OTHER WARRANTIES, NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS.
- Buyer Remedy:** Seller's sole obligation hereunder shall be to replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product or, at Seller's election, to repay or credit Buyer an amount equal to the purchase price of the Product; provided that there shall be no liability for Seller or its affiliates unless Seller's analysis confirms that the Products were correctly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be approved in writing by Seller before shipment.
- Limitation on Liability:** SELLER AND ITS AFFILIATES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY. FURTHER, IN NO EVENT SHALL LIABILITY OF SELLER OR ITS AFFILIATES EXCEED THE INDIVIDUAL PRICE OF THE PRODUCT ON WHICH LIABILITY IS ASSERTED.
- Indemnities:** Buyer shall indemnify and hold harmless Seller, its affiliates and its employees from and against all liabilities, losses, claims, costs and expenses (including attorney's fees and expenses) related to any claim, investigation, litigation or proceeding (whether or not Seller is a party) which arises or is alleged to arise from Buyer's acts or omissions under these Terms or in any way with respect to the Products.

### V. INFORMATION; ETC.

- Intellectual Property:** The intellectual property embodied in the Products is the exclusive property of Seller and its affiliates and Buyer shall not attempt to duplicate it in any way without the written permission of Seller. Buyer (at its own expense) shall indemnify and hold harmless Seller and defend or settle any action brought against Seller to the extent that it is based on a claim that any Product made to Buyer specifications infringed intellectual property rights of another party.
- Property; Confidentiality:** Notwithstanding any charges to Buyer for engineering or tooling, all engineering and tooling shall remain the exclusive property of Seller. All information and materials supplied by Seller to Buyer relating to the Products are confidential and proprietary, and Buyer shall limit distribution thereof to its trusted employees and strictly prevent disclosure to any third party.
- Performance Data:** Performance data is provided as a guide in determining suitability and does not constitute a warranty. It may represent the result of Seller's test conditions, and the users must correlate it to actual application requirements.
- Change In Specifications:** Product specifications and descriptions may be changed at any time based on improvements or other reasons. It is Seller's practice to change part numbers when published ratings or features are changed, or when significant engineering changes are made. However, some specifications of the Product may be changed without any notice.
- Errors And Omissions:** The information on Seller's website or in other documentation has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.
- Export Controls:** Buyer shall comply with all applicable laws, regulations and licenses regarding (a) export of the Products or information provided by Seller; (b) sale of Products to forbidden or other proscribed persons or organizations; (c) disclosure to non-citizens of regulated technology or information.

### VI. MISCELLANEOUS

- Waiver:** No failure or delay by Seller in exercising any right and no course of dealing between Buyer and Seller shall operate as a waiver of rights by Seller.
- Assignment:** Buyer may not assign its rights hereunder without Seller's written consent.
- Law:** These Terms are governed by Illinois law (without regard to conflict of laws). Federal and state courts in Cook County, Illinois have exclusive jurisdiction for any dispute hereunder.
- Amendment:** These Terms constitute the entire agreement between Buyer and Seller relating to the Products, and no provision may be changed or waived unless in writing signed by the parties.
- Severability:** If any provision hereof is rendered ineffective or invalid, such provision shall not invalidate any other provision.

# Certain Precautions on Specifications and Use

1. **Suitability for Use.** Seller shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in Buyer's application or use of the Product. At Buyer's request, Seller will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases but the following is a non-exhaustive list of applications for which particular attention must be given:
  - (i) Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this document.
  - (ii) Energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
  - (iii) Use in consumer products or any use in significant quantities.
  - (iv) Systems, machines and equipment that could present a risk to life or property. Please know and observe all prohibitions of use applicable to this product.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.
2. **Programmable Products.** Seller shall not be responsible for the user's programming of a programmable product, or any consequence thereof.
3. **Performance Data.** Performance data given in this publication is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Seller's test conditions, and the users must correlate it to actual application requirements. Actual performance is subject to Seller's Warranty and Limitations of Liability.
4. **Change in Specifications.** Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Seller representative at any time to confirm actual specifications of purchased Product.
5. **Errors and Omissions.** The information in this publication has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors, or omissions.
6. **RoHS Compliance.** Where indicated, our products currently comply, to the best of our knowledge as of the date of this publication, with the requirements of the European Union's Directive on the Restriction of certain Hazardous Substances ("RoHS"), although the requirements of RoHS do not take effect until July 2006. These requirements may be subject to change. Please consult our website for current information.

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**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

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