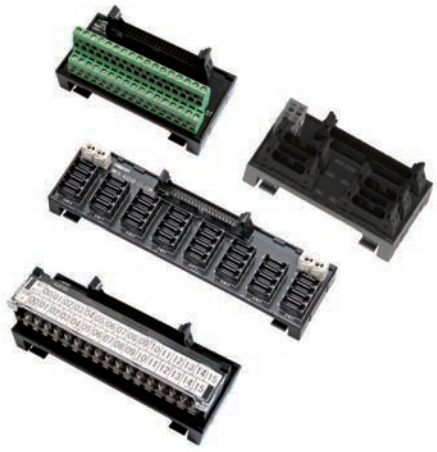
Connector-Terminal Block Conversion Units for PLCs

XW2R

CSM_XW2R-C_M_K_DS_E_5_8

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, 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-N□□GD-C□-COM	XW2R-G32GD-M1-COM	
	Page	Page 2	Page 10	
Without power supply terminals	Appearance			
	Model	XW2R-□34GD-C□	XW2R-□34GD-M□	XW2R-J□□GD-K□
	Page	Page 7	Page 14	Page 17

Options (Order Separately)

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 - N □□ G D - C□ - COM

Wiring method	
N	e-CON Type

I/O Points	
16	16 Points
32	32 Points

Mounted Connector type	
G	MIL (XG4A)

Mounting method	
D	DIN Track mounting

PLC type	
C1	Refer to the following table for 16-pole models and to page 3 for 32-pole models.
C2	
C3	
C4	

Power supply terminals	
COM	Provided

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	XW2R-N16GD-C1-COM: 2 pcs	XW2Z-□□□D: 1 Cable
		CS1W-ID231		
	64	CJ1W-ID261	XW2R-N16GD-C1-COM: 4 pcs	XW2Z-□□□D: 2 Cables
		CS1W-ID261		
I/O	16	NX-MD6121-6 (inputs)	XW2R-N16GD-C1-COM: 1 pcs	XW2Z-□□□A: 1 Cable
		CJ1W-MD231 (inputs)	XW2R-N16GD-C1-COM: 1 pcs	XW2Z-□□□A: 1 Cable
	32	CJ1W-MD261 (inputs)	XW2R-N16GD-C1-COM: 2 pcs	XW2Z-□□□D: 1 Cable
		CS1W-MD261 (inputs)		
		CS1W-MD262 (inputs)		
		CS1W-MD561 (inputs)		
Input	32	CJ1W-ID232	XW2R-N16GD-C1-COM: 2 pcs	XW2Z-□□□N: 1 Cable
		CJ1W-ID233		
I/O		CJ1W-MD263 (inputs)		
		CJ1W-MD563 (inputs)		
Input	64	CJ1W-ID262	XW2R-N16GD-C1-COM: 4 pcs	XW2Z-□□□N: 2 Cables

* □□□ 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

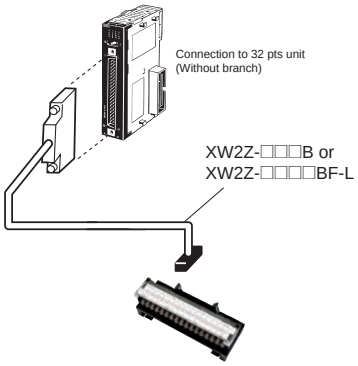
I/O	I/O Points	I/O Unit Model	Models that connect to PLCs	Connecting cables ∗
Input	32	NX-ID6142-5	XW2R-N32GD-C2-COM: 1 pcs	XW2Z-□□□K: 1 Cable, or XW2Z-□□□□FF-L: 1 Cable
		NX-ID6142-6	XW2R-N32GD-C1-COM: 1 pcs	XW2Z-□□□B: 1 Cable, or XW2Z-□□□□BF-L: 1 Cable
		CJ1W-ID231	XW2R-N32GD-C1-COM: 1 pcs	XW2Z-□□□B: 1 Cable, or XW2Z-□□□□BF-L: 1 Cable
		CS1W-ID231		
	64	CJ1W-ID261	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-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	XW2R-N32GD-C2-COM: 1 pcs	XW2Z-□□□K: 1 Cable, or XW2Z-□□□□FF-L: 1 Cable
		CJ1W-ID233		
	64	CJ1W-ID262	XW2R-N32GD-C2-COM: 2 pcs	XW2Z-□□□K: 2 Cables, or XW2Z-□□□□FF-L: 2 Cables
I/O	32	CJ1W-MD263 (inputs)	XW2R-N32GD-C2-COM: 1 pcs	XW2Z-□□□K: 1 Cable, or XW2Z-□□□□FF-L: 1 Cable
		CJ1W-MD563 (inputs)		

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

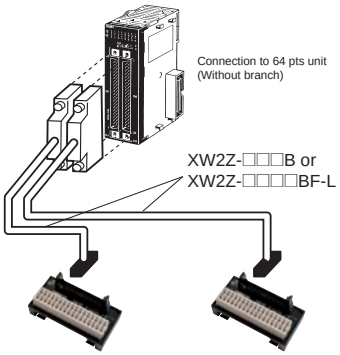
Note: Connection is not possible to all OMRON PLC Units.
This Connector-Terminal Block Conversion Unit is for NPN. For PNP, reverse the polarity of the external power supply and I/O on the Connector-Terminal Block Conversion Unit.

Connection Examples

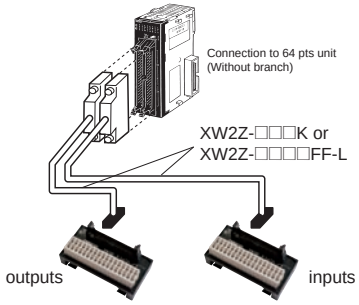
32-point Input Unit
CJ1W-ID231 32-point



64-point Input Unit
CJ1W-ID261 64-point

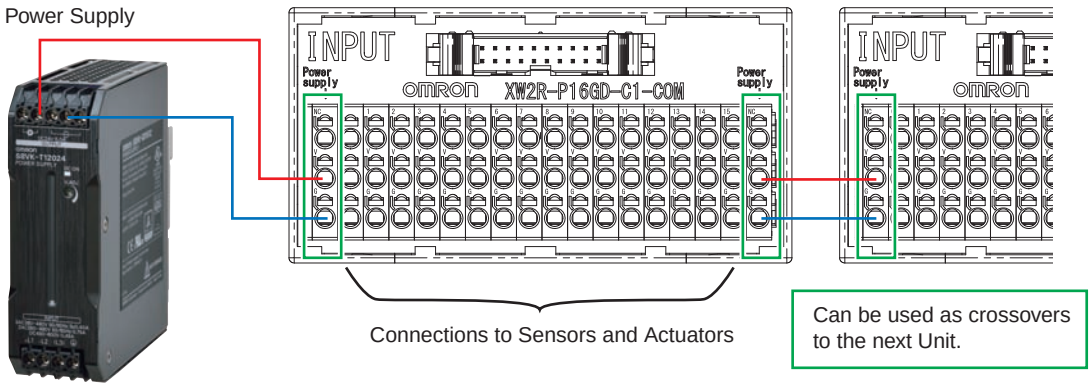


64-point I/O Unit
CJ1W-MD563 IN 32 Points,
OUT 32 Points



Models for Connection to OMRON PLCs with power supply terminals

Application Example

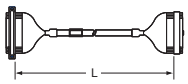


PLC Connecting Cables

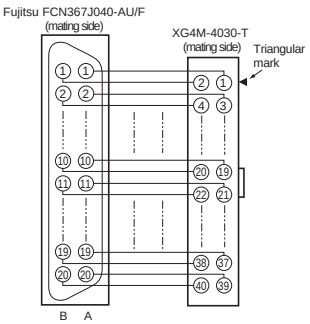
XW2Z-□□□B, XW2Z-□□□□BF-L
Connectors: One 40-pin Connector Made by Fujitsu/Otax Component, Ltd. to One 40-pin MIL Connector

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	---

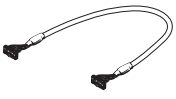
Cable length L (m)



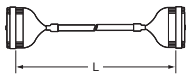
Wiring Diagram



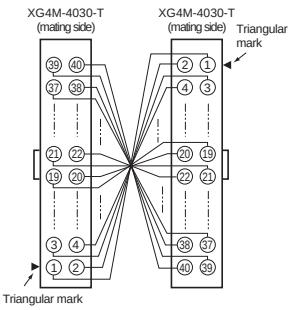
XW2Z-□□□K, XW2Z-□□□□FF-L
Connectors: One 40-pin Connector to One 40-pin MIL Connector

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

Cable length L (m)



Wiring Diagram



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

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

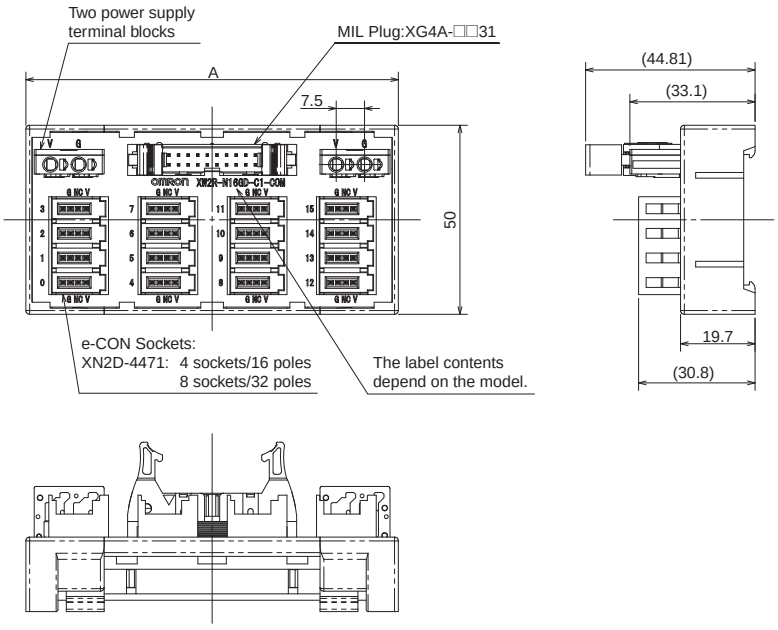
Rated current		Power supply terminal block: 4 A/16 poles or 8 A/32 poles
		Connectors/e-CON Connectors: 1 A (However, rated current of e-CON Connector depends on the wires that are used.)
Rated voltage		24VDC
Insuration resistance		100MΩ min. (at 500VDC)
Dielectric strength		500VAC for 1 min (leakage 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 wires) AWG 28 to 16 (solid wires)∗ (Outer diameter of insulation must be 4 mm max)
	Stripped length	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 19.

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

Dimensions

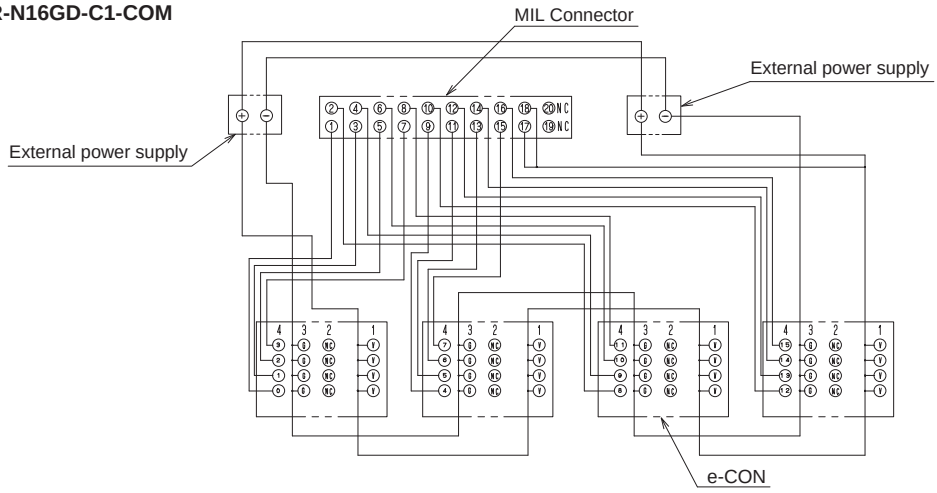
(Unit: mm)



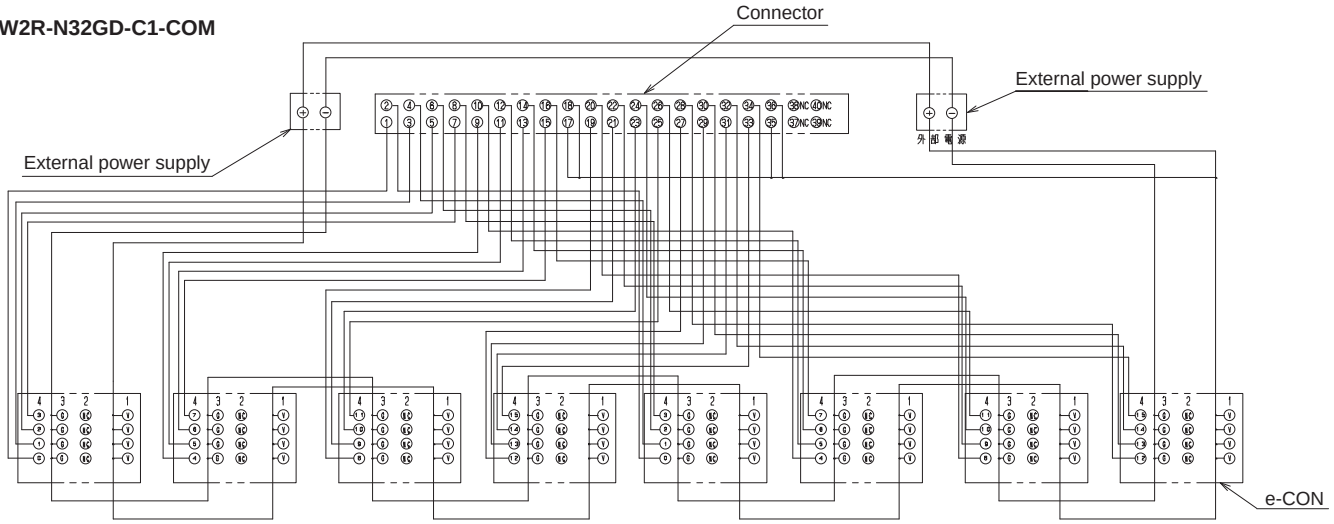
Models for Connection to OMRON PLCs with power supply terminals

Wiring Diagram

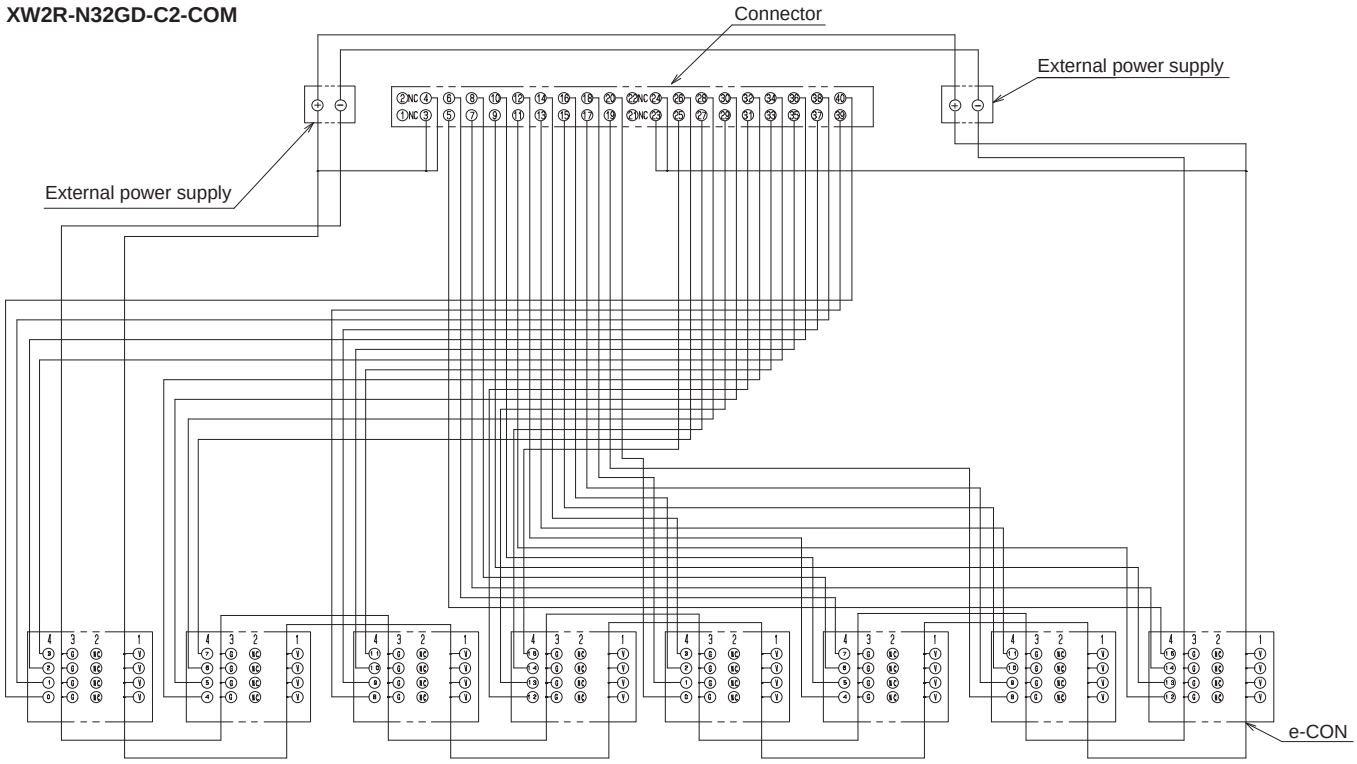
XW2R-N16GD-C1-COM



XW2R-N32GD-C1-COM



XW2R-N32GD-C2-COM



Models for Connection to OMRON PLCs without power supply terminals

Model List

XW2R - □ 34 G D - C □

Wiring method	
J	Phillips screw
E	Slotted screw (rise up)

Number of poles	
34	34 poles (I/O points: 32 points)

Mounted Connector type	
G	MIL (XG4A)

Mounting method	
D	DIN Track mounting

PLC type	
C1	Refer to the following table for details.
C2	
C3	
C4	

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 or E).
∗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.

Ratings and Specifications

Rated current		0.5 A/signal, 4 A/common
Rated voltage		24VDC
Insuration 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

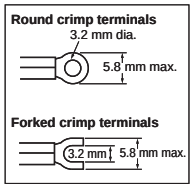
Details on Crimp Terminals

Wiring Terminal Blocks

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

Terminal Screw Tightening Torque

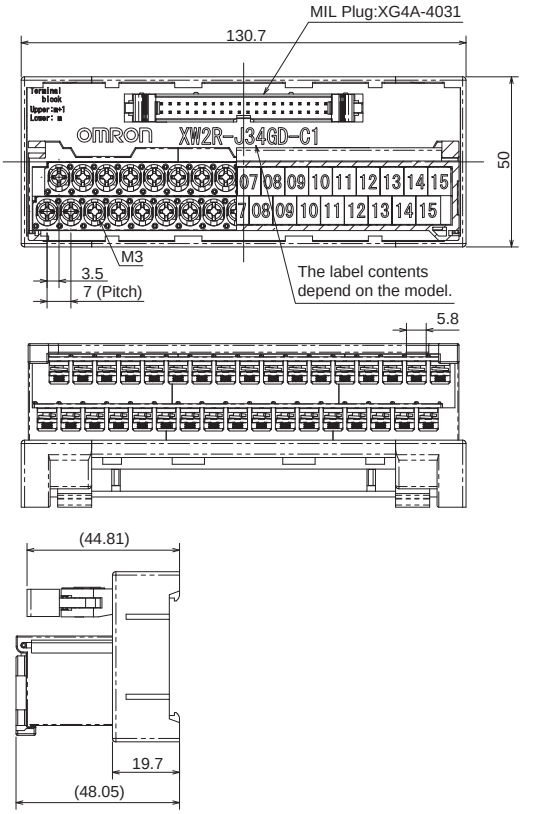
- Use a tightening torque of 0.5 N·m when connecting wires or crimp terminals to the terminal block.



Applicable crimp terminals		Applicable wires
Round crimp terminals	1.25-3	AWG 22 to 16 (0.30 to 1.25 mm²)
Forked crimp terminals	1.25Y-3	AWG 22 to 16 (0.30 to 1.25 mm²)

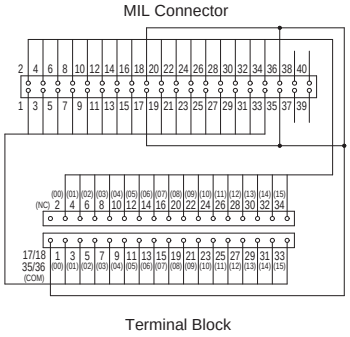
Dimensions

(Unit: mm)

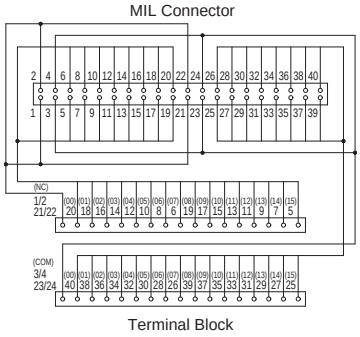


Wiring Diagram

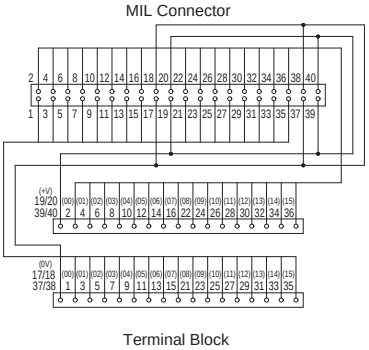
XW2R-J34GD-C1



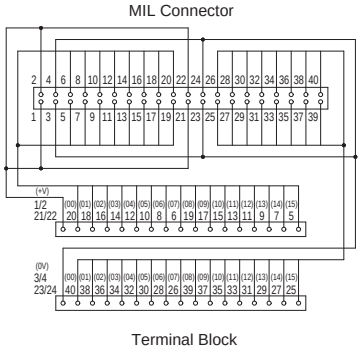
XW2R-J34GD-C2



XW2R-J34GD-C3



XW2R-J34GD-C4



Label Contents

XW2R-J34GD-C1, XW2R-J34GD-C2

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

XW2R-J34GD-C3, XW2R-J34GD-C4

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

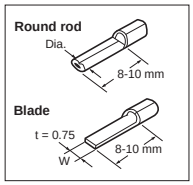
∗ Only DIN Track mounting models are described here.

Ratings and Specifications

Rated current		0.5 A/signal, 4 A/common
Rated voltage		24VDC
Insuration 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

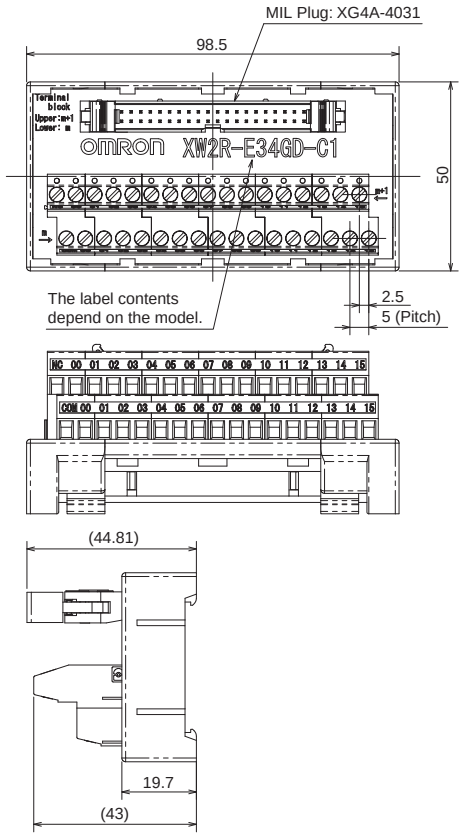
Details on Crimp Terminals

Applicable crimp terminals		Applicable wires
Rod	TC-05 Dia. = 1	AWG22 to AWG18 (0.30 to 0.75 mm²)
	TC-1.25S Dia. = 1.5	AWG22 to AWG16 (0.30 to 1.25 mm²)
Blade	BT1.25-9-1 BT1.25-10-1 W = 2.2	AWG22 to AWG16 (0.30 to 1.25 mm²)



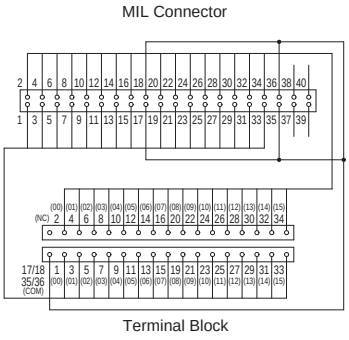
Note: Round rod and blade crimp terminals are made by Nichifu.

Dimensions (Unit: mm)

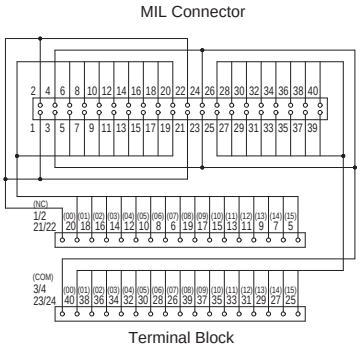


Wiring Diagram

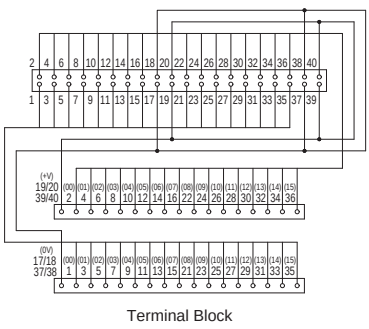
XW2R-E34GD-C1



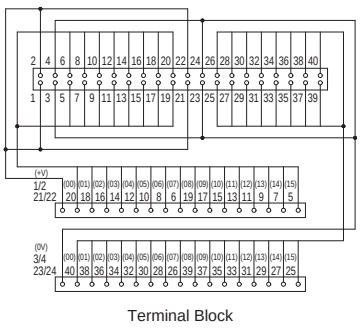
XW2R-E34GD-C2



XW2R-E34GD-C3

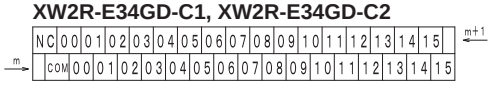


XW2R-E34GD-C4

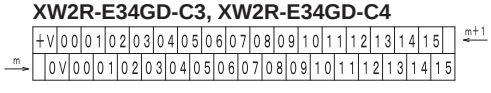


Label Contents

XW2R-E34GD-C1, XW2R-E34GD-C2



XW2R-E34GD-C3, XW2R-E34GD-C4



Models for Connection to Mitsubishi PLCs with power supply terminals

Model List

XW2R - G 32 G D - M1 - COM

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

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 Connection B XW2Z-□□□AA: 4 Cables
	QH42P(Input) , QX41Y41P (Input)		
	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 Connection B XW2Z-□□□AA: 8 Cables
	LX42C4		

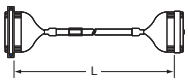
* □□□□ is replaced by the cable length.

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.

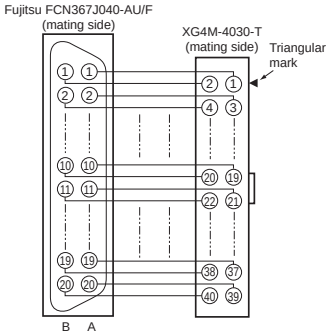
XW2Z-□□□B, XW2Z-□□□□BF-L
Connectors: One 40-pin Connector Made by Fujitsu/Otax Component, Ltd. to One 40-pin MIL Connector

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	---

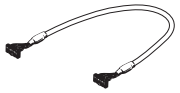
Cable length L (m)



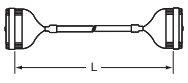
Wiring Diagram



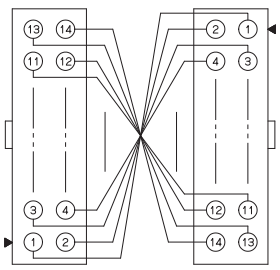
XW2Z-□□□AA One 14-pin MIL Connector to One 14-pin MIL Connector

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

Cable length L (m)



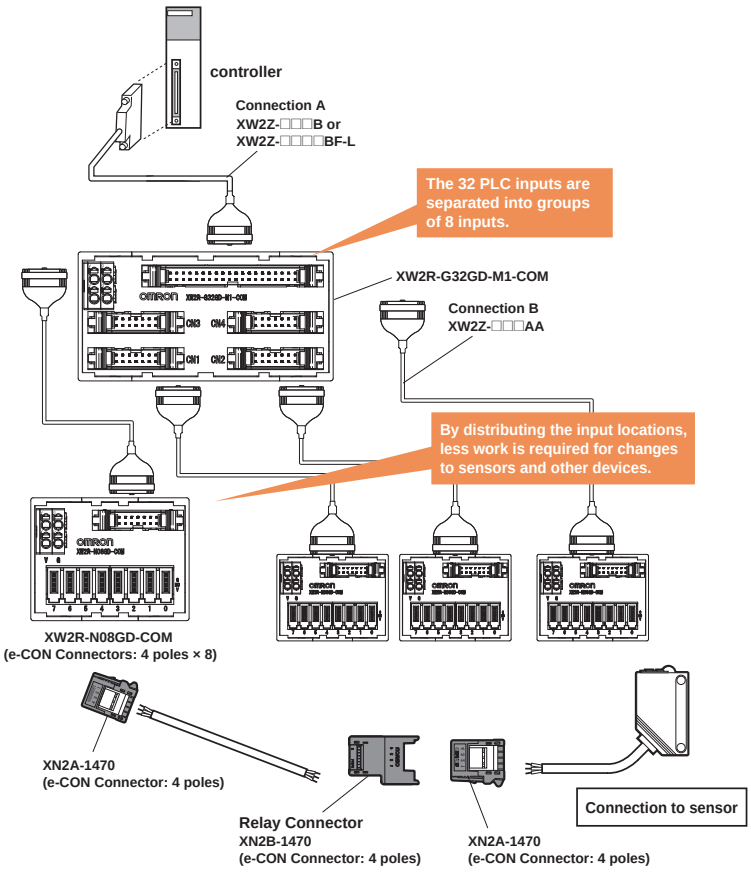
Wiring Diagram



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

Models for Connection to Mitsubishi PLCs with power supply terminals

Connection Examples



Models for Connection to Mitsubishi PLCs with power supply terminals

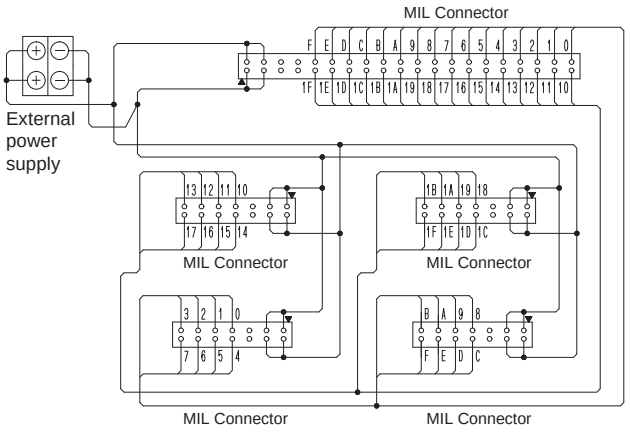
Ordering Information

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

Ratings and Specifications

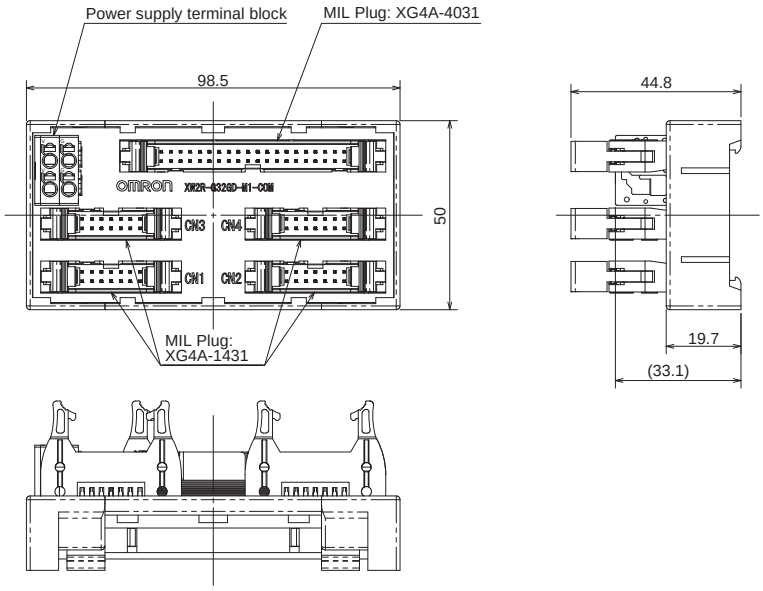
Rated current		Power supply terminal block: 8A Connectors: 1A
Rated voltage		24VDC
Insuration resistance		100MΩ min. (at 500VDC)
Dielectric strength		500VAC for 1 min (leakage current: 1 mA max.)
Ambient operating temperature		0 to 55°C
Applicable wires	**Applicable wire sizes**	AWG 24 to 14 (ferrules) AWG 28 to 14 (stranded wires) AWG 28 to 16 (solid wires) (Outer diameter of insulation must be 4 mm max)
	Stripped length	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	**XW2R-N08GD-COM**	XG4A-1431 (PLC end) XN2D-4471 (for input)	XG4M-1430-T (PLC end) XN2A-1470 (for input)

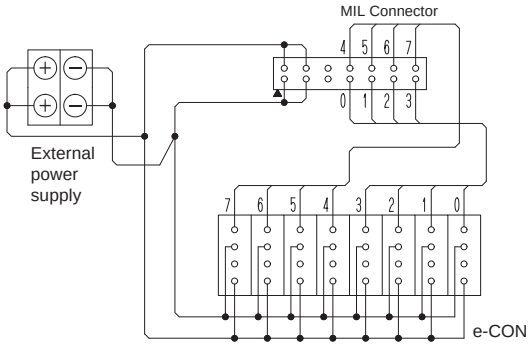
Ratings and Specifications

Rated current		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.)
Rated voltage		24VDC
Insuration 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 wires), AWG 28 to 16 (solid wires) (Outer diameter of insulation must be 4 mm max)
	Stripped length	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 19.

Refer to page 19 for the recommended e-CON Connectors.

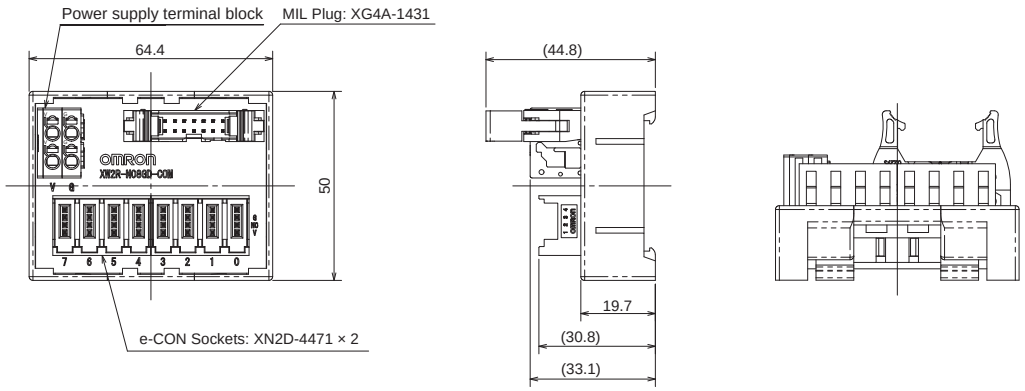
Wiring Diagram



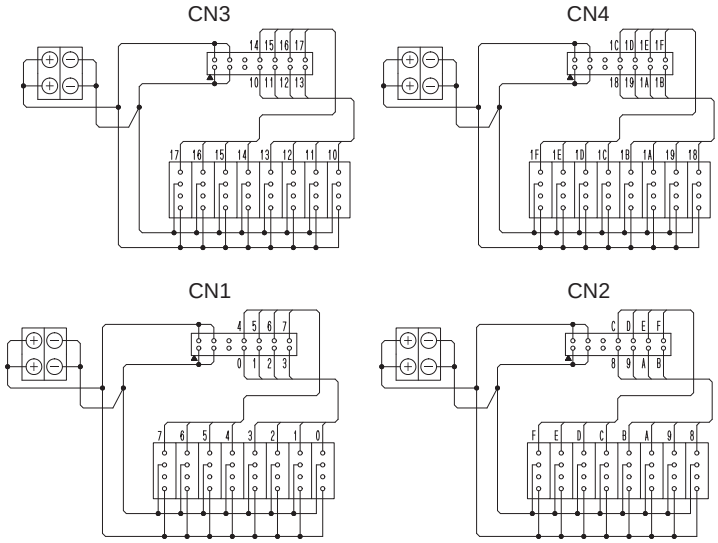
(This connection diagram is for combining with CN1 on the XW2R-G32GD-M1-COM.)

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 without power supply terminals

Model List

XW2R - □ 34 G D - M □

Wiring method	
J	Phillips screw
E	Slotted screw (rise up)

Number of poles	
34	34 poles (I/O points: 32 points)

Mounted Connector type	
G	MIL (XG4A)

Mounting method	
D	DIN Track mounting

PLC Type	
M1	Refer to the following table for details.
M2	

Models for Connection to Mitsubishi PLCs

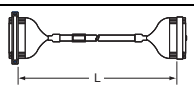
PLC Type	I/O Points	Mitsubishi PLC Module model	Models that connect to PLCs ∗1	Connecting cables ∗2
M1	32	LX41C4	XW2R-□34GD-M1: 1 pcs	XW2Z-□□□B: 1 Cable, or XW2Z-□□□BF-L: 1 Cable
		QX41/QX41-S1/QX41-S2		
		QX71		
		RX41C4		
		QH42P (Input)		
		QX41Y41P (Input)		
		RH42C4NT2P (Input)		
	64	LX42C4	XW2R-□34GD-M1: 2 pcs	XW2Z-□□□B: 2 Cables, or XW2Z-□□□□BF-L: 2 Cables
		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)		
	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 or E).
∗2 □□□□ is replaced by the cable length.

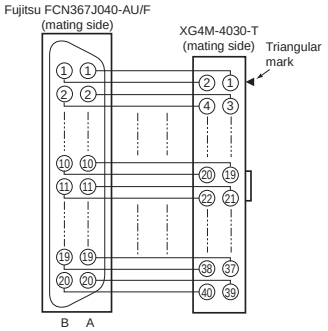
XW2Z-□□□B, XW2Z-□□□□BF-L
Connectors: One 40-pin Connector Made by Fujitsu/Otax Component, Ltd. to One 40-pin MIL Connector

Appearance	Cable length L (m)	With shield Model	With shield 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)



Wiring Diagram



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.

Ratings and Specifications

Rated current		0.5 A/signal, 2 A/common
Rated voltage		24VDC
Insuration 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

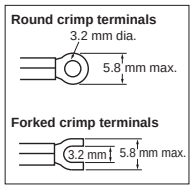
Details on Crimp Terminals

Wiring Terminal Blocks

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

Terminal Screw Tightening Torque

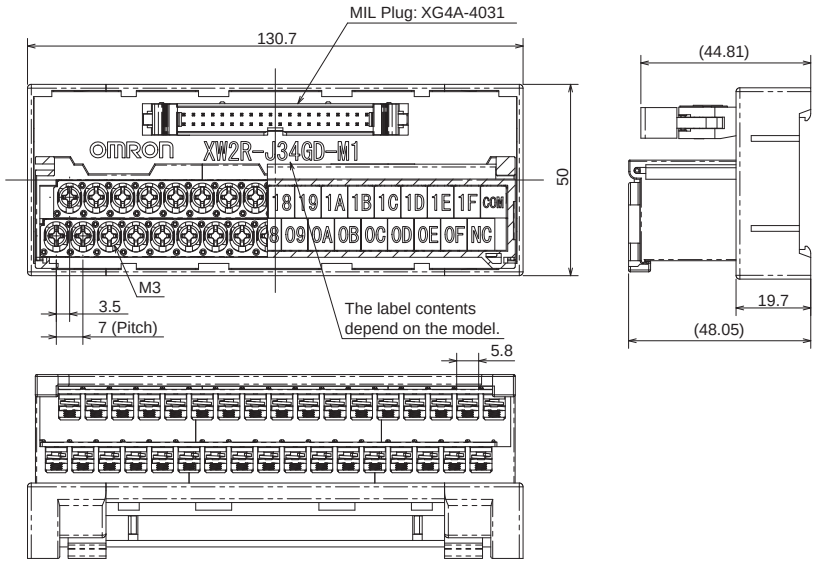
- Use a tightening torque of 0.5 N·m when connecting wires or crimp terminals to the terminal block.



Applicable crimp terminals		Applicable wires
Round crimp terminals	1.25-3	AWG 22 to 16 (0.30 to 1.25 mm²)
Forked crimp terminals	1.25Y-3	AWG 22 to 16 (0.30 to 1.25 mm²)

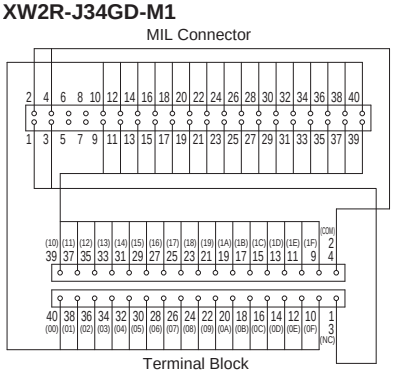
Dimensions

(Unit: mm)

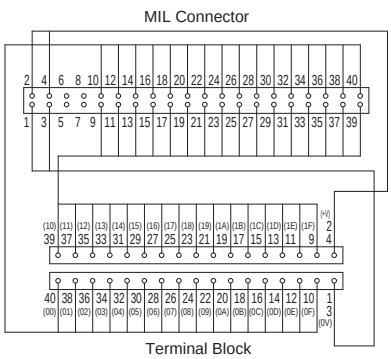


Wiring Diagram

XW2R-J34GD-M1



XW2R-J34GD-M2



Label Contents

XW2R-J34GD-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-J34GD-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 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

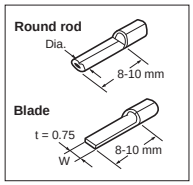
* Only DIN Track mounting models are described here.

Ratings and Specifications

Rated current		0.5 A/signal, 2 A/common
Rated voltage		24VDC
Insuration 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

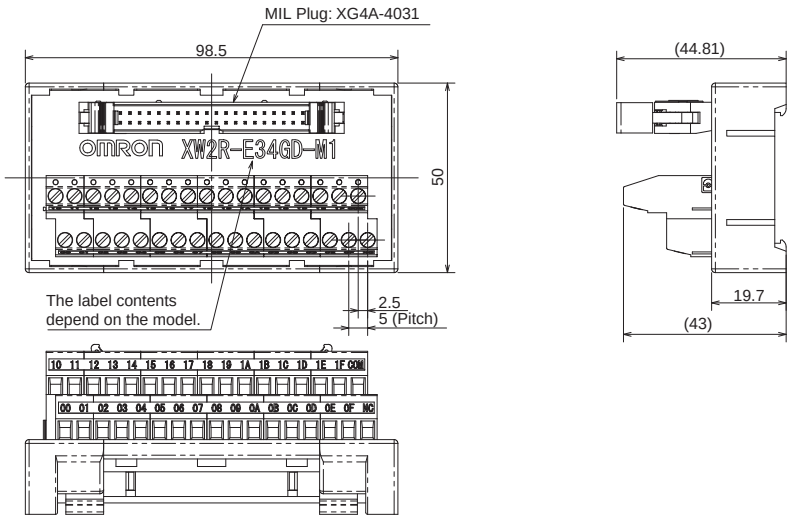
Applicable crimp terminals		Applicable wires
Rod	TC-05 Dia. = 1	AWG22 to AWG18 (0.30 to 0.75 mm^2)
	TC-1.25S Dia. = 1.5	AWG22 to AWG16 (0.30 to 1.25 mm^2)
Blade	BT1.25-9-1 BT1.25-10-1 W = 2.2	AWG22 to AWG16 (0.30 to 1.25 mm^2)



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

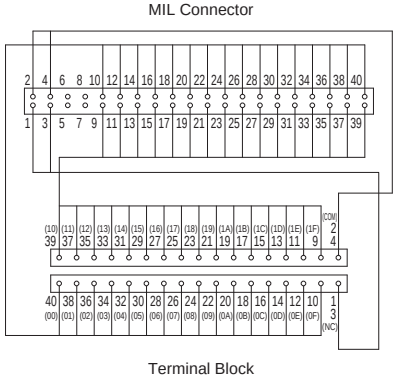
Dimensions

(Unit: mm)

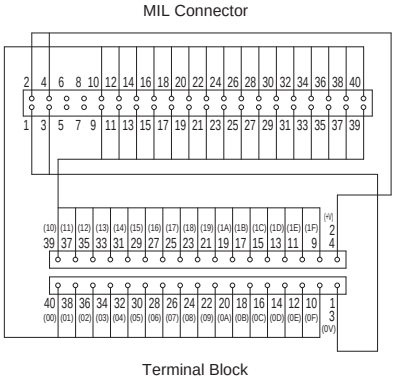


Wiring Diagram

XW2R-E34GD-M1



XW2R-E34GD-M2



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	0V														

Models for Keyence PLCs without power supply terminals

Model List

XW2R - J □□ G D - K□

Wiring method	
J	Phillips screw

Number of poles	
34	34 poles (I/O points: 32 points)*1
40	40 poles (I/O points: 36 points)*2

*1. K1 Type
*2. K2 Type

Mounted Connector type	
G	MIL (XG4A)

Mounting method	
D	DIN Track mounting

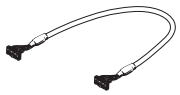
PLC Type	
K1	Refer to the following table for details.
K2	

Models for Keyence PLCs

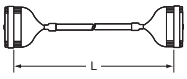
I/O	I/O Points	Unit	Models for Keyence PLCs	Models that connect to PLCs	Connecting cables *1
Input	32	I/O Unit Model	KV-C32XA, KV-C32XC	XW2R-J34GD-K1: 1 pcs	XW2Z-□□□EE: 1 Cable, or XW2Z-□□□□EE-L: 1 Cable
Output			KV-C32TA, KV-C32TC, KV-C32TCP		
			KV-C32TD		
I/O			KV-C32XTD		
Input	64		KV-C64XA, KV-C64XB, KV-C64XC	XW2R-J34GD-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-J40GD-K2: 1 pcs	XW2Z-□□□K: 1 Cable, or XW2Z-□□□□FF-L: 1 Cable

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

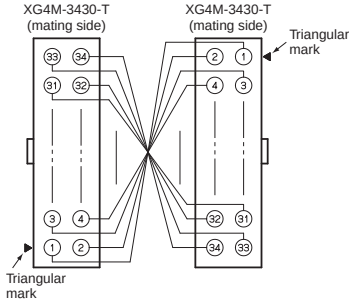
XW2Z-□□□EE, XW2Z-□□□□EE-L
Connectors: One 34-pin MIL Connector to One 34-pin MIL Connector

Appearance	Cable length L (m)	With shield Model	Without shield 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

Cable length L (m)

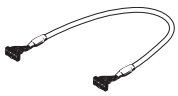


Wiring Diagram

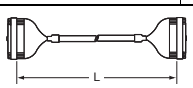


Note: Wire the connector terminals 1:1 so that the connector terminal numbers coincide.

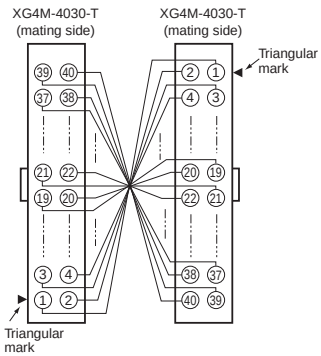
XW2Z-□□□K, XW2Z-□□□□FF-L
Connectors: One 40-pin MIL Connector to One 40-pin MIL Connector

Appearance	Cable length L (m)	With shield Model	Without shield 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

Cable length L (m)



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.

Ratings and Specifications

Rated current		1A
Rated voltage		125 VAC/DC
Insuration 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

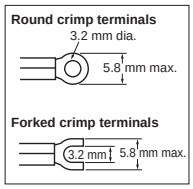
Details on Crimp Terminals

Wiring Terminal Blocks

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

Terminal Screw Tightening Torque

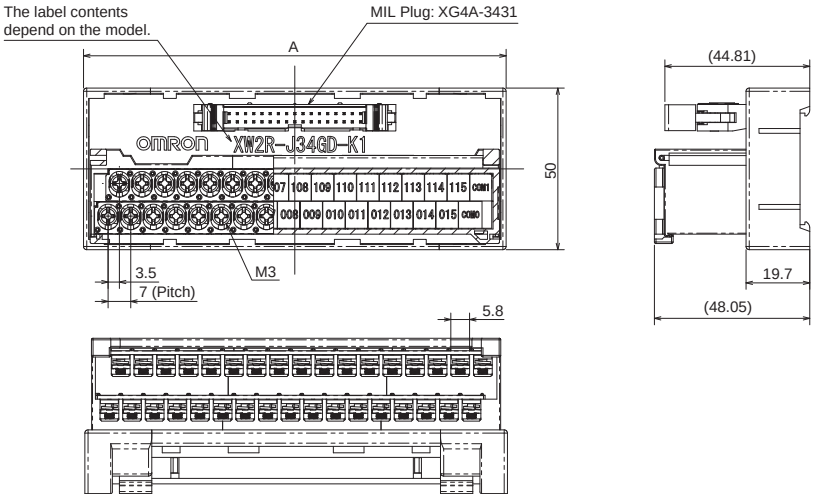
- Use a tightening torque of 0.5 N·m when connecting wires or crimp terminals to the terminal block.



Applicable crimp terminals		Applicable wires
Round crimp terminals	1.25-3	AWG 22 to 16 (0.30 to 1.25 mm^2)
Forked crimp terminals	1.25Y-3	AWG 22 to 16 (0.30 to 1.25 mm^2)

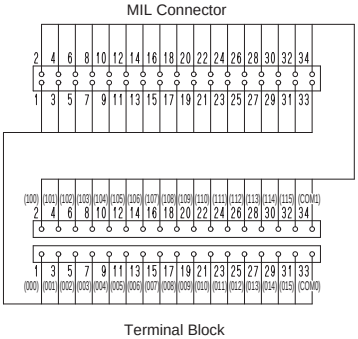
Dimensions

(Unit: mm)

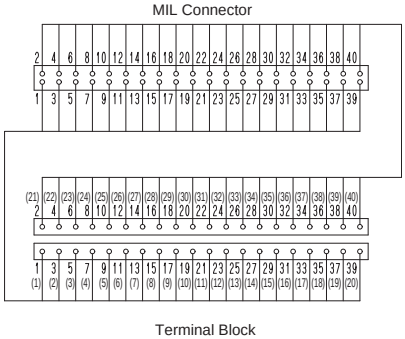


Wiring Diagram

XW2R-J34GD-K1

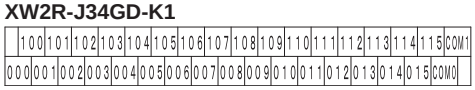


XW2R-J40GD-K2

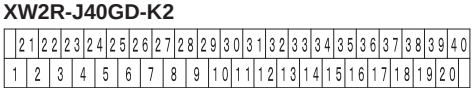


Label Contents

XW2R-J34GD-K1



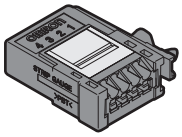
XW2R-J40GD-K2



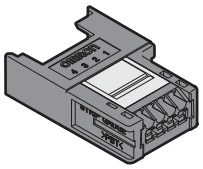
Input Device Connectors: XN2 e-CON Connectors

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

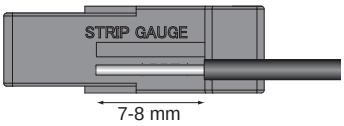
Rated current	3 A/pin (with AWG20 wires), 2 A/pin (with AWG22 wires), 1 A/pin (with AWG24 wires), 0.5 A/pin (with AWG26 or AWG28 wires)
Rated voltage	32 VDC
Contact resistance	30 mΩ max. (at 20 mV, 100 mA max.)
Insuration resistance	10^3 MΩ min. (at 500VDC)
Dielectric strength	1,000 VAC for 60 sec (leakage current: 1 mA max.)
Insertion durability	50 times
Ambient operating temperature	-30 to 75°C ∗
Applicable wires	Stranded wire 0.08mm^2 (AWG28) to 0.5mm^2 (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

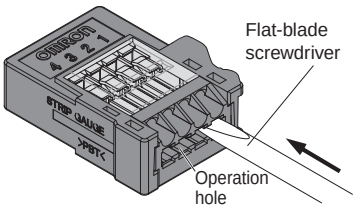
Wire Preparation

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.

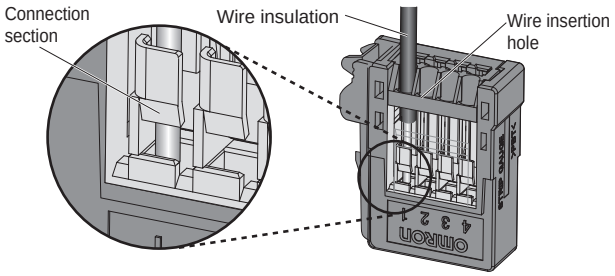


Connection Procedure

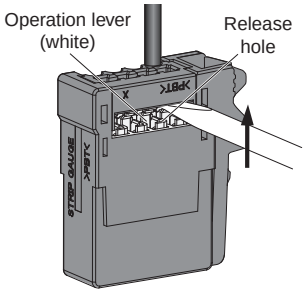
1. Press a flat-blade screwdriver into the operation hole until the operation lever locks into place.



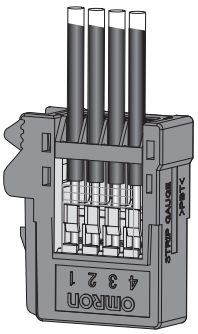
2. Insert the wire all the way into the wire insertion hole. Confirm that the insulation on the wire also enters the wire insertion hole and that the end of the wire has passed through the connection section.



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

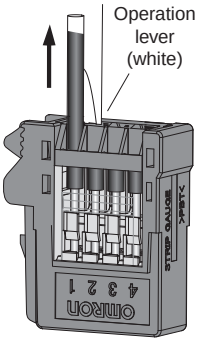


4. Finally, check the following items.
   - Make sure the operation lever has been reset.
   - Check the items given in step 2 again. (Pull lightly on the wire to see if it is held firmly in place.)



Disconnection Procedure

1. Press in the operation level, confirm that the operation lever 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

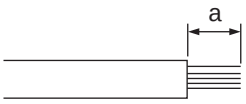
- Do not damage the cores when stripping the insulation from them.
- Always twist stranded wires together before connecting them.
- Do not presolder wires. It may not be possible to connect them or remove them.

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)

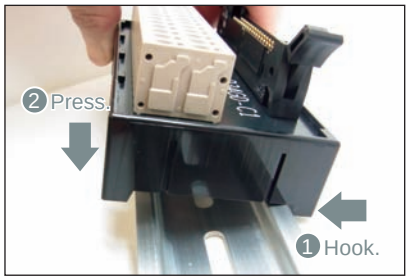
When an electric wire is connected directly (J,E,P type)



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

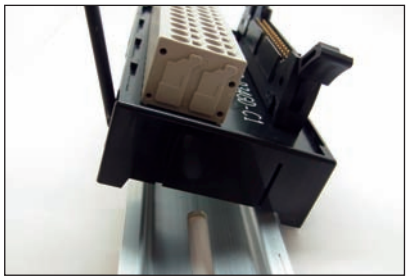
Mounting Units to and Removing Units from DIN Track

Mounting Procedure



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

Removal Procedure



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

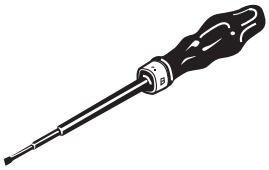
Use tool

- 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.

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 elecrical continuity in the screw, Please confirm it at hole for confirming continuity or wiring part.

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