

## Connector-Terminal Block Conversion Units Designed Specifically to Connect PLCs

- Wiring patterns that are specifically designed for PLCs reduce the work required to check signal layout.
- Terminal block signal labels give the PLC addresses.
- Models available with Phillips screw, slotted screw, push-in, or e-CON connections.
- Models available with and without power supply terminals.
- Mounting to DIN Track is possible.



Item	PLC Maker	OMRON	Mitsubishi	Keyence
With power supply terminals	Appearance			
	Model	XW2R-□□□GD-C□-COM	XW2R-□32GD-M□-COM	XW2R-P32GD-K1-COM
	Page	Page 2	Page 13	Page 22
Without power supply terminals	Appearance			
	Model	XW2R-□34GD-C□	XW2R-□34GD-M□	XW2R-□□□GD-K□
	Page	Page 9	Page 18	Page 24

### Options (Order Separately)

Models that are mounted with screws are also available.

Refer to the *XW2R-series Connector-Terminal Block Conversion Units Catalog* (Cat. No. G077) for details.

### Connecting Cables for Connector-Terminal Block Conversion Units

Refer to the XW2Z datasheet.

# Models for Connection to OMRON PLCs with power supply terminals

## Model List

XW2R - □ □ □ G □ - C □ - COM

Wiring method		I/O Points		Mounted Connector type		Mounting method		PLC type		Power supply terminals	
P	Push-in spring	16	16 Points	G	MIL (XG4A)	D	DIN Track mounting	C1	Refer to the following table for 16-pole models and to page 3 for 32-pole models.	COM	Provided
N	e-CON Type	32	32 Points			V	Vertical screw mounting	C2			
						Blank	Horizontal screw mounting	C3			
								C4			

## Models for OMRON PLCs

### Models with 16 Poles

I/O	I/O Points	I/O Unit Model	Models that connect to PLCs	Connecting cables *	
Input	32	CJ1W-ID231 CS1W-ID231	XW2R-P16GD-C1-COM: 2 pcs XW2R-N16GD-C1-COM: 2 pcs	XW2Z-□□□D: 1 Cable	
		64	CJ1W-ID261 CS1W-ID261	XW2R-P16GD-C1-COM: 4 pcs XW2R-N16GD-C1-COM: 4 pcs	XW2Z-□□□D: 2 Cables
I/O	16		NX-MD6121-6 (inputs)	XW2R-P16GD-C1-COM: 1 pcs XW2R-N16GD-C1-COM: 1 pcs	XW2Z-□□□A: 1 Cable
		CJ1W-MD231 (inputs)	XW2R-P16GD-C1-COM: 1 pcs XW2R-N16GD-C1-COM: 1 pcs	XW2Z-□□□A: 1 Cable	
	32	CJ1W-MD261 (inputs)	XW2R-P16GD-C1-COM: 2 pcs XW2R-N16GD-C1-COM: 2 pcs	XW2Z-□□□D: 1 Cable	
		CS1W-MD261 (inputs)			
CS1W-MD262 (inputs)					
Input	32	CJ1W-ID232 CJ1W-ID233	XW2R-P16GD-C1-COM: 2 pcs XW2R-N16GD-C1-COM: 2 pcs	XW2Z-□□□N: 1 Cable	
		I/O			CJ1W-MD263 (inputs)
	CJ1W-MD563 (inputs)				
Input	64	CJ1W-ID262	XW2R-P16GD-C1-COM: 4 pcs XW2R-N16GD-C1-COM: 4 pcs	XW2Z-□□□N: 2 Cables	
Output	16	NX-OD5121-5 NX-OD5256-5	XW2R-P16GD-C3-COM: 1 pcs	XW2Z-□□□X: 1 Cable	
		32	CJ1W-OD231 CS1W-OD231 CS1W-OD232	XW2R-P16GD-C3-COM: 2 pcs	XW2Z-□□□L: 1 Cable
	CJ1W-OD232 CJ1W-OD233 CJ1W-OD234		XW2R-P16GD-C3-COM: 2 pcs	XW2Z-□□□N: 1 Cables	
	64		CJ1W-OD261 CS1W-OD261	XW2R-P16GD-C3-COM: 4 pcs	XW2Z-□□□L: 2 Cables
			CJ1W-OD262 CJ1W-OD263	XW2R-P16GD-C3-COM: 4 pcs	XW2Z-□□□N: 2 Cables
	I/O	16	NX-MD6121-6 (outputs)	XW2R-P16GD-C3-COM: 1 pcs	XW2Z-□□□A: 1 Cable
			CJ1W-MD231 (outputs)	XW2R-P16GD-C3-COM: 1 pcs	XW2Z-□□□A: 1 Cable
		32	CJ1W-MD261 (outputs)	XW2R-P16GD-C3-COM: 2 pcs	XW2Z-□□□L: 1 Cable
			CS1W-MD261 (outputs)		
CS1W-MD262 (outputs)					
	CS1W-MD561 (outputs)				

\* □□□ is replaced by the cable length. Refer to page 4.

**Note:** Connection is not possible to all OMRON PLC Units.

This Connector-Terminal Block Conversion Unit is for NPN. For PNP, reverse the polarity of the external power supply and I/O on the Connector-Terminal Block Conversion Unit.

# Models for Connection to OMRON PLCs with power supply terminals

## Models for OMRON PLCs

### Models with 32 Poles

I/O	I/O Points	I/O Unit Model	Models that connect to PLCs	Connecting cables *		
Input	32	NX-ID6142-5	XW2R-P32GD-C2-COM: 1 pcs XW2R-N32GD-C2-COM: 1 pcs	XW2Z-□□□K: 1 Cable, or XW2Z-□□□□FF-L: 1 Cable		
		NX-ID6142-6	XW2R-P32GD-C1-COM: 1 pcs XW2R-N32GD-C1-COM: 1 pcs	XW2Z-□□□B: 1 Cable, or XW2Z-□□□□BF-L: 1 Cable		
		CJ1W-ID231	XW2R-P32GD-C1-COM: 1 pcs	XW2Z-□□□B: 1 Cable, or XW2Z-□□□□BF-L: 1 Cable		
		CS1W-ID231	XW2R-N32GD-C1-COM: 1 pcs	XW2Z-□□□□BF-L: 1 Cable		
	64	CJ1W-ID261	XW2R-P32GD-C1-COM: 2 pcs XW2R-N32GD-C1-COM: 2 pcs	XW2Z-□□□B: 2 Cables, or XW2Z-□□□□BF-L: 2 Cables		
		CS1W-ID261				
I/O	32	CJ1W-MD261 (inputs)	XW2R-P32GD-C1-COM: 1 pcs XW2R-N32GD-C1-COM: 1 pcs	XW2Z-□□□B: 1 Cable, or XW2Z-□□□□BF-L: 1 Cable		
		CS1W-MD261 (inputs)				
		CS1W-MD262 (inputs)				
		CS1W-MD561 (inputs)				
Input	32	CJ1W-ID232 CJ1W-ID233	XW2R-P32GD-C2-COM: 1 pcs XW2R-N32GD-C2-COM: 1 pcs	XW2Z-□□□K: 1 Cable, or XW2Z-□□□□FF-L: 1 Cable		
	64	CJ1W-ID262	XW2R-P32GD-C2-COM: 2 pcs XW2R-N32GD-C2-COM: 2 pcs	XW2Z-□□□K: 2 Cables, or XW2Z-□□□□FF-L: 2 Cables		
I/O	32	CJ1W-MD263 (inputs) CJ1W-MD563 (inputs)	XW2R-P32GD-C2-COM: 1 pcs XW2R-N32GD-C2-COM: 1 pcs	XW2Z-□□□K: 1 Cable, or XW2Z-□□□□FF-L: 1 Cable		
		Output	32	NX-OD6121-5 NX-OD6256-5	XW2R-P32GD-C4-COM: 1 pcs	XW2Z-□□□K: 1 Cable, or XW2Z-□□□□FF-L: 1 Cable
NX-OD6121-6	XW2R-P32GD-C3-COM: 1 pcs			XW2Z-□□□B: 1 Cable, or XW2Z-□□□□BF-L: 1 Cable		
CJ1W-OD231 CS1W-OD231 CS1W-OD232	XW2R-P32GD-C3-COM: 1 pcs			XW2Z-□□□B: 1 Cable, or XW2Z-□□□□BF-L: 1 Cable		
CJ1W-OD261 CS1W-OD261 CS1W-OD262	XW2R-P32GD-C3-COM: 2 pcs			XW2Z-□□□B: 2 Cables, or XW2Z-□□□□BF-L: 2 Cables		
I/O	32		CJ1W-MD261 (outputs) CS1W-MD261 (outputs) CS1W-MD262 (outputs) CS1W-MD561 (outputs)	XW2R-P32GD-C3-COM: 1 pcs	XW2Z-□□□B: 1 Cable, or XW2Z-□□□□BF-L: 1 Cable	
			Output	32	CJ1W-OD232 CJ1W-OD233 CJ1W-OD234	XW2R-P32GD-C4-COM: 1 pcs
		64			CJ1W-OD262 CJ1W-OD263	XW2R-P32GD-C4-COM: 2 pcs
		I/O	32	CJ1W-MD263 (outputs) CJ1W-MD563 (outputs)	XW2R-P32GD-C4-COM: 1 pcs	XW2Z-□□□K: 1 Cable, or XW2Z-□□□□FF-L: 1 Cable

\* □□□□ is replaced by the cable length. Refer to page 4.

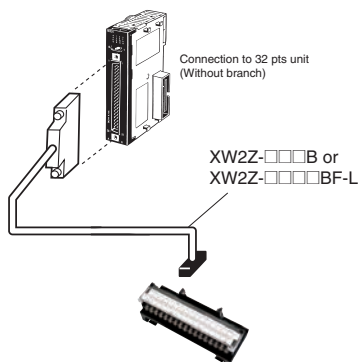
**Note:** Connection is not possible to all OMRON PLC Units.

This Connector-Terminal Block Conversion Unit is for NPN. For PNP, reverse the polarity of the external power supply and I/O on the Connector-Terminal Block Conversion Unit.

## Connection Examples

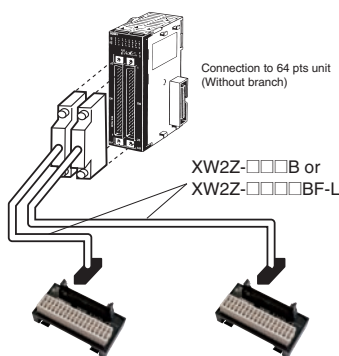
### 32-point Input Unit or Output Unit

CJ1W-ID231 32-point  
CJ1W-OD231 32-point



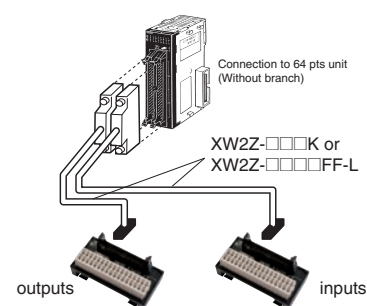
### 64-point Input Unit or Output Unit

CJ1W-ID261 64-point  
CJ1W-OD261 64-point



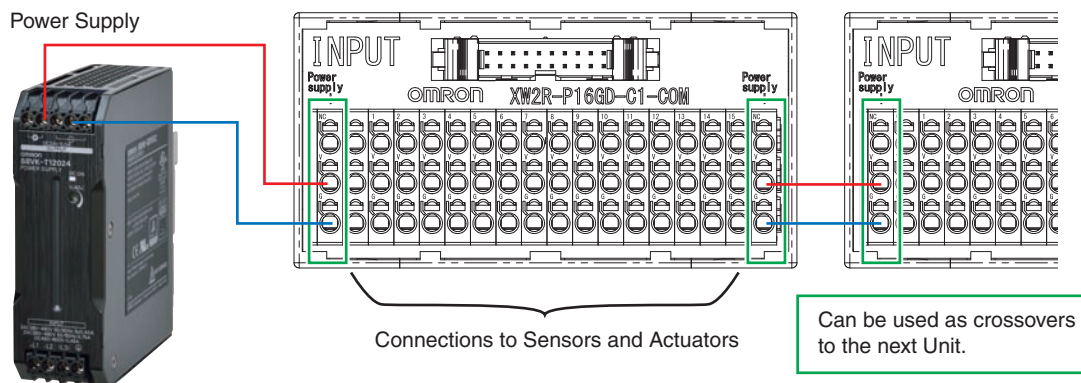
### 64-point I/O Unit

CJ1W-MD563 IN 32 Points,  
OUT 32 Points



# Models for Connection to OMRON PLCs with power supply terminals

## Application Example



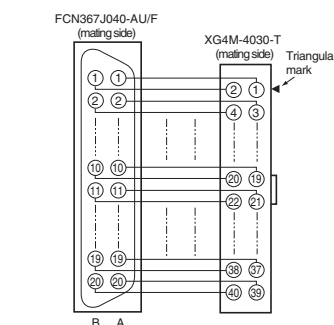
## PLC Connecting Cables

### XW2Z-□□□B, XW2Z-□□□□BF-L

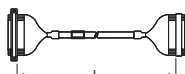
Connectors: One 40-pin Connector Made by Fujitsu Component, Ltd. to One 40-pin MIL Connector

#### Wiring Diagram

Appearance	Cable length L (m)	With shield	Without shield
		Model	Model
	0.5	XW2Z-050B	XW2Z-0050BF-L
	1	XW2Z-100B	XW2Z-0100BF-L
	1.5	XW2Z-150B	XW2Z-0150BF-L
	2	XW2Z-200B	XW2Z-0200BF-L
	3	XW2Z-300B	XW2Z-0300BF-L
	5	XW2Z-500B	XW2Z-0500BF-L
	7	XW2Z-700B	XW2Z-0700BF-L
	10	XW2Z-010B	XW2Z-1000BF-L
	15	XW2Z-15MB	---
	20	XW2Z-20MB	---



Cable length L (m)

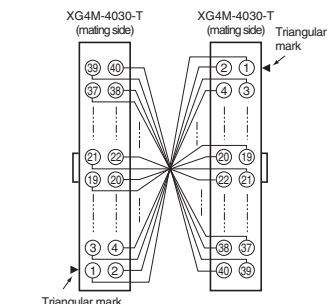


### XW2Z-□□□K, XW2Z-□□□□FF-L

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

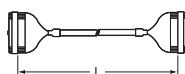
#### Wiring Diagram

Appearance	Cable length L (m)	With shield	Without shield
		Model	Model
	0.25	XW2Z-C25K	---
	0.5	XW2Z-C50K	XW2Z-0050FF-L
	1	XW2Z-100K	XW2Z-0100FF-L
	1.5	XW2Z-150K	XW2Z-0150FF-L
	2	XW2Z-200K	XW2Z-0200FF-L
	3	XW2Z-300K	XW2Z-0300FF-L
	5	XW2Z-500K	XW2Z-0500FF-L
	7	---	XW2Z-0700FF-L
10	XW2Z-010K	XW2Z-1000FF-L	



Note: Wire the connector terminals 1:1 so that the connector terminal numbers coincide.


Cable length L (m)



# Models for Connection to OMRON PLCs with power supply terminals

Push-in spring

## Ordering Information

Appearance *1	I/O Points	Input/Output	Model *2	Dimension A (mm)
	16	Input	XW2R-P16GD-C1-COM	98.5
		Output	XW2R-P16GD-C3-COM	
	32	Input	XW2R-P32GD-C1-COM	186.7
			XW2R-P32GD-C2-COM	
		Output	XW2R-P32GD-C3-COM	
			XW2R-P32GD-C4-COM	

\*1 Input models (XW2R-P□□GD-C1/C2-COM) are black and output models (XW2R-P□□GD-C3/C4-COM) are green.

\*2 Only DIN Track mounting models are described here. Refer to the XW2R-series Connector-Terminal Block Conversion Units Catalog (Cat. No. G077) for information on screw mounting models.

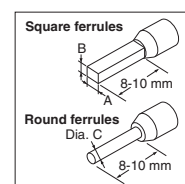
## Ratings and Specifications

<b>Rated current</b>	16 Points: 1A/signal, 4A/common 32 Points: 1A/signal, 8A/common	
<b>Rated voltage</b>	24VDC	
<b>Insulation resistance</b>	100MΩ min. (at 500VDC)	
<b>Dielectric strength</b>	500VAC for 1 ferrule/min (leakage current: 1 mA max.)	
<b>Ambient operating temperature</b>	0 to 55°C	
<b>Applicable wires</b>	<b>Applicable wire sizes</b>	AWG 24 to 14 (ferrules) AWG 28 to 14 (stranded or solid) (Outer diameter of insulation must be 4 mm max)
	<b>Stripped length</b>	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.



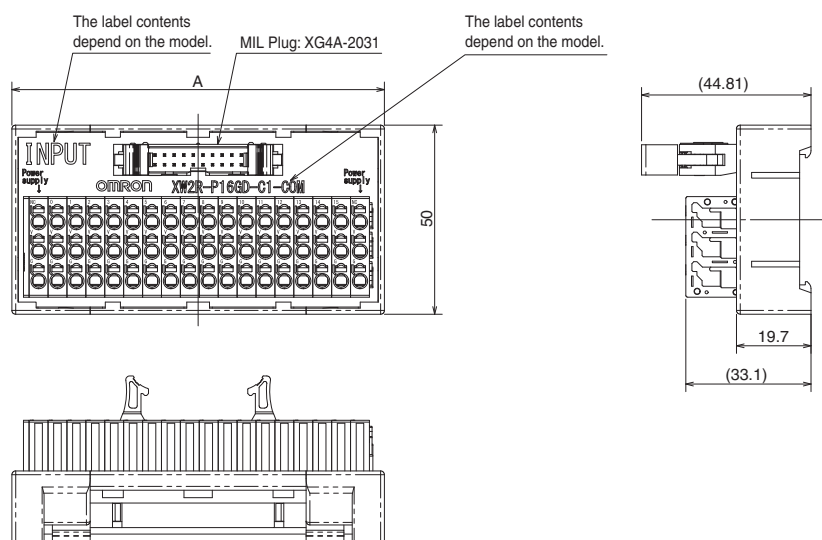
- Ferrule Dimensions

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

Refer to page 28 for information on Square/Round ferrule and use tool.

## Dimensions

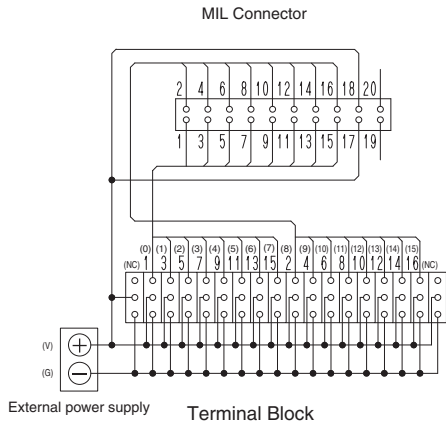
(Unit: mm)



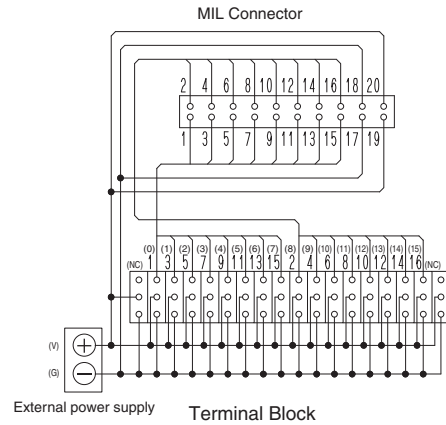
# Models for Connection to OMRON PLCs with power supply terminals

## Wiring Diagram

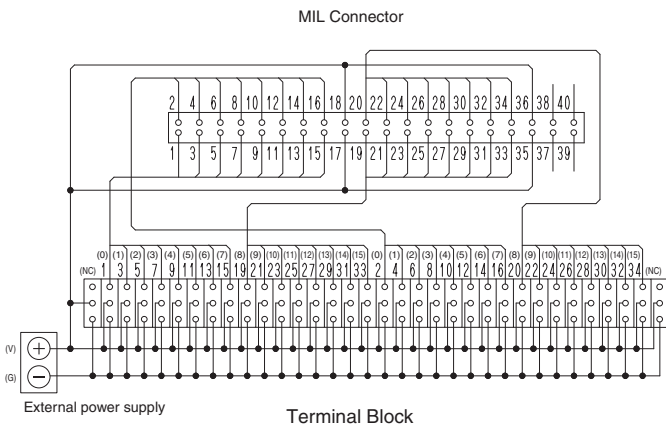
XW2R-P16GD-C1-COM



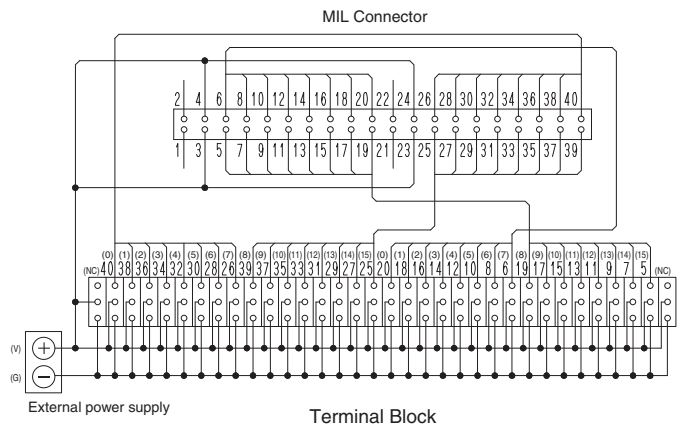
XW2R-P16GD-C3-COM



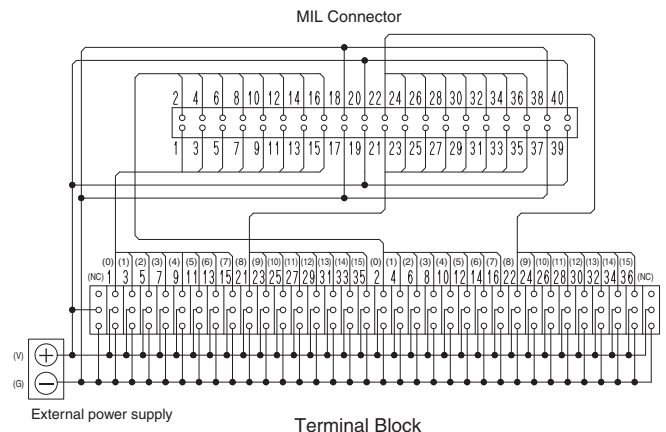
XW2R-P32GD-C1-COM



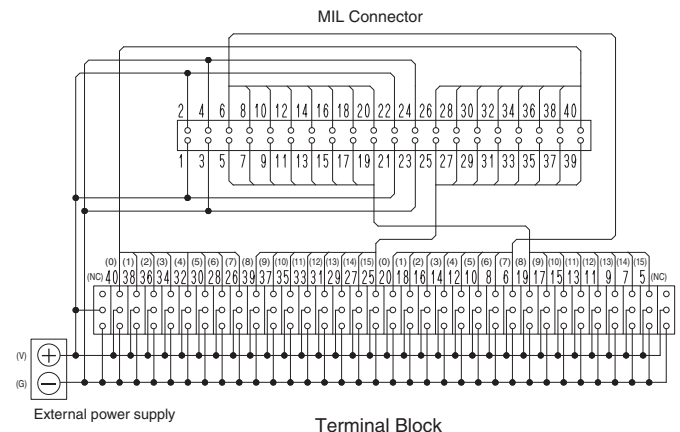
XW2R-P32GD-C2-COM



XW2R-P32GD-C3-COM



XW2R-P32GD-C4-COM



## Label Contents

XW2R-P16GD-C1-COM  
XW2R-P16GD-C3-COM

NC	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	NC
V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G


XW2R-P32GD-C1-COM, XW2R-P32GD-C3-COM  
XW2R-P32GD-C2-COM, XW2R-P32GD-C4-COM

NC	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	NC
V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G

# Models for Connection to OMRON PLCs with power supply terminals

e-CON Type

## Ordering Information

Appearance	I/O Points	Input/Output	Model	Dimension A (mm)
	16	Input	XW2R-N16GD-C1-COM	98.5
	32		XW2R-N32GD-C1-COM	186.7
			XW2R-N32GD-C2-COM	

## Ratings and Specifications

<b>Rated current</b>	Power supply terminal block: 4 A/16 poles or 8 A/32 poles Connectors/e-CON Connectors: 1 A (However, rated current of e-CON Connector depends on the wires that are used.)
<b>Rated voltage</b>	24VDC
<b>Insulation resistance</b>	100M $\Omega$ min. (at 500VDC)
<b>Dielectric strength</b>	500VAC for 1 min (leakage current: 1 mA max.)
<b>Ambient operating temperature</b>	0 to 55°C
<b>Applicable wires</b>	<b>Applicable wire sizes</b>
	<b>Stripped length</b>

AWG 24 to 14 (ferrules)  
AWG 28 to 14 (stranded wires)  
AWG 28 to 16 (solid wires)\*  
(Outer diameter of insulation must be 4 mm max)

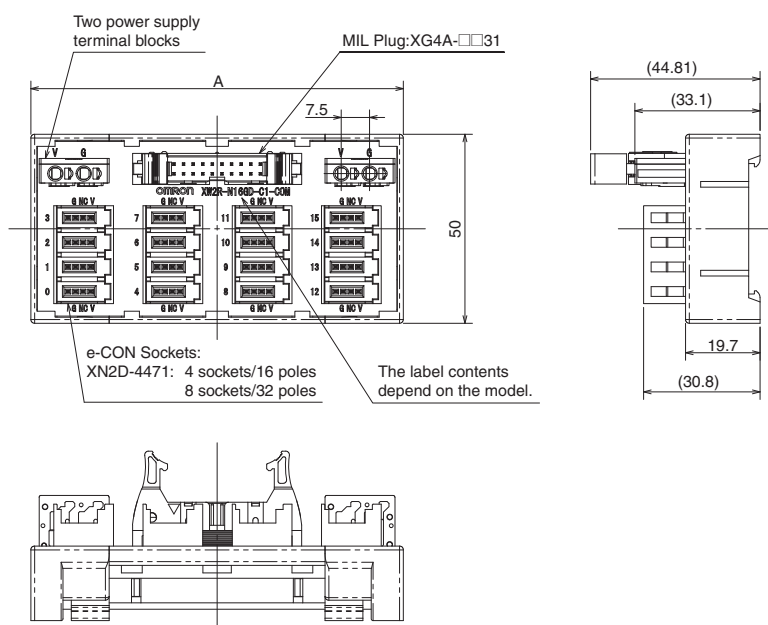
AWG28-16: 8 to 10 mm  
AWG14: 9 to 10 mm

\* This is the applicable range for the power supply terminal block. For the applicable wire sizes for I/O Connectors (e-CON), refer to page 27.

Refer to page 27 for the recommended e-CON Connectors.

## Dimensions

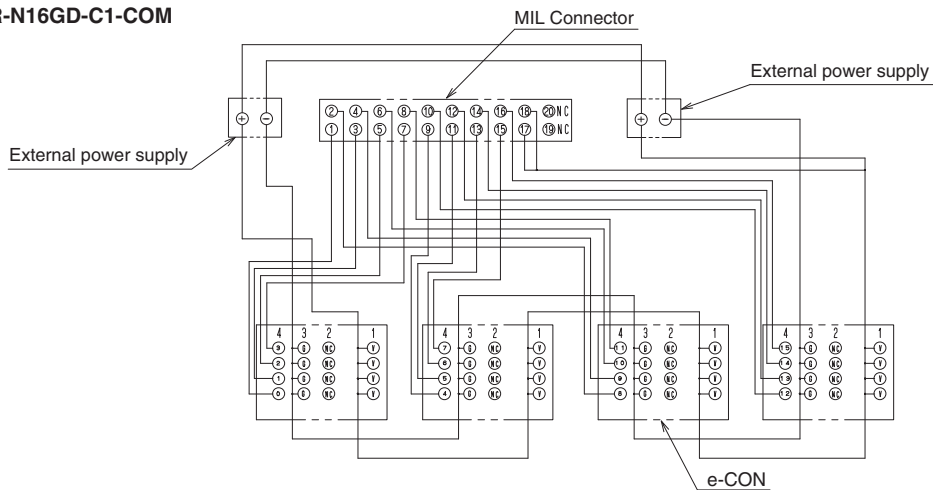
(Unit: mm)



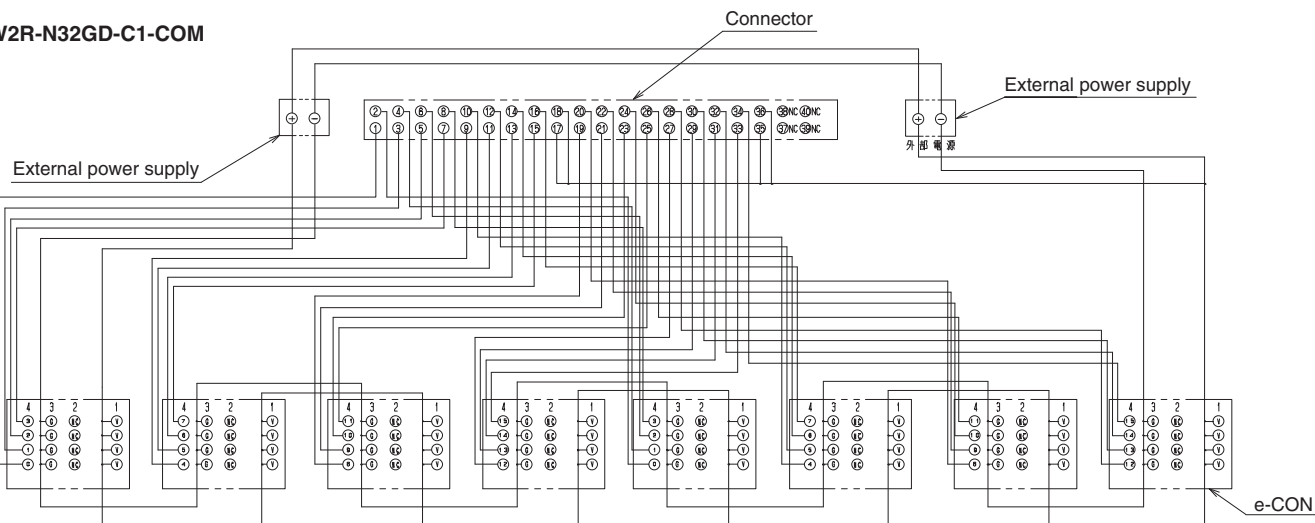
# Models for Connection to OMRON PLCs with power supply terminals

## Wiring Diagram

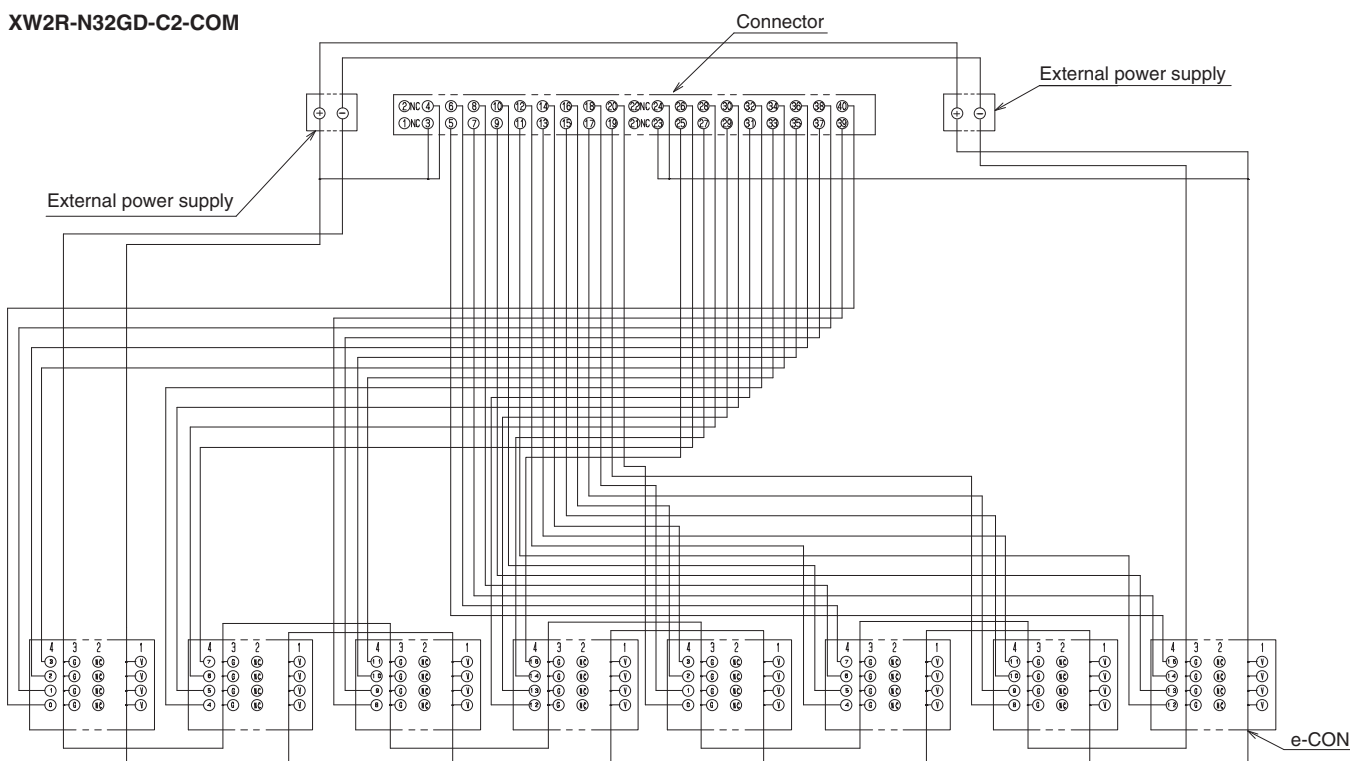
XW2R-N16GD-C1-COM



XW2R-N32GD-C1-COM



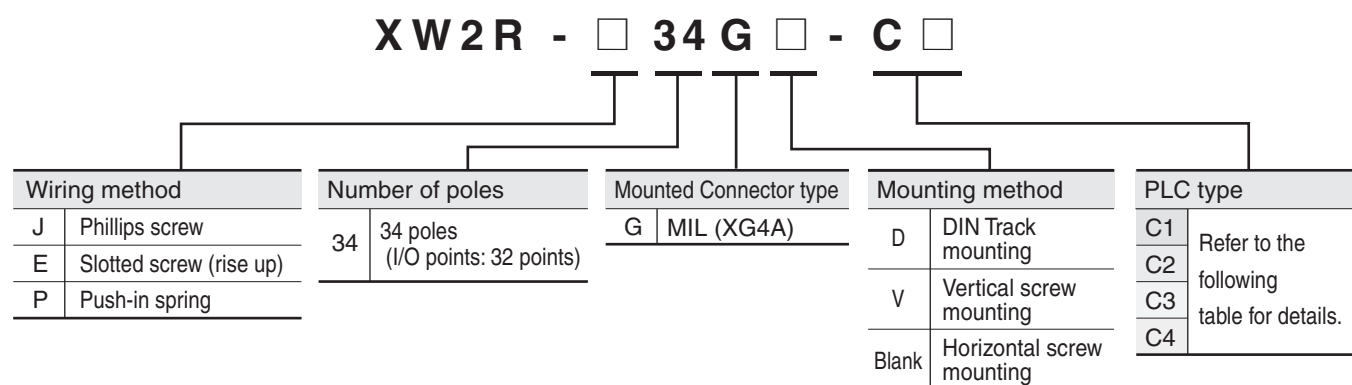
XW2R-N32GD-C2-COM





# Models for Connection to OMRON PLCs without power supply terminals

## Model List



## Models for OMRON PLCs

I/O	I/O Points	I/O Unit Model	Models that connect to PLCs *1	Connecting cables *2
Input	32	NX-ID6142-6	XW2R-□34GD-C1: 1 pcs	XW2Z-□□□B: 1 Cable, or XW2Z-□□□□BF-L: 1 Cable
		CJ1W-ID231	XW2R-□34GD-C1: 1 pcs	XW2Z-□□□B: 1 Cable, or XW2Z-□□□□BF-L: 1 Cable
		CS1W-ID231		
	64	CJ1W-ID261	XW2R-□34GD-C1: 2 pcs	XW2Z-□□□B: 2 Cables, or XW2Z-□□□□BF-L: 2 Cables
CS1W-ID261				
I/O	32	CJ1W-MD261 (inputs)	XW2R-□34GD-C1: 1 pcs	XW2Z-□□□B: 1 Cable, or XW2Z-□□□□BF-L: 1 Cable
		CS1W-MD261 (inputs)		
		CS1W-MD262 (inputs)		
		CS1W-MD561 (inputs)		
Input	32	NX-ID6142-5	XW2R-□34GD-C2: 1 pcs	XW2Z-□□□K: 1 Cable, or XW2Z-□□□□FF-L: 1 Cable
		CJ1W-ID232	XW2R-□34GD-C2: 1 pcs	XW2Z-□□□K: 1 Cable, or XW2Z-□□□□FF-L: 1 Cable
		CJ1W-ID233		
	64	CJ1W-ID262	XW2R-□34GD-C2: 2 pcs	XW2Z-□□□K: 2 Cables, or XW2Z-□□□□FF-L: 2 Cables
I/O	32	CJ1W-MD263 (inputs)	XW2R-□34GD-C2: 1 pcs	XW2Z-□□□K: 1 Cable, or XW2Z-□□□□FF-L: 1 Cable
		CJ1W-MD563 (inputs)		
Output	32	NX-OD6121-6	XW2R-□34GD-C3: 1 pcs	XW2Z-□□□B: 1 Cable, or XW2Z-□□□□BF-L: 1 Cable
		CJ1W-OD231	XW2R-□34GD-C3: 1 pcs	XW2Z-□□□B: 1 Cable, or XW2Z-□□□□BF-L: 1 Cable
		CS1W-OD231		
		CS1W-OD232		
	64	CJ1W-OD261	XW2R-□34GD-C3: 2 pcs	XW2Z-□□□B: 2 Cables, or XW2Z-□□□□BF-L: 2 Cables
		CS1W-OD261		
CS1W-OD262				
I/O	32	CJ1W-MD261 (outputs)	XW2R-□34GD-C3: 1 pcs	XW2Z-□□□B: 1 Cable, or XW2Z-□□□□BF-L: 1 Cable
		CS1W-MD261 (outputs)		
		CS1W-MD262 (outputs)		
		CS1W-MD561 (outputs)		
Output	32	NX-OD6121-5	XW2R-□34GD-C4: 1 pcs	XW2Z-□□□K: 1 Cable, or XW2Z-□□□□FF-L: 1 Cable
		NX-OD6256-5		
		CJ1W-OD232	XW2R-□34GD-C4: 1 pcs	XW2Z-□□□K: 1 Cable, or XW2Z-□□□□FF-L: 1 Cable
		CJ1W-OD233		
	CJ1W-OD234			
	64	CJ1W-OD262	XW2R-□34GD-C4: 2 pcs	XW2Z-□□□K: 2 Cables, or XW2Z-□□□□FF-L: 2 Cables
CJ1W-OD263				
I/O	32	CJ1W-MD263 (outputs)	XW2R-□34GD-C4: 1 pcs	XW2Z-□□□K: 1 Cable, or XW2Z-□□□□FF-L: 1 Cable
		CJ1W-MD563 (outputs)		

\*1 Replace the box (□) with the wiring method code (J, E, or P).

\*2 □□□□ is replaced by the cable length. For details, refer to page 4.


**Note:** 1. Connection is not possible to all OMRON PLC Units.

2. There is one common for each 32 points.

# Models for Connection to OMRON PLCs without power supply terminals

Phillips screw

## Ordering Information

Appearance	I/O Points (Number of poles)	Model *
	32 (34)	XW2R-J34GD-C1
		XW2R-J34GD-C2
		XW2R-J34GD-C3
		XW2R-J34GD-C4

\* Only DIN Track mounting models are described here. Refer to the XW2R-series Connector-Terminal Block Conversion Units Catalog (Cat. No. G077) for information on screw mounting models.

## Ratings and Specifications

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

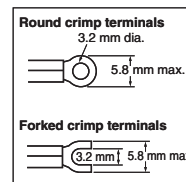
### Details on Crimp Terminals

#### Wiring Terminal Blocks

- Using Crimp Terminals (With a Terminal Block with M3 Screws)

#### Terminal Screw Tightening Torque

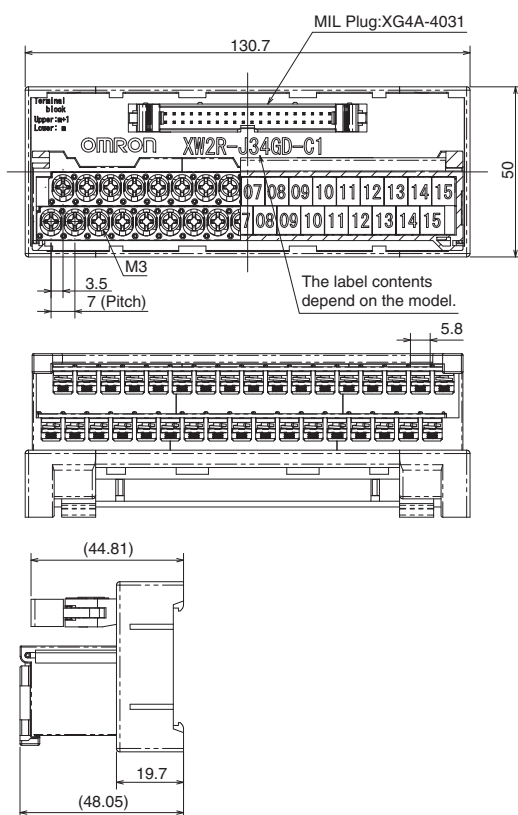
- Use a tightening torque of 0.5 N·m when connecting wires or crimp terminals to the terminal block.



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> )

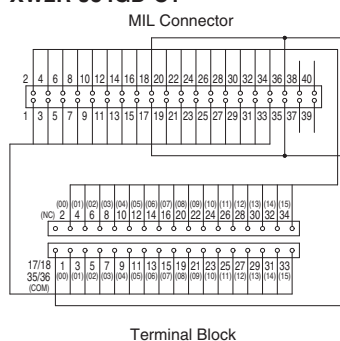
## Dimensions

(Unit: mm)

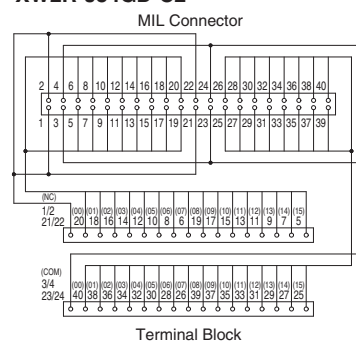


## Wiring Diagram

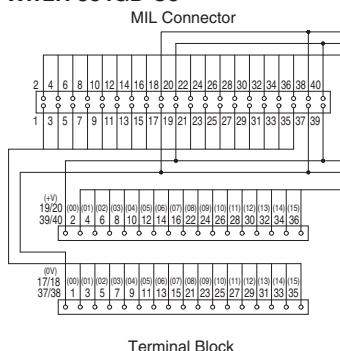
### XW2R-J34GD-C1



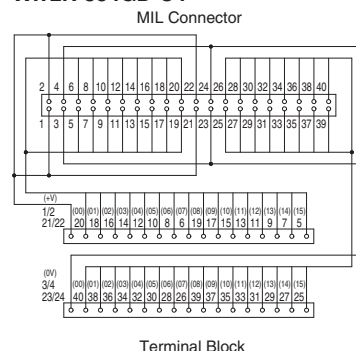
### XW2R-J34GD-C2



### XW2R-J34GD-C3



### XW2R-J34GD-C4



## Label Contents

### XW2R-J34GD-C1, XW2R-J34GD-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


### XW2R-J34GD-C3, XW2R-J34GD-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

# Models for Connection to OMRON PLCs without power supply terminals

Slotted screw (rise up)

## Ordering Information

Appearance	I/O Points (Number of poles)	Model *
	32 (34)	XW2R-E34GD-C1
		XW2R-E34GD-C2
		XW2R-E34GD-C3
		XW2R-E34GD-C4

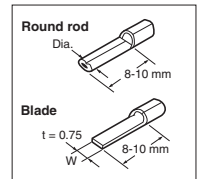
\* Only DIN Track mounting models are described here. Refer to the XW2R-series Connector-Terminal Block Conversion Units Catalog (Cat. No. G077) for information on screw mounting models.

## Ratings and Specifications

Rated current	0.5 A/signal, 4 A/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 (ferrules) AWG 26 to 16 (stranded or solid wires)
	Stripped length	7 mm
	Tightening	0.5 to 0.6 N·m

### Details on Crimp Terminals

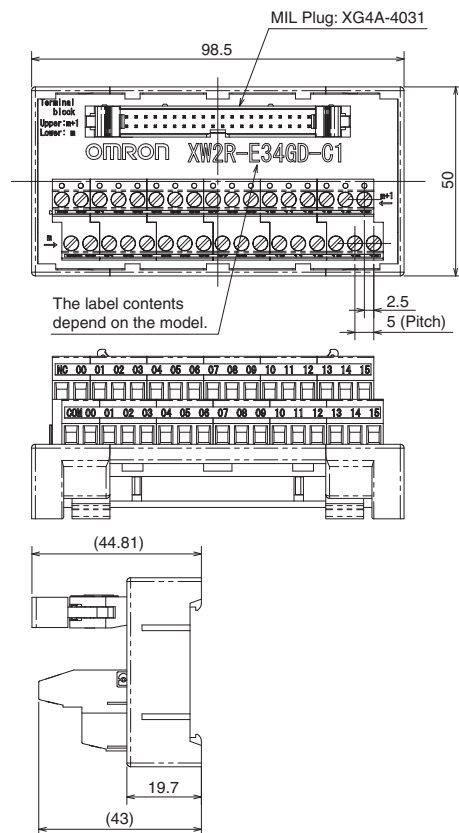
Applicable crimp terminals		Applicable wires
Rod	TC-05 Dia. = 1	AWG22 to AWG18 (0.30 to 0.75 mm <sup>2</sup> )
	TC-1.25S Dia. = 1.5	AWG22 to AWG16 (0.30 to 1.25 mm <sup>2</sup> )
Blade	BT1.25-9-1	AWG22 to AWG16 (0.30 to 1.25 mm <sup>2</sup> )
	BT1.25-10-1 W = 2.2	



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

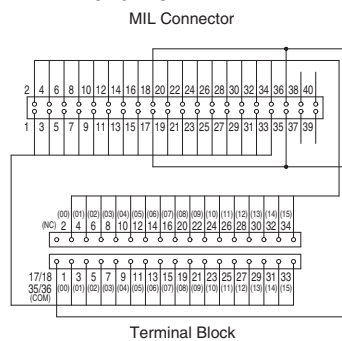
## Dimensions

(Unit: mm)

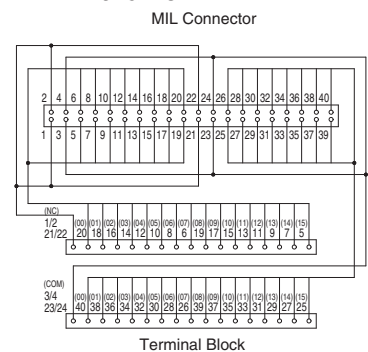


## Wiring Diagram

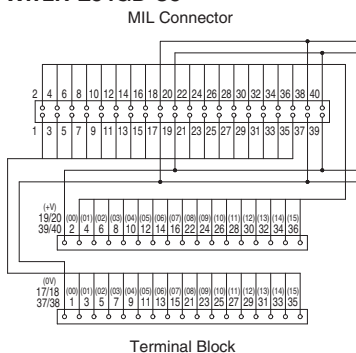
### XW2R-E34GD-C1



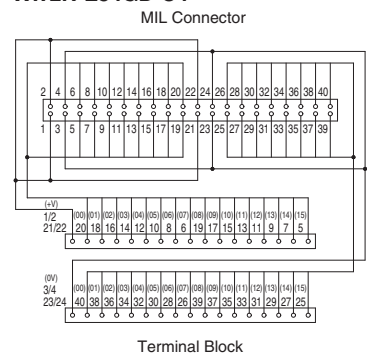
### XW2R-E34GD-C2



### XW2R-E34GD-C3



### XW2R-E34GD-C4



## Label Contents

### XW2R-E34GD-C1, XW2R-E34GD-C2

N	C	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	<sup>m+1</sup>
<sup>m</sup>	com	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	


### XW2R-E34GD-C3, XW2R-E34GD-C4

+V	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	<sup>m+1</sup>	
<sup>m</sup>	0	v	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

# Models for Connection to OMRON PLCs without power supply terminals

Push-in spring

## Ordering Information

Appearance	I/O Points (Number of poles)	Model *
	32 (34)	XW2R-P34GD-C1
		XW2R-P34GD-C2
		XW2R-P34GD-C3
		XW2R-P34GD-C4

\* Only DIN Track mounting models are described here. Refer to the XW2R-series Connector-Terminal Block Conversion Units Catalog (Cat. No. G077) for information on screw mounting models.

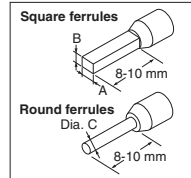
## Ratings and Specifications

Rated current	0.5 A/signal, 4 A/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 24 to 14 (ferrules) AWG 28 to 14 (stranded or solid) (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.



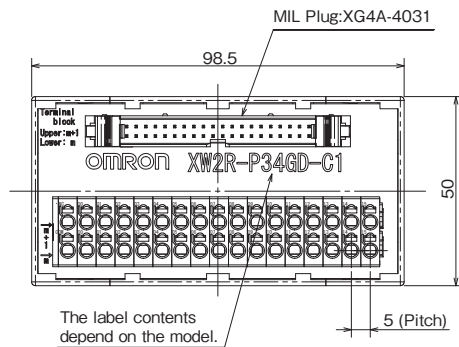
#### Ferrule Dimensions

Square ferrules	Dimension A (Width)	2.7 mm 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)	

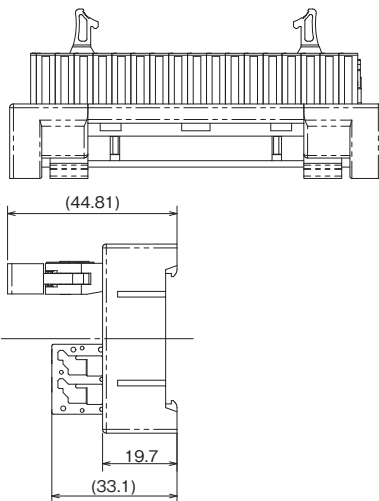
Refer to page 28 for information on Square/Round ferrule and use tool.

## Dimensions

(Unit: mm)

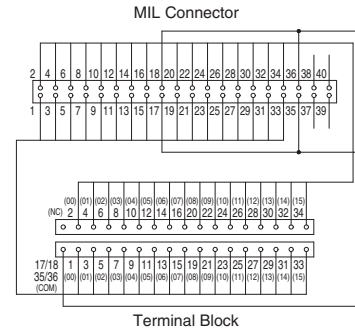


The label contents depend on the model.

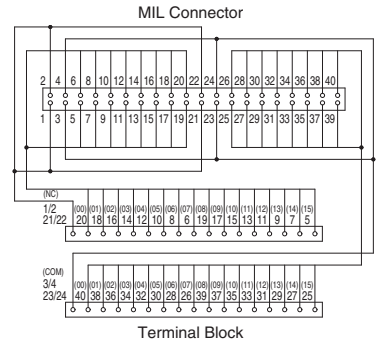


## Wiring Diagram

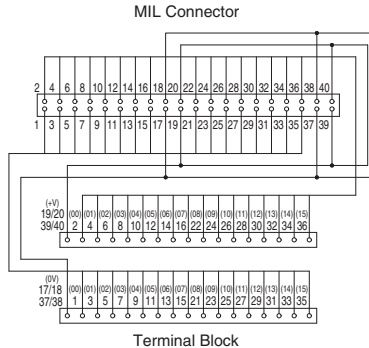
### XW2R-P34GD-C1



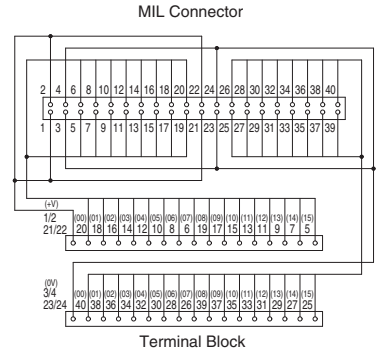
### XW2R-P34GD-C2



### XW2R-P34GD-C3



### XW2R-P34GD-C4



## Label Contents

XW2R-P34GD-C1, XW2R-P34GD-C2

m+1	NC	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
m	COM	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15

XW2R-P34GD-C3, XW2R-P34GD-C4

m+1	+V	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
m	0V	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15

# Models for Connection to Mitsubishi PLCs with power supply terminals

## Model List

**XW2R - □ 32 GD - M□ - COM**

Wiring method		I/O Points		Mounted Connector type		Mounting method		PLC type		Power supply terminals	
P	Push-in spring	32	32 Points	G	MIL (XG4A)	D	DIN Track mounting	M1	Refer to the following table for details.	COM	Provided
G	MIL Connector							M2			

## Models for Connection to Mitsubishi PLCs

PLC Type	I/O Points	Mitsubishi PLC Module model	Models that connect to PLCs	Connecting cables *				
M1	32	LX41C4	XW2R-P32GD-M1-COM: 1 pcs	XW2Z-□□□B: 1 Cable, or XW2Z-□□□□BF-L: 1 Cable				
		QX41/QX41-S1/QX41-S2						
		QX71						
		RX41C4						
		QH42P (Input)						
		QX41Y41P (Input)						
M1	64	LX42C4	XW2R-P32GD-M1-COM: 2 pcs	XW2Z-□□□B: 2 Cables, or XW2Z-□□□□BF-L: 2 Cables				
		QX42/QX42-S1						
		QX82/QX82-S1						
		RX42C4						
M2	32	LY41NT1P	XW2R-P32GD-M2-COM: 1 pcs	XW2Z-□□□B: 1 Cable, or XW2Z-□□□□BF-L: 1 Cable				
		QY41P						
		QY71						
		RY41NT2P						
		RY41PT1P						
		QH42P (Output)						
		QX41Y41P (Output)						
		RH42C4NT2P (Output)						
		M2			64	LY42NT1P	XW2R-P32GD-M2-COM: 2 pcs	XW2Z-□□□B: 2 Cables, or XW2Z-□□□□BF-L: 2 Cables
						QY42P		
QY82P								
RY42NT2P								
RY42PT1P								

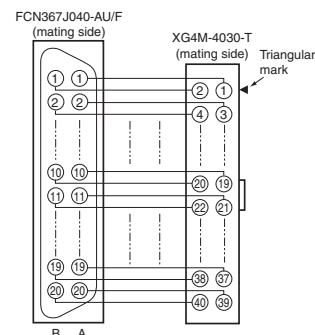
\* □□□□ is replaced by the cable length.

**Note:** This Connector-Terminal Block Conversion Unit is for NPN. For PNP, reverse the polarity of the external power supply and I/O on the Connector-Terminal Block Conversion Unit.

### XW2Z-□□□B, XW2Z-□□□□BF-L

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

#### Wiring Diagram



Appearance	Cable length L (m)	With shield	Without shield
		Model	Model
	0.5	XW2Z-050B	XW2Z-0050BF-L
	1	XW2Z-100B	XW2Z-0100BF-L
	1.5	XW2Z-150B	XW2Z-0150BF-L
	2	XW2Z-200B	XW2Z-0200BF-L
	3	XW2Z-300B	XW2Z-0300BF-L
	5	XW2Z-500B	XW2Z-0500BF-L
	7	XW2Z-700B	XW2Z-0700BF-L
	10	XW2Z-010B	XW2Z-1000BF-L
	15	XW2Z-15MB	---
	20	XW2Z-20MB	---

Cable length L (m)



# Models for Connection to Mitsubishi PLCs with power supply terminals

## MIL Connector

### Models for Connection to Mitsubishi PLCs

I/O Points	Model	Models that connect to PLCs	Connecting cables*
32	QX41, QX41-S1, QX41-S2, QX71	XW2R-G32GD-M1-COM: 1 pcs	Connection A XW2Z-□□□B: 1 Cable, or XW2Z-□□□BF-L: 1 Cable
	QH42P(Input) , QX41Y41P (Input)		Connection B XW2Z-□□□AA: 4 Cables
	LX41C4		
64	QX42, QX42-S1, QX82, QX82-S1	XW2R-G32GD-M1-COM: 2 pcs	Connection A XW2Z-□□□B: 2 Cables, or XW2Z-□□□BF-L: 2 Cables
	LX42C4		Connection B XW2Z-□□□AA: 8 Cables

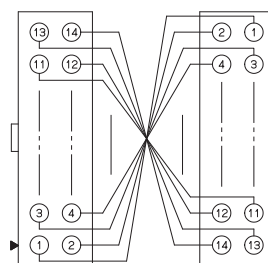
\* □□□□ is replaced by the cable length.

**Note:** Refer to page 13 for information on the XW2Z-□□□B and XW2Z-□□□BF-L.

This Connector-Terminal Block Conversion Unit is for NPN. For PNP, reverse the polarity of the external power supply and I/O on the Connector-Terminal Block Conversion Unit.

### XW2Z-□□□AA One 14-pin MIL Connector to One 14-pin MIL Connector

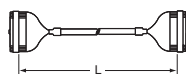
#### Wiring Diagram



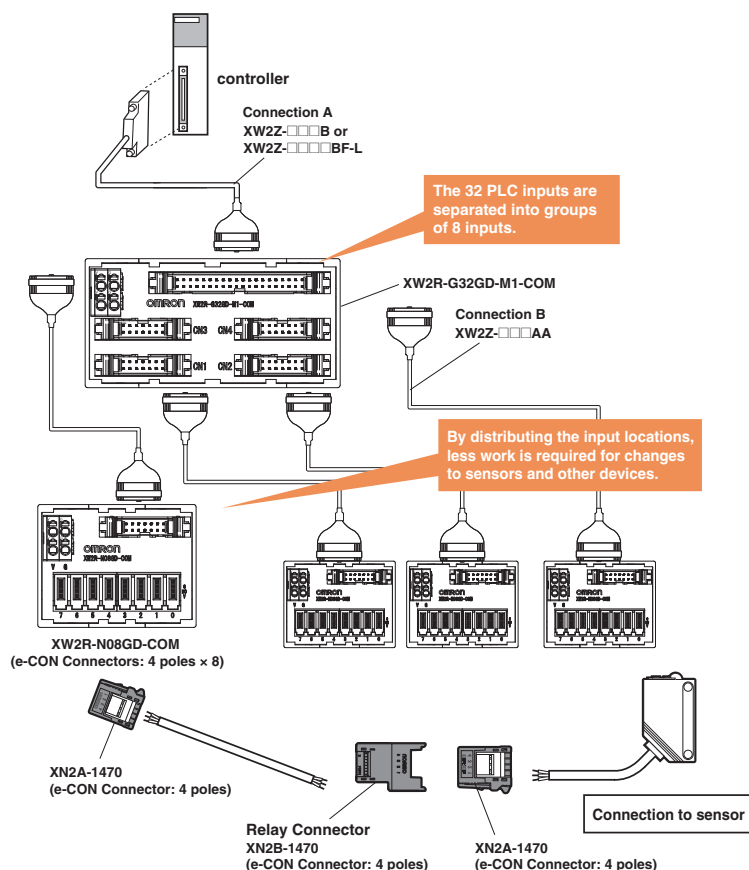
**Note:** Wire the connector terminals 1:1 so that the connector terminal numbers coincide.

Appearance	Cable length L (m)	With shield
		Model
	0.5	<b>XW2Z-050AA</b>
	1	<b>XW2Z-100AA</b>
	2	<b>XW2Z-200AA</b>
	5	<b>XW2Z-500AA</b>
	10	<b>XW2Z-010AA</b>

Cable length L (m)




### Connection Examples



# Models for Connection to Mitsubishi PLCs with power supply terminals

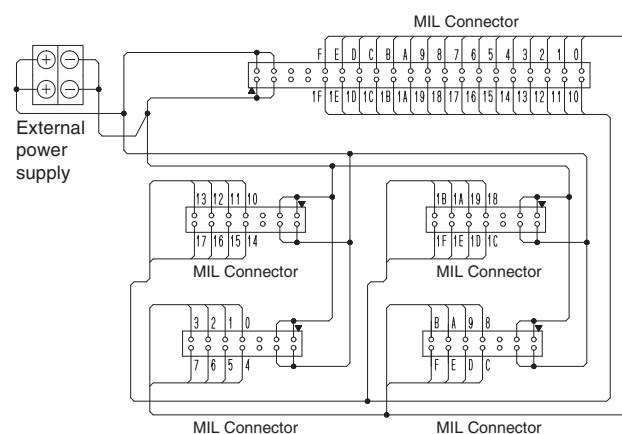
## Ordering Information

Appearance	Model	Number of poles
	XW2R-G32GD-M1-COM	40 poles x 1 point 14 poles x 4 points

## Ratings and Specifications

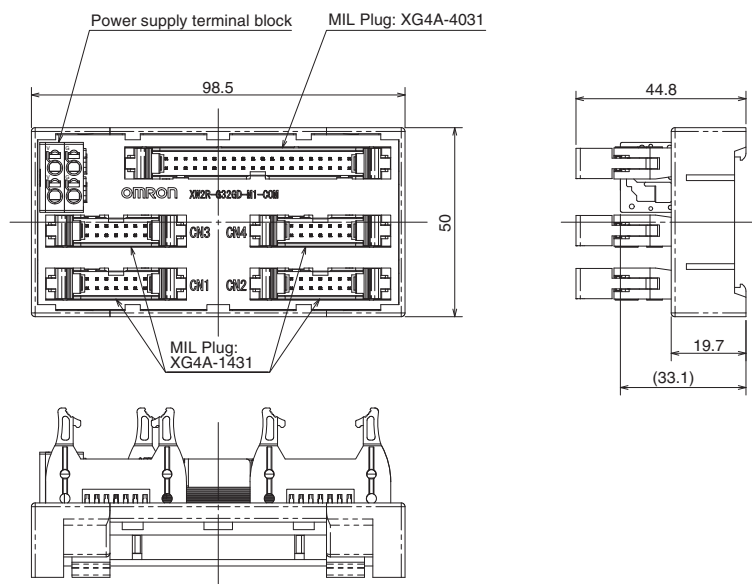
<b>Rated current</b>	Power supply terminal block: 8A Connectors: 1A
<b>Rated voltage</b>	24VDC
<b>Insulation resistance</b>	100MΩ min. (at 500VDC)
<b>Dielectric strength</b>	500VAC for 1 min (leakage current: 1 mA max.)
<b>Ambient operating temperature</b>	0 to 55°C
<b>Applicable wires</b>	<b>Applicable wire sizes</b>
	<b>Stripped length</b>
	AWG 24 to 14 (ferrules) AWG 28 to 14 (stranded wires) AWG 28 to 16 (solid wires) (Outer diameter of insulation must be 4 mm max)
	AWG28-16: 8 to 10 mm, AWG14: 9 to 10 mm

## Wiring Diagram




## Dimensions

(Unit: mm)



# Models for Connection to Mitsubishi PLCs with power supply terminals

## Ordering Information

Appearance	I/O Points	Number of poles (PLC end)	I/O	Model	Mounted Connector model	Cable Connector model
	8 points	14 poles	Input	<b>XW2R-N08GD-COM</b>	XG4A-1431 (PLC end) XN2D-4471 (for input)	XG4M-1430-T (PLC end) XN2A-1470 (for input)

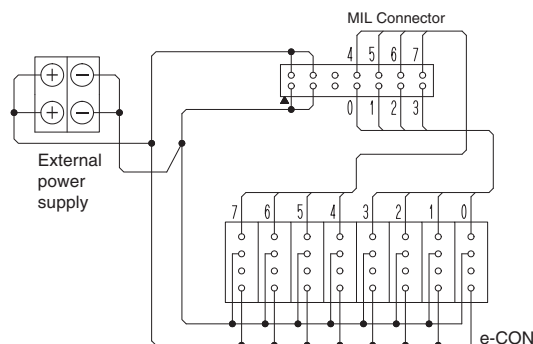
## Ratings and Specifications

<b>Rated current</b>	Power supply terminal block: 2A Connectors/e-CON Connectors: 1 A (However, rated current of e-CON Connector depends on the wires that are used.)
<b>Rated voltage</b>	24VDC
<b>Insulation resistance</b>	100MΩ min. (at 500VDC)
<b>Dielectric strength</b>	500VAC for 1 min (leakage current: 1 mA max.)
<b>Ambient operating temperature</b>	0 to 55°C
<b>Applicable wires</b>	<b>Applicable wire sizes *</b>
	<b>Stripped length</b>

\* This is the applicable range for the power supply terminal block. For the applicable wire sizes for I/O Connectors (e-CON), refer to page 27.

Refer to page 27 for the recommended e-CON Connectors.

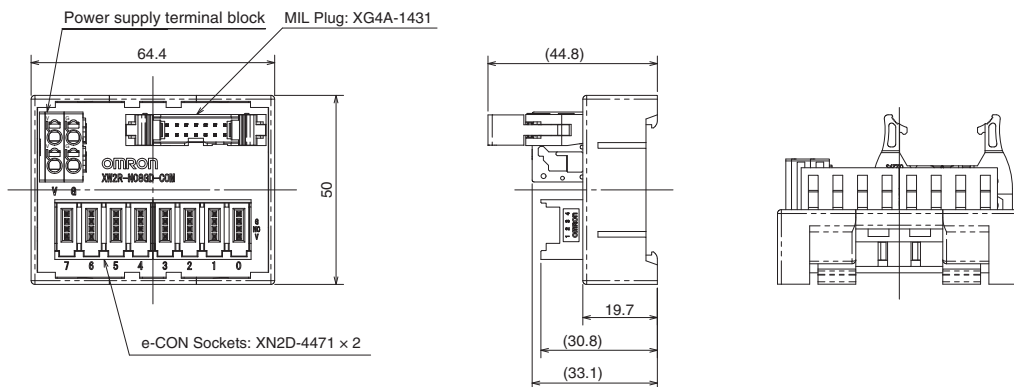
## Wiring Diagram



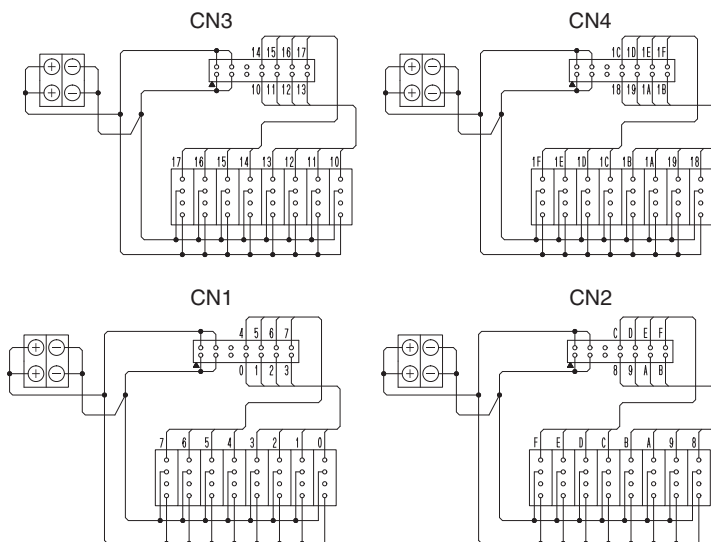
(This connection diagram is for combining with CN1 on the XW2R-G32GD-M1-COM.)

## Dimensions

(Unit: mm)



The e-CON address assignments are for combining the XW2R-G32GD-M1-COM with four XW2R-N08GD-COM.





# Models for Connection to Mitsubishi PLCs with power supply terminals

Push-in spring

## Ordering Information

Appearance	I/O Points	Input/Output	Model
	32 points	Input	XW2R-P32GD-M1-COM
		Output	XW2R-P32GD-M2-COM

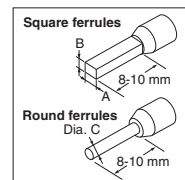
## Ratings and Specifications

Rated current	1 A/signal, 8 A/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 24 to 14 (ferrules) AWG 28 to 14 (stranded or solid) (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.



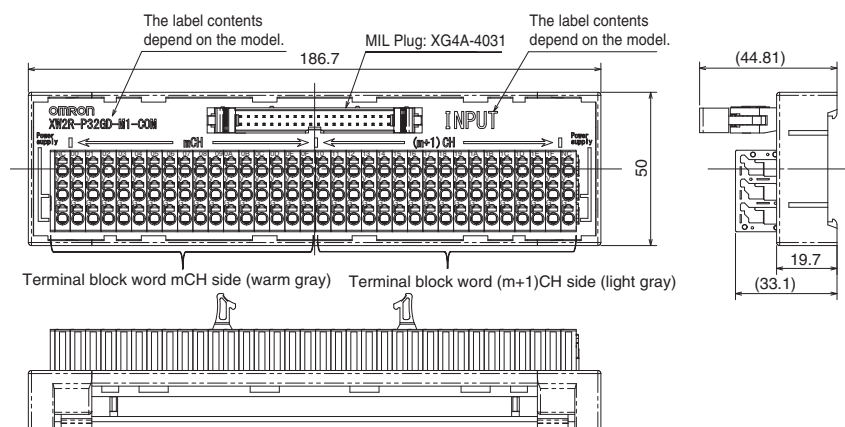
- Ferrule Dimensions

Square ferrules	Dimension A (Width)	2.7 mm 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)	

Refer to page 28 for information on Square/Round ferrule and use tool.

## Dimensions

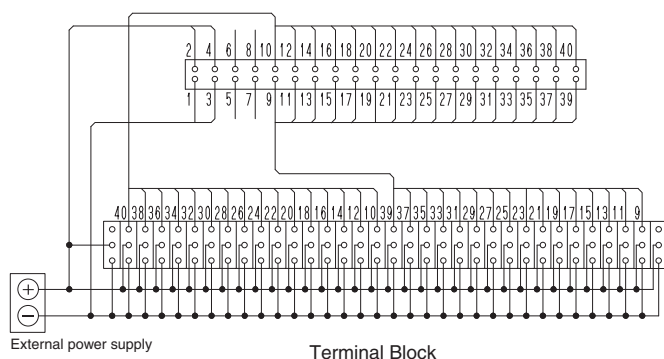
(Unit: mm)



## Wiring Diagram

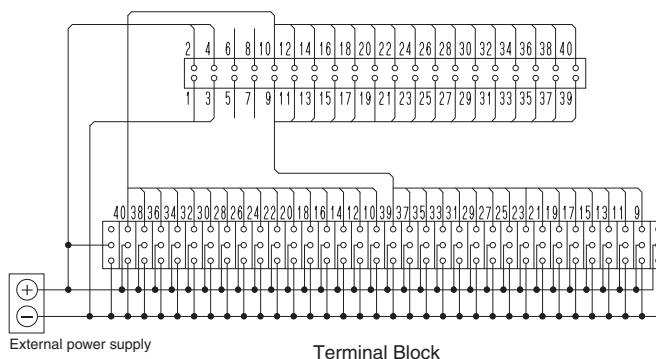
XW2R-P32GD-M1-COM

MIL Connector



XW2R-P32GD-M2-COM

MIL Connector



## Label Contents

XW2R-P32GD-M1-COM, XW2R-P32GD-M2-COM

	mCH																(m+1)CH																	
Row 1	NC	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F	NC
Row 2	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
Row 3	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G

# Models for Connection to Mitsubishi PLCs without power supply terminals

## Model List

XW2R - □ 34 G □ - M □

Wiring method		Number of poles 34 34 poles (I/O points: 32 points)	Mounted Connector type		Mounting method		PLC Type	
J	Phillips screw			G	MIL (XG4A)	D	DIN Track mounting	M1
E	Slotted screw (rise up)	V		Vertical screw mounting	M2			
P	Push-in spring	Blank		Horizontal screw mounting				

## Models for Connection to Mitsubishi PLCs

PLC Type	I/O Points	Mitsubishi PLC Module model	Models that connect to PLCs *1	Connecting cables *2				
M1	32	LX41C4	XW2R-□34GD-M1: 1 pcs	XW2Z-□□□B: 1 Cable, or XW2Z-□□□BF-L: 1 Cable				
		QX41/QX41-S1/QX41-S2						
		QX71						
		RX41C4						
		QH42P (Input)						
		QX41Y41P (Input)						
M1	64	RH42C4NT2P (Input)	XW2R-□34GD-M1: 2 pcs	XW2Z-□□□B: 2 Cables, or XW2Z-□□□BF-L: 2 Cables				
		LX42C4						
		QX42/QX42-S1						
		QX82/QX82-S1						
		RX42C4						
M2	32	LY41NT1P	XW2R-□34GD-M2: 1 pcs	XW2Z-□□□B: 1 Cable, or XW2Z-□□□BF-L: 1 Cable				
		QY41P						
		QY71						
		RY41NT2P						
		RY41PT1P						
		QH42P (Output)						
		QX41Y41P (Output)						
		RH42C4NT2P (Output)						
		M2			64	LY42NT1P	XW2R-□34GD-M2: 2 pcs	XW2Z-□□□B: 2 Cables, or XW2Z-□□□BF-L: 1 Cable
						QY42P		
QY82P								
RY42NT2P								
RY42PT1P								


\*1 Replace the box (□) with the wiring method code (J, E, or P).

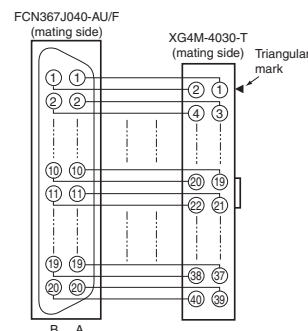
\*2 □□□□ is replaced by the cable length.

### XW2Z-□□□B, XW2Z-□□□BF-L

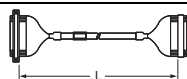
Connectors: One 40-pin Connector Made by Fujitsu Component, Ltd. to One 40-pin MIL Connector

#### Wiring Diagram

Appearance	Cable length L (m)	With shield	With shield
		Model	Model
	0.5	XW2Z-050B	XW2Z-0050BF-L
	1	XW2Z-100B	XW2Z-0100BF-L
	1.5	XW2Z-150B	XW2Z-0150BF-L
	2	XW2Z-200B	XW2Z-0200BF-L
	3	XW2Z-300B	XW2Z-0300BF-L
	5	XW2Z-500B	XW2Z-0500BF-L
	7	XW2Z-700B	XW2Z-0700BF-L
	10	XW2Z-010B	XW2Z-1000BF-L
	15	XW2Z-15MB	---
	20	XW2Z-20MB	---




Cable length L (m)



# Models for Connection to Mitsubishi PLCs without power supply terminals

Phillips screw

## Ordering Information

Appearance	I/O Points (Number of poles)	Model *
	32 (34)	XW2R-J34GD-M1
		XW2R-J34GD-M2

\* Only DIN Track mounting models are described here. Refer to the XW2R-series Connector-Terminal Block Conversion Units Catalog (Cat. No. G077) for information on screw mounting models.

## Ratings and Specifications

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

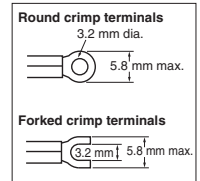
### Details on Crimp Terminals

#### Wiring Terminal Blocks

- Using Crimp Terminals (With a Terminal Block with M3 Screws)

#### Terminal Screw Tightening Torque

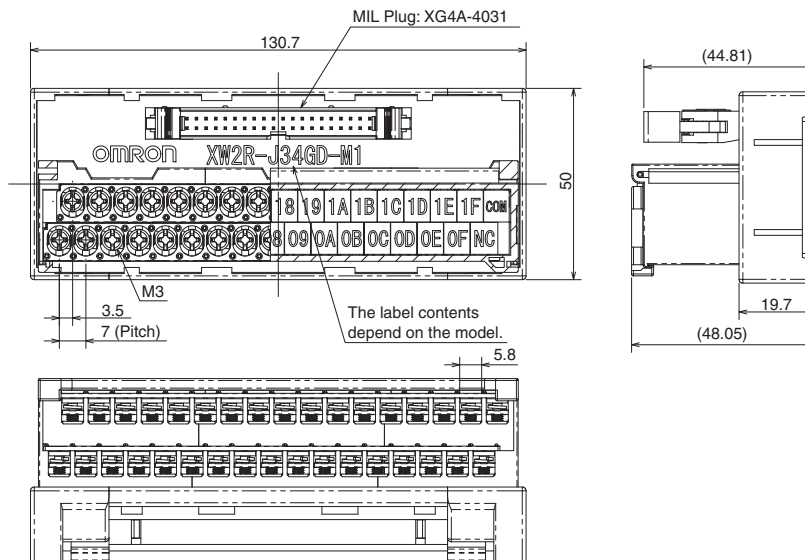
- Use a tightening torque of 0.5 N·m when connecting wires or crimp terminals to the terminal block.



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> )

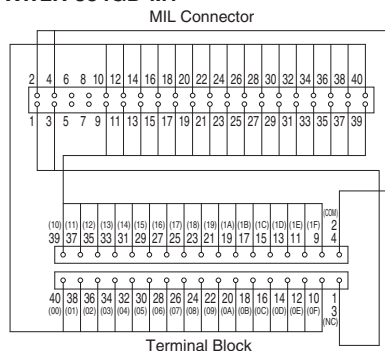
## Dimensions

(Unit: mm)

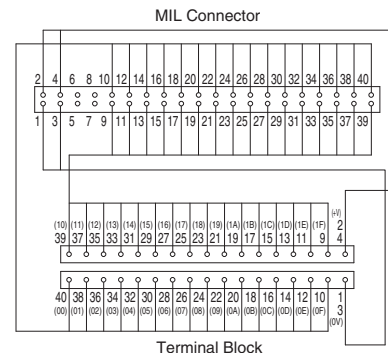


## Wiring Diagram

XW2R-J34GD-M1



XW2R-J34GD-M2



## Label Contents

XW2R-J34GD-M1

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


XW2R-J34GD-M2

1	0	1	1	1	2	1	3	1	4	1	5	1	6	1	7	1	8	1	9	1	A	1	B	1	C	1	D	1	E	1	F	+V
0	0	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	0V

# Models for Connection to Mitsubishi PLCs without power supply terminals

Slotted screw (rise up)

## Ordering Information

Appearance	I/O Points (Number of poles)	Model *
	32 (34)	XW2R-E34GD-M1
		XW2R-E34GD-M2

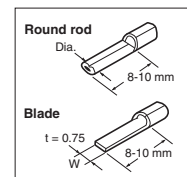
\* Only DIN Track mounting models are described here. Refer to the XW2R-series Connector-Terminal Block Conversion Units Catalog (Cat. No. G077) for information on screw mounting models.

## Ratings and Specifications

Rated current	0.5 A/signal, 2 A/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 (ferrules) AWG 26 to 16 (stranded or solid wires)
	Stripped length	7 mm
	Tightening	0.5 to 0.6 N·m

### Details on Crimp Terminals

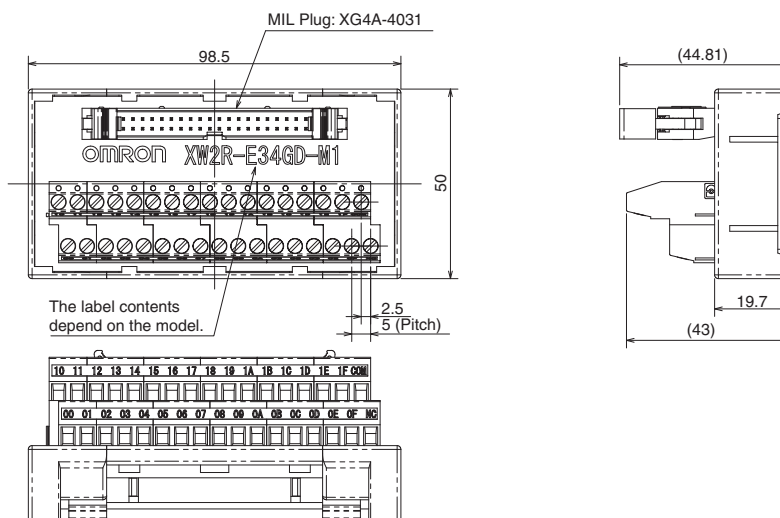
Applicable crimp terminals	Applicable wires	
Rod	TC-05 Dia. = 1	AWG22 to AWG18 (0.30 to 0.75 mm <sup>2</sup> )
	TC-1.25S Dia. = 1.5	AWG22 to AWG16 (0.30 to 1.25 mm <sup>2</sup> )
Blade	BT1.25-9-1 W = 2.2	AWG22 to AWG16 (0.30 to 1.25 mm <sup>2</sup> )



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

## Dimensions

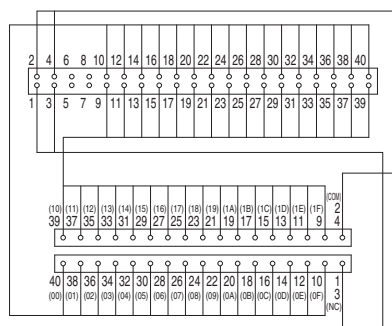
(Unit: mm)



## Wiring Diagram

XW2R-E34GD-M1

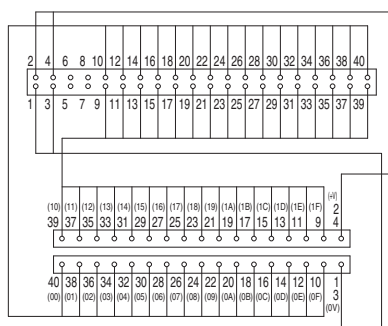
MIL Connector



Terminal Block

XW2R-E34GD-M2

MIL Connector



Terminal Block

## Label Contents

XW2R-E34GD-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


XW2R-E34GD-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	OV

# Models for Connection to Mitsubishi PLCs without power supply terminals

Push-in spring

## Ordering Information

Appearance	I/O Points (Number of poles)	Model *
	32 (34)	XW2R-P34GD-M1
		XW2R-P34GD-M2

\* Only DIN Track mounting models are described here. Refer to the XW2R-series Connector-Terminal Block Conversion Units Catalog (Cat. No. G077) for information on screw mounting models.

## Ratings and Specifications

<b>Rated current</b>	0.5 A/signal, 2 A/common
<b>Rated voltage</b>	24VDC
<b>Insulation resistance</b>	100MΩ min. (at 500VDC)
<b>Dielectric strength</b>	500VAC for 1 min (leakage current: 1 mA max.)
<b>Ambient operating temperature</b>	0 to 55°C
<b>Applicable wires</b>	<b>Applicable wire sizes</b>
	<b>Stripped length</b>

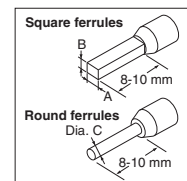
AWG 24 to 14 (ferrules)  
AWG 28 to 14 (stranded or solid)  
(Outer diameter of insulation must be 4 mm max)

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.



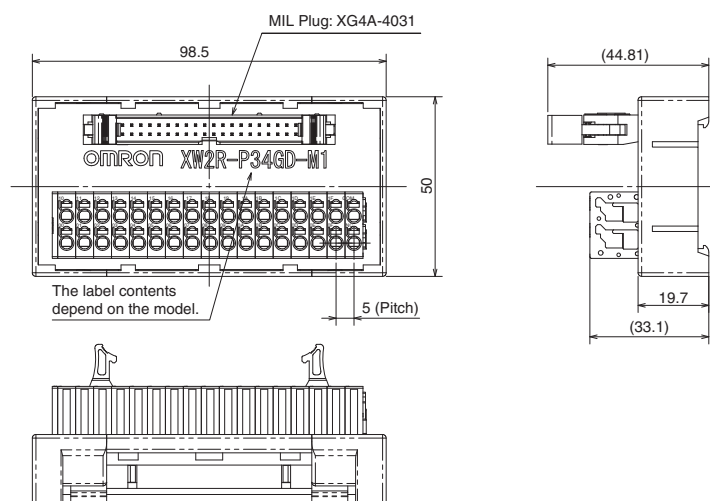
#### Ferrule Dimensions

Square ferrules	Dimension A (Width)	2.7 mm 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)	

Refer to page 28 for information on Square/Round ferrule and use tool.

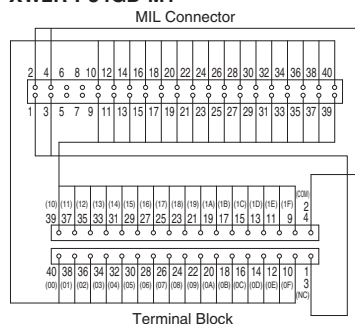
## Dimensions

(Unit: mm)

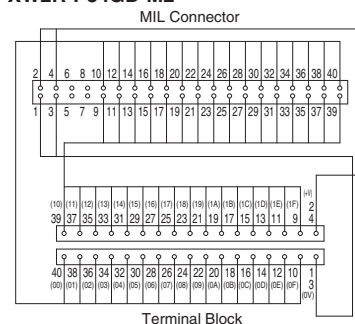


## Wiring Diagram

XW2R-P34GD-M1



XW2R-P34GD-M2



## Label Contents

XW2R-P34GD-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

XW2R-P34GD-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 Keyence PLCs with power supply terminals

## Model List

<b>XW2R - P 32 G D - K1 - COM</b>											
Wiring method		I/O Points		Mounted Connector type		Mounting method		PLC Type		Power supply terminals	
P	Push-in spring	32	32 Points	G	MIL (XG4A)	D	DIN Track mounting	K1	Refer to the following table for details.	COM	Provided

## Models for Keyence PLCs

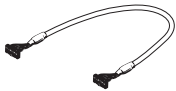
I/O	I/O Points	Unit	Models for Keyence PLCs	Models that connect to PLCs	Connecting cables*
Input	32	Input Unit Model	KV-C32XA, KV-C32XC	XW2R-P32GD-K1-COM:1 pcs	XW2Z-□□□EE: 1 Cable, or XW2Z-□□□EE-L: 1 Cable
	64		KV-C64XA, KV-C64XB, KV-C64XC	XW2R-P32GD-K1-COM:2 pcs	XW2Z-□□□EE: 2 Cables, or XW2Z-□□□EE-L: 2 Cables

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

**Note:** This Connector-Terminal Block Conversion Unit is for NPN. For PNP, reverse the polarity of the external power supply and I/O on the Connector-Terminal Block Conversion Unit.

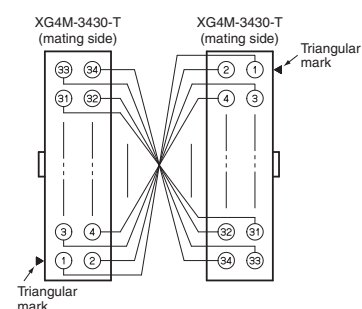
### XW2Z-□□□EE, XW2Z-□□□EE-L

#### Connectors: One 34-pin MIL Connector to One 34-pin MIL Connector

Appearance	Cable length L (m)	With shield	Without shield
		Model	Model
	0.5	<b>XW2Z-050EE</b>	<b>XW2Z-0050EE-L</b>
	1	<b>XW2Z-100EE</b>	<b>XW2Z-0100EE-L</b>
	1.5	<b>XW2Z-150EE</b>	<b>XW2Z-0150EE-L</b>
	2	<b>XW2Z-200EE</b>	<b>XW2Z-0200EE-L</b>
	3	<b>XW2Z-300EE</b>	<b>XW2Z-0300EE-L</b>
	5	<b>XW2Z-500EE</b>	<b>XW2Z-0500EE-L</b>
	7	---	<b>XW2Z-0700EE-L</b>
	10	---	<b>XW2Z-1000EE-L</b>



#### Wiring Diagram




**Note:** Wire the connector terminals 1:1 so that the connector terminal numbers coincide.

# Models for Keyence PLCs with power supply terminals

Push-in spring

## Ordering Information

Appearance	I/O Points	Model
	32	XW2R-P32GD-K1-COM

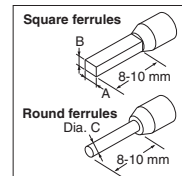
## Ratings and Specifications

Rated current	1 A/signal, 8 A/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

### 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.



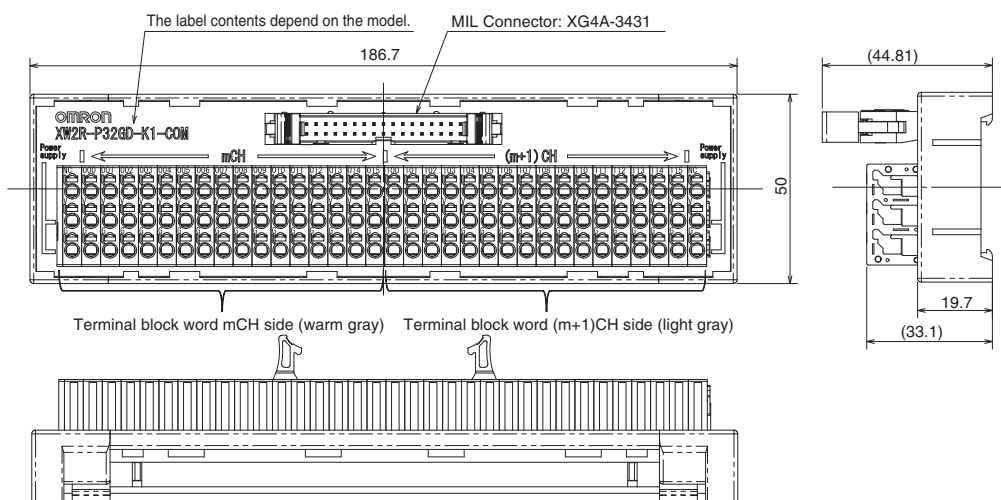
- Ferrule Dimensions

Square ferrules	Dimension A (Width)	2.7 mm 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)	

Refer to page 28 for information on Square/Round ferrule and use tool.

## Dimensions

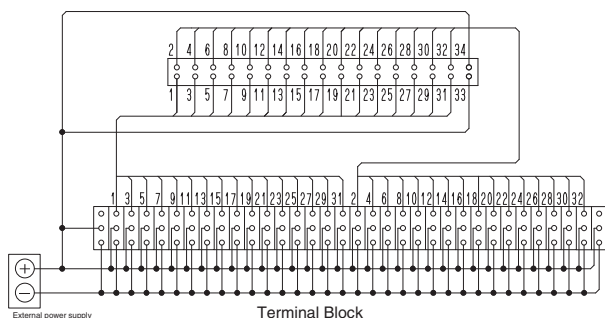
(Unit: mm)



## Wiring Diagram

### XW2R-P32GD-K1-COM

MIL Connector



## Label Contents

### XW2R-P32GD-K1-COM

mCH																(m+1)CH																		
NC	000	001	002	003	004	005	006	007	008	009	010	011	012	013	014	015	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	NC	
V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	

# Models for Keyence PLCs without power supply terminals

## Model List

XW2R - □ □ □ G □ - K □

Wiring method		Number of poles		Mounted Connector type	Mounting method		PLC Type		
J	Phillips screw	34	34 poles (I/O points: 32 points)*1	G	MIL (XG4A)	D	DIN Track mounting	K1	Refer to the following table for details.
P	Push-in spring	40	40 poles (I/O points: 36 points)*2			V	Vertical screw mounting	K2	
						Blank	Horizontal screw mounting		

\*1. K1 Type  
\*2. K2 Type

## Models for Keyence PLCs

I/O	I/O Points	Unit	Models for Keyence PLCs	Models that connect to PLCs *1	Connecting cables *2
Input	32	I/O Unit Model	KV-C32XA, KV-C32XC	XW2R-□□34GD-K1: 1 pcs	XW2Z-□□□EE: 1 Cable, or XW2Z-□□□EE-L: 1 Cable
Output			KV-C32TA, KV-C32TC, KV-C32TCP		
I/O			KV-C32TD		
			KV-C32XTD		
Input	64	I/O Unit Model	KV-C64XA, KV-C64XB, KV-C64XC	XW2R-□□34GD-K1: 2 pcs	XW2Z-□□□EE: 2 Cables, or XW2Z-□□□EE-L: 2 Cables
Output			KV-C64TA, KV-C64TC, KV-C64TD, KV-C64TCP		
---	---	CPU Unit Model	KV-1000, KV-3000, KV-5000, KV-5500	XW2R-□□40GD-K2: 1 pcs	XW2Z-□□□K: 1 Cable, or XW2Z-□□□FF-L: 1 Cable

\*1 Replace the box (□) with the wiring method code (J or P).

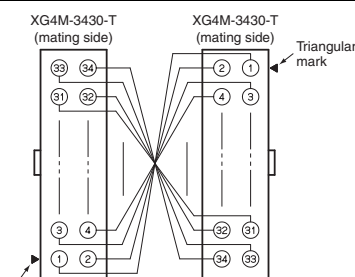
\*2 □□□□ is replaced by the cable length.

### XW2Z-□□□EE, XW2Z-□□□EE-L

#### Connectors: One 34-pin MIL Connector to One 34-pin MIL Connector

Appearance	Cable length L (m)	With shield	Without shield
		Model	Model
	0.5	XW2Z-050EE	XW2Z-0050EE-L
	1	XW2Z-100EE	XW2Z-0100EE-L
	1.5	XW2Z-150EE	XW2Z-0150EE-L
	2	XW2Z-200EE	XW2Z-0200EE-L
	3	XW2Z-300EE	XW2Z-0300EE-L
	5	XW2Z-500EE	XW2Z-0500EE-L
	7	---	XW2Z-0700EE-L
	10	---	XW2Z-1000EE-L

#### Wiring Diagram



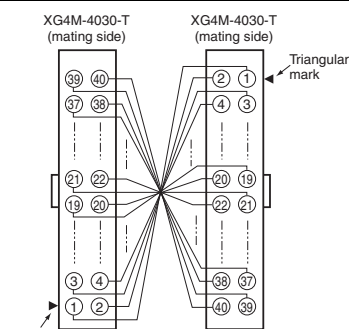
Note: Wire the connector terminals 1:1 so that the connector terminal numbers coincide.

### XW2Z-□□□K, XW2Z-□□□FF-L

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

Appearance	Cable length L (m)	With shield	Without shield
		Model	Model
	0.25	XW2Z-C25K	---
	0.5	XW2Z-C50K	XW2Z-0050FF-L
	1	XW2Z-100K	XW2Z-0100FF-L
	1.5	XW2Z-150K	XW2Z-0150FF-L
	2	XW2Z-200K	XW2Z-0200FF-L
	3	XW2Z-300K	XW2Z-0300FF-L
	5	XW2Z-500K	XW2Z-0500FF-L
	7	---	XW2Z-0700FF-L
10	XW2Z-010K	XW2Z-1000FF-L	

#### Wiring Diagram




Note: Wire the connector terminals 1:1 so that the connector terminal numbers coincide.



# Models for Keyence PLCs without power supply terminals

Phillips screw

## Ordering Information

Appearance	I/O Points (Number of poles)	Model *	Dimension A (mm)
	32 (34)	XW2R-J34GD-K1	130.7
	36 (40)	XW2R-J40GD-K2	151.7

\* Only DIN Track mounting models are described here. Refer to the XW2R-series Connector-Terminal Block Conversion Units Catalog (Cat. No. G077) for information on screw mounting models.

## Ratings and Specifications

Rated current	1A	
Rated voltage	125 VAC/DC	
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) AWG 26 to 16 (stranded or solid wires)
	Stripped length	9 mm
	Tightening	0.5 N·m

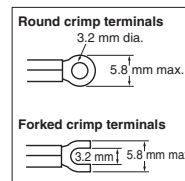
### Details on Crimp Terminals

#### Wiring Terminal Blocks

- Using Crimp Terminals (With a Terminal Block with M3 Screws)

#### Terminal Screw Tightening Torque

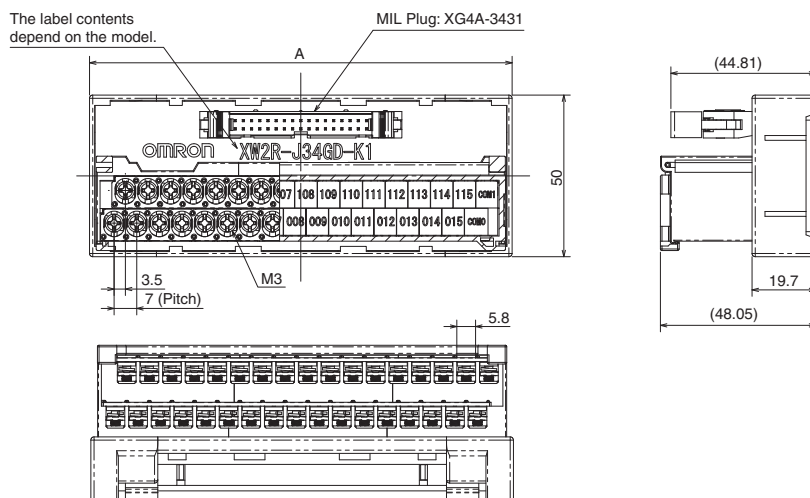
- Use a tightening torque of 0.5 N·m when connecting wires or crimp terminals to the terminal block.



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> )

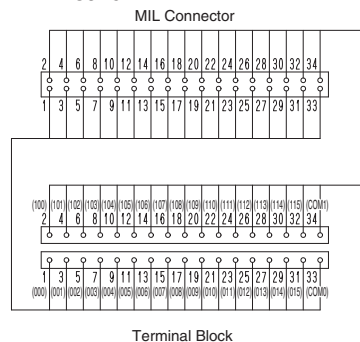
## Dimensions

(Unit: mm)

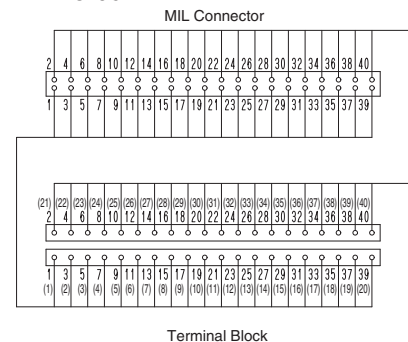


## Wiring Diagram

### XW2R-J34GD-K1



### XW2R-J40GD-K2



## Label Contents

### XW2R-J34GD-K1

1	0	0	1	0	1	0	2	1	0	3	1	0	4	1	0	5	1	0	6	1	0	7	1	0	8	1	0	9	1	0	1	1	1	1	2	1	1	3	1	1	4	1	1	5	COM1
0	0	0	0	1	0	0	2	0	0	3	0	0	4	0	0	5	0	0	6	0	0	7	0	0	8	0	0	9	0	0	1	0	1	1	2	0	1	3	0	1	4	0	1	5	COM0


### XW2R-J40GD-K2

2	1	2	2	3	2	4	2	5	2	6	2	7	2	8	2	9	3	0	3	1	2	3	3	3	4	3	5	3	6	3	7	3	8	3	9	4	0
1	2	3	4	5	6	7	8	9	1	0	1	1	2	1	3	1	4	1	5	1	6	1	7	1	8	1	9	2	0								

# Models for Keyence PLCs without power supply terminals

Push-in spring

## Ordering Information

Appearance	I/O Points (Number of poles)	Model *	Dimension A (mm)
	32 (34)	XW2R-P34GD-K1	98.5
	36 (40)	XW2R-P40GD-K2	113.5

\* Only DIN Track mounting models are described here. Refer to the XW2R-series Connector-Terminal Block Conversion Units Catalog (Cat. No. G077) for information on screw mounting models.

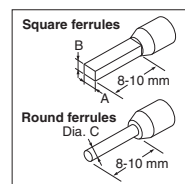
## Ratings and Specifications

<b>Rated current</b>	1A	
<b>Rated voltage</b>	AC/ DC125V	
<b>Insulation resistance</b>	100MΩ min. (at 500VDC)	
<b>Dielectric strength</b>	500VAC for 1 min (leakage current: 1 mA max.)	
<b>Ambient operating temperature</b>	0 to 55°C	
<b>Applicable wires</b>	<b>Applicable wire sizes</b>	AWG 24 to 14 (ferrules), AWG 28 to 14 (stranded or solid wires) (Outer diameter of insulation must be 4 mm max)
	<b>Stripped length</b>	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.



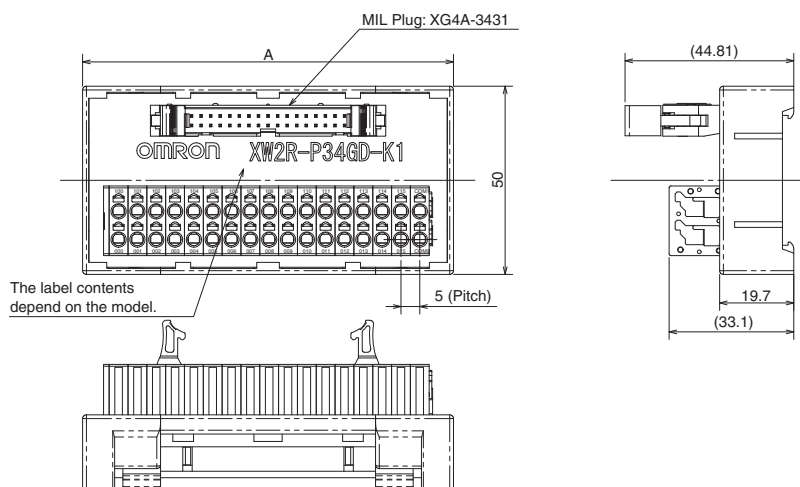
- Ferrule Dimensions

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

Refer to page 28 for information on Square/Round ferrule and use tool.

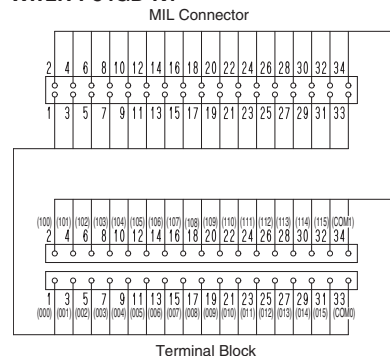
## Dimensions

(Unit: mm)

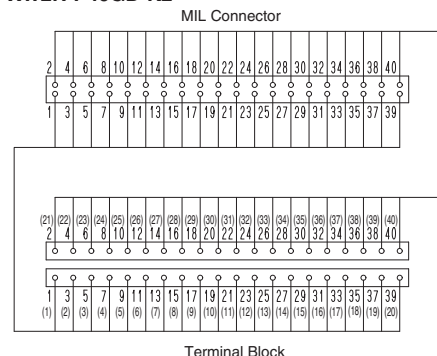


## Wiring Diagram

### XW2R-P34GD-K1



### XW2R-P40GD-K2



## Label Contents

### XW2R-P34GD-K1

100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	COM1
000	001	002	003	004	005	006	007	008	009	010	011	012	013	014	015	COM0

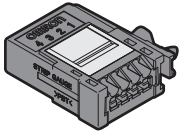
### XW2R-P40GD-K2

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

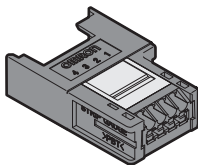
# Input Device Connectors: XN2 e-CON Connectors

## Ordering Information

### For Sensor

Appearance	Number of poles	Model
	4	XN2A-1470

### Relay Connector

Appearance	Number of poles	Model
	4	XN2B-1470

## Ratings and Specifications

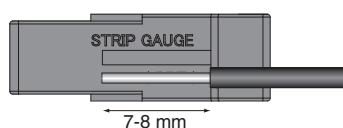
<b>Rated current</b>	3 A/pin (with AWG20 wires), 2 A/pin (with AWG22 wires), 1 A/pin (with AWG24 wires), 0.5 A/pin (with AWG26 or AWG28 wires)
<b>Rated voltage</b>	32 VDC
<b>Contact resistance</b>	30 mΩ max. (at 20 mV, 100 mA max.)
<b>Insulation resistance</b>	10 <sup>9</sup> MΩ min. (at 500VDC)
<b>Dielectric strength</b>	1,000 VAC for 60 sec (leakage current: 1 mA max.)
<b>Insertion durability</b>	50 times
<b>Ambient operating temperature</b>	-30 to 75°C *
<b>Applicable wires</b>	Stranded wire 0.08mm <sup>2</sup> (AWG28) to 0.5mm <sup>2</sup> (AWG20) (Outer diameter of insulation must be 1.5 mm max)

\* The operating temperature range is restricted by the maximum operating temperature of the cable.

## Wiring Procedure

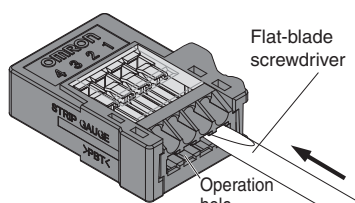
### Wire Preparation

Use the strip gauge on the front panel and strip 7 to 8 mm of the insulation. If you use stranded wires, twist them several times.

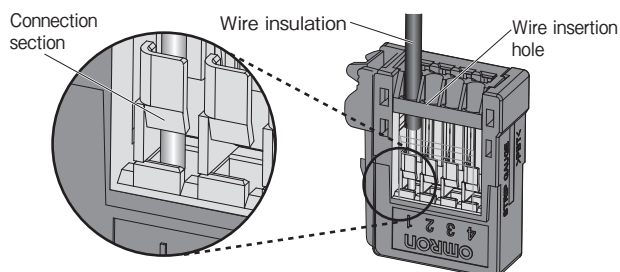


### Connection Procedure

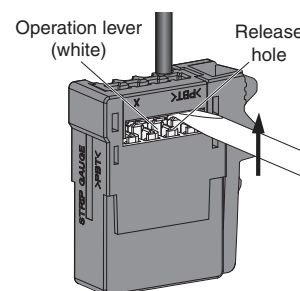
1. Press a flat-blade screwdriver into the operation hole until the operation lever locks into place.



2. Insert the wire all the way into the wire insertion hole. Confirm that the insulation on the wire also enters the wire insertion hole and that the end of the wire has passed through the connection section.

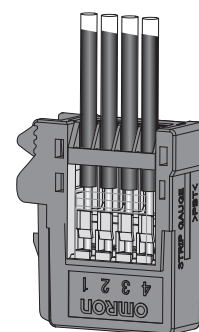


3. Insert a flat-blade screwdriver into the release hole and gently reset the lever. You should hear the operation lever reset.



4. Finally, check the following items.

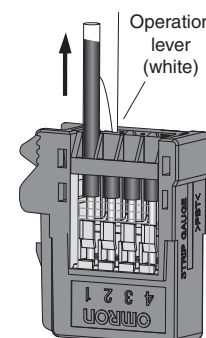
- Make sure the operation lever has been reset.
- Check the items given in step 2 again. (Pull lightly on the wire to see if it is held firmly in place.)



### Disconnection Procedure

1. Press in the operation level, confirm that the release hole is locked into place, and then pull out the wire.

2. After you remove the wire, always reset the operation lever. However, if you are going to connect another wire to the same terminal, you do not need to reset the operation lever and can immediately connect the other wire.



## Safety Precautions

### 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.

#### XW2R-P□□ type (Square/Round ferrule)

Type of terminal	Manufacturer	Size	Recommend ferrule	Recommend crimp tool
Square ferrule	Phoenix Contact	AWG24	AI0.25-8□□	CRIMFOX6
		AWG22	AI0.34-8TQ	
		AWG20	AI0.5-10WH AI0.5-8WH	
		AWG18	AI0.75-10GY AI0.75-8GY	
		AWG16	AI1.5-10BK	
		AWG14	AI2.5-8BU	
	Weidmuller	AWG24	H0.25/12	PZ6 roto
		AWG22	H0.34/12	
		AWG20	H0.5/14	
		AWG18	H0.75/14	
		AWG16	H1.5/14	
		AWG14	H2.5/15D	
Round ferrule	Nichifu	AWG22- AWG16	TGV TC-1.25-9T	NH11 NH32 NH65

Note: □□ of ferrule model is for color (Ex: YE = Yellow)

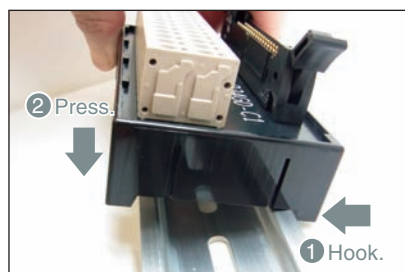
#### When an electric wire is connected directly (J,E,P type)



Model	Strip length "a"
XW2R-J□□	9 mm
XW2R-E□□	7 mm
XW2R-P□□	AWG28-16: 8 to 10 mm
	AWG14: 9 to 10 mm

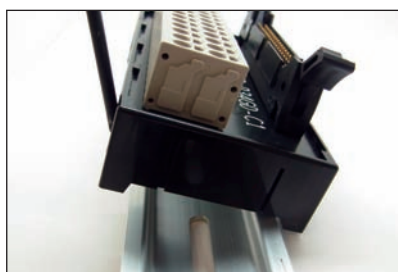
#### Mounting Units to and Removing Units from DIN Track

##### Mounting Procedure



- Hook the Unit on the DIN Track.
- Press the Unit onto the DIN Track to secure it.

##### Removal Procedure

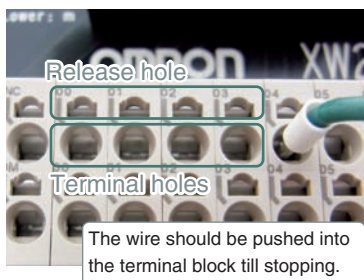


- Insert a flat-blade screwdriver into the DIN Track lock.
- Move the screwdriver like a lever to free the lock.

## Connecting Spring cramp Terminals

### Using Ferrules

#### How to insert wire

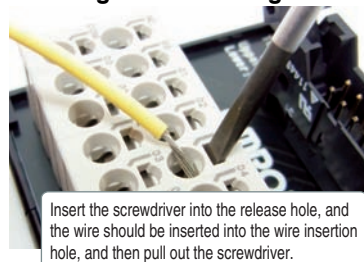


#### How to release wire



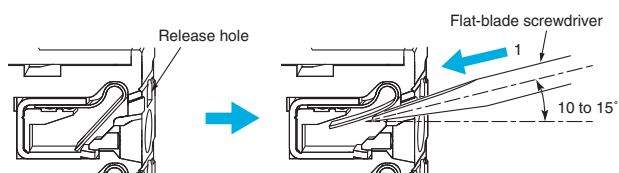
### Using Stripped Wires

#### Inserting and Removing Wires

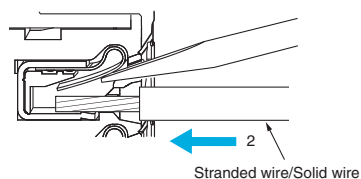


#### Inserting Wires

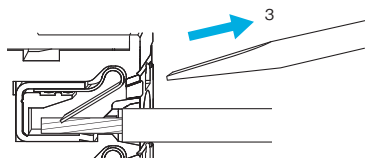
1. Press the a flat-blade screwdriver diagonally into the release hole. Press at an angle of  $10^\circ$  to  $15^\circ$ . If you press in the screwdriver correctly, you will feel the spring in the release hole.



2. Leave the flat-blade screwdriver pressed into the release hole and insert the stranded wire or the solid wire into the terminal hole. Insert the stranded wire or the solid wire until the stripped portion is no longer visible to prevent shorting.

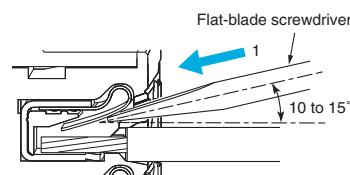


3. Remove the flat-blade screwdriver from the release hole.

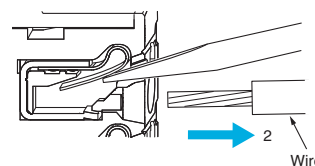


#### Removing Wires

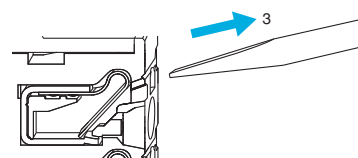
1. Press the flat-blade screwdriver diagonally into the release hole. Press at an angle of  $10^\circ$  to  $15^\circ$ . If you press in the screwdriver correctly, you will feel the spring in the release hole.



2. Leave the flat-blade screwdriver pressed into the release hole and pull out the wire.

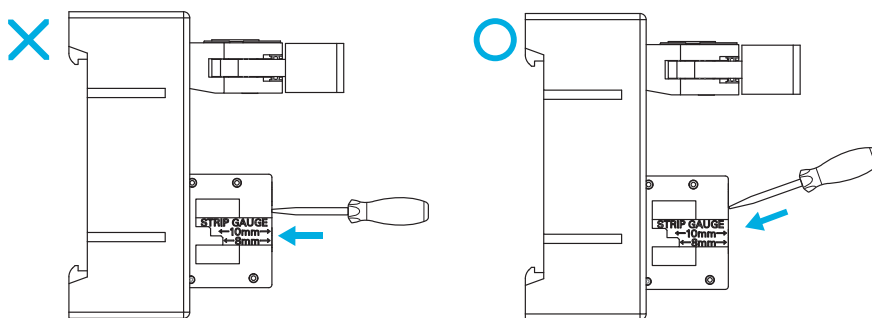


3. Remove the flat-blade screwdriver from the release hole.

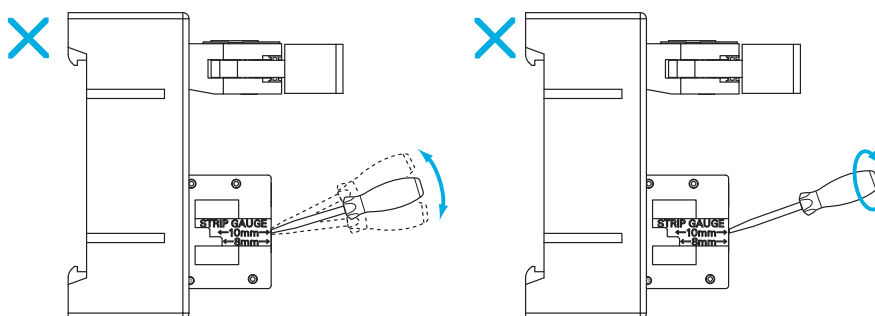


**Precautions for Safe Use**

- Do not press the flat-blade screwdriver straight into the release hole. Doing so may break the terminal block.



- When you insert a flat-blade screwdriver into a release hole, press it down with a force of 30 N max. Applying excessive force may damage the terminal block.
- Do not tilt or twist the flat-blade screwdriver while it is pressed into the release hole. Doing so may break the terminal block.



- Make sure that all wiring is correct.
- Do not bend the cable forcibly. Doing so may sever the cable.

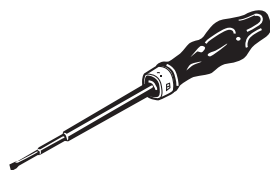
**Use tool**

- Select a use tool from following table.

Model	Use tool	Specialized tool and dimension
XW2R-J□□	Phillips screwdriver	JIS#2
XW2R-E□□	Flat-blade screwdriver	Model XW4Z-00B Head of screwdriver is 0.4 x 2.5mm max.
XW2R-P□□		

**Flat-blade screwdriver**

Model
XW4Z-00B



**Bending Radius of Connecting Cables**

- To prevent damaging the Connecting Cables, use the following minimum bending radii as guidelines.

XW2Z - □ □ □ □ □

End of model number	Minimum bending radius
BF-L, EE-L, FF-L	66 mm
A	67.2 mm
EE	83 mm
B, D, K, L, N	88 mm

**For checking electrical continuity**

- XW2R-E□□ type: There is no electrical continuity in the screw, Please confirm it at hole for confirming continuity or wiring part.

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