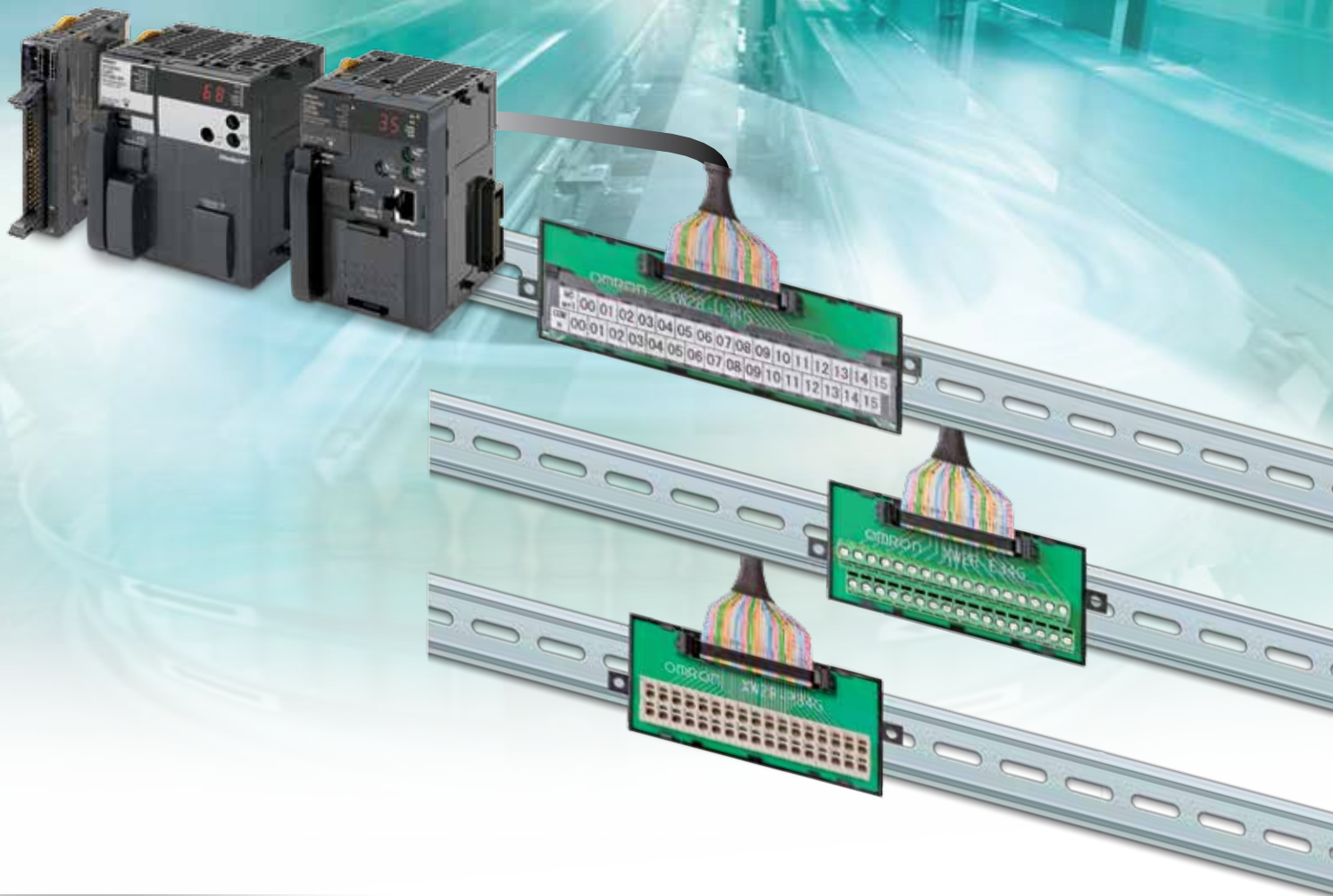


# XW2R Series Connector-Terminal Block Conversion Units



» Simple connection to controllers

» Slim design

» Variety of models for various controller types

- Specialized wiring pattern for OMRON and Mitsubishi PLCs
- Minimized size with required number of poles
- Wide variation of poles

## General-purpose devices

### Wide variation of poles

#### M3 Screw

XW2R-J□□□□-T□



#### Clamp

XW2R-E□□□□-T□



#### Spring Clamp

XW2R-P□□□□-T□



To page 13 for details on models for general-purpose devices

To page 4 for details on models for OMRON PLCs

To page 9 for details on models for Mitsubishi PLCs

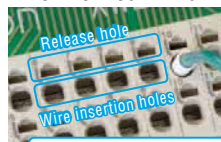
## All Models

- Spring Clamp terminals simplify wiring and make the terminal blocks even easier to use. (In comparison to the OMRON XW2F.)
- The terminal arrangement enables smoother wiring work.
- Mount to DIN Rail or with screws.
- Common design that can also be customized.

### Connecting Spring Clamp Terminals

#### Using Ferrules

- How to insert wire



Insert wire into the terminal block.

- How to release wire



Insert the screwdriver into the release hole and pull out the ferrule.

#### Using Stripped Wires

- Inserting and Removing Wires



To insert a wire, insert a screwdriver into the release hole and then insert the stripped wire. To remove a wire, insert a screwdriver into the release hole and then pull out the stripped wire.

# New Series XW2R

## Product Lineup

Type



PLCs



Features

Specialized wiring pattern  
for PLC

Minimized size with  
required number of poles

Terminal Type

M3 Screw

Clamp

Spring Clamp

Model

For OMRON  
PLC

XW2R-J34G-C□

XW2R-E34G-C□

XW2R-P34G-C□

For Mitsubishi  
PLC

XW2R-J34G-M□

XW2R-E34G-M□

XW2R-P34G-M□

Appearance



## Smart Features

### PLC Connecting type

- Wiring patterns that are specifically designed for PLCs reduce the work required to check signal layout.
- Terminal block signal labels give the PLC addresses.

General-purpose  
devices

|    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |
|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | B10 | B11 | B12 | B13 | B14 | B15 | B16 | B17 |
| A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 | A10 | A11 | A12 | A13 | A14 | A15 | A16 | A17 |

For PLCs from  
OMRON

|     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| IN  | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 |
| COM | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 |

For PLCs from  
Mitsubishi

|    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |
|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|
| I0 | I1 | I2 | I3 | I4 | I5 | I6 | I7 | I8 | I9 | I10 | I11 | I12 | I13 | I14 | I15 | COM |
| Q0 | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 | NC  |

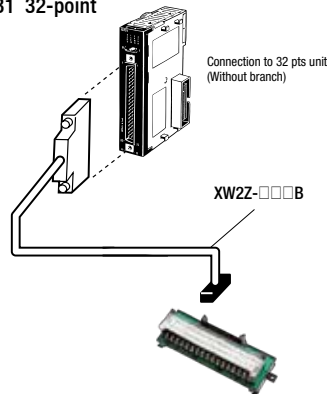
### General-purpose devices

- More model variations are scheduled for future development, such as models with FCN, MR, or MDR connectors in addition to the current models with MIL connectors.

## Connection Examples

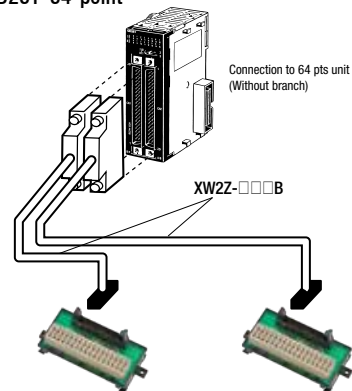
### 32-point Input Unit or Output Unit

CJ1W-ID231 32-point



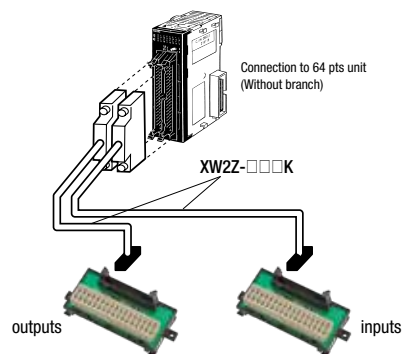
### 64-point Input Unit or Output Unit

CJ1W-ID261 64-point



### 64-point Output Unit

CJ1W-MD563 IN 32 Points, OUT 32 Points



# Models for Connection to OMRON PLCs

## Model List

**X W 2 R - □ 3 4 G - □ □**

| Wiring method |              |
|---------------|--------------|
| <b>J</b>      | M3 Screw     |
| <b>E</b>      | Clamp        |
| <b>P</b>      | Spring Clamp |

| Mounted Connector type |            |
|------------------------|------------|
| <b>G</b>               | MIL (XG4A) |

| PLC type  |                                           |
|-----------|-------------------------------------------|
| <b>C1</b> | Refer to the following table for details. |
| <b>C2</b> |                                           |
| <b>C3</b> |                                           |
| <b>C4</b> |                                           |

## Models for OMRON PLCs

| PLC Type | I/O    | I/O Points | I/O Unit Model       | Connecting cables                                              |
|----------|--------|------------|----------------------|----------------------------------------------------------------|
| C1       | Input  | 32         | CJ1W-ID231           | XW2Z-□□□B<br>32-point Unit: 1 Cable<br>64-point Unit: 2 Cables |
|          |        |            | CS1W-ID231           |                                                                |
|          |        |            | C200H-ID216          |                                                                |
|          |        |            | C200H-ID218          |                                                                |
|          |        |            | CQM1-ID112           |                                                                |
|          |        |            | CQM1-ID213           |                                                                |
|          |        |            | CQM1-ID214           |                                                                |
|          |        | 64         | CJ1W-ID261           |                                                                |
|          |        |            | CS1W-ID261           |                                                                |
|          |        |            | C200H-ID217          |                                                                |
|          |        |            | C200H-ID219          |                                                                |
|          |        | 32         | C200H-ID111          |                                                                |
|          |        |            | C500-ID114           |                                                                |
|          |        |            | C500-ID219           |                                                                |
|          |        |            | CJ1W-MD261 (inputs)  |                                                                |
|          |        |            | CS1W-MD261 (inputs)  |                                                                |
|          |        |            | CS1W-MD262 (inputs)  |                                                                |
|          |        |            | CS1W-MD561 (inputs)  |                                                                |
| C2       | Input  | 32         | CJ1W-ID232           | XW2Z-□□□K<br>32-point Unit: 1 Cable<br>64-point Unit: 2 Cables |
|          |        | 64         | CJ1W-ID233           |                                                                |
|          | I/O    | 32         | CJ1W-ID262           |                                                                |
|          |        |            | CJ1W-MD263 (inputs)  |                                                                |
|          |        |            | CJ1W-MD563 (inputs)  |                                                                |
| C3       | Output | 32         | CJ1W-OD231           | XW2Z-□□□B<br>32-point Unit: 1 Cable<br>64-point Unit: 2 Cables |
|          |        |            | CS1W-OD231           |                                                                |
|          |        |            | CS1W-OD232           |                                                                |
|          |        |            | C200H-OD218          |                                                                |
|          |        |            | CQM1-OD213           |                                                                |
|          |        | 64         | CJ1W-OD261           |                                                                |
|          |        |            | CS1W-OD261           |                                                                |
|          |        |            | CS1W-OD262           |                                                                |
|          |        |            | C200H-OD219          |                                                                |
|          |        |            | C500-OD213           |                                                                |
|          |        | 32         | CJ1W-MD261 (outputs) |                                                                |
|          |        |            | CS1W-MD261 (outputs) |                                                                |
|          |        |            | CS1W-MD262 (outputs) |                                                                |
|          |        |            | CS1W-MD561 (outputs) |                                                                |
| C4       | Output | 32         | CJ1W-OD232           | XW2Z-□□□K<br>32-point Unit: 1 Cable<br>64-point Unit: 2 Cables |
|          |        |            | CJ1W-OD233           |                                                                |
|          |        |            | CJ1W-OD234           |                                                                |
|          |        | 64         | CJ1W-OD262           |                                                                |
|          |        |            | CJ1W-OD263           |                                                                |
|          | I/O    | 32         | CJ1W-MD263 (outputs) |                                                                |
|          |        |            | CJ1W-MD563 (outputs) |                                                                |

\*Connection is not possible to all OMRON PLC Units.

\*□□□ is replaced by the cable length.

\*There is one common for each 32 points.

\*Refer to page 16-17 for information on Connecting Cables.





# Models for Connection to OMRON PLCs

## M3 Screw

| Appearance                                                                        | I/O Points<br>(number of poles) | Model        | Dimension A(mm) | Dimension B(mm) |
|-----------------------------------------------------------------------------------|---------------------------------|--------------|-----------------|-----------------|
|  | 32 (34)                         | XW2R-J34G-C1 | 130.7           | 140.2           |
|                                                                                   | 32 (34)                         | XW2R-J34G-C2 | 130.7           | 140.2           |
|                                                                                   | 32 (34)                         | XW2R-J34G-C3 | 130.7           | 140.2           |
|                                                                                   | 32 (34)                         | XW2R-J34G-C4 | 130.7           | 140.2           |

## Ratings and Specifications

|                               |                                                                                                 |
|-------------------------------|-------------------------------------------------------------------------------------------------|
| Rated current                 | 0.5A/signal, 4A/common                                                                          |
| Rated voltage                 | 24VDC                                                                                           |
| Insulation resistance         | 100MΩ min.(at 500VDC)                                                                           |
| Dielectric strength           | 500VAC for 1 min (leakage current: 1 mA max.)                                                   |
| Ambient operating temperature | 0 to 55°C                                                                                       |
| Applicable wires              | Applicable wire sizes                                                                           |
|                               | Stripped length                                                                                 |
|                               | AWG 22 to 16 (round or forked crimp terminals)<br>AWG 26 to 16 (twisted or solid wires)<br>9 mm |

## Details on Crimp Terminals

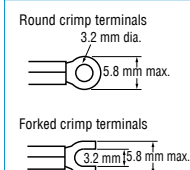
### ● Wiring Terminal Blocks

Use crimp terminals on terminal blocks with M3 screws.

### ● Terminal Screw Tightening Torque

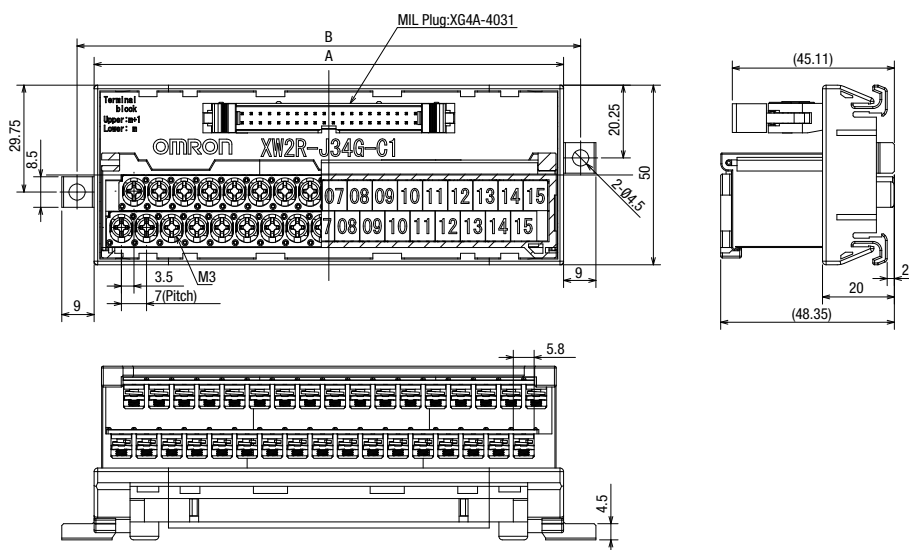
Use a tightening torque of 0.5 N·m when connecting wires or crimp terminals to the terminal block.

| Applicable crimp terminals | Applicable wires                                    |
|----------------------------|-----------------------------------------------------|
| Round crimp terminals      | 1.25-3 AWG 22 to 16(0.30 to 1.25 mm <sup>2</sup> )  |
| Forked crimp terminals     | 1.25Y-3 AWG 22 to 16(0.30 to 1.25 mm <sup>2</sup> ) |

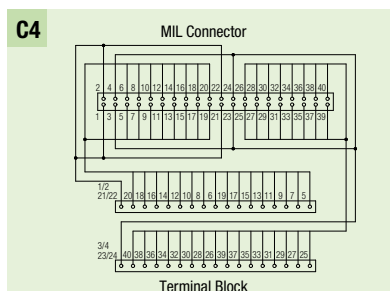
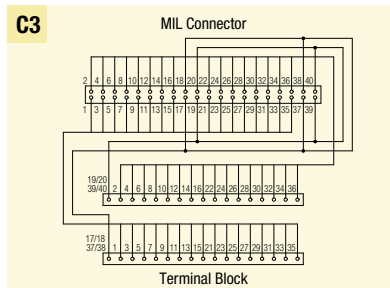
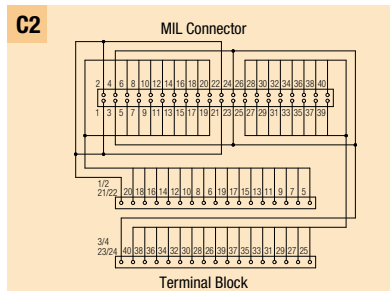
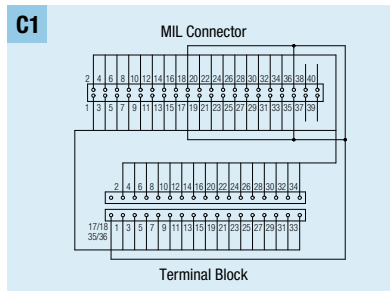


## Dimensions

(Unit:mm)



## Wiring Diagram



## Label Contents

### For C1 and C2

|     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| NC  | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 |
| COM | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 |

### For C3 and C4

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| +V | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 |
| 0V | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 |

## Model List

**X W 2 R - □ 3 4 G - □ □**

| Wiring method |              |
|---------------|--------------|
| <b>J</b>      | M3 Screw     |
| <b>E</b>      | Clamp        |
| <b>P</b>      | Spring Clamp |

| Mounted Connector type |            |
|------------------------|------------|
| <b>G</b>               | MIL (XG4A) |

| PLC type  |                                           |
|-----------|-------------------------------------------|
| <b>M1</b> | Refer to the following table for details. |
| <b>M2</b> |                                           |

## Models for Connection to Mitsubishi PLCs

| PLC Type  | I/O Points | Mitsubishi PLC Module model | Connecting cables   |
|-----------|------------|-----------------------------|---------------------|
| <b>M1</b> | 32         | LX41C4                      | XW2Z-□□□B: 1 cable  |
|           |            | QX41                        |                     |
|           |            | QX41-S1                     |                     |
|           |            | QX41-S2                     |                     |
|           |            | QX71                        |                     |
|           |            | QH42P (input)               |                     |
|           |            | QX41Y41P (input)            |                     |
|           |            | A1SX41-S1                   |                     |
|           |            | A1SX41-S2                   |                     |
|           |            | A1SX71                      |                     |
|           |            | A1SH42 (input)              |                     |
|           |            | A1SH42-S1 (input)           |                     |
|           | 64         | LX42C4                      | XW2Z-□□□B: 2 cables |
|           |            | QX42                        |                     |
|           |            | QX42-S1                     |                     |
|           |            | QX82                        |                     |
|           |            | QX82-S1                     |                     |
|           |            | A1SX42-S1                   |                     |
|           |            | A1SX42-S2                   |                     |
|           |            | A1SX82-S                    |                     |
| <b>M2</b> | 32         | LY41NT1P                    | XW2Z-□□□B: 1 cable  |
|           |            | QY41P                       |                     |
|           |            | QY71                        |                     |
|           |            | QH42P (output)              |                     |
|           |            | QY41Y41P (output)           |                     |
|           |            | A1SY41-S1                   |                     |
|           |            | A1SY41P                     |                     |
|           |            | A1SY42P                     |                     |
|           |            | A1SY71                      |                     |
|           |            | A1SH42 (output)             |                     |
|           | 64         | A1SH42-S1 (output)          | XW2Z-□□□B: 2 cables |
|           |            | LY42NT1P                    |                     |
|           |            | QY42P                       |                     |
|           |            | A1SY42                      |                     |
|           |            |                             |                     |

\*□□□ is replaced by the cable length.

\*Refer to page 16 for information on Connecting Cables.



# Models for Connection to OMRON PLCs

## Spring Clamp

| Appearance                                                                        | I/O Points<br>(number of poles) | Model        | Dimension A(mm) | Dimension B(mm) |
|-----------------------------------------------------------------------------------|---------------------------------|--------------|-----------------|-----------------|
|  | 32 (34)                         | XW2R-P34G-C1 | 98.5            | 108             |
|                                                                                   | 32 (34)                         | XW2R-P34G-C2 | 98.5            | 108             |
|                                                                                   | 32 (34)                         | XW2R-P34G-C3 | 98.5            | 108             |
|                                                                                   | 32 (34)                         | XW2R-P34G-C4 | 98.5            | 108             |

## Ratings and Specifications

|                               |                                                                                                                     |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Rated current                 | 0.5A/signal, 4A/common                                                                                              |
| Rated voltage                 | 24VDC                                                                                                               |
| Insulation resistance         | 100MΩ min. (at 500VDC)                                                                                              |
| Dielectric strength           | 500VAC for 1 min                                                                                                    |
| Ambient operating temperature | 0 to 55°C                                                                                                           |
| Applicable wires              | AWG 24 to 14 (rod terminals), AWG 28 to 14 (twisted or solid wires) (Outer diameter of insulation must be 4 mm max) |
| Stripped length               | AWG28-16: 8 to 10 mm, AWG14: 9 to 10 mm                                                                             |

## Details on Crimp Terminals

### ● Applicable Ferrules

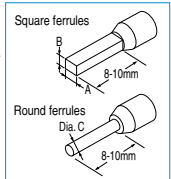
- Use ferrules of the lengths and thicknesses specified below. If other lengths or thicknesses are used, connection may not be possible or it may not be possible to insert or remove the posts.

### • Ferrule Dimensions

|                 |                        |                                 |                                                                             |
|-----------------|------------------------|---------------------------------|-----------------------------------------------------------------------------|
| Square ferrules | Dimension A (Width)    | 2.7mm max.                      | The cross-sectional area after crimping must be 4.8 mm <sup>2</sup> or less |
|                 | Dimension B (Height)   | 2 mm max.                       |                                                                             |
| Round ferrules  | Dimension C (Diameter) | 2 mm dia. max. (after crimping) |                                                                             |

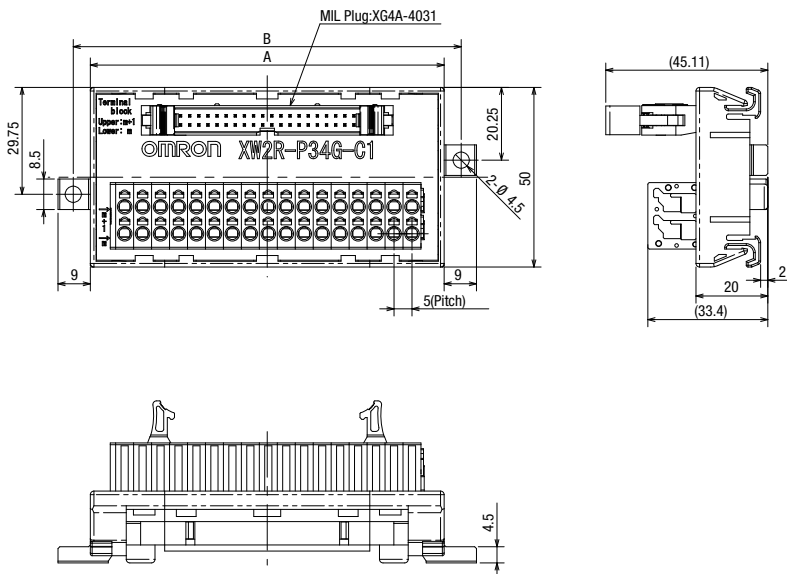
### • Special Tools

|       |          |
|-------|----------|
| Model | XW4Z-00B |
|-------|----------|

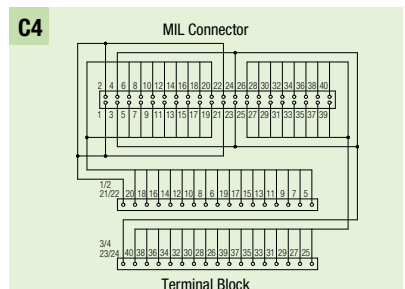
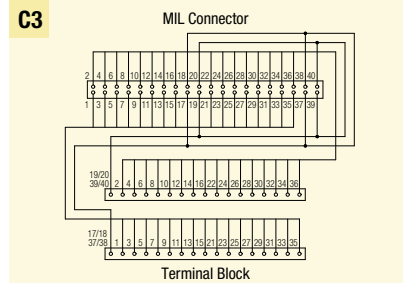
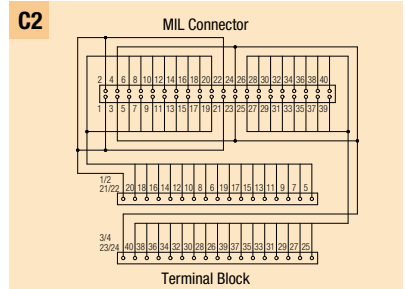
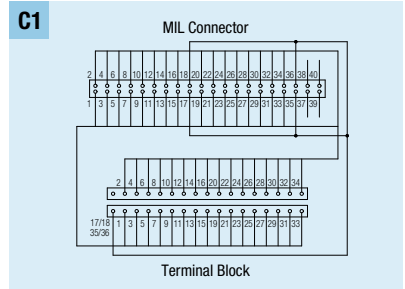


## Dimensions

(Unit:mm)



## Wiring Diagram



## Label Contents

### For C1 and C2

|   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| m | + | 1 | NC  | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 4 | 0 | 5 | 0 | 6 | 0 | 7 | 0 | 8 | 0 | 9 | 1 | 0 | 1 | 1 | 2 | 1 | 3 | 1 | 4 | 1 | 5 |
| m | + | 1 | COM | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 4 | 0 | 5 | 0 | 6 | 0 | 7 | 0 | 8 | 0 | 9 | 1 | 0 | 1 | 1 | 2 | 1 | 3 | 1 | 4 | 1 | 5 |

### For C3 and C4

|   |   |   |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| m | + | 1 | +V | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 4 | 0 | 5 | 0 | 6 | 0 | 7 | 0 | 8 | 0 | 9 | 1 | 0 | 1 | 1 | 2 | 1 | 3 | 1 | 4 | 1 | 5 |
| m | + | 1 | 0V | 0 | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 4 | 0 | 5 | 0 | 6 | 0 | 7 | 0 | 8 | 0 | 9 | 1 | 0 | 1 | 1 | 2 | 1 | 3 | 1 | 4 | 1 | 5 |

# Models for Connection to Mitsubishi PLCs

## Clamp

| Appearance                                                                        | I/O Points<br>(number of poles) | Model        | Dimension A(mm) | Dimension B(mm) |
|-----------------------------------------------------------------------------------|---------------------------------|--------------|-----------------|-----------------|
|  | 32 (34)                         | XW2R-E34G-M1 | 98.5            | 108             |
|                                                                                   | 32 (34)                         | XW2R-E34G-M2 | 98.5            | 108             |

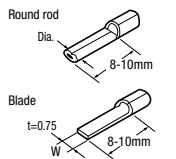
## Ratings and Specifications

|                               |                                                                       |
|-------------------------------|-----------------------------------------------------------------------|
| Rated current                 | 0.5A/signal, 2A/common                                                |
| Rated voltage                 | 24VDC                                                                 |
| Insulation resistance         | 100MΩ min. (at 500VDC)                                                |
| Dielectric strength           | 500VAC for 1 min (leakage current: 1 mA max.)                         |
| Ambient operating temperature | 0 to 55°C                                                             |
| Applicable wires              | Applicable wire sizes                                                 |
|                               | AWG 22 to 16 (rod terminals)<br>AWG 26 to 16 (twisted or solid wires) |
|                               | Stripped length                                                       |
|                               | 7 mm                                                                  |

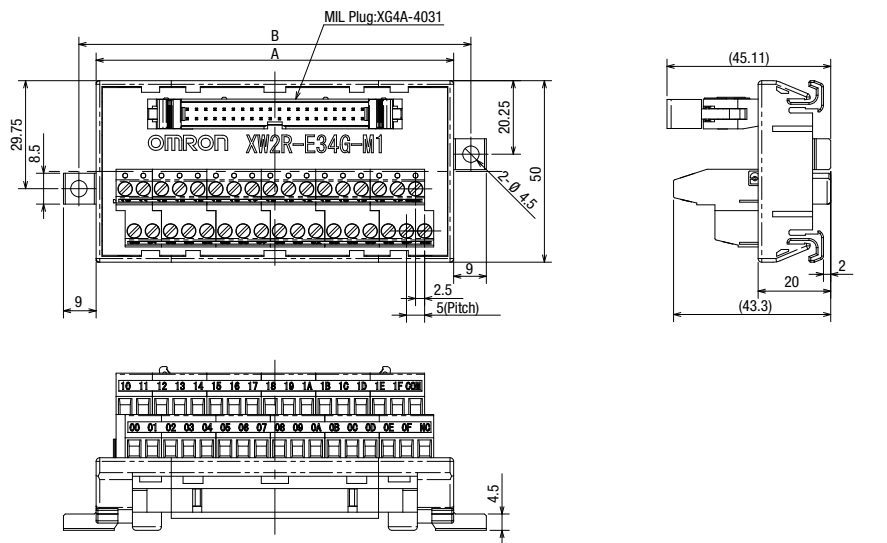
## Details on Crimp Terminals

| Applicable crimp terminals |                                      | Applicable wires                                  |
|----------------------------|--------------------------------------|---------------------------------------------------|
| Rod                        | TC-05<br>Dia. = 1                    | AWG22 to AWG18<br>(0.30 to 0.75 mm <sup>2</sup> ) |
|                            | TC-1.25S<br>Dia. = 1.5               | AWG22 to AWG16<br>(0.30 to 1.25 mm <sup>2</sup> ) |
| Blade                      | BT1.25-9-1<br>BT1.25-10-1<br>W = 2.2 | AWG22 to AWG16<br>(0.30 to 1.25 mm <sup>2</sup> ) |

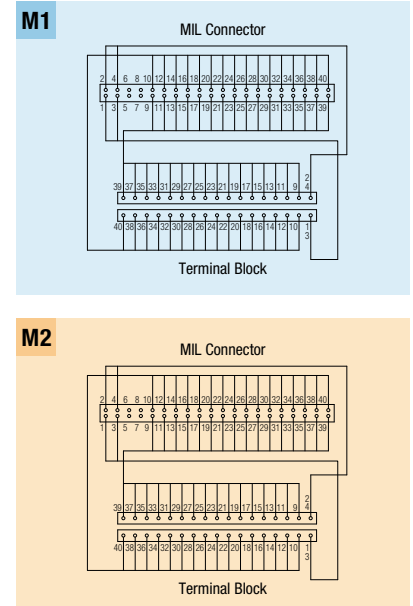
Note: Round rod and blade crimp terminals are made by Nichifu.



## Dimensions



## Wiring Diagram



## Label Contents

### For M1

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 1A | 1B | 1C | 1D | 1E | 1F | COM |
| 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 0A | 0B | 0C | 0D | 0E | 0F | NC  |

### For M2

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 1A | 1B | 1C | 1D | 1E | 1F | +V |
| 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 0A | 0B | 0C | 0D | 0E | 0F | 0V |

# Models for Connection to Mitsubishi PLCs

## M3 Screw

| Appearance                                                                        | I/O Points<br>(number of poles) | Model        | Dimension A(mm) | Dimension B(mm) |
|-----------------------------------------------------------------------------------|---------------------------------|--------------|-----------------|-----------------|
|  | 32 (34)                         | XW2R-J34G-M1 | 130.7           | 140.2           |
|                                                                                   | 32 (34)                         | XW2R-J34G-M2 | 130.7           | 140.2           |

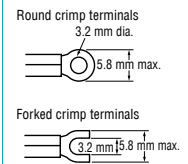
### Ratings and Specifications

|                               |                                                                                         |
|-------------------------------|-----------------------------------------------------------------------------------------|
| Rated current                 | 0.5A/signal, 2A/common                                                                  |
| Rated voltage                 | 24VDC                                                                                   |
| Insulation resistance         | 100MΩ min. (at 500VDC)                                                                  |
| Dielectric strength           | 500VAC for 1 min (leakage current: 1 mA max.)                                           |
| Ambient operating temperature | 0 to 55°C                                                                               |
| Applicable wires              | Applicable wire sizes                                                                   |
|                               | AWG 22 to 16 (round or forked crimp terminals)<br>AWG 26 to 16 (twisted or solid wires) |
|                               | Stripped length                                                                         |
|                               | 9 mm                                                                                    |

### Details on Crimp Terminals

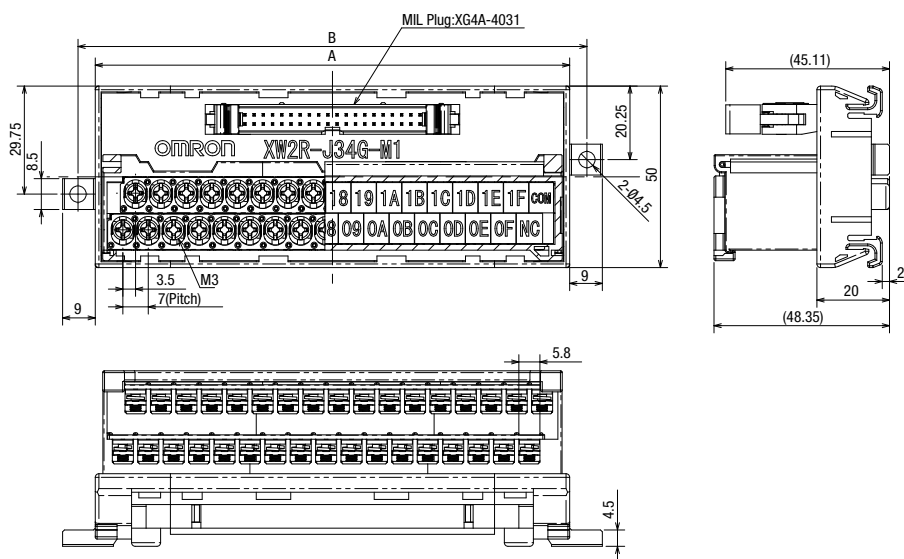
- **Wiring Terminal Blocks**  
Use crimp terminals on terminal blocks with M3 screws.
- **Terminal Screw Tightening Torque**  
Use a tightening torque of 0.5 N·m when connecting wires or crimp terminals to the terminal block.

| Applicable crimp terminals | Applicable wires                                    |
|----------------------------|-----------------------------------------------------|
| Round crimp terminals      | 1.25-3 AWG 22 to 16(0.30 to 1.25 mm <sup>2</sup> )  |
| Forked crimp terminals     | 1.25Y-3 AWG 22 to 16(0.30 to 1.25 mm <sup>2</sup> ) |

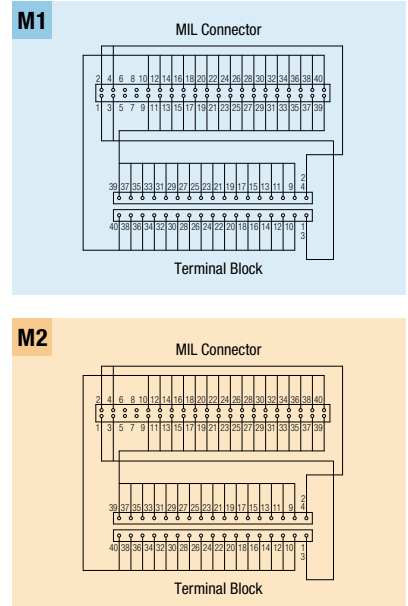


### Dimensions

(Unit:mm)



### Wiring Diagram



### Label Contents

For **M1**

|  |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |    |
|--|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|---|---|---|---|---|---|---|---|----|
|  | 1  | 0 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | 1 | C | 1 | D | 1 | E | 1 | F | COM |   |   |   |   |   |   |   |   |    |
|  | 00 | 0 | 1 | 0 | 2 | 0 | 3 | 0 | 4 | 0 | 5 | 0 | 6 | 0 | 7 | 0 | 8 | 0 | 9 | 0 | A | 0 | B   | 0 | C | 0 | D | 0 | E | 0 | F | NC |

For **M2**

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|    | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 1A | 1B | 1C | 1D | 1E | 1F | +V |
| 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 0A | 0B | 0C | 0D | 0E | 0F | 0V |    |

## Model List

**X W 2 R - □ □ □ □ □ - T**

| Wiring method |              |
|---------------|--------------|
| <b>J</b>      | M3 Screw     |
| <b>E</b>      | Clamp        |
| <b>P</b>      | Spring Clamp |
| <b>N</b>      | e-CON*       |

| Number of poles |           |
|-----------------|-----------|
|                 | <b>20</b> |
|                 | <b>34</b> |
|                 | <b>40</b> |
|                 | <b>50</b> |
|                 | <b>60</b> |

| Mounted Connector type |             |
|------------------------|-------------|
| <b>G</b>               | MIL (XG4A)  |
| <b>C</b>               | MIL (XG4C)* |
| <b>F</b>               | FCN*        |
| <b>D</b>               | D-sub*      |
| <b>R</b>               | MR*         |
| <b>M</b>               | MDR*        |

| Plug/Socket  |                  |
|--------------|------------------|
| <b>Blank</b> | Plug (male)      |
| <b>R</b>     | Socket (female)* |

\* Scheduled for release soon.

## M3 Screw

| Appearance | number of poles | Model       | Dimension A(mm) | Dimension B(mm) |
|------------|-----------------|-------------|-----------------|-----------------|
|            | 20              | XW2R-J20G-T | 81.7            | 91.2            |
|            | 34              | XW2R-J34G-T | 130.7           | 140.2           |
|            | 40              | XW2R-J40G-T | 151.7           | 161.2           |
|            | 50              | XW2R-J50G-T | 186.7           | 196.2           |
|            | 60              | XW2R-J60G-T | 221.7           | 231.2           |

## Ratings and Specifications

|                               |                                               |
|-------------------------------|-----------------------------------------------|
| Rated current                 | 1A                                            |
| Rated voltage                 | 125VAC 24VDC                                  |
| Insulation resistance         | 100MΩ min.(at 500VDC)                         |
| Dielectric strength           | 500VAC for 1 min (leakage current: 1 mA max.) |
| Ambient operating temperature | 0 to 55°C                                     |

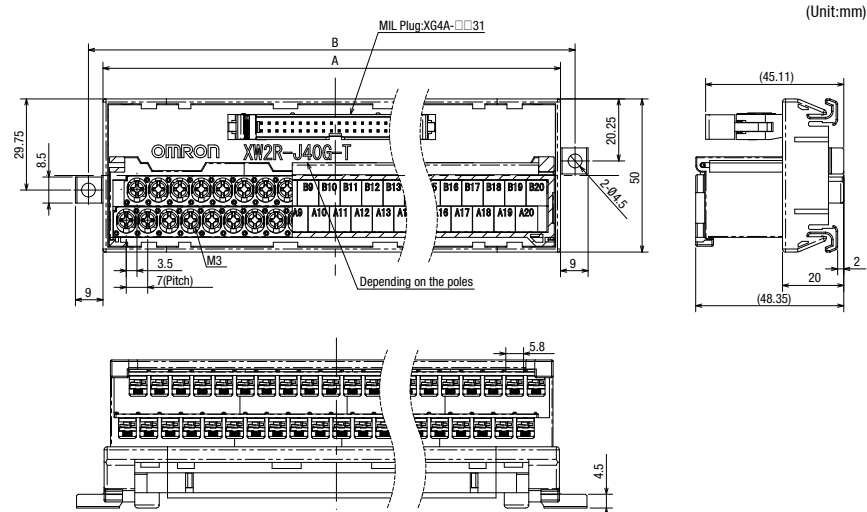
\*The details on crimp terminals are the same for the XW2R-J34G on page 6.

## Label Contents

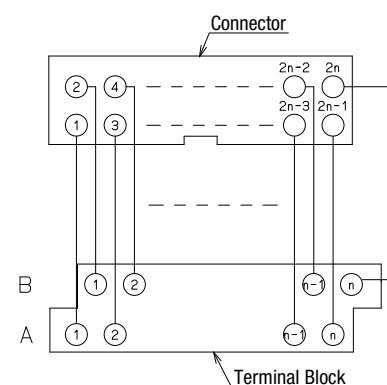
|    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |
|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | B10 | B11 | B12 | B13 | B14 | B15 | B16 | B17 |
| A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 | A10 | A11 | A12 | A13 | A14 | A15 | A16 | A17 |

\*The label contents for a Terminal Block with 34 poles are shown.

## Dimensions



## Wiring Diagram



## Spring Clamp

| Appearance                                                                        | I/O Points<br>(number of poles) | Model        | Dimension A(mm) | Dimension B(mm) |
|-----------------------------------------------------------------------------------|---------------------------------|--------------|-----------------|-----------------|
|  | 32 (34)                         | XW2R-P34G-M1 | 98.5            | 108             |
|                                                                                   | 32 (34)                         | XW2R-P34G-M2 | 98.5            | 108             |

## Ratings and Specifications

|                               |                       |                                                                                                                    |
|-------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------|
| Rated current                 |                       | 0.5A/signal, 2A/common                                                                                             |
| Rated voltage                 |                       | 24VDC                                                                                                              |
| Insuration resistance         |                       | 100MΩ min.(at 500VDC)                                                                                              |
| Dielectric strength           |                       | 500VAC for 1 min                                                                                                   |
| Ambient operating temperature |                       | 0 to 55°C                                                                                                          |
| Applicable wires              | Applicable wire sizes | AWG 24 to 14 (rod terminals), AWG 28 to 14 (twisted or solid wires)(Outer diameter of insulation must be 4 mm max) |
|                               | Stripped length       | AWG28~16: 8 to 10 mm, AWG14: 9 to 10 mm                                                                            |

### Details on Crimp Terminals

- Applicable Ferrules

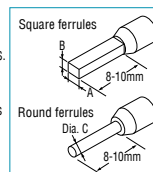
- Use ferrules of the lengths and thicknesses specified below. If other lengths or thicknesses are used, connection may not be possible or it may not be possible to insert or remove the posts.

- Ferrule Dimensions

|                 |                        |                                 |                                                                              |
|-----------------|------------------------|---------------------------------|------------------------------------------------------------------------------|
| Square ferrules | Dimension A (Width)    | 2.7mm max.                      | The cross-sectional area after crimping must be 4.8 mm <sup>2</sup> or less. |
|                 | Dimension B (Height)   | 2 mm max.                       |                                                                              |
| Round ferrules  | Dimension C (Diameter) | 2 mm dia. max. (after crimping) |                                                                              |

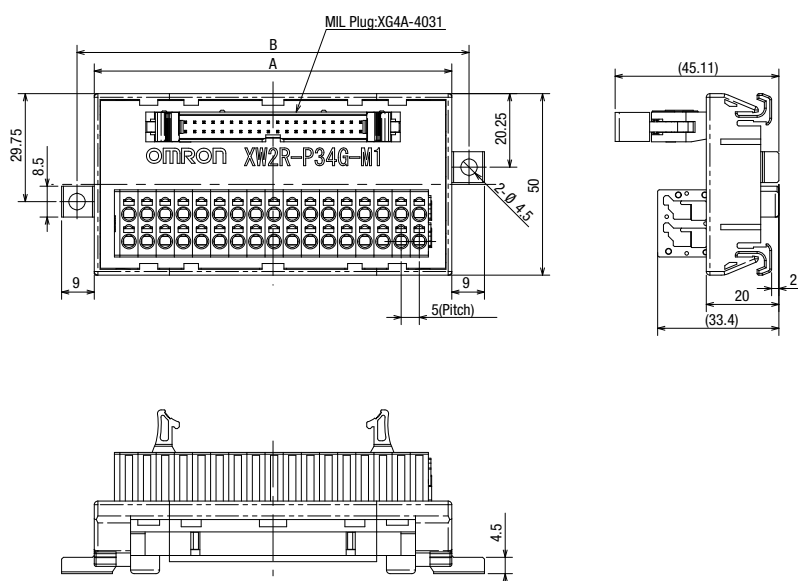
• Special Tools

|       |          |
|-------|----------|
| Model | XW4Z-00B |
|-------|----------|



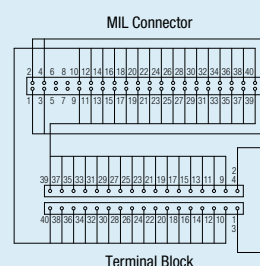
## Dimensions

(Unit:mm)

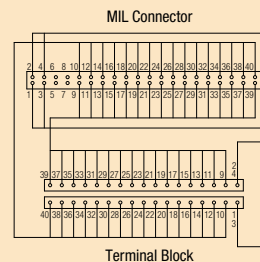


## Wiring Diagram

## M1



## M2



## Label Contents

## For M1

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 1A | 1B | 1C | 1D | 1E | 1F | COM |
| 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 0A | 0B | 0C | 0D | 0E | 0F | NC  |

**For M2**

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 1A | 1B | 1C | 1D | 1E | 1F | +V |
| 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 0A | 0B | 0C | 0D | 0E | 0F | 0V |

## Spring Clamp

| Appearance                                                                        | number of poles | Model       | Dimension A(mm) | Dimension B(mm) |
|-----------------------------------------------------------------------------------|-----------------|-------------|-----------------|-----------------|
|  | 20              | XW2R-P20G-T | 64.4            | 73.9            |
|                                                                                   | 34              | XW2R-P34G-T | 98.5            | 108             |
|                                                                                   | 40              | XW2R-P40G-T | 113.5           | 123             |
|                                                                                   | 50              | XW2R-P50G-T | 138.5           | 148             |
|                                                                                   | 60              | XW2R-P60G-T | 163.5           | 173             |

### Ratings and Specifications

|                               |                                               |
|-------------------------------|-----------------------------------------------|
| Rated current                 | 1A                                            |
| Rated voltage                 | 125VAC 24VDC                                  |
| Insulation resistance         | 100M $\Omega$ min.(at 500VDC)                 |
| Dielectric strength           | 500VAC for 1 min (leakage current: 1 mA max.) |
| Ambient operating temperature | 0 to 55°C                                     |
| Applicable wires              | Applicable wire sizes                         |
|                               | Stripped length                               |

AWG 24 to 14 (rod terminals), AWG 28 to 14 (twisted or solid wires)(Outer diameter of insulation must be 4 mm max)  
 AWG28-16: 8 to 10 mm, AWG14: 9 to 10 mm

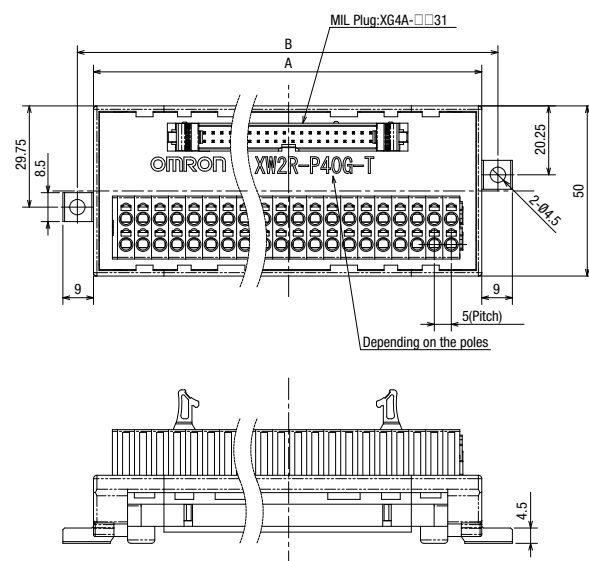
\*The details on crimp terminals are the same for the XW2R-P34G on page 8.

### Label Contents

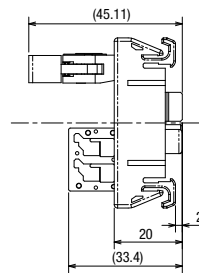
|   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|
| B | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| A | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |

\*The label contents for a Terminal Block with 34 poles are shown.

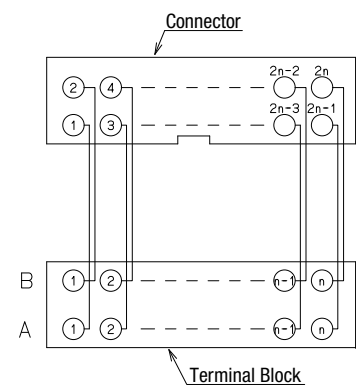
### Dimensions



(Unit:mm)



### Wiring Diagram



## Clamp

| Appearance                                                                        | number of poles | Model       | Dimension A(mm) | Dimension B(mm) |
|-----------------------------------------------------------------------------------|-----------------|-------------|-----------------|-----------------|
|  | 20              | XW2R-E20G-T | 64.4            | 73.9            |
|                                                                                   | 34              | XW2R-E34G-T | 98.5            | 108             |
|                                                                                   | 40              | XW2R-E40G-T | 113.5           | 123             |
|                                                                                   | 50              | XW2R-E50G-T | 138.5           | 148             |
|                                                                                   | 60              | XW2R-E60G-T | 163.5           | 173             |

### Ratings and Specifications

|                               |                                               |
|-------------------------------|-----------------------------------------------|
| Rated current                 | 1A                                            |
| Rated voltage                 | 125VAC 24VDC                                  |
| Insuration resistance         | 100MΩ min.(at 500VDC)                         |
| Dielectric strength           | 500VAC for 1 min (leakage current: 1 mA max.) |
| Ambient operating temperature | 0 to 55℃                                      |

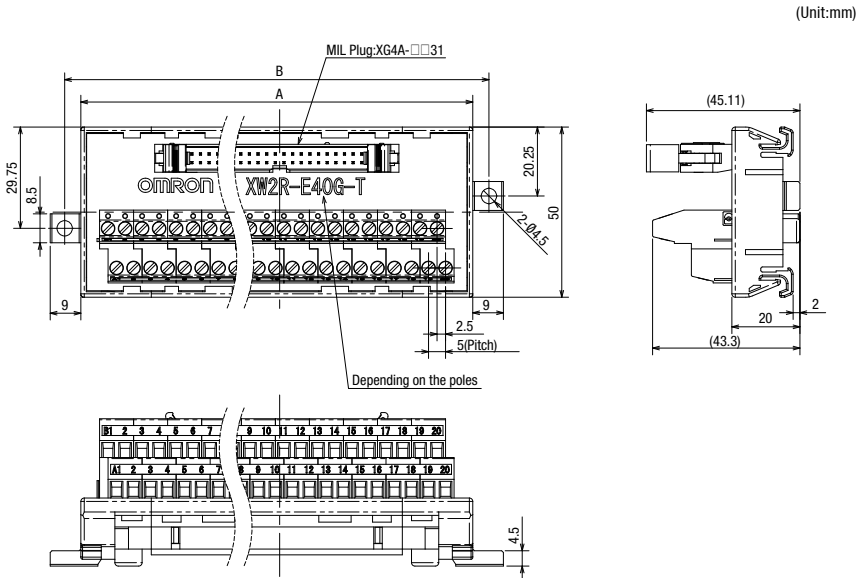
\*The details on crimp terminals are the same for the XW2R-E34G on page 7.

### Label Contents

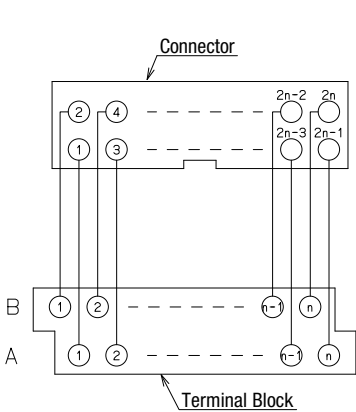
|   |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|
| B | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| A | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |

\*The label contents for a Terminal Block with 34 poles are shown.

### Dimensions



### Wiring Diagram

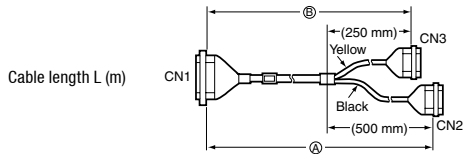




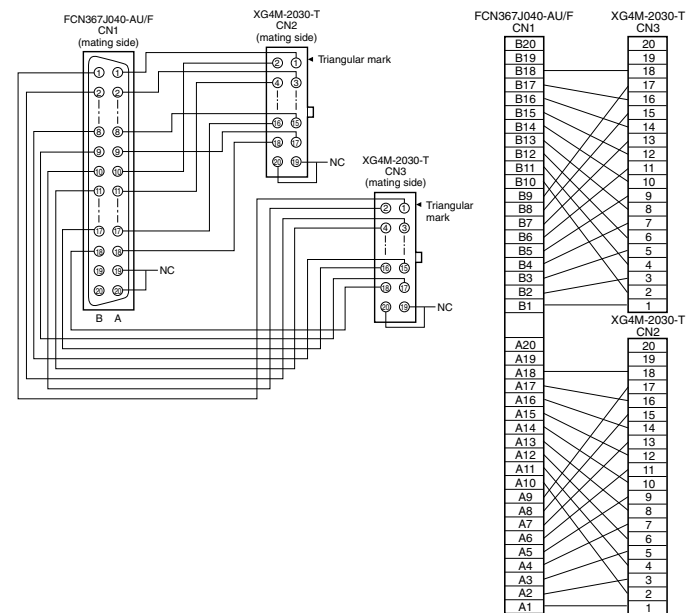
## XW2Z-□□□D

Connectors: One 40-pin Connector Made by Fujitsu Component, Ltd. to Two 20-pin MIL Connectors

| Appearance                                                                        | Model     | Cable length L (m) |       |
|-----------------------------------------------------------------------------------|-----------|--------------------|-------|
|                                                                                   |           | A                  | B     |
|  | XW2Z-100D | 1                  | 0.75  |
|                                                                                   | XW2Z-150D | 1.5                | 1.25  |
|                                                                                   | XW2Z-200D | 2                  | 1.75  |
|                                                                                   | XW2Z-300D | 3                  | 2.75  |
|                                                                                   | XW2Z-500D | 5                  | 4.75  |
|                                                                                   | XW2Z-010D | 10                 | 9.75  |
|                                                                                   | XW2Z-15MD | 15                 | 14.75 |
|                                                                                   | XW2Z-20MD | 20                 | 19.75 |

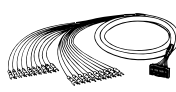


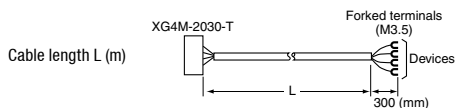
## Wiring Diagram



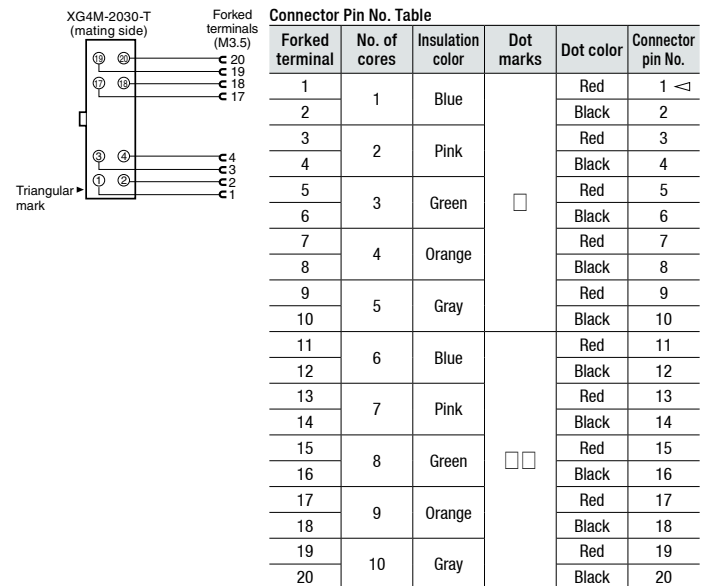
## XW2Z-□□□F

Connectors: One 20-pin MIL Connector to 20 Loose Wires with Crimp Terminals Attached

| Appearance                                                                          | Model     | Cable length L (m) |
|-------------------------------------------------------------------------------------|-----------|--------------------|
|  | XW2Z-100F | 1                  |
|                                                                                     | XW2Z-150F | 1.5                |
|                                                                                     | XW2Z-200F | 2                  |
|                                                                                     | XW2Z-300F | 3                  |
|                                                                                     | XW2Z-500F | 5                  |
|                                                                                     | XW2Z-010F | 10                 |
|                                                                                     | XW2Z-15MF | 15                 |
|                                                                                     | XW2Z-20MF | 20                 |

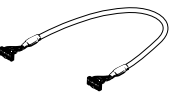


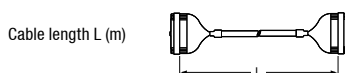
## Wiring Diagram



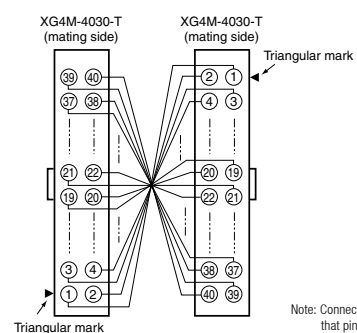
## XW2Z-□□□K

Connectors: One 40-pin MIL Connector to One 40-pin MIL Connector

| Appearance                                                                          | Model     | Cable length L (m) |
|-------------------------------------------------------------------------------------|-----------|--------------------|
|  | XW2Z-C25K | 0.25               |
|                                                                                     | XW2Z-C50K | 0.5                |
|                                                                                     | XW2Z-100K | 1                  |
|                                                                                     | XW2Z-150K | 1.5                |
|                                                                                     | XW2Z-200K | 2                  |
|                                                                                     | XW2Z-300K | 3                  |
|                                                                                     | XW2Z-500K | 5                  |
|                                                                                     | XW2Z-010K | 10                 |



## Wiring Diagram



Note: Connector pins are connected 1-to-1 so that pin numbers correspond.

## XW2Z

### Appearance



### Ratings and Specifications

|                               |                                                   |
|-------------------------------|---------------------------------------------------|
| Rated current                 | 1A                                                |
| Rated voltage                 | 125 VAC 24 VDC                                    |
| Contact resistance            | 20 mΩ max. (at 20 mV, 100 mA max.) *1             |
| Insulation resistance         | 100 MΩ min. (at 500 VDC)                          |
| Dielectric strength           | 500 VAC for 1 min (leakage current: 1 mA max.) *2 |
| Ambient operating temperature | 25 to 80°C                                        |

\*1. Contact resistance for the Connector. \*2. Dielectric strength for the Connector.

### Materials and Finish

| Item             | Part name                              |                     | Materials and Finish           |                                                   |
|------------------|----------------------------------------|---------------------|--------------------------------|---------------------------------------------------|
| Connectors       | XG4M-2030<br>XG4M-4030                 | Housing             |                                | Fiber-glass reinforced PBT resin (UL94V-0)/black  |
|                  |                                        | Cover               |                                |                                                   |
|                  |                                        | Contacts            | Mating end                     | Phosphor bronze/nickel base, 0.15-μm gold plating |
|                  |                                        |                     | Press-fit end                  | Phosphor bronze/nickel base, 2.0-μm tin plating   |
|                  | XG4T-2004/4004                         | Strain Relief       |                                | Fiber-glass reinforced PBT resin (UL94V-0)/black  |
|                  | FCN-367J024-AU/F *<br>FCN-367J040-AU/F | Housing             |                                | Polyester resin (UL94V-0)/black                   |
|                  |                                        | Contacts            | Mating end                     | Copper alloy/gold plated                          |
|                  |                                        |                     | Press-fit end                  | Copper alloy/tin plated                           |
| Connecting screw |                                        | Steel/nickel plated |                                |                                                   |
| Cable            | UL2464 Interface Cable                 |                     | AWG28                          |                                                   |
| Crimp terminal   | Forked crimp terminal                  |                     | 1.25 YAS 3.5 or the equivalent |                                                   |

\* These housings, contacts, and connecting screws are made by Fujitsu Component, Ltd.

### XW2Z-□□□A

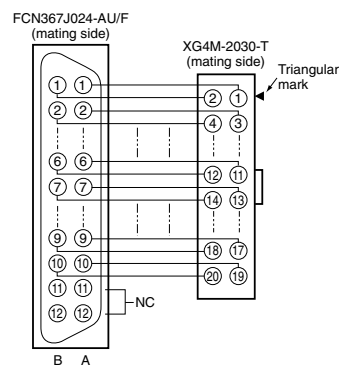
Connectors: One 24-pin Connector Made by Fujitsu Component, Ltd. to One 20-pin MIL Connector

| Appearance | Model     | Cable length L (m) |
|------------|-----------|--------------------|
|            | XW2Z-050A | 0.5                |
|            | XW2Z-100A | 1                  |
|            | XW2Z-150A | 1.5                |
|            | XW2Z-200A | 2                  |
|            | XW2Z-300A | 3                  |
|            | XW2Z-500A | 5                  |
|            | XW2Z-700A | 7                  |
|            | XW2Z-010A | 10                 |
|            | XW2Z-15MA | 15                 |
|            | XW2Z-20MA | 20                 |

Cable length L (m)



### Wiring Diagram

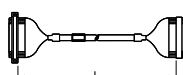


### XW2Z-□□□B

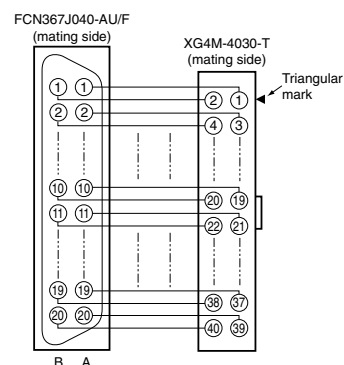
Connectors: One 40-pin Connector Made by Fujitsu Component, Ltd. to One 40-pin MIL Connector

| Appearance | Model     | Cable length L (m) |
|------------|-----------|--------------------|
|            | XW2Z-050B | 0.5                |
|            | XW2Z-100B | 1                  |
|            | XW2Z-150B | 1.5                |
|            | XW2Z-200B | 2                  |
|            | XW2Z-300B | 3                  |
|            | XW2Z-500B | 5                  |
|            | XW2Z-700B | 7                  |
|            | XW2Z-010B | 10                 |
|            | XW2Z-15MB | 15                 |
|            | XW2Z-20MB | 20                 |

Cable length L (m)



### Wiring Diagram



# Safety Precautions

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## Precautions for Correct Use

### ● Wiring Precautions

- Do not perform wiring work, remove connectors, or connect connectors while power is being supplied.  
Electric shock or damage to the device may result.
- Double-check all wiring before turning ON the power supply.
- After wiring, route the cable so that force is not applied directly to the connections.

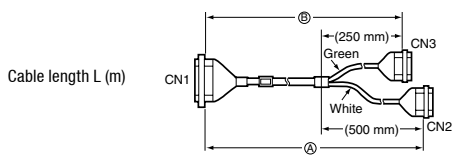
### ● Wires for Terminal Blocks

- Do not damage the cores when stripping the insulation from them.
- Always twist stranded wires together before connecting them.
- Do not presolder wires. It may not be possible to connect them or remove them.

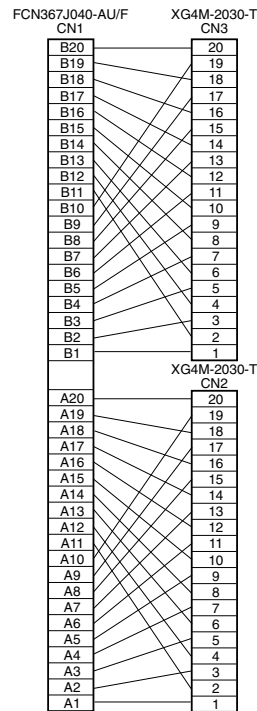
## XW2Z-□□□L

Connectors: One 40-pin Connector Made by Fujitsu Component, Ltd. to Two 20-pin MIL Connectors

| Appearance                                                                        | Model     | Cable length L (m) |       |
|-----------------------------------------------------------------------------------|-----------|--------------------|-------|
|                                                                                   |           | A                  | B     |
|  | XW2Z-100L | 1                  | 0.75  |
|                                                                                   | XW2Z-150L | 1.5                | 1.25  |
|                                                                                   | XW2Z-200L | 2                  | 1.75  |
|                                                                                   | XW2Z-300L | 3                  | 2.75  |
|                                                                                   | XW2Z-500L | 5                  | 4.75  |
|                                                                                   | XW2Z-010L | 10                 | 9.75  |
|                                                                                   | XW2Z-15ML | 15                 | 14.75 |
|                                                                                   | XW2Z-20ML | 20                 | 19.75 |



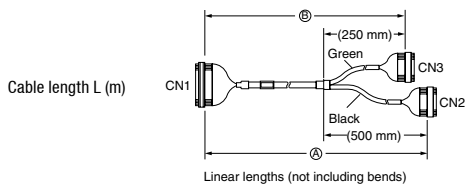
## Wiring Diagram



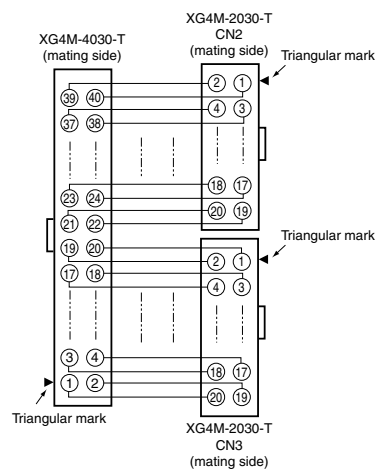
## XW2Z-□□□N

Connectors: One 40-pin MIL Connector to Two 20-pin MIL Connectors

| Appearance                                                                          | Model     | Cable length L (m) |       |
|-------------------------------------------------------------------------------------|-----------|--------------------|-------|
|                                                                                     |           | A                  | B     |
|  | XW2Z-100N | 1                  | 0.75  |
|                                                                                     | XW2Z-150N | 1.5                | 1.25  |
|                                                                                     | XW2Z-200N | 2                  | 1.75  |
|                                                                                     | XW2Z-300N | 3                  | 2.75  |
|                                                                                     | XW2Z-500N | 5                  | 4.75  |
|                                                                                     | XW2Z-010N | 10                 | 9.75  |
|                                                                                     | XW2Z-15MN | 15                 | 14.75 |
|                                                                                     | XW2Z-20MN | 20                 | 19.75 |

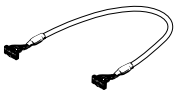


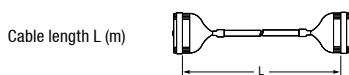
## Wiring Diagram



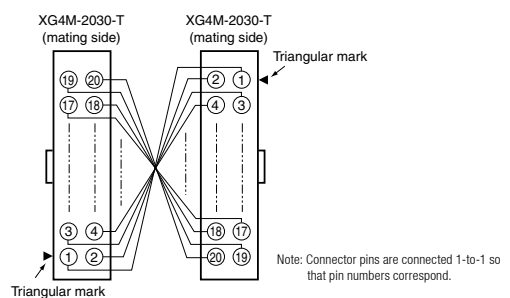
## XW2Z-□□□X

Connectors: One 20-pin MIL Connector to One 20-pin MIL Connector

| Appearance                                                                          | Model     | Cable length L (m) |
|-------------------------------------------------------------------------------------|-----------|--------------------|
|  | XW2Z-C50X | 0.5                |
|                                                                                     | XW2Z-100X | 1                  |
|                                                                                     | XW2Z-200X | 2                  |
|                                                                                     | XW2Z-300X | 3                  |
|                                                                                     | XW2Z-500X | 5                  |
|                                                                                     | XW2Z-010X | 10                 |



## Wiring Diagram



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