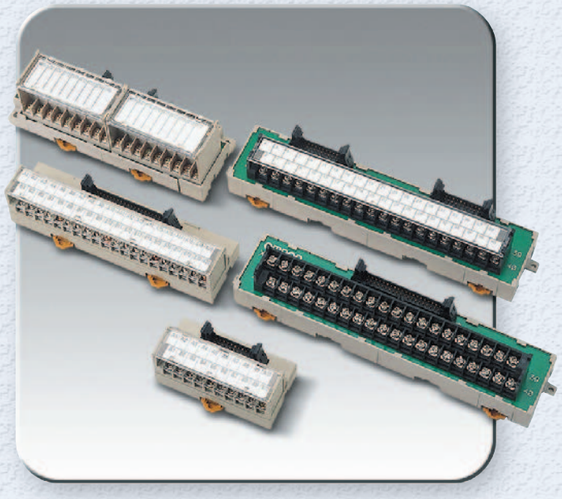
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OMRON

Cat. No. X074-E1-01

Connector-terminal Conversion Unit Group Catalog



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Kanagawa, 213-0012 Japan
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In the interest of product improvement, specifications are subject to change without notice.

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Cal. No. X074-E1-01

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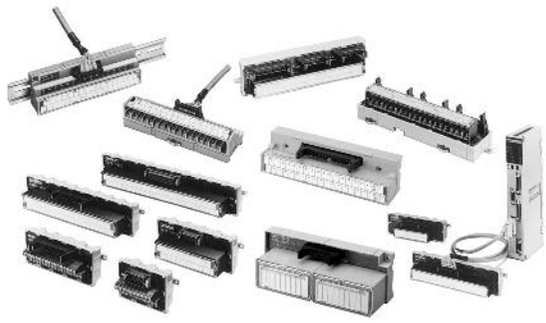
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Connector-Terminal Block Conversion Units (with Special Connecting Cables)

XW2D/XW2C/ XW2B/XW2E

Connector-Terminal Block Conversion Units use a Cable to connect all PLC inputs and outputs at once.
Wiring and installation time are cut and maintenance is simpler.



Features

Slim Connector-Terminal Block Conversion Units contribute to downsizing control panels and automatic equipment.

XW2D

- Mounting area reduced by 35% (in comparison with 40-pole XW2B Units.)
- Fallout prevention for terminal screws.
- Terminal screws arranged by color to simplify counting terminal numbers and ensure more efficient wiring.

Refer to pages 3 to 5.

An extensive series with Connector-Terminal Block Conversion Units for a wide range of applications.

XW2B

- Series includes both Through-type Connector-Terminal Block Conversion Units, as well as Special Servo Relay Units and Terminal Blocks for Motion Controls Units.

Refer to pages 12 to 22.

Common terminal and LED operation indicators provided on terminal block.

XW2C

- Common terminal for device power supply on Units with two-tiered terminal block.
- For 16 inputs only.

Refer to pages 6 to 9.

Three-tiered terminal block equipped with power supply common for easy input device connection.

XW2E

- Power supply common provided for input devices.
- Three-tiered terminal block simplifies wiring.

Refer to pages 10 to 11.

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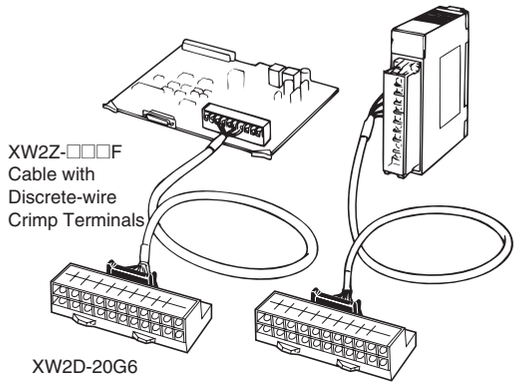
Connector-Terminal Block Conversion Unit Connection Examples

Note: Refer to page 35 for Position Control Unit and Servo Driver connections.

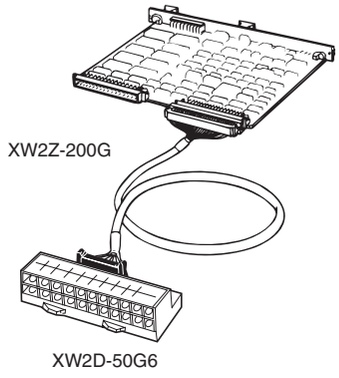
■ Controller Connections

XW2D Series (See page 3.)

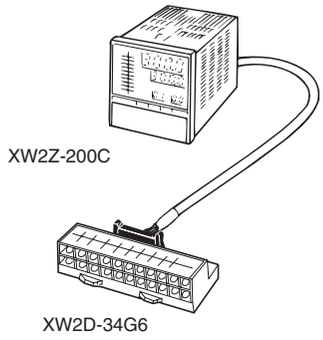
Programmable Controller I/O Units with Terminal Blocks, Board Computers, Etc.



E5ZD Multiple-point Temperature Controller Series



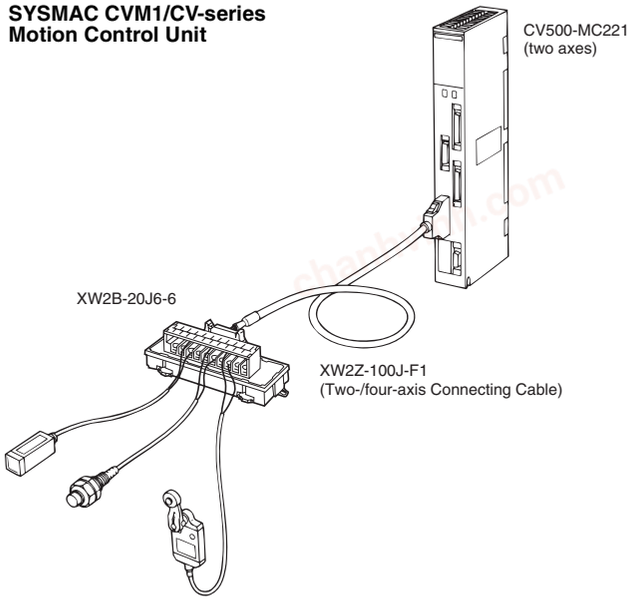
ES100 Temperature Controllers (for Expansion I/O)

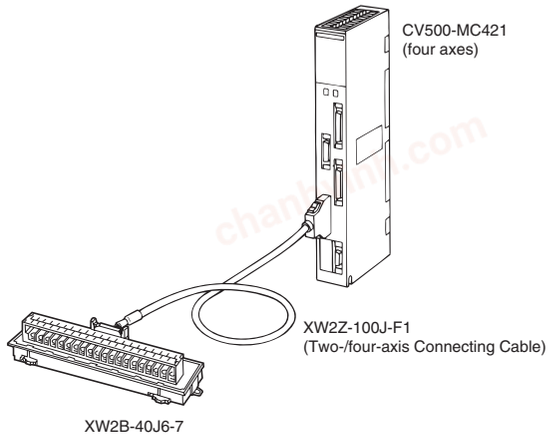


■ SYSMAC CVM1/CV-series Motion Control Unit Connections

XW2B Motion Control Unit Terminal Block (See page 52.)

SYSMAC CVM1/CV-series Motion Control Unit

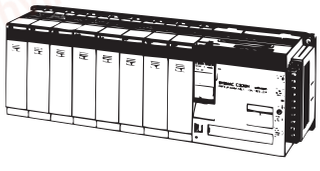


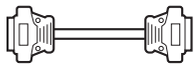


■ Programmable Controller and Host Link Connection

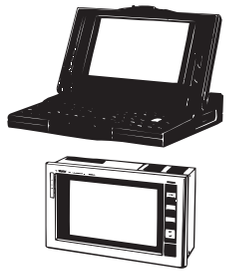
XW2Z Host Link Cable (See page 58.)

SYSMAC PLC
CQM1
C Series
CV Series
CVM1





XW2Z-□□□P/R/S/T
Host Link Cable



Host
Personal computer
Factory Intelligent Terminal
Programmable Terminal

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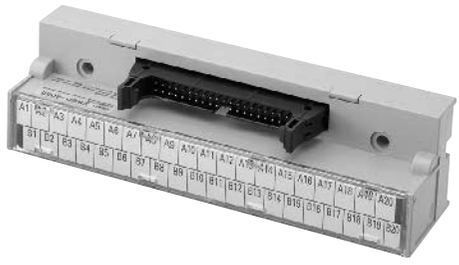
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Slim Connector-Terminal Block Conversion Units

XW2D

New Slim Connector-Terminal Block Conversion Units.

- Mounting area reduced by 35% (in comparison with 40-pole XW2B Units) to contribute to downsizing control panels and automatic equipment.
- Fallout prevention for terminal screws.
- Round or forked crimp terminals can be used.
- Mount to DIN Track or via screws. Unique DIN Track lock can maintain open status during DIN track attachment and removal.
- Terminal cover can be locked open.
- Screw terminals are arranged by color in groups of five to simplify counting terminal numbers.



■ Ratings and Characteristics

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

■ Ordering Information

Mounted Connector	No. of poles	Model	Dimension A	Dimension B	Mounted Connector model	Cable Connector model
XG4A MIL Connectors	20	XW2D-20G6	79	57	XG4A-2031	XG4M-2030-T
	34	XW2D-34G6	128	100	XG4A-3431	XG4M-3430-T
	40	XW2D-40G6	149	110	XG4A-4031	XG4M-4030-T
		XW2D-40G6-RF (See note 1.) *NEW*	149	110	XG4A-4031	XG4M-4030-T
		XW2D-40G6-RM (See note 2.) *NEW*	149	110	XG4A-4031	XG4M-4030-T
	50	XW2D-50G6	184	144	XG4A-5031	XG4M-5030-T
XG4C MIL Connectors	20	XW2D-20C6	79	57	XG4C-2031	XG4M-2030-U
	34	XW2D-34C6	128	100	XG4C-3431	XG4M-3430-U
	40	XW2D-40C6	149	110	XG4C-4031	XG4M-4030-U
	50	XW2D-50C6	184	144	XG4C-5031	XG4M-5030-U
MR Sockets	20	XW2D-20X6	79	57	MR-20RFD2	MR-20M
	34	XW2D-34X6	128	100	MR-34RFD2	MR-34M
	50	XW2D-50X6	184	144	MR-50RFD2	MR-50M
MR Plugs	20	XW2D-20Y6	79	57	MR-20RMD2	MR-20F
	34	XW2D-34Y6	128	100	MR-34RMD2	MR-34F
	50	XW2D-50Y6	184	144	MR-50RMD2	MR-50F

Note: **1.** Has built-in bleeder resistance and is used for the CJ1W-ID231/-ID261.

2. Has built-in bleeder resistance and is used for the CJ1W-ID232.

3. The MR Connector is made by Honda Tsushin Kogyo.

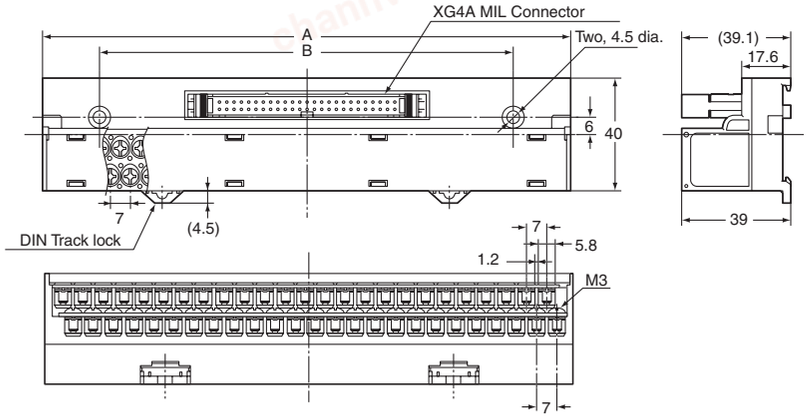
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■ Dimensions

XW2D-□□G6

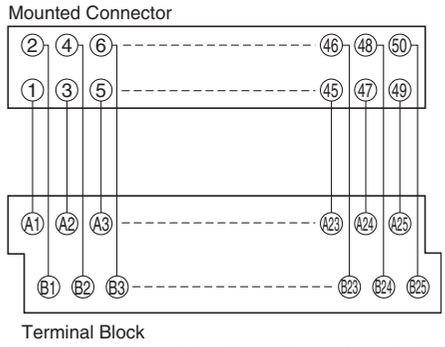
Mounted Connector: XG4A MIL Connector



Note: There is only one DIN Track lock located in the center of the terminal block for a 20-pole Unit.

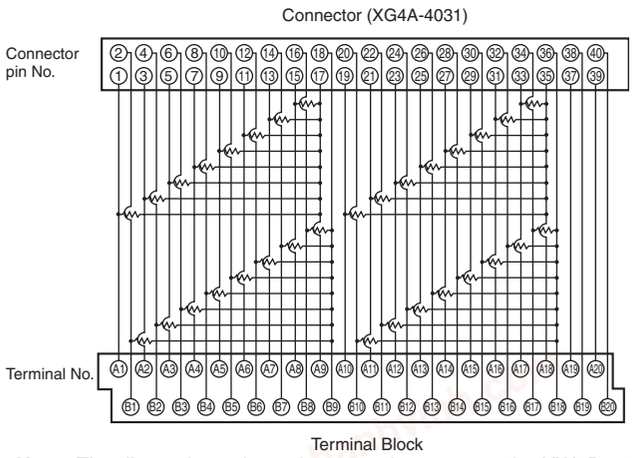
Wiring Diagram

(Example for Terminal Block with 50 Poles)



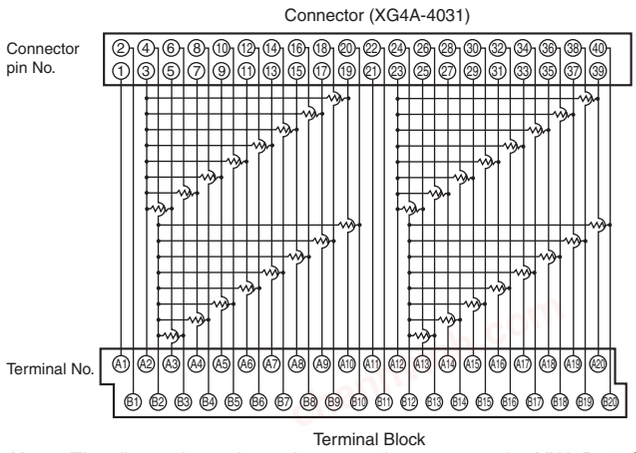
Note: For all models, the odd-numbered pins on the Connector correspond to row A on the terminal block and the even-numbered pins on the Connector correspond to row B on the terminal block.

XW2D-40G6-RF



Note: The dimensions shown here are the same as the XW2D-40G6.

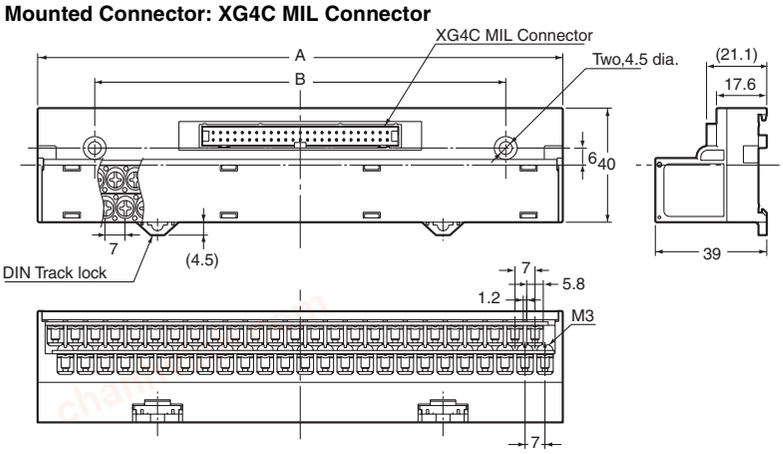
XW2D-40G6-RM



Note: The dimensions shown here are the same as the XW2D-40G6.

XW2D-□□C6

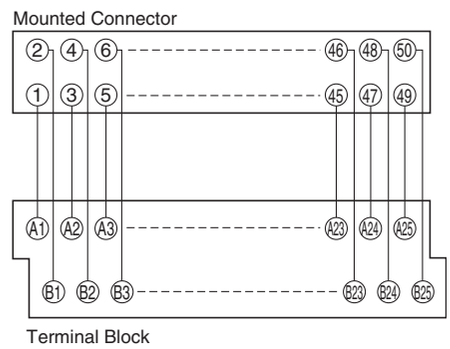
Mounted Connector: XG4C MIL Connector



Note: There is only one DIN Track lock located in the center of the terminal block for a 20-pole Unit.

Wiring Diagram

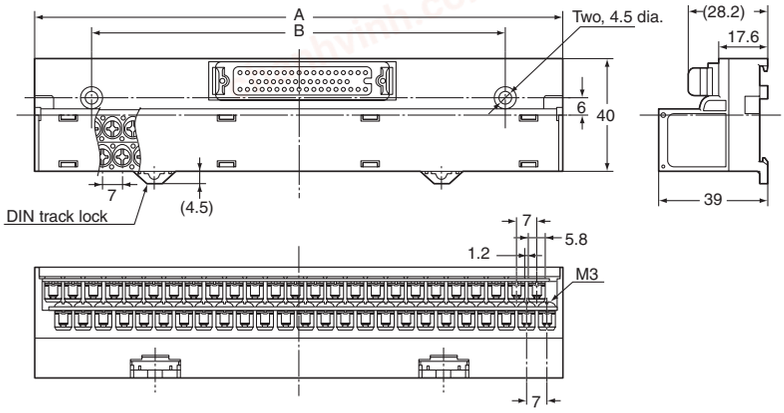
(Example for Terminal Block with 50 Poles)



Note: For all models, the odd-numbered pins on the Connector correspond to row A on the terminal block and the even-numbered pins on the Connector correspond to row B on the terminal block.

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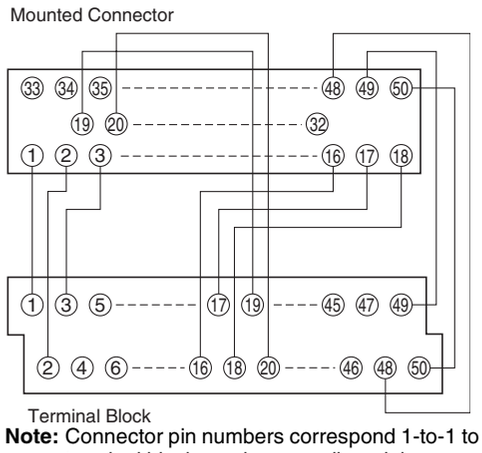
XW2D-□□X6
Mounted Connector: MR Socket



Note: There is only one DIN Track lock located in the center of the Connector for a 20-pole Unit.

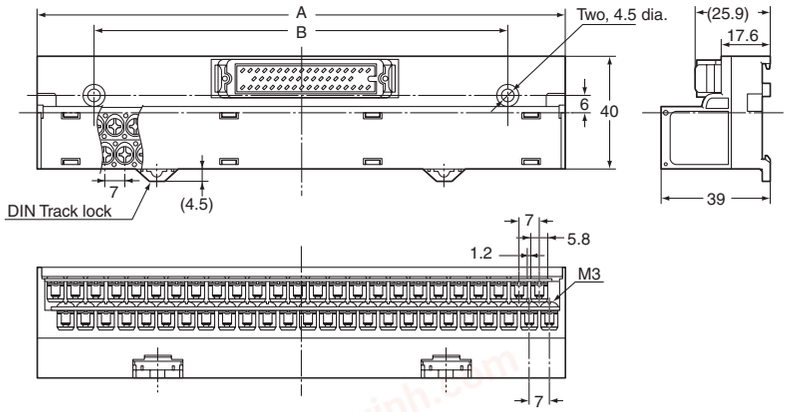
Wiring Diagram

(Example for Terminal Block with 50 Poles)



Note: Connector pin numbers correspond 1-to-1 to terminal block numbers on all models.

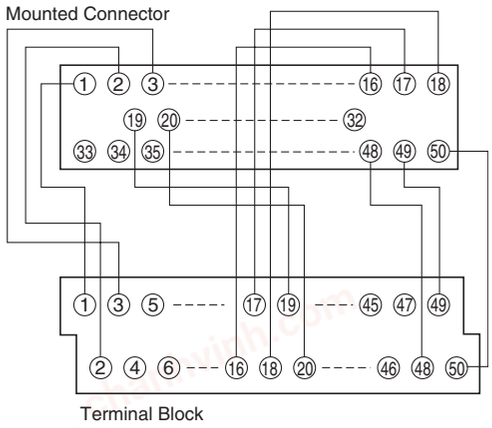
XW2D-□□Y6
Mounted Connector: MR Plug



Note: There is only one DIN Track lock located in the center of the terminal block for a 20-pole Unit.

Wiring Diagram

(Example for Terminal Block with 50 Poles)



Note: Connector pin numbers correspond 1-to-1 to terminal block numbers on all models.

■ Options (Sold Separately)

Connecting Cables for Connector-Terminal Block Conversion Units

Refer to pages 23 to 31.

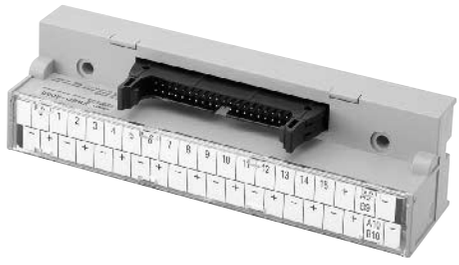
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Connector-Terminal Block Conversion Units with Two-tiered I/O Terminal Block with Common

XW2C

Common terminal provided. Use for either PLC Input Unit or Output Unit merely by changing short bar.



■ Ordering Information

No. of inputs	No. of poles	Model	Mounted Connector model	Cable Connector model
16	20	XW2C-20G6-IO16	XG4A-2031	XG4M-2030-T

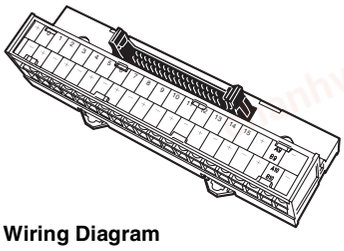
Note: The Connecting Cable is the XW2Z-□□□A described on page 24.

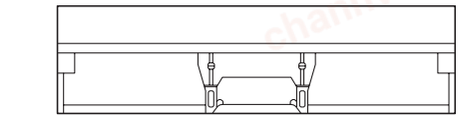
■ Ratings and Characteristics

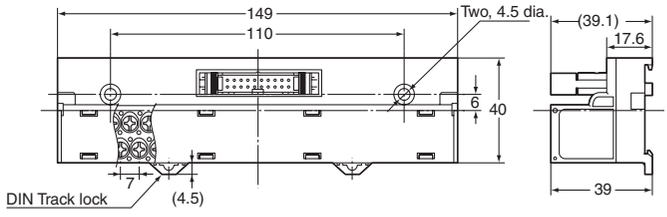
Rated current	1 A
Rated voltage	125 VAC, 24 VDC
Insulation resistance	100 MΩ min. (at 500 VDC)
Dielectric strength	500 VAC for 1 min (leakage current: 1 mA max.)
Operating temperature	0 to 55°C

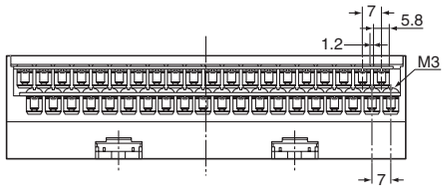
■ Dimensions

XWS2C-20G6-IO16

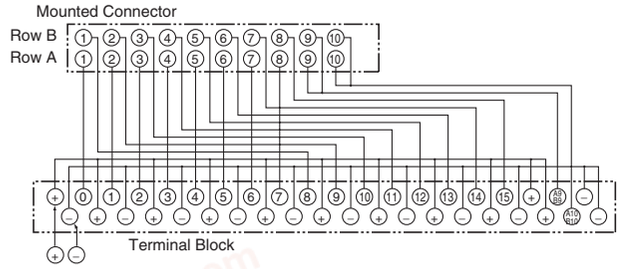


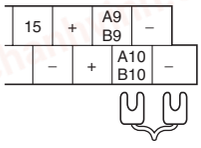






Wiring Diagram





Either a PLC Input or Output Unit can be connected by shorting terminals A9/B9 and A10/B10 to the + or – terminals.

■ Options (Sold Separately)

Connecting Cables for Connector-Terminal Block Conversion Units

Refer to pages 23 to 31.

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■ Precautions

Correct Use

XW2D/XW2C-20G6-IO16

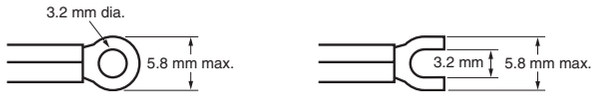
Wiring

- Always turn OFF the power supply before wiring. Otherwise, cables or other conductors can short the terminals and cause the Unit to fail.
- Do not connect or disconnect Connectors with the power turned ON. Otherwise, it may cause malfunctions.

Wiring Terminal Blocks

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

Round crimp terminals **Forked crimp terminals**



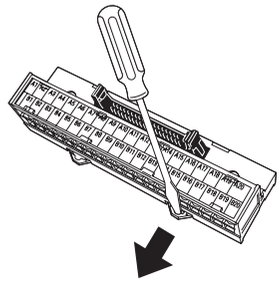
Applicable crimp terminals		Applicable wires
Round crimp terminals	1.25-3	AWG22 to AWG16 (0.30 to 1.25 mm^2)
Forked crimp terminals	1.25Y-3	AWG22 to AWG16 (0.30 to 1.25 mm^2)

Terminal Screw Tightening Torque

- Use a tightening torque of 0.7 N·m when connecting wires or crimp terminals to the terminal block.

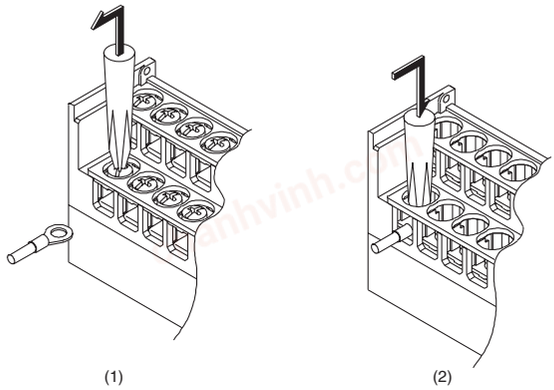
Mounting Units to and Removing Units from DIN Track

- XW2□ Connector-Terminal Block Conversion Units can be mounted side-to-side on DIN Track.
- Secure both ends of the XW2□ with End Plates.
- When removing the Unit from a DIN Track, insert a flat-head screwdriver into the slider and pull the lock out.



Handling M3 Screw and Round Terminals

- Raise the M3 screw with a Phillips screwdriver as shown in diagram (1) and slide the screw toward you to keep the space open. Follow the steps in diagrams (1) and (2) below when using round crimp terminals.



(1) (2)

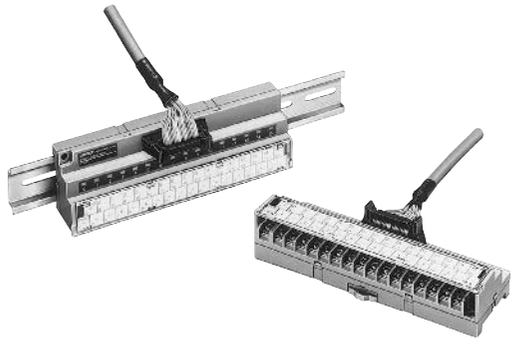
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Connector-Terminal Block Conversion Units with Common

XW2C

Features like a common terminal and LED operation indicators reduce control panel wiring for input devices.



- Power supply common provided for input devices.
- LEDs indicate at a glance whether input signals are ON or OFF.
- Mounts to DIN Track or via screws.
- Connecting Cable available (sold separately).

■ Ordering Information

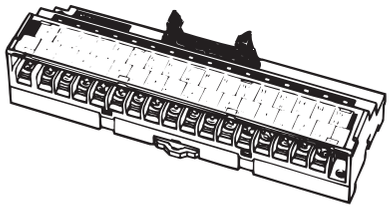
No. of inputs	Input type	Model
16	NPN-compatible input (+ common)	XW2C-20G5-IN16

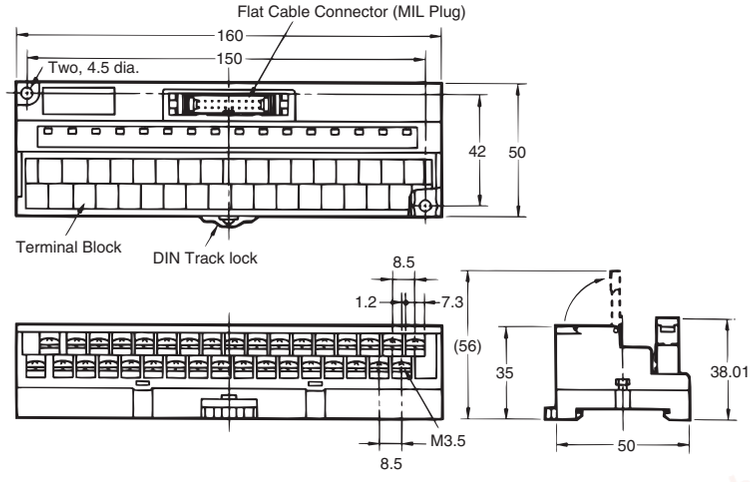
■ Ratings and Characteristics

Rated current	1 A/common
Rated voltage	12 to 24 VDC
No. of circuits	16
Input indicator	LED (orange)
Power supply voltage range	12 to 24 VDC±5%
LED current	24 VDC: 10 mA/point max.
Insulation resistance	50 MΩ min. (at 500 VDC)
Dielectric strength	500 VAC for 1 min
Operating temperature	0 to 55°C

■ Dimensions

XWS2C-20G5-IN16

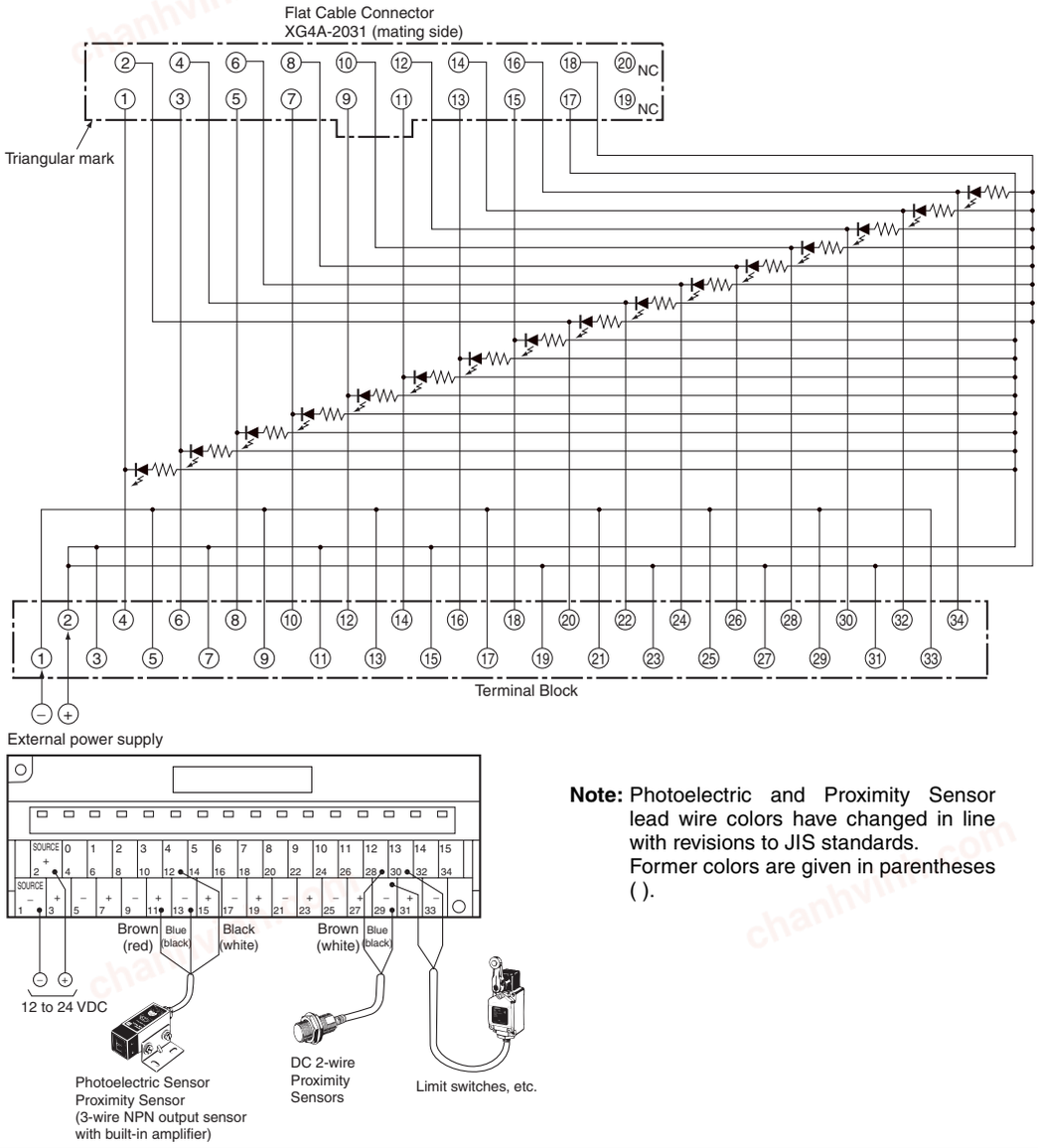




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■ Circuit and Terminal Arrangement Diagram

Wiring Diagram



Note: Photoelectric and Proximity Sensor lead wire colors have changed in line with revisions to JIS standards. Former colors are given in parentheses ( ).

■ Options (Sold Separately)

Connecting Cables for Connector-Terminal Block Conversion Units

Refer to pages 23 to 31.

Note: Do not use the G79-□C (G7TC Connector with Cable) because it is wired differently.

■ Precautions

Correct Use

Wiring

- Always turn OFF the power supply before wiring. Otherwise, cables or other conductors can short the terminals and cause the Unit to fail.
- Do not connect or disconnect Connectors with the power turned ON. Otherwise, it may cause malfunctions.

Wiring Terminal Blocks

- The following crimp terminals are applicable for terminal blocks with M3.5 screws.
  2-3.5 (round)
  2Y-3.5 (forked)

DIN Track Mounting

- Secure both ends of the XW2C with End Plates.

Terminal Screw Tightening Torque

- Use a tightening torque of 0.59 N·m when connecting crimp terminals to the terminal block.

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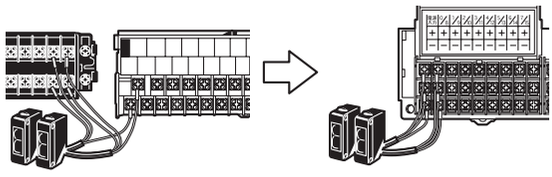
OMRON

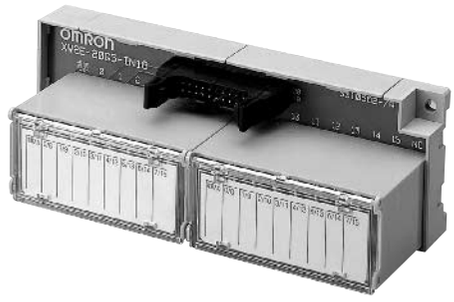
Connector-Terminal Block Conversion Units with Three-tiered Terminal Block with Common

XW2E

A common terminal is provided for device power supply and the three-tiered structure means easier wiring.

- For 16 inputs only.
- The three-tiered terminal block simplifies wiring because the power supply terminal block is wired with just one crimp terminal.





■ Ordering Information

No. of inputs	No. of poles	Model	Mounted Connector model	Cable Connector model
16	20	XW2E-20G5-IN16	XG4A-2031	XG4M-2030-T

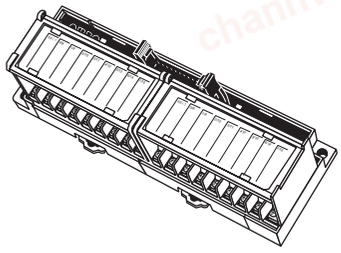
■ Ratings and Characteristics

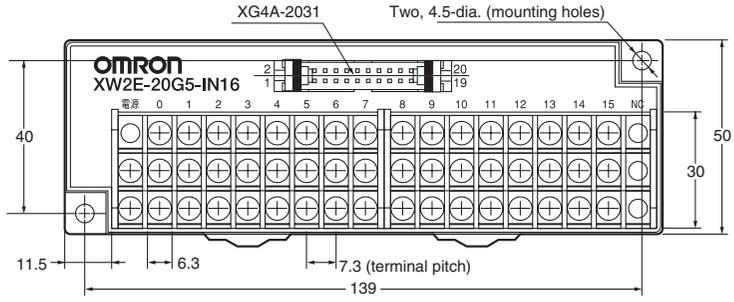
Rated current	1 A
Rated voltage	12 to 24 VDC
Insulation resistance	100 MΩ min. (at 500 VDC)
Dielectric strength	500 VAC for 1 min (leakage current: 1 mA max.)
Operating temperature	0 to 55°C

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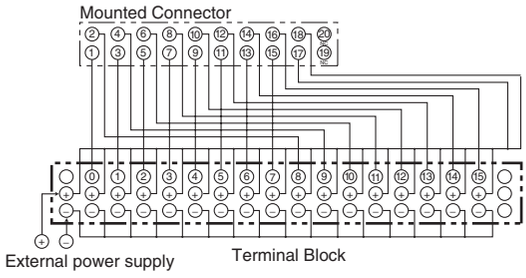
■ Dimensions

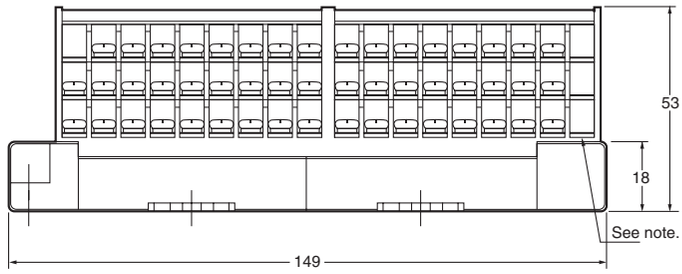
XW2E-20G5-IN16





Wiring Diagram





Note: This is not a row of terminals.

■ Options (Sold Separately)

Connecting Cables for Connector-Terminal Block Conversion Units

Refer to pages 23 to 31.

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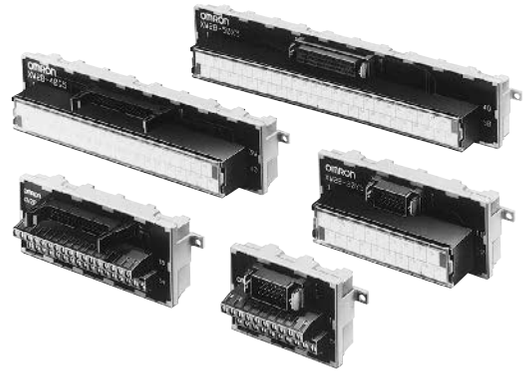
OMRON

Through-type Connector-Terminal Block Conversion Units

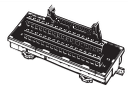
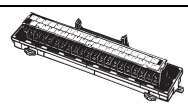
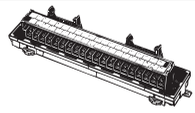
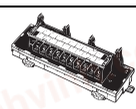
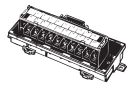
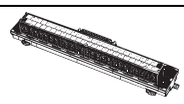
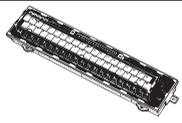
XW2B

Simplifies Connector and terminal block replacement, and requires less in-panel wiring.

- Mount to DIN Track or via screws.
- MIL Flat Cable Connectors and Multi-pole, Square Connectors are standard.
- Terminal blocks available with either M3 or M3.5 screws.
- Connecting Cables for Programmable Controllers available (sold separately).



■ Connectors

Type	Model	Connector	Terminal Block	Appearance	Page
Flat Cable	XW2B-□□G4	Flat Cable Connectors	Terminal block with M3 screws		14
	SW2B-□□G5		Terminal block with M3.5 screws		14
Twin-connector	XW2B-40G5-T	Flat Cable Connectors	Terminal block with M3.5 screws		16
Daisy Chain	XW2B-20G5-D				17
Multi-pole, Square-connector	XW2B-□□Y4	Multi-pole, Square Connector Plugs (See note 1.)	Terminal block with M3 screws		18
	XW2B-□□Y5		Terminal block with M3.5 screws		19
	XW2B-□□X5	Multi-pole, Square Connector Sockets (See note 1.)			20
Board I/O	XW2B-40F5-P	Board I/O Connectors (See note 2.)	Terminal block with M3.5 screws		21

Note: **1.** These Plugs and Sockets are made by Honda Tsushin Kogyo.

2. These Plugs are made by Fujitsu.

■ Ratings and Characteristics

Item	XW2B-□□G□ Flat Cable Units	XW2B-□□Y□ Multi-pole, Square-connector Units	XW2B-40F5-P Board I/O Unit
Rated current	1 A		
Rated voltage	125 VAC		
Insulation resistance	100 MΩ min. (at 500 VDC)		
Dielectric strength	500 VAC for 1 min (leakage current: 1 mA max.)		
Operating temperature	0 to 55°C		

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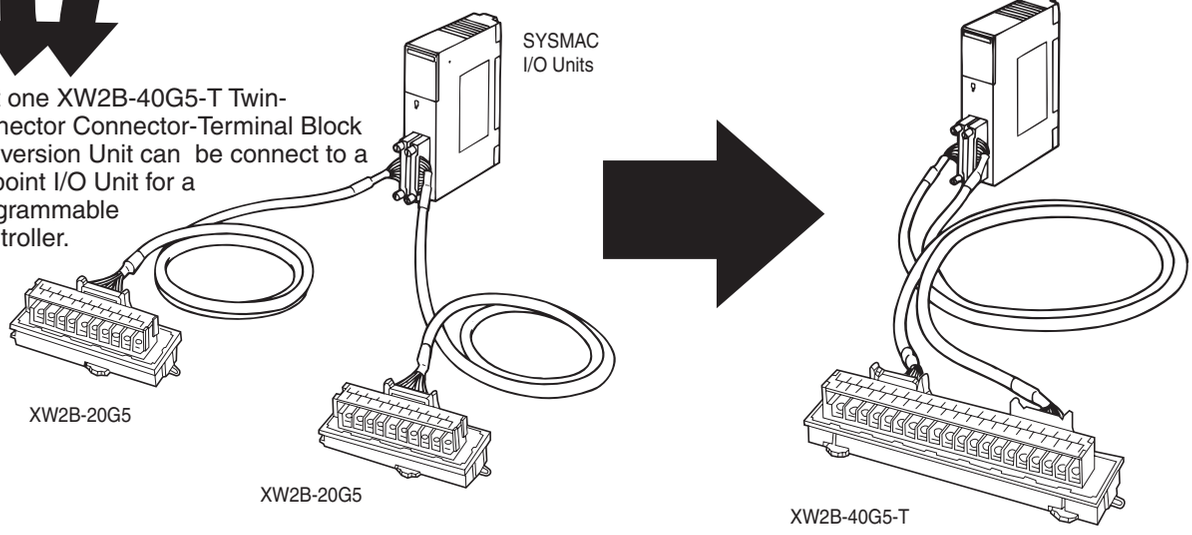
OMRON

OMRON's popular Connector-Terminal Block Conversion Unit line has two new additions that connect to 32-point I/O Units for Programmable Controllers.
The new models offer reduced in-panel wiring and greater space savings.

Twin-connector Units

Refer to page 16.

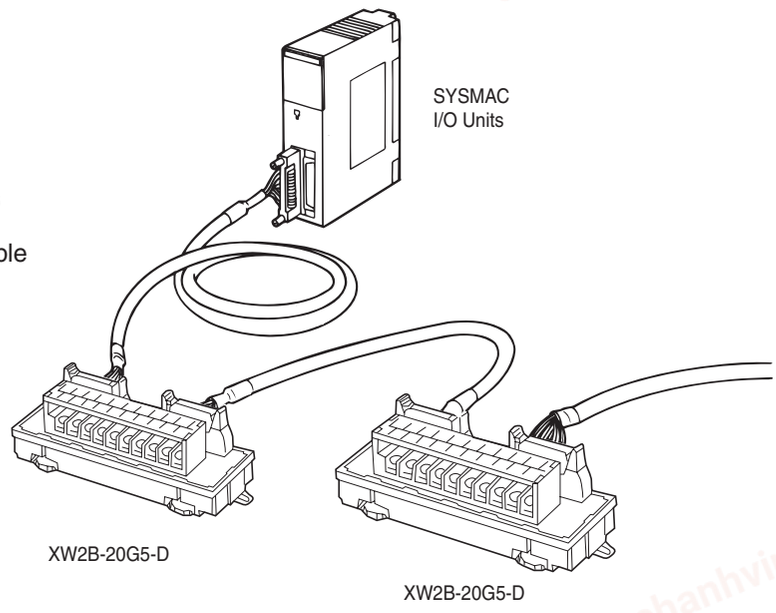
Just one XW2B-40G5-T Twin-connector Connector-Terminal Block Conversion Unit can be connect to a 32-point I/O Unit for a Programmable Controller.



Daisy Chain Units

Refer to page 17.

XW2B-20G5-D Daisy Chain Units can distribute output signals from 32-point I/O Units for Programmable Controllers.



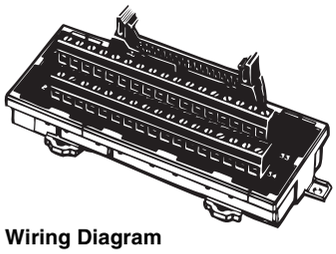
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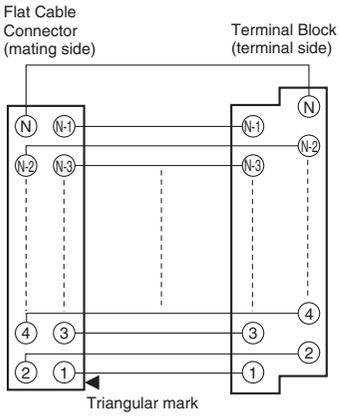
Flat Cable Units with a Terminal Block with M3 Screws

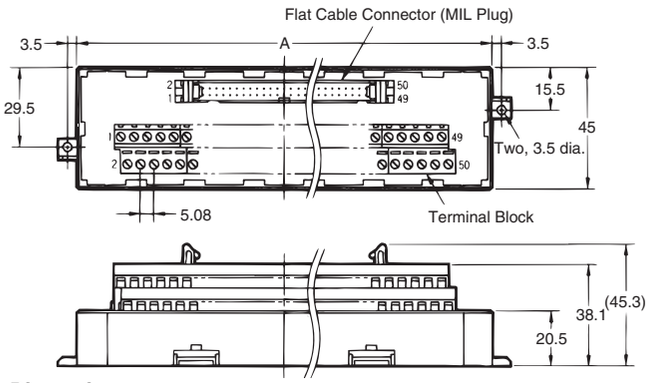
■ Dimensions

XW2B-□□G4



Wiring Diagram





Dimensions

Model	No. of poles	Dimension A (mm)	Applicable Connector models (See note 1.)
XW2B-20G4	20	67.5	XG4A-2031
XW2B-34G4	34	112.5	XG4A-3431
XW2B-40G4	40	135.0	XG4A-4031
XW2B-50G4	50	157.7	XG4A-5031
XW2B-60G4	60	180.0	XG4A-6031

Note: 1. Flat Cable Connectors have one polarity slot.

2. Terminal block pitch is 5.08 mm.
Use a wire size between 0.3 and 1.25 mm^2 (AWG22 to AWG16).
The wire insertion holes are 1.8 × 2.5 (H × W) mm.

■ Ordering Information

No. of poles	Model
20	XW2B-20G4
34	XW2B-34G4
40	XW2B-40G4
50	XW2B-50G4
60	XW2B-60G4

■ Special Connecting Cables

Refer to pages 23 to 31.

■ Applicable Connectors

Model	Applicable Connectors (sold separately)		
	Flat Cable Connectors, MIL Sockets with Strain Reliefs	Discrete-wire IDC Connectors, Double-row Sockets	
		Connectors (See note 1.)	Semi-covers (See note 2.)
XW2B-20G4	XG4M-2030-T	XG5M-2032-N XG5M-2035-N	XG5S-1001
XW2B-34G4	XG4M-3430-T	XG5M-3432-N XG5M-3435-N	XG5S-1701
XW2B-40G4	XG4M-4030-T	XG5M-4032-N XG5M-4035-N	XG5S-2001
XW2B-50G4	XG4M-5030-T	XG5M-5032-N XG5M-5035-N	XG5S-2501
XW2B-60G4	XG4M-6030-T	XG5M-6032-N XG5M-6035-N	XG5S-3001

Note: 1. Either the XG5M-□□32-N or the XG5M-□□35-N may be used.

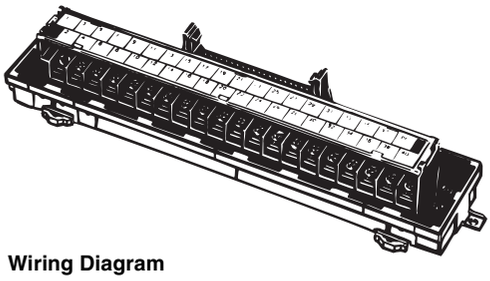
2. Each Connector requires two Semi-covers.

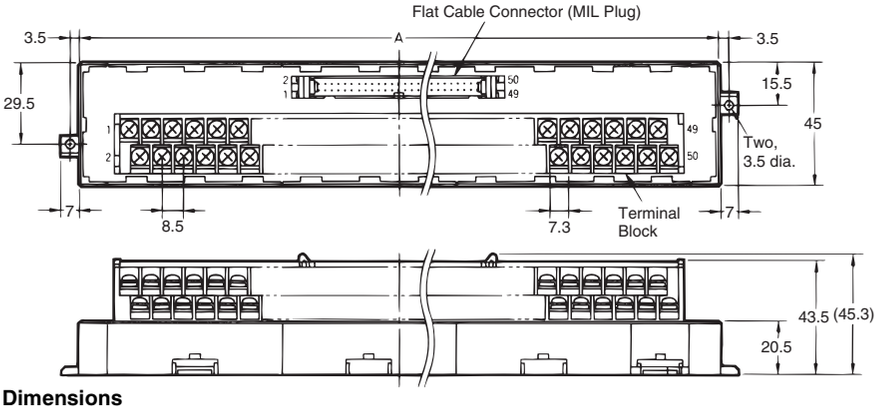
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Flat Cable Units with a Terminal Block with M3.5 Screws

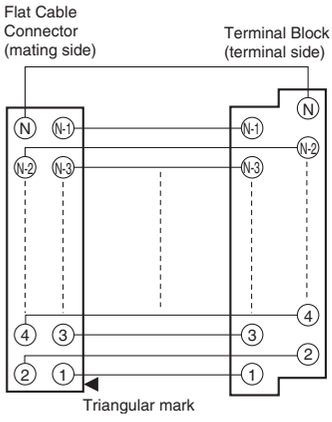
■ Dimensions

XW2B-□□G5





Wiring Diagram



Dimensions

Model	No. of poles	Dimension A (mm)	Applicable Connector models (See note 1.)
XW2B-20G5	20	112.5	XG4A-2031
XW2B-34G5	34	180.0	XG4A-3431
XW2B-40G5	40	202.5	XG4A-4031
XW2B-50G5	50	247.5	XG4A-5031
XW2B-60G5	60	292.5	XG4A-6031

Note: 1. Flat Cable Connectors have one polarity slot.
2. Terminal block pitch is 8.5 mm.

■ Ordering Information

No. of poles	Model
20	XW2B-20G5
34	XW2B-34G5
40	XW2B-40G5
50	XW2B-50G5
60	XW2B-60G5

■ Special Connecting Cables

Refer to pages 23 to 31.

■ Applicable Connectors

Model	Applicable Connectors (sold separately)		
	Flat Cable Connectors, MIL Sockets with Strain Reliefs	Discrete-wire IDC Connectors, Double-row Sockets	
		Connectors (See note 1.)	Semi-covers (See note 2.)
XW2B-20G5	XG4M-2030-T	XG5M-2032-N XG5M-2035-N	XG5S-1001
XW2B-34G5	XG4M-3430-T	XG5M-3432-N XG5M-3435-N	XG5S-1701
XW2B-40G5	XG4M-4030-T	XG5M-4032-N XG5M-4035-N	XG5S-2001
XW2B-50G5	XG4M-5030-T	XG5M-5032-N XG5M-5035-N	XG5S-2501
XW2B-60G5	XG4M-6030-T	XG5M-6032-N XG5M-6035-N	XG5S-3001

Note: 1. Either the XG5M-□□32-N or the XG5M-□□35-N may be used.
2. Each Connector requires two Semi-covers.

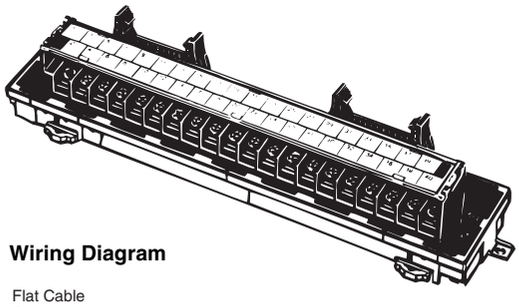
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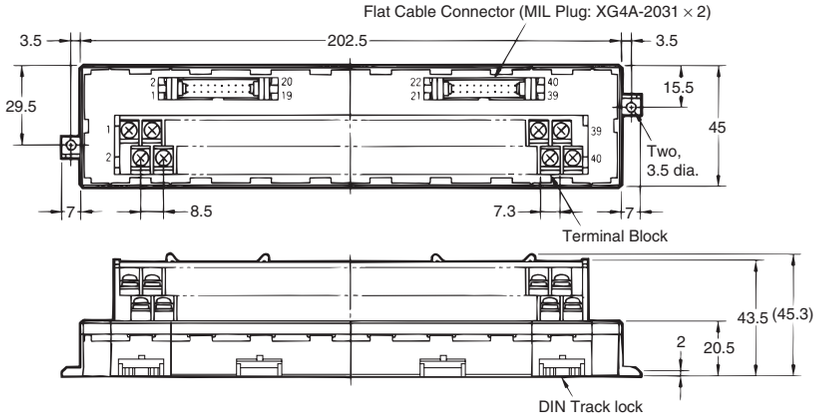
OMRON

Twin-connector Units with a Terminal Block with M3.5 Screws

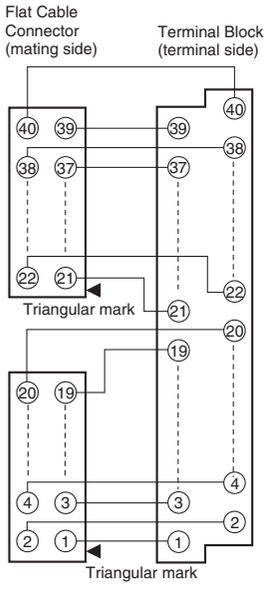
■ Dimensions

XW2B-40G5-T





Wiring Diagram



■ Ordering Information

Model	No. of poles (See note 1.)	Applicable Connector models (See note 2.)
XW2B-40G5-T	40	XG4A-2031

Note: 1. The number of poles indicated here is the number of poles on the terminal block.
2. Flat Cable Connectors have one polarity slot.
3. Terminal block pitch is 8.5 mm.

■ Applicable Connectors

Model	Applicable Connectors (sold separately)		
	Flat Cable Connectors, MIL Sockets with Strain Reliefs	Discrete-wire IDC Connectors, Double-row Sockets	
		Connectors (See note 1.)	Semi-covers (See note 2.)
XW2B-40G5-T	XG4M-2030-T	XG5M-2032-N XG5M-2035-N	XG5S-1001

Note: 1. Either the XG5M-□□32-N or the XG5M-□□35-N may be used.
2. Each Connector requires two Semi-covers.

■ Special Connecting Cables

Refer to pages 23 to 31.

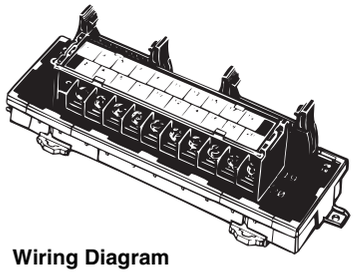
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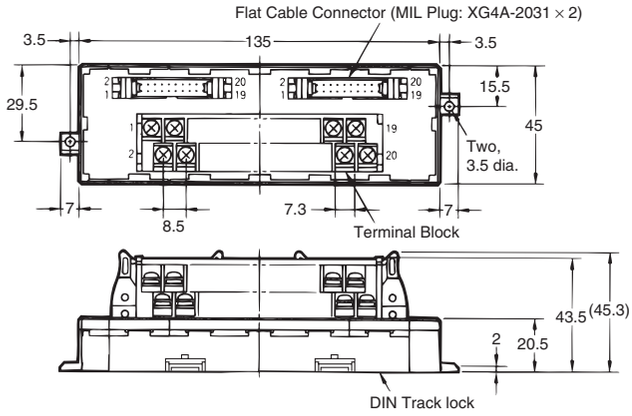
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Daisy Chain Units with a Terminal Block with M3.5 Screws

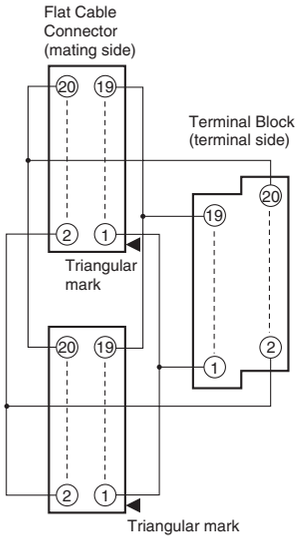
■ Dimensions

XW2B-20G5-D





Wiring Diagram



■ Ordering Information

Model	No. of poles (See note 1.)	Applicable Connector models (See note 2.)
XW2B-20G5-D	20	XG4A-2031

Note: 1. The number of poles indicated here is the number of poles on the terminal block.
2. Flat Cable Connectors have one polarity slot.
3. Terminal block pitch is 8.5 mm.

■ Applicable Connectors

Model	Applicable Connectors (sold separately)		
	Flat Cable Connectors, MIL Sockets with Strain Reliefs	Discrete-wire IDC Connectors, Double-row Sockets	
		Connectors (See note 1.)	Semi-covers (See note 2.)
XW2B-20G5-D	XG4M-2030-T	XG5M-2032-N XG5M-2035-N	XG5S-1001

Note: 1. Either the XG5M-□□32-N or the XG5M-□□35-N may be used.
2. Each Connector requires two Semi-covers.

■ Special Connecting Cables

Refer to pages 23 to 31.

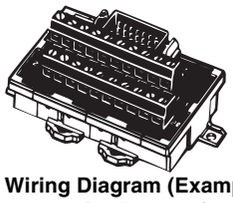
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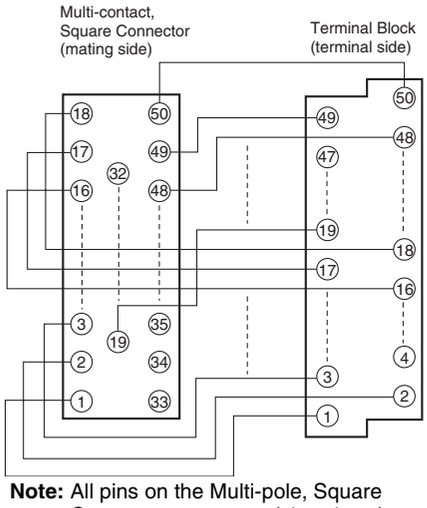
Multi-pole, Square-connector Plug Units with a Terminal Block with M3 Screws

■ Dimensions

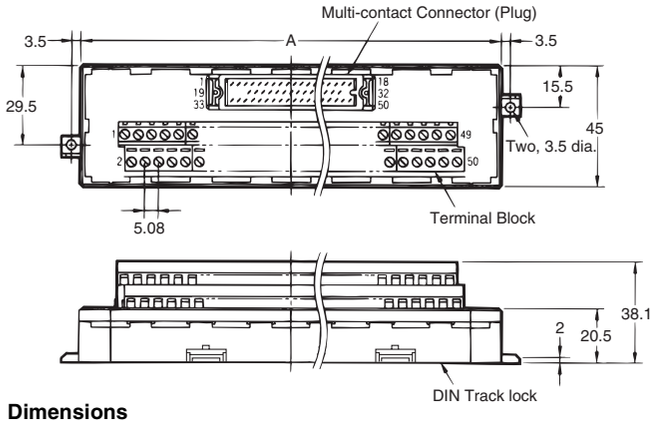
XW2B-□□Y4



Wiring Diagram (Example for Terminal Block with 50 Poles)



Note: All pins on the Multi-pole, Square Connector correspond 1-to-1 to the terminal of the same number on the terminal block as shown above.



Dimensions

Model	No. of poles	Dimension A (mm)	Applicable Connector models (See note 1.)
XW2B-20Y4	20	67.5	MR-20RMD2
XW2B-34Y4	34	112.5	MR-34RMD2
XW2B-50Y4	50	157.5	MR-50RMD2

Note: 1. These Connectors are made by Honda Tsushin Kogyo.

2. Terminal block pitch is 5.08 mm.
Use a wire size between 0.3 and 1.25 mm^2 (AWG22 to AWG16).
The wire insertion holes are 1.8 × 2.5 (H × W) mm.

■ Ordering Information

No. of poles	Model
20	XW2B-20Y4
34	XW2B-34Y4
50	XW2B-50Y4

■ Applicable Connectors

Model	Applicable Connectors (See note 1.)	Hood (See note 1.)
XW2B-20Y4	MR-20F (soldered) MRP-20F01 (crimped) (See note 2.) MR-20FW (wrapped)	MR-20L
XW2B-34Y4	MR-34F (soldered) MRP-34F01 (crimped) (See note 2.) MR-34FW (wrapped)	MR-34L
XW2B-50Y4	MR-50F (soldered) MRP-50F01 (crimped) (See note 2.) MR-50FW (wrapped)	MR-50L

Note: 1. All applicable Connector Hoods are made by Honda Tsushin Kogyo.

2. Use MRP-F113 or MRP-F103 crimp terminals made by Honda Tsushin Kogyo.

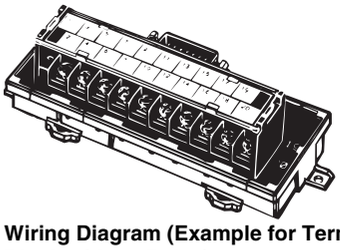
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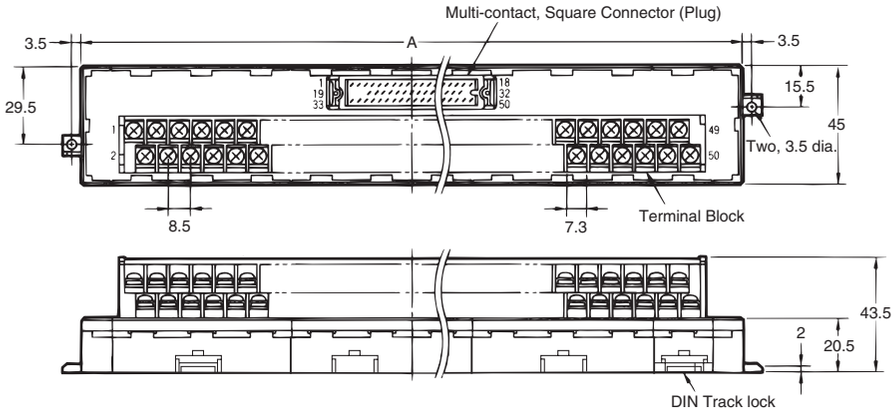
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Multi-pole, Square-connector Plug Units with a Terminal Block with M3.5 Screws

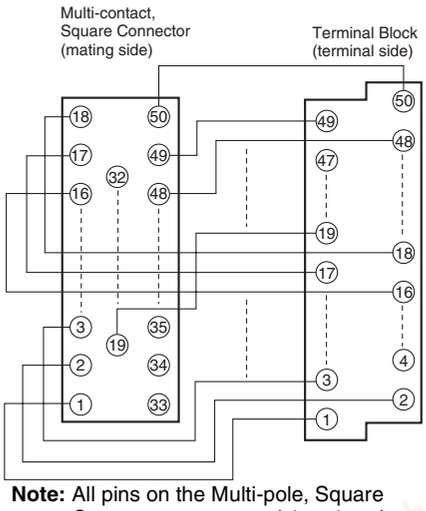
■ Dimensions

XW2B-□□Y5





Wiring Diagram (Example for Terminal Block with 50 Poles)



Note: All pins on the Multi-pole, Square Connector correspond 1-to-1 to the terminal of the same number on the terminal block as shown above.

Dimensions

Model	No. of poles	Dimension A (mm)	Applicable Connector models (See note 1.)
XW2B-20Y5	20	112.5	MR-20RMD2
XW2B-34Y5	34	180.0	MR-34RMD2
XW2B-50Y5	50	247.5	MR-50RMD2

Note: 1. These Connectors are made by Honda Tsushin Kogyo.
2. Terminal block pitch is 8.5 mm.

■ Ordering Information

No. of poles	Model
20	XW2B-20Y5
34	XW2B-34Y5
50	XW2B-50Y5

■ Applicable Connectors

Model	Applicable Connectors (See note 1.)	Hood (See note 1.)
XW2B-20Y5	MR-20F (soldered) MRP-20F01 (crimped) (See note 2.) MR-20FW (wrapped)	MR-20L
XW2B-34Y5	MR-34F (soldered) MRP-34F01 (crimped) (See note 2.) MR-34FW (wrapped)	MR-34L
XW2B-50Y5	MR-50F (soldered) MRP-50F01 (crimped) (See note 2.) MR-50FW (wrapped)	MR-50L

Note: 1. All applicable Connector Hoods are made by Honda Tsushin Kogyo.
2. Use MRP-F113 or MRP-F103 crimp terminals made by Honda Tsushin Kogyo.

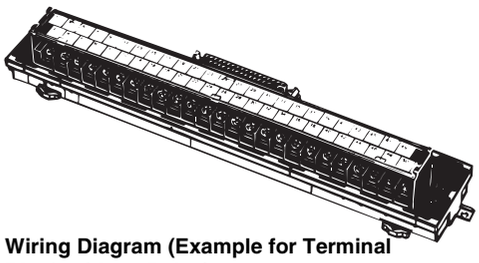
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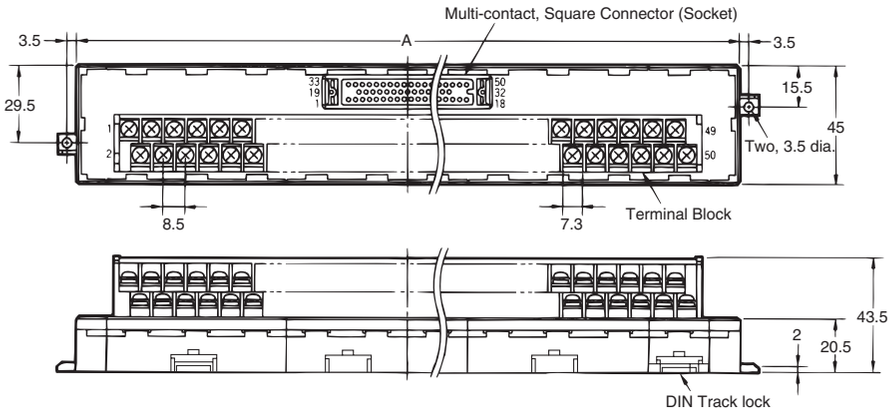
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Multi-pole, Square Connector Socket Units with a Terminal Block with M3.5 Screws

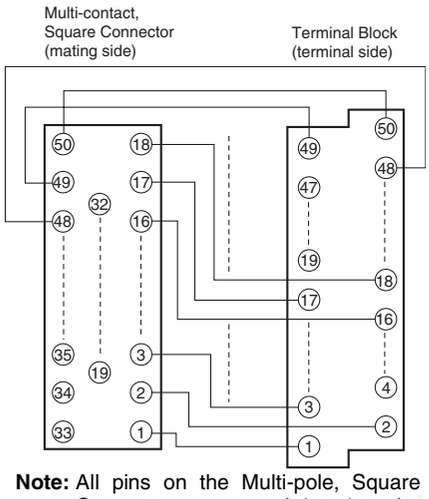
■ Dimensions

XW2B-□□X5





Wiring Diagram (Example for Terminal Block with 50 Poles)



Note: All pins on the Multi-pole, Square Connector correspond 1-to-1 to the terminal of the same number on the terminal block as shown above.

Dimensions

Model	No. of poles	Dimension A (mm)	Applicable Connector models (See note 1.)
XW2B-20X5	20	112.5	MR-20RFD2
XW2B-34X5	34	180.0	MR-34RFD2
XW2B-50X5	50	247.5	MR-50RFD2

Note: 1. These Connectors are made by Honda Tsushin Kogyo.
2. Terminal block pitch is 8.5 mm.

■ Ordering Information

No. of poles	Model
20	XW2B-20X5
34	XW2B-34X5
50	XW2B-50X5

■ Applicable Connectors

Model	Applicable Connectors (See note 1.)	Hood (See note 1.)
XW2B-20X5	MR-20M (soldered) MRP-20M01 (crimped) (See note 2.) MR-20MW (wrapped)	MR-20L
XW2B-34X5	MR-34M (soldered) MRP-34M01 (crimped) (See note 2.) MR-34FM (wrapped)	MR-34L
XW2B-50X5	MR-50M (soldered) MRP-50M01 (crimped) (See note 2.) MR-50MW (wrapped)	MR-50L

Note: 1. All applicable Connector Hoods are made by Honda Tsushin Kogyo.
2. Use MRP-F113 or MRP-F103 crimp terminals made by Honda Tsushin Kogyo.

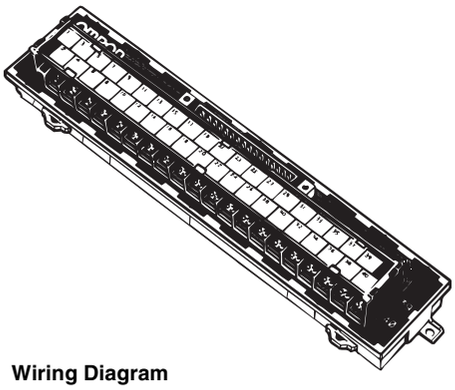
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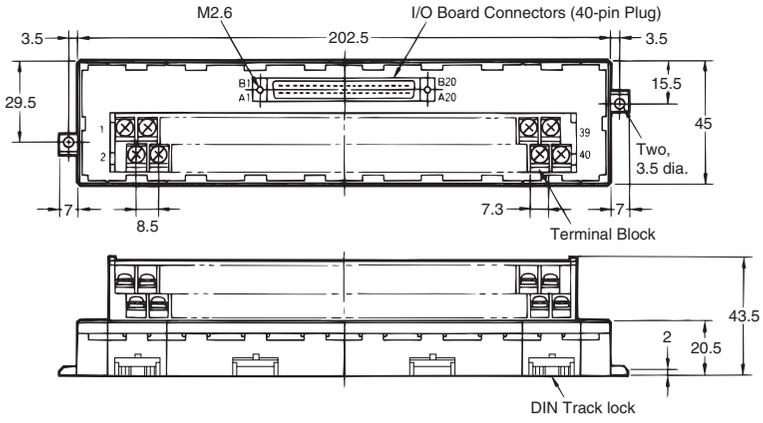
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Board I/O Units with a Terminal Block with M3.5 Screws

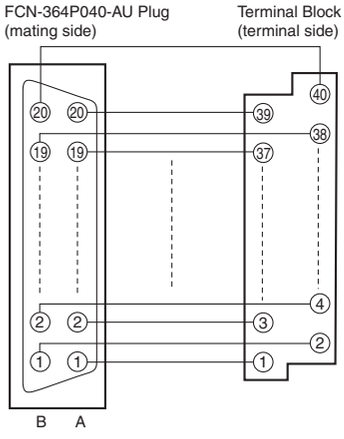
■ Dimensions

XW2B-40F5-P





Wiring Diagram



Dimensions

Model	No. of poles	Applicable Connectors and Circuits (See note 1.)
XW2B-40F5-P	40	FCN-364P40-AU (Connector) FCN-360A1 (Anchor)

Note: 1. These Connectors and circuits are made by Fujitsu.
2. Terminal block pitch is 5.08 mm.

■ Ordering Information

No. of poles	Model
40	XW2B-40F5-P

■ Applicable Connectors

Model	Applicable Connectors (See note 1.)	Hood (See note 1.)
XW2B-40F5-P	FCN361J040-AU (soldered) FCN363J040-AAU (crimped)	FCN360C040-B

Note: 1. All applicable Connectors and Covers are made by Fujitsu.
2. Refer to the OMNUC U Series user's manual for details on the Connecting Cable used between the XW2B-40F5-P and the U-series AC Servo Driver.

■ Options (Sold Separately)

Connecting Cables for Connector-Terminal Block Conversion Units

Refer to pages 23 to 31.

Contact your OMRON representative for information on the Connecting Cable used between XW2B Daisy Chain-type Connectors.

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■ Precautions

Correct Use

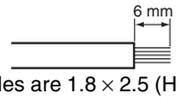
Wiring

- Always turn OFF the power supply before wiring. Otherwise, cables or other conductors can short the terminals and cause the Unit to fail.
- Do not connect or disconnect Connectors with the power turned ON. Otherwise, it may cause malfunctions.

Wiring Terminal Blocks

Direct Wire Connections with a Terminal Block with M3 Screws

1. Use a wire size between 0.3 and 1.25 mm^2 (AWG22 to AWG16).
2. Prepare the end of each wire as shown in the following diagram.



3. The wire insertion holes are 1.8 × 2.5 (H × W) mm on the terminal block with M3 screws.

Direct Wire Connections with a Terminal Block with M3.5 Screws

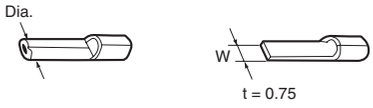
Round Forked



Applicable crimp terminals		Applicable wires
Round	1.25-3.5	AWG22 to AWG16 (0.30 to 1.25 mm^2)
	2-3.5	AWG22 to AWG14 (1.25 to 2.0 mm^2)
Forked	1.25Y-3.5	AWG22 to AWG16 (0.30 to 1.25 mm^2)
	2Y-3.5	AWG22 to AWG14 (1.25 to 2.0 mm^2)

(With a Terminal Block with M3 Screws)

Round rod Blade



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)

Round rod and blade crimp terminals are made by Nichifu.

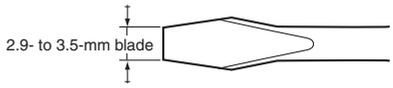
Terminal Screw Tightening Torque

- Select a tightening torque from the following table when connecting wires or crimp terminals to the terminal block.

Terminal Block	Tightening torque N·m
With M3 screws	0.40
With M3.5 screws	0.59

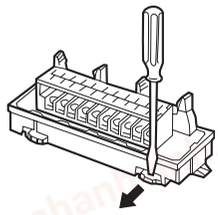
Mounting Units to and Removing Units from DIN Track

- For terminal blocks with M3 screws, use a flat-heat screwdriver like the one shown in the following diagram.





- XW2B Connector-Terminal Block Conversion Units can be mounted side-to-side on DIN Track.
  The flanges for mounting screws are located on each side at the bottom of the XW2B.
- Secure both ends of the XW2B with End Plates.
- When removing the Unit from a DIN Track, insert a flat-head screwdriver into the slider and pull the lock out.



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Connecting Cables for Connector-Terminal Block Conversion Units

XW2Z

Connect Connector-Terminal Block Conversion Units (XW2□) to I/O Units for Programmable Controllers with one touch.

■ Ratings and Characteristics

Rated current	1 A
Rated voltage	125 VAC
Contact resistance	20 mΩ max. (at 20 mV, 100 mA max.) (See note 1.)
Insulation resistance	100 MΩ min. (at 500 VDC)
Dielectric strength	500 VAC for 1 min (leakage current: 1 mA max.) (See note 2.)
Operating temperature	–25 to 80°C

Note: **1.** Contact resistance for the Connector.
2. Dielectric strength for the Connector.

■ Materials and Finish

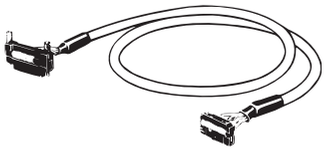
Item	Part name			Materials and Finish
Connectors	XG4M-2030 XG4M-4030	Housing		Fiber-glass reinforced PBT resin (UL94V-0)/black
		Cover		
		Contacts	Mating end	Phosphor bronze/nickel base, 0.15-μm gold plating
			Press-fit end	Phosphor bronze/nickel base, 2.0-μm tin plating
	XG4T-2004/4004	Strain Relief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

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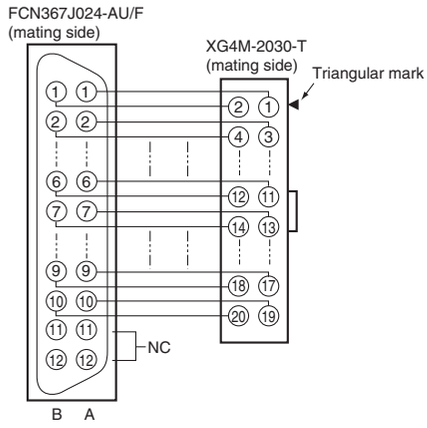
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For 32-point, Connector-type I/O Units for Programmable Controllers

XW2Z-□□□A (For XW2D-20G6/XW2B-20G□/-40G5-T/-20G5-D/XW2C-20G5-IN16/XW2E-20G5-16)



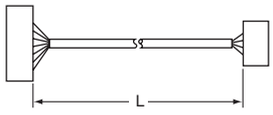
Wiring Diagram



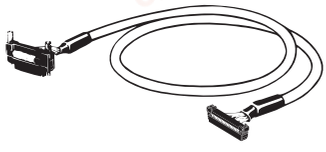
■ Ordering Information

Cable length L (mm) (See note.)	Model
500	XW2Z-050A
1,000	XW2Z-100A
1,500	XW2Z-150A
2,000	XW2Z-200A
3,000	XW2Z-300A
5,000	XW2Z-500A

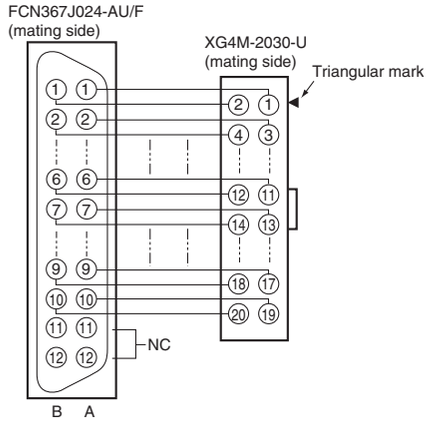
Note: Cable length L (mm)



XW2Z-□□□AU (for XW2D-20C6)



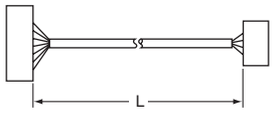
Wiring Diagram



■ Ordering Information

Cable length L (mm) (See note.)	Model
500	XW2Z-050AU
1,000	XW2Z-100AU
1,500	XW2Z-150AU
2,000	XW2Z-200AU
3,000	XW2Z-300AU
5,000	XW2Z-500AU

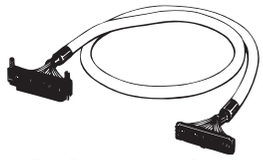
Note: Cable length L (mm)



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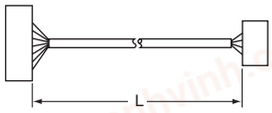
For 32-point, Connector-type I/O Units (Group 2) for Programmable Controllers
For 64-point, Connector-type I/O Units for Programmable Controllers
XW2Z-□□□B (For XW2D-40G6/XW2B-40G□)



■ Ordering Information

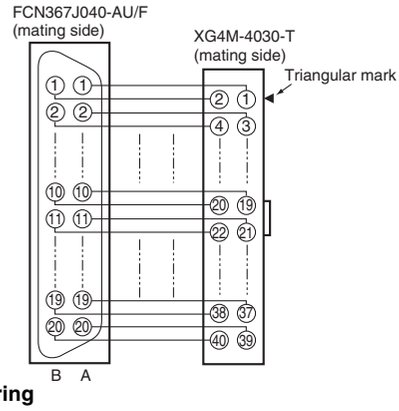
Type	Cable length L (mm) (See note.)	Model
Normal wiring	500	XW2Z-050B
	1,000	XW2Z-100B
	1,500	XW2Z-150B
	2,000	XW2Z-200B
	3,000	XW2Z-300B
	5,000	XW2Z-500B
Reverse wiring	500	XW2Z-050B-R1
	1,000	XW2Z-100B-R1
	1,500	XW2Z-150B-R1
	2,000	XW2Z-200B-R1
	3,000	XW2Z-300B-R1
	5,000	XW2Z-500B-R1

Note: Cable length L (mm)

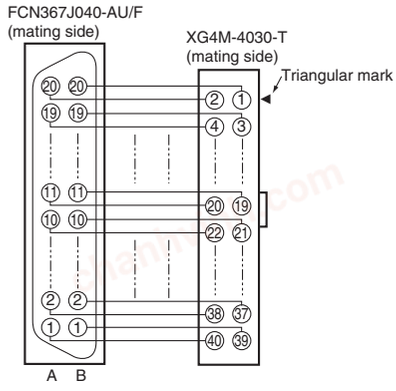


Wiring Diagram

Normal wiring



Reverse wiring



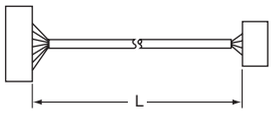
XW2Z-□□□BU (for XW2D-40C6)



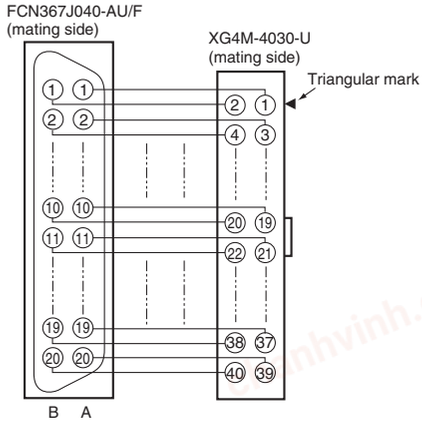
■ Ordering Information

Type	Cable length L (mm) (See note.)	Model
Normal wiring	500	XW2Z-050BU
	1,000	XW2Z-100BU
	1,500	XW2Z-150BU
	2,000	XW2Z-200BU
	3,000	XW2Z-300BU
	5,000	XW2Z-500BU

Note: Cable length L (mm)



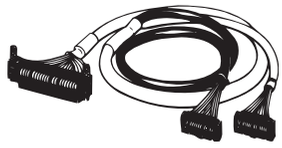
Wiring Diagram



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32-point, Connector-type Input Units (Group 2) for Programmable Controllers
For 64-point, Connector-type Input Units for Programmable Controllers
XW2Z-□□□D



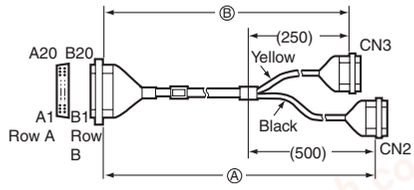
Note: Do not use the G79-I□C-□ (G7TC cable with Connector) with the XW2C because it is wired differently.

■ Ordering Information

Applicable Terminal Block Conversion Units	Cable length L (mm) (See note 2.)		Model	Applicable Programmable Controller Input Units
	A	B		
XW2C-20G6-IO16 (See note 1.) XW2C-20G5-IN16 XW2B-20G4 XW2B-20G5 XW2B-40G5-T XW2D-20G6 XW2E-20G5-IN16	1,000	750	XW2Z-100D	CQM1-ID213 CQM1-ID112 C200H-ID111 C200H-ID216 C200H-ID217 C500-ID114 C500-ID219
	1,500	1,250	XW2Z-150D	
	2,000	1,750	XW2Z-200D	
	3,000	2,750	XW2Z-300D	
	5,000	4,750	XW2Z-500D	

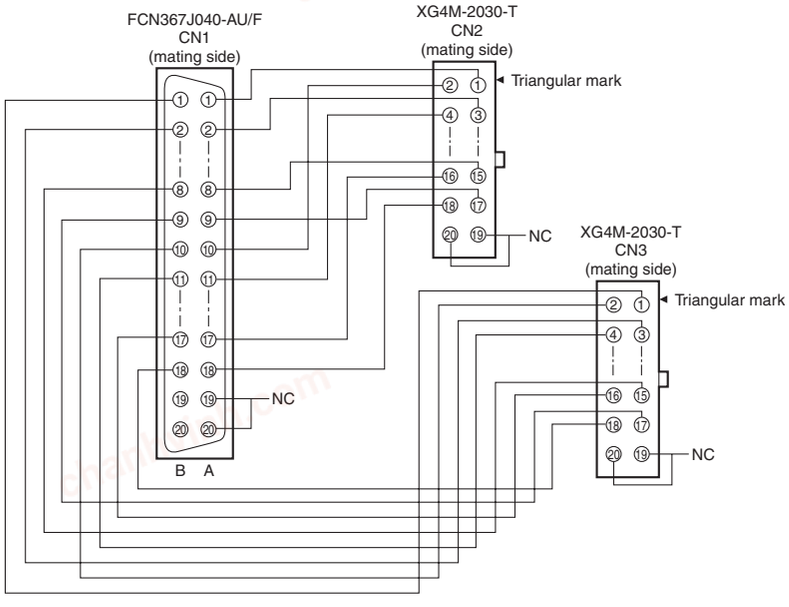
Note: 1. Only the inputs of the XW2C-20G6-IO16 are connected.

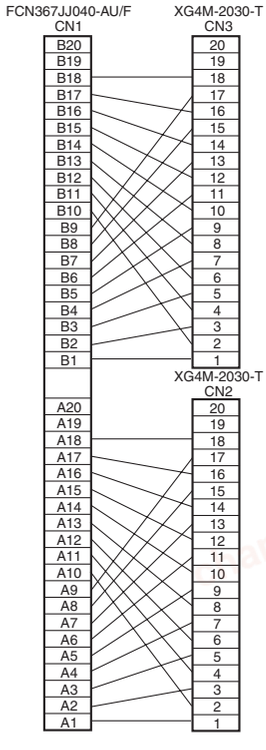
2. Cable length L (mm)



Connector CN2 (black side) is for row A on CN1 and Connector CN3 (yellow side) is for row B on CN1.

Wiring Diagram



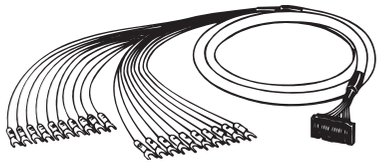


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20-pole Cable with Discrete-wire Press-fit Terminals

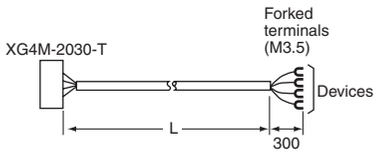
XW2Z-□□□F



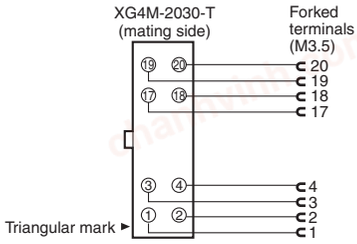
■ Ordering Information

Applicable Terminal Block Conversion Units	Cable length L (mm) (See note.)	Model	Applicable OMRON Programmable Controller Input Units
XW2B-20G5 XW2B-20G4 XW2B-40G5-T XW2C-20G6-IO16 XW2C-20G5-IN16 XW2D-20G6 XW2E-20G5-IN16	1,000	XW2Z-100F	Programmable Controller Input Units with terminal blocks, board computers, etc.
	1,500	XW2Z-150F	
	2,000	XW2Z-200F	
	3,000	XW2Z-300F	
	5,000	XW2Z-500F	

Note: Cable length L (mm)



Wiring Diagram



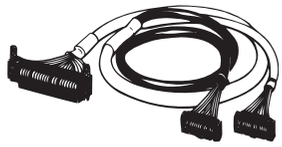
Connector Pin No. Table

Forked terminal	No. of cores	Insulation color	Dot marks	Dot color	Connector pin No.
1	1	Blue	□	Red	1Δ
2		Blue	□	Black	2
3	2	Pink	□	Red	3
4		Pink	□	Black	4
5	3	Green	□	Red	5
6		Green	□	Black	6
7	4	Orange	□	Red	7
8		Orange	□	Black	8
9	5	Gray	□	Red	9
10		Gray	□	Black	10
11	6	Blue	□□	Red	11
12		Blue	□□	Black	12
13	7	Pink	□□	Red	13
14		Pink	□□	Black	14
15	8	Green	□□	Red	15
16		Green	□□	Black	16
17	9	Orange	□□	Red	17
18		Orange	□□	Black	18
19	10	Gray	□□	Red	19
20		Gray	□□	Black	20

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32-point, Connector-type Output Units (Group 2) for Programmable Controllers
For 64-point, Connector-type Output Units for Programmable Controllers
XW2Z-□□□L

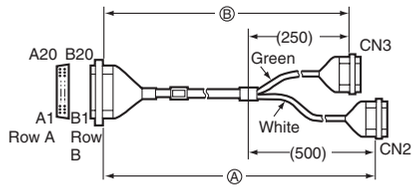


■ Ordering Information

Applicable Terminal Block Conversion Units	Cable length L (mm) (See note 2.)		Model	Applicable Programmable Controller Input Units
	A	B		
XW2C-20G6-IO16 (See note 1.) XW2B-20G4 XW2B-20G5	1,000	750	XW2Z-100L	CQM1-OD213 C200H-OD218 C200H-OD219 C500-OD213
	1,500	1,250	XW2Z-150L	
	2,000	1,750	XW2Z-200L	
	3,000	2,750	XW2Z-300L	
	5,000	4,750	XW2Z-500L	

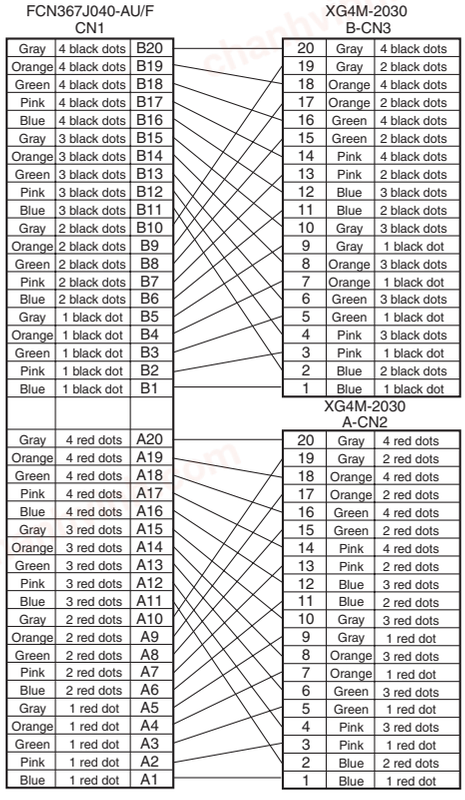
Note: 1. Only the outputs of the XW2C-20G6-IO16 are connected.

2. Cable length L (mm)



Connector CN2 (white side) is for row A on CN1 and Connector CN3 (green side) is for row B on CN1.

Wiring Diagram

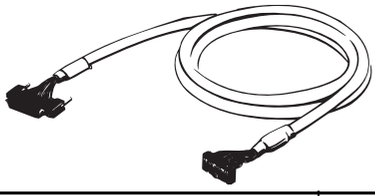


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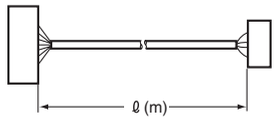
For 96-point, Connector-type I/O Units for Programmable Controllers
XW2Z-□□□H (For CS1-series I/O Unit Connection)

■ Ordering Information

XW2Z-□□□H-1



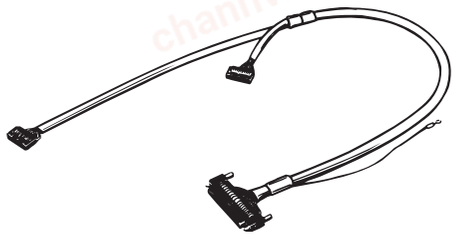
Note: Cable length L (mm)



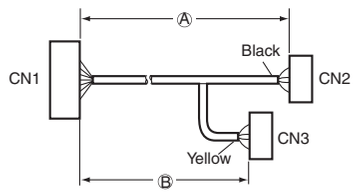
Applicable PLC Units	Special Connecting Cables (See note 1.)		Applicable Connector-Terminal Block Conversion Units (See note 2.)
	Cable length ℓ (m)	Model	
CS1W-ID291 (96 inputs) CS1W-OD291 (96 outputs) CS1W-OD292 (96 outputs) CS1W-MD291 (48 inputs/48 outputs) CS1W-MD292 (48 inputs/48 outputs)	0.5	XW2Z-050H-1	XW2B-60G5 or XW2B-60G4
	1	XW2Z-100H-1	
	1.5	XW2Z-150H-1	
	2	XW2Z-200H-1	
	3	XW2Z-300H-1	
	5	XW2Z-500H-1	
	7	XW2Z-700H-1	
	10	XW2Z-010H-1	
	1	XW2Z-100H-1G	
	1.5	XW2Z-150H-1G	
	2	XW2Z-200H-1G	
	3	XW2Z-300H-1G	
	5	XW2Z-500H-1G	

Note: 1. Up to two cables required for each Programmable Controller I/O Unit.
2. One Conversion Unit is required for each cable.
3. CS1 signal names connected to the XW2B/D are different for the XW2Z-□□□H-□ and the XW2Z-□□□H-□G. Refer to the *I/O Signal Tables* on page 30.

XW2Z-□□□H-2



Note: Cable length L (mm)



Linear lengths (not including bends)

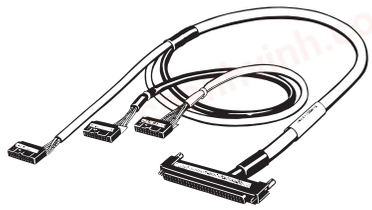
Applicable PLC Units	Special Connecting Cables (See note 1.)			Applicable Connector-Terminal Block Conversion Units (See note 2.)
	Cable length ℓ (m)		Model	
	A	B		
CS1W-ID291 (96 inputs) CS1W-OD291 (96 outputs) CS1W-OD292 (96 outputs) CS1W-MD291 (48 inputs/48 outputs) CS1W-MD292 (48 inputs/48 outputs)	1	0.75	XW2Z-100H-2	XW2D-20G6, XW2B-20G5, or XW2B-20G4 XW2D-40G6, XW2B-40G5, or XW2B-40G4
	1.5	1.25	XW2Z-150H-2	
	2	1.75	XW2Z-200H-2	
	3	2.75	XW2Z-300H-2	
	5	4.75	XW2Z-500H-2	
	10	9.75	XW2Z-010H-2	
	1	0.75	XW2Z-100H-2G	
	1.5	1.25	XW2Z-150H-2G	
	2	1.75	XW2Z-200H-2G	
	3	2.75	XW2Z-300H-2G	
	5	4.75	XW2Z-500H-2G	

Note: 1. Up to two cables required for each Programmable Controller I/O Unit.
2. Use one XW2□-20G□ and XW2□-40G□ for each cable.
3. CS1 signal names connected to the XW2B/D are different for the XW2Z-□□□H-□ and the XW2Z-□□□H-□G. Refer to the *I/O Signal Tables* on page 30.

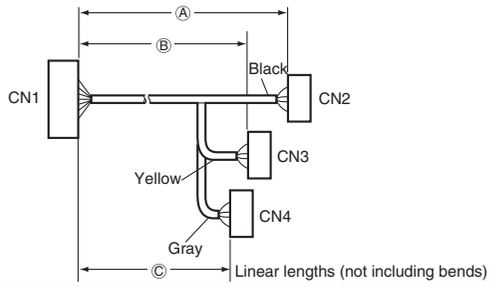
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XW2Z-□□□H-3



Note: Cable length L (mm)



Applicable PLC Units	Special Connecting Cables (See note 1.)				Applicable Connector-Terminal Block Conversion Units (See note 2.)
	Cable length ℓ (m)			Model	
	A	B	C		
CS1W-ID291 (96 inputs) CS1W-OD291 (96 outputs) CS1W-OD292 (96 outputs) CS1W-MD291 (48 inputs/48 outputs) CS1W-MD292 (48 inputs/48 outputs)	1	0.75	1	XW2Z-100H-3	XW2D-20G6, XW2B-20G5, or XW2B-20G4
	1.5	1.25	1.5	XW2Z-150H-3	
	2	1.75	2	XW2Z-200H-3	
	3	2.75	3	XW2Z-300H-3	
	5	4.75	5	XW2Z-500H-3	
	10	9.75	10	XW2Z-010H-3	

Note: 1. Up to two cables required for each Programmable Controller I/O Unit.

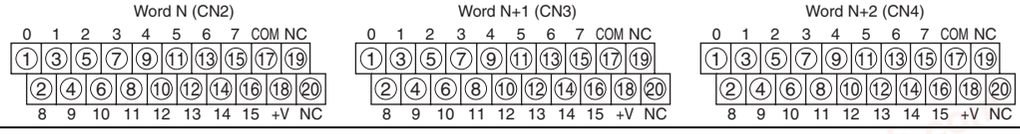
2. Three XW2□-20G□ Conversion Units are required for each cable.

■ I/O Signal Tables (Example Using CN1 on CS1W-OD291)

XW2Z-□□□H-□ Connecting Cables

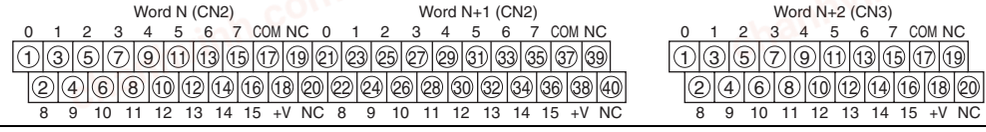
XW2Z-□□□H-3

XW2□-20G□



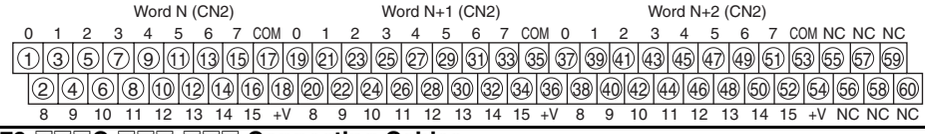
XW2Z-□□□H-2

XW2□-40G□ XW2□-20G□



XW2Z-□□□H-1

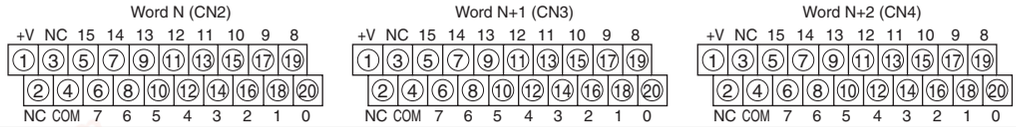
XW2B-60G□



XW2Z-□□□H-□G/G79-□□□C-□□□-□□□ Connecting Cables

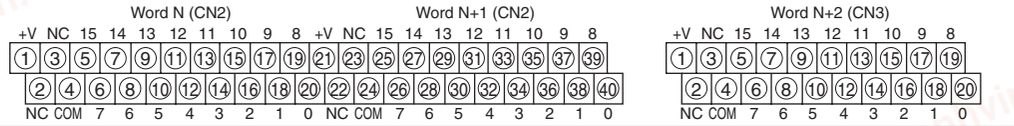
G79-□□□C-□□□-□□□

XW2□-20G□



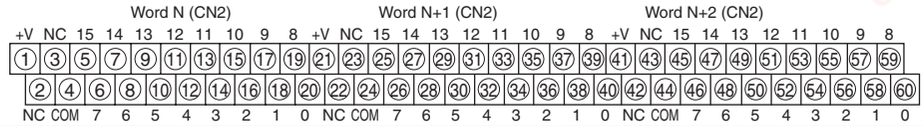
XW2Z-□□□H-2G

XW2□-40G□ XW2□-20G□



XW2Z-□□□H-1G

XW2B-60G□



Note: The XW2Z-□□□H-□G I/O signal arrangement is oriented the same as the Connector Cable for the G79 I/O Relay Terminal.

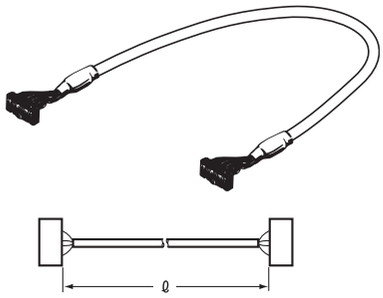
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For 32-point, MIL Connector-type I/O Units for Programmable Controllers

XW2Z-□□□K

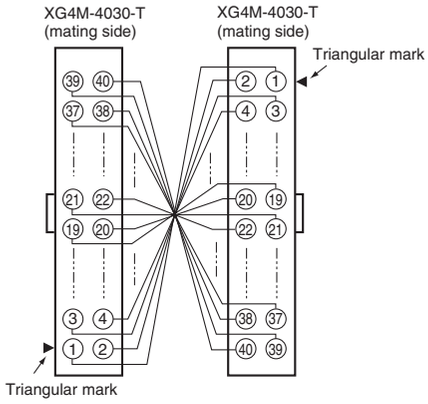
■ Ordering Information



Applicable PLC Units	Special Connecting Cables		Applicable Connector-Terminal Block
	Cable length L (m)	Model	
CJ1W-ID232 CJ1W-OD232 (MIL Connector Unit)	1.0	XW2Z-100A	XW2B-40G4 XW2B-40G5 XW2D-40G6 XW2D-40G6-RM (See note.)
	1.5	XW2Z-150A	
	2.0	XW2Z-200A	
	3.0	XW2Z-300A	
	5.0	XW2Z-500A	

Note: Only use the CJ1W-ID232 terminal block with bleeder resistor.

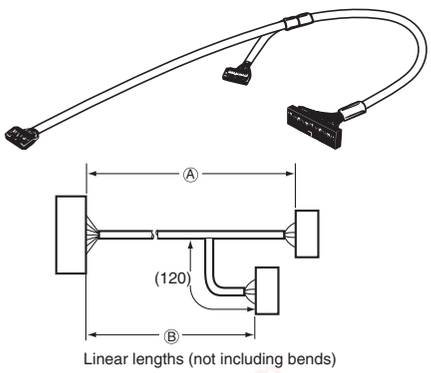
Wiring Diagram



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

XW2Z-□□□N

■ Ordering Information

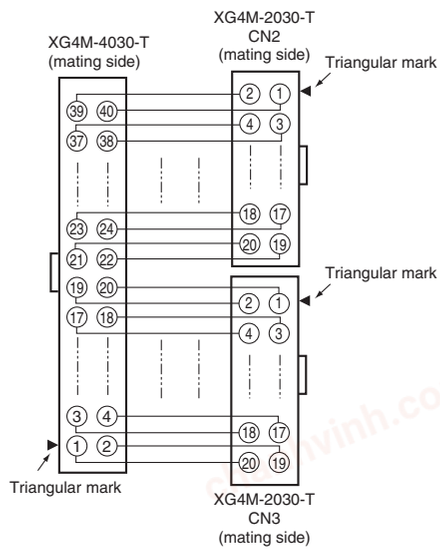


Linear lengths (not including bends)

Applicable PLC Units	Special Connecting Cables			Applicable Connector-Terminal Block
	Cable length (m)		Model	
	A	B		
CJ1W-ID232 CJ1W-OD232 (MIL Connector Unit)	1.0	0.75	XW2Z-100N	XW2C-20G5-IN16 (See note.) XW2C-20G6-IO16
	1.5	1.25	XW2Z-150N	
	2.0	1.75	XW2Z-200N	
	3.0	2.75	XW2Z-300N	
	5.0	4.75	XW2Z-500N	

Note: Only use the CJ1W-ID232.

Wiring Diagram



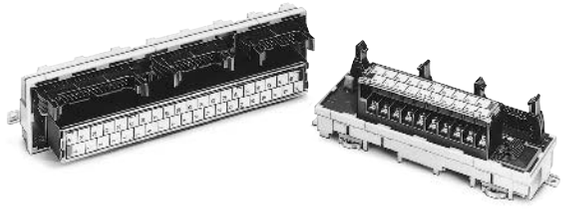
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Servo Relay Units

XW2B

Connectors and terminal block in a single unit reduces wiring between Servo Drivers and Position Control Units.



- Simplifies control signal wiring between Servo Drivers and Position Control Units.
- With no soldering connections, a screwdriver is all you need.
- Special cables available for between Units.
- Only a 24-VDC power supply is required for control signals.
- Space-saving terminals blocks with M3 screws.
- Mount to DIN Track or via screws.

■ Ordering Information

Servo Relay Units

Name	Applicable Units	Model
One-axis Servo Relay Unit	CJ1W-NC1□3 CS1W-NC1□3 C200HW-NC113 C200H-NC112 3F88M-DRT141	XW2B-20J6-1B
Two-axis Servo Relay Unit	CJ1W-NC2□3/NC4□3 CS1W-NC2□3/NC4□3 C200HW-NC213/NC413 C200H-NC211	XW2B-40J6-2B
CQM1 Relay Unit (for one-/two-axis Servos)	CQM1-CPU43-V1 CQM1H-PLB21 CS1WS-HCP22	XW2B-20J6-3B
Two-axis Servo Relay Unit (with communications support)	CS1W-NC2□3/NC4□3 CJ1W-NC2□3/NC4□3	XW2B-40J6-4A
Servo Relay Unit for the CJ1M-CPU Unit (for 1 axis)	CJ1M-CPU22 CJ1M-CPU23	XW2B-20J6-8A
Servo Relay Unit for the CJ1M-CPU Unit (for 2 axes)	CJ1M-CPU22 CJ1M-CPU23	XW2B-40J6-9A

Servo Driver Connecting Cables

Name	Applicable Servo Driver		Model
30- to 750-W U-series Connecting Cables	R88D-UP	1 m	XW2Z-100J-B1
		2 m	XW2Z-200J-B1
M-series Connecting Cables	R88D-MT	1 m	XW2Z-100J-B2
		2 m	XW2Z-200J-B2
H-series Connecting Cables	R88D-H	1 m	XW2Z-100J-B3
		2 m	XW2Z-200J-B3
1-kW min. W- and U-series Connecting Cables	R88D-WT R88D-UT	1 m	XW2Z-100J-B4
		2 m	XW2Z-200J-B4
SMARTSTEP/UE-series Connecting Cables	R7D-AP R88D-UEP	1 m	XW2Z-100J-B5
		2 m	XW2Z-200J-B5
SMARTSTEP Cable with Communications Support	R7D-AP	1 m	XW2Z-100J-B7
		2 m	XW2Z-200J-B7

Connecting Cables for Serial Communications Units and Boards

Name	Applicable Serial Communications Units and Boards		Model
SMARTSTEP Connecting Cables	CJ1W-SCU41 CS1W-SCB41	1 m	XW2Z-100J-C1
		2 m	XW2Z-200J-C1

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Position Control Unit Connecting Cables

Name	Applicable Units		Model
One-axis W-, U-, H-, and M-series Connecting Cables	C200H-NC112	0.5 m	XW2Z-050J-A1
		1 m	XW2Z-100J-A1
Two-axis W-, U-, H-, and M-series Connecting Cables	C200H-NC211	0.5 m	XW2Z-050J-A2
		1 m	XW2Z-100J-A2
One-axis W-, U-, H-, M-, SMARTSTEP, and UE-series Connecting Cables	CQM1-CPU43-V1 CQM1H-PLB21	0.5 m	XW2Z-050J-A3
		1 m	XW2Z-100J-A3
One-axis SMARTSTEP and UE-series Connecting Cables	C200H-NC112	0.5 m	XW2Z-050J-A4
		1 m	XW2Z-100J-A4
Two-axis SMARTSTEP and UE-series Connecting Cables	C200H-NC211	0.5 m	XW2Z-050J-A5
		1 m	XW2Z-100J-A5
One-axis W-, U-, H-, and M-series Connecting Cables	CS1W-NC113 C200HW-NC113	0.5 m	XW2Z-050J-A6
		1 m	XW2Z-100J-A6
Two-axis W-, U-, H-, and M-series Connecting Cables	CS1W-NC213/NC413 C200HW-NC213/NC413	0.5 m	XW2Z-050J-A7
		1 m	XW2Z-100J-A7
One-axis SMARTSTEP and UE-series Connecting Cables	CS1W-NC113 C200HW-NC113	0.5 m	XW2Z-050J-A8
		1 m	XW2Z-100J-A8
Two-axis SMARTSTEP and UE-series Connecting Cables	CS1W-NC213/NC413 C200HW-NC213/NC413	0.5 m	XW2Z-050J-A9
		1 m	XW2Z-100J-A9
One-axis W-, U-, H-, and M-series Connecting Cables	CS1W-NC133	0.5 m	XW2Z-050J-A10
		1 m	XW2Z-100J-A10
Two-axis W-, U-, H-, and M-series Connecting Cables	CS1W-NC233/NC433	0.5 m	XW2Z-050J-A11
		1 m	XW2Z-100J-A11
One-axis SMARTSTEP and UE-series Connecting Cables	CS1W-NC133	0.5 m	XW2Z-050J-A12
		1 m	XW2Z-100J-A12
Two-axis SMARTSTEP and UE-series Connecting Cables	CS1W-NC233/NC433	0.5 m	XW2Z-050J-A13
		1 m	XW2Z-100J-A13
One-axis W-, U-, H-, and M-series Connecting Cables	CJ1W-NC113	0.5 m	XW2Z-050J-A14
		1 m	XW2Z-100J-A14
Two-axis W-, U-, H-, and M-series Connecting Cables	CJ1W-NC213/NC413	0.5 m	XW2Z-050J-A15
		1 m	XW2Z-100J-A15
One-axis SMARTSTEP and UE-series Connecting Cables	CJ1W-NC113	0.5 m	XW2Z-050J-A16
		1 m	XW2Z-100J-A16
Two-axis SMARTSTEP and UE-series Connecting Cables	CJ1W-NC213/NC413	0.5 m	XW2Z-050J-A17
		1 m	XW2Z-100J-A17
One-axis W-, U-, H-, and M-series Connecting Cables	CJ1W-NC133	0.5 m	XW2Z-050J-A18
		1 m	XW2Z-100J-A18
Two-axis W-, U-, H-, and M-series Connecting Cables	CJ1W-NC233/NC433	0.5 m	XW2Z-050J-A19
		1 m	XW2Z-100J-A19
One-axis SMARTSTEP and UE-series Connecting Cables	CJ1W-NC133	0.5 m	XW2Z-050J-A20
		1 m	XW2Z-100J-A20
Two-axis SMARTSTEP and UE-series Connecting Cables	CJ1W-NC233/NC433	0.5 m	XW2Z-050J-A21
		1 m	XW2Z-100J-A21
One-axis W-, U-, H-, M-, SMARTSTEP, and UE-series Connecting Cables	CS1W-HCP22 (for 1 axis)	0.5 m	XW2Z-050J-A22
		1 m	XW2Z-100J-A22
	CS1W-HCP22 (for 2 axes)	0.5 m	XW2Z-050J-A23
		1 m	XW2Z-100J-A23
One-axis W-, U-, H-, and M-series Connecting Cables	3F88M-DRT141	0.5 m	XW2Z-050J-A24
		1 m	XW2Z-100J-A24
One-axis SMARTSTEP and UE-series Connecting Cables		0.5 m	XW2Z-050J-A25
		1 m	XW2Z-100J-A25
Two-axis SMARTSTEP Connecting Cables	CJ1M-CPU22 CJ1M-CPU23	1 m	XW2Z-100J-A26
Two-axis SMARTSTEP Connecting Cables		1 m	XW2Z-100J-A27

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■ Servo Relay Unit Specifications

Ratings and Characteristics

Item	XW2B-□□J6-□
Rated current	1 A (temperature rise plus 30°C max.)
Rated voltage	24 VDC
Insulation resistance	5 MΩ min. (at 500 VDC)
Dielectric strength	500 VAC for 1 min (leakage current: 1 mA max.)
Degree of protection	IP00 IEC standard
Electrical protection class	Class 0
Operating temperature	0 to 55°C

Materials and Finish

Item	Part name	Materials and finish
Units	Main Unit/Expansion Unit	PBT resin (UL94V-0)/gray
	DIN Track lock	POM resin (UL94HB)/yellow
Flat Cable Connectors	Housing	PBT resin (UL94V-0)/black
	Contacts	Brass/gold plated
Terminal Block	Main Unit	PBT resin (UL94V-0)/black
	Connecting screw	Steel/nickel plated
	Cover	PC resin (UL94V-0)/transparent
PCB	---	FCL-GE4 Glass-epoxy Board

■ Position Control Unit and Servo Driver Connecting Cable Specifications

Ratings and Characteristics

Item	Specifications
Rated current	1 A (temperature rise plus 30°C max.)
Rated voltage	24 VDC
Contact resistance	20 mΩ max. (at 20 mV, 100 mA max.) (See note 1.)
Insulation resistance	5 MΩ min. (at 500 VDC)
Dielectric strength	500 VAC for 1 min (leakage current: 1 mA max.) (See note 2.)
Degree of protection	IP00 IEC standard
Electrical protection class	Class 0
Operating temperature	0 to 55°C

Note: **1.** Contact resistance of the Connector.
2. Dielectric strength of the Connector.

Materials and Finish

Item	Part name		Materials and Finish
Connectors	XG4M-1630 XG4M-2030 XG4M-3430	Housing	Fiber-glass reinforced PBT resin (UL94V-0)/black
		Cover	
		Contacts: Mating end	Phosphor bronze/nickel base, 0.15-μm gold plating
		Contacts: Press-fit end	Phosphor bronze/nickel base, 2.0-μm tin plating
	XG4T-1604/2004/3404	Strain Relief	Fiber-glass reinforced PBT resin (UL94V-0)/black
	XM2A-1501 XM2D-1501	Housing	Polyamide resin (UL94V-0)/milky white
		Contact terminals: Mating end	Brass/nickel base, 0.2-μm gold plating
		Contact terminals: Press-fit end	
		Shell	Steel/nickel plated
	XM2S-1511/3711	Housing	ABS resin/nickel plated
	FCN-367J040-AU/F	Housing	PBT resin (UL94V-0)/black
		Contacts: Mating end	Phosphor bronze/gold plated
		Contacts: Press-fit end	Phosphor bronze/tin plated
		Connecting screw	Steel/nickel plated
	MR-34LF MR-50LF	Housing	Fiber-glass reinforced PBT resin (UL94V-0)/black
		Contacts: Mating end	Brass/nickel base, silver plated
		Cover	ABS resin (UL94-HB)
	10136-3000VE 10150-3000VE	Housing	Fiber-glass reinforced PBT resin (UL94V-0)/black
		Contacts	Copper alloy/nickel base, 0.5-μm gold plating
	10136-52A0-008 10130-52A0-008	Housing	Fiber-glass reinforced PBT resin (UL94V-0)/black
Cable	UL2464 Interface Cable		AWG28 or the equivalent

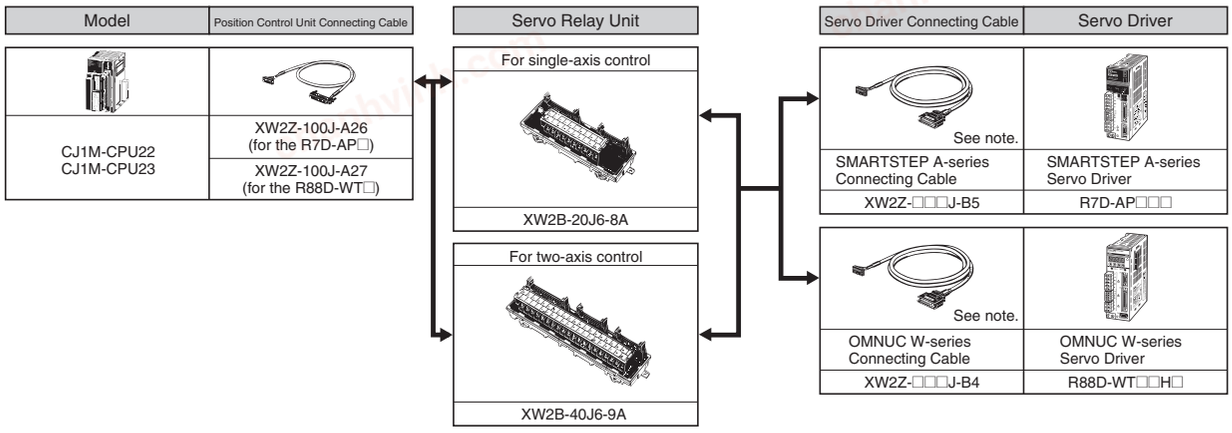
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■ Servo Relay Unit, Servo Driver and Position Control Unit Combinations

Model	Position Control Unit Connecting Cable	Servo Relay Unit	Servo Driver Connecting Cable	Servo Driver
C200H-NC112	XW2Z-□□□J-A1	XW2B-20J6-1B (See note 1.)	See notes 2 and 3. SMARTSTEP A-series Connecting Cable: XW2Z-□□□J-B5 with no communications support (for the XW2B-□□J6-□B)	SMARTSTEP A-series Servo Driver: R7D-AP□□□
	XW2Z-□□□J-A4 (for the R88D-UEP/R7D-AP)			
C200HW-NC113 CS1W-NC113	XW2Z-□□□J-A6			
	XW2Z-□□□J-A8 (for the R88D-UEP/R7D-AP)			
CS1W-NC133	XW2Z-□□□J-A10			
	XW2Z-□□□J-A12 (for the R88D-UEP/R7D-AP)			
CJ1W-NC113	XW2Z-□□□J-A14			
	XW2Z-□□□J-A16 (for the R88D-UEP/R7D-AP)			
CJ1W-NC133	XW2Z-□□□J-A18			
	XW2Z-□□□J-A20 (for the R88D-UEP/R7D-AP)			
3F88M-DRT141	XW2Z-□□□J-A24			
	XW2Z-□□□J-A25 (for the R88D-UEP/R7D-AP)			
			See notes 2 and 3. OMNUC W-series Connecting Cable: XW2Z-□□□J-B4	OMNUC W-series Servo Driver: R88D-WT□□H□
			See notes 2 and 3. OMNUC U-series Connecting Cable: XW2Z-□□□J-B1	OMNUC U-series Servo Driver: R88D-UP□□□
			XW2Z-□□□J-B4	R88D-UT□□□
			XW2Z-□□□J-B5	R88D-UEP□□□ (See note 4.)
			See notes 2 and 3. OMNUC M-series Connecting Cable: XW2Z-□□□J-B2	OMNUC M-series Servo Driver: R88D-MT□□
			See notes 2 and 3. OMNUC H-series Connecting Cable: XW2Z-□□□J-B3	OMNUC H-series Servo Driver: R88D-H□□□
C200H-NC211	XW2Z-□□□J-A2	XW2B-40J6-2B (See note 1.)		
	XW2Z-□□□J-A5 (for the R88D-UEP/R7D-AP)			
C200HW-NC213/413 CS1W-NC213/413	XW2Z-□□□J-A7			
	XW2Z-□□□J-A9 (for the R88D-UEP/R7D-AP)			
CS1W-NC233/433	XW2Z-□□□J-A11			
	XW2Z-□□□J-A13 (for the R88D-UEP/R7D-AP)			
CJ1W-NC213/413	XW2Z-□□□J-A15			
	XW2Z-□□□J-A17 (for the R88D-UEP/R7D-AP)			
CJ1W-NC233/433	XW2Z-□□□J-A19			
	XW2Z-□□□J-A21 (for the R88D-UEP/R7D-AP)			
CQM1-CPU43-V1 CQM1H-PLB21	See note 3. XW2Z-□□□J-A3	See note 3. XW2B-20J6-3B (See note 1.)		
CS1W-HCP22 (for 1 axis)	XW2Z-□□□J-A22			
CS1W-HCP22 (for 2 axes)	XW2Z-□□□J-A23			
CS1W-NC113/213/413	See note 5. XW2Z-□□□J-A9	XW2B-40J6-4A	See notes 2 and 3. SMARTSTEP A-series Connecting Cable: XW2Z-□□□J-B7 with communications support (for the XW2B-40J6-4A)	SMARTSTEP A-series Servo Driver: R7D-AP□□□
CS1W-NC133/233/433	XW2Z-□□□J-A13			
CJ1W-NC113/213/413	XW2Z-□□□J-A17			
CJ1W-NC133/233/433	XW2Z-□□□J-A21			
Serial Communications Units and Boards	Connecting Cables for Serial Communications Units and Boards			
See note 6. CS1W-SCB41	XW2Z-□□□J-C1			
CJ1W-SCU41				

Note:
1. Same functions as conventional models, such as the XW2B-20J6-2, XW2B-40J6-2, and XW2B-20J6-3, and connects to the R88D-UEP□□□.
2. Two Servo Driver Connecting Cables are required per Relay Unit when using the C200H-NC211, C200HW-NC213/413, or CS1W-NC213/233/413/433.
3. Two Relay Units, two Position Control Connecting Cables, and two Servo Driver Connecting Cables are required when using the CQM1-CPU43-V1 for 2-axis control.
4. Use the XW2Z-□□□J-A4 Connecting Cable for the C200H-NC112, the XW2Z-□□□J-A8 Connecting Cable for the C200HW-NC113 and CS1W-NC113, the XW2Z-□□□J-A5 Connecting Cable for the C200H-NC211, and the XW2Z-□□□J-A9 Connecting Cable for the C200HW-NC213/413 and CS1W-NC213.
5. Do not connect a signal lines to the Y-axis terminals on the XW2B-40J6-4A when connected to a Position Control Unit used for one-axis control.
6. Use this cable between XW2B-406J-4A communications connectors to control two or more axes.

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Note: For 2-axis control, two Servo Driver Connecting Cables are required for each Relay Unit.

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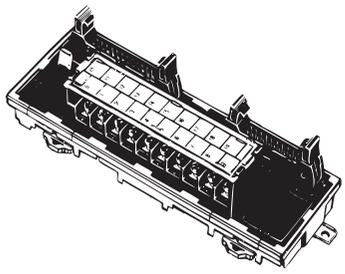
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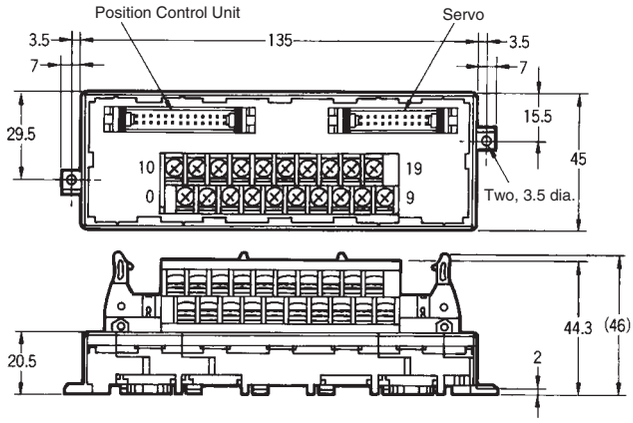
XW2B Servo Relay Units

For the C200H-NC112, C200HW-NC113, CS1W-NC113/133, CJ1W-NC113/133, 3F88M-DRT141 (with a Terminal Block with M3 Screws)

■ Dimensions

XW2B-20J6-1B





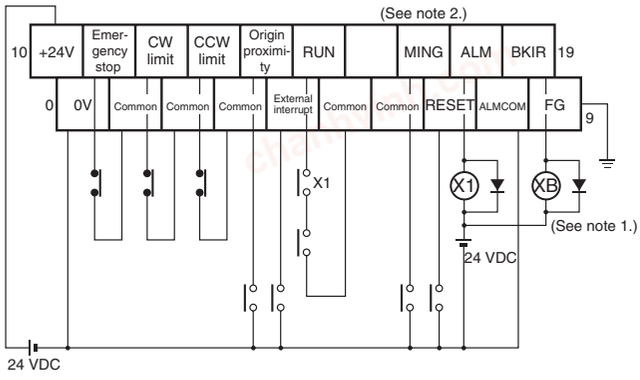
Note: Terminal block pitch is 7.62 mm.

Wiring Terminal Blocks

Signal names for the terminal block depend on the Servo Driver that is connected.
Refer to the user's manual provided with the Servo Driver for details.
(Terminal nameplates are provided and the correct one must be inserted into the terminal covers according to the type of Servo Driver that is connected.)

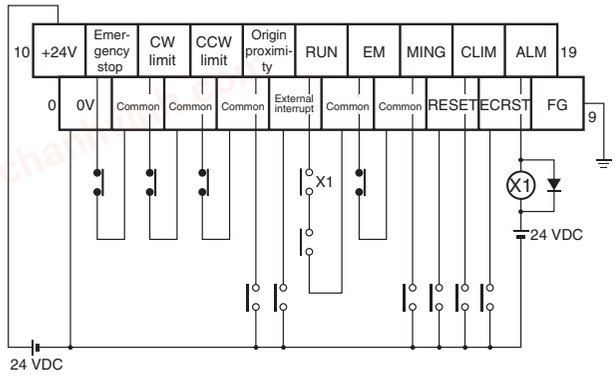
C200H-NC112, C200HW-NC113, CS1W-NC1□3, CJ1W-NC1□3, 3F88M-DRT141: SMARTSTEP and OMNUC W, U, and UE Series

Use mode 2 for origin searches.



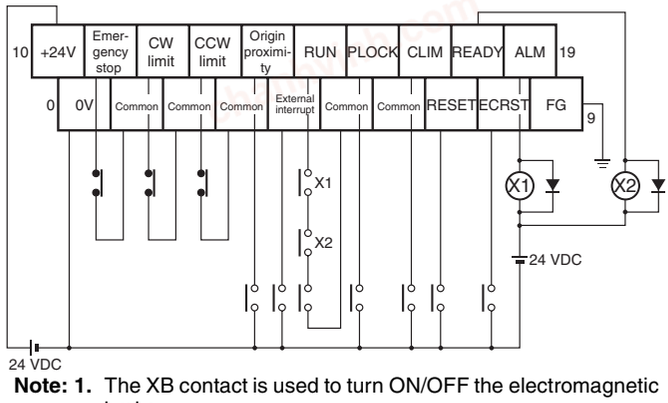
C200H-NC112, C200HW-NC113, CS1W-NC1□3, CJ1W-NC1□3, 3F88M-DRT141: OMNUC H Series

Use mode 3 for origin searches.



C200H-NC112, C200HW-NC113, CS1W-NC1□3, CJ1W-NC1□3, 3F88M-DRT141: OMNUC M Series

Use mode 3 for origin searches.



Note: 1. The XB contact is used to turn ON/OFF the electromagnetic brake.
2. The MING input is disabled for SMARTSTEP.
3. Signal names depend on the Servo Driver that is connected.
4. Refer to the user's manual provided with the Servo Driver for signal name details.
5. Do not connect unused terminals.
6. The 0 V terminal is internally connected to the common terminals.
7. The following crimp terminal is applicable: R1.25-3 (round or forked)
8. Three terminal nameplates are provided with the terminal block and the correct one must be inserted into the terminal covers according to the type of Servo Driver that is connected.

Type	Nameplate color
SMARTSTEP and OMNUC W, U, and UE Series	Black
OMNUC M Series	Red
OMNUC H Series	Green

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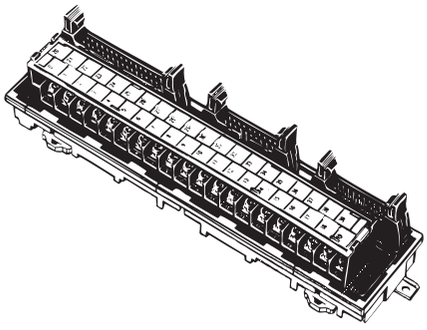
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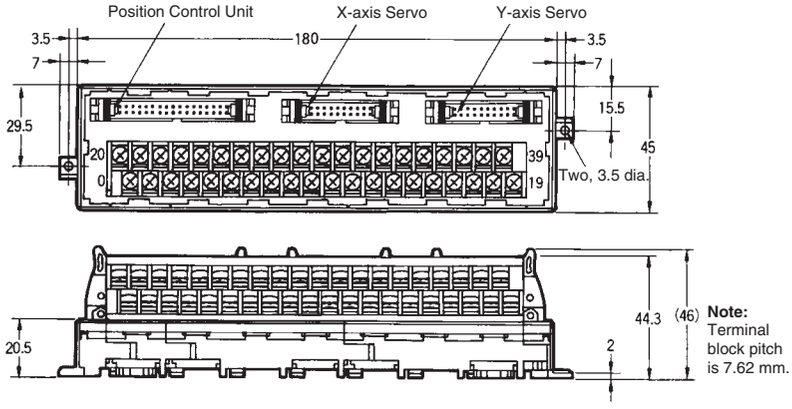
XW2B Servo Relay Units

For the C200H-NC211, C200HW-NC213/413, CS1W-NC213/233/413/433, CJ1W-NC213/233/413/433 (with Terminal Block with M3 Screws)

■ Dimensions

XW2B-40J6-2B



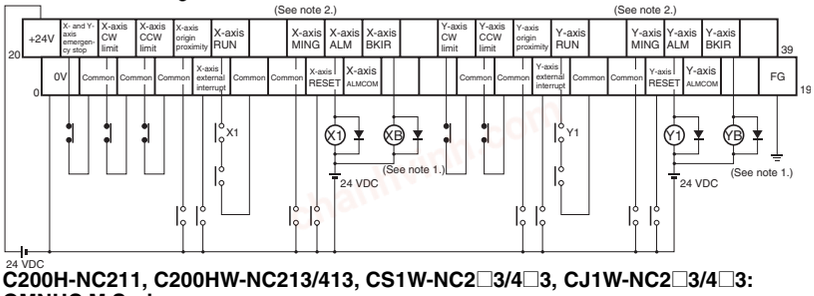


Wiring Terminal Blocks

Signal names for the terminal block depend on the Servo Driver that is connected.
Refer to the user's manual provided with the Servo Driver for details.
(Terminal nameplates are provided and the correct one must be inserted into the terminal covers according to the type of Servo Driver that is connected.)

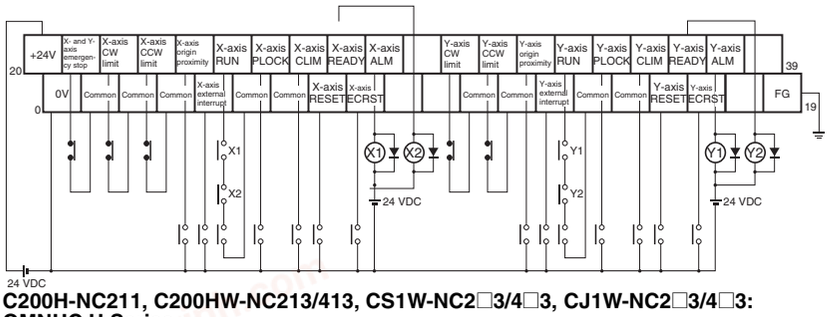
C200H-NC211, C200HW-NC213/413, CS1W-NC2□3/4□3, CJ1W-NC2□3/4□3: SMARTSTEP and OMNUC W, U, and UE Series

Use mode 2 for origin searches.



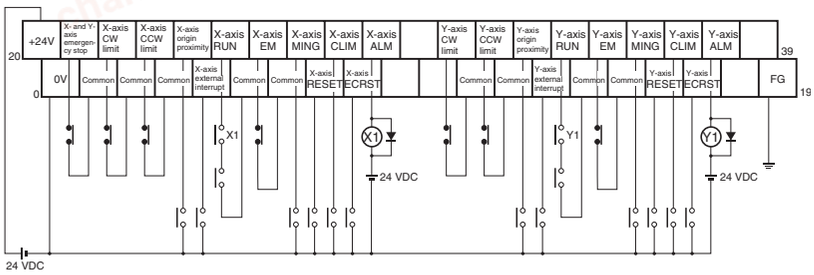
C200H-NC211, C200HW-NC213/413, CS1W-NC2□3/4□3, CJ1W-NC2□3/4□3: OMNUC M Series

Use mode 3 for origin searches.



C200H-NC211, C200HW-NC213/413, CS1W-NC2□3/4□3, CJ1W-NC2□3/4□3: OMNUC H Series

Use mode 3 for origin searches.



Note: 1. The YB/XB contact is used to turn ON/OFF the electromagnetic brake.

2. The MING input is disabled for SMARTSTEP.

3. Signal names depend on the Servo Driver that is connected.

4. Refer to the user's manual provided with the Servo Driver for details.

5. Connect the CW and CCW limit signals of the unused axis to a common terminal when controlling one axis.

6. Do not connect unused terminals.

7. The 0 V terminal is internally connected to the common terminals.

8. The following crimp terminal is applicable: R1.25-3 (round or forked)

9. Connect the CW and CCW limit signals of the unused axis to a common terminal when using the XW2B-40J6-2 (B) (terminal block for two-axis control) for one-axis control.

10. Three terminal nameplates are provided with the terminal block and the correct one must be inserted into the terminal covers according to the type of Servo Driver that is connected.

Type	Nameplate color
SMARTSTEP and OMNUC W, U, and UE Series	Black
OMNUC M Series	Red
OMNUC H Series	Green

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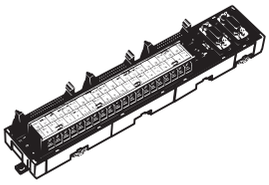
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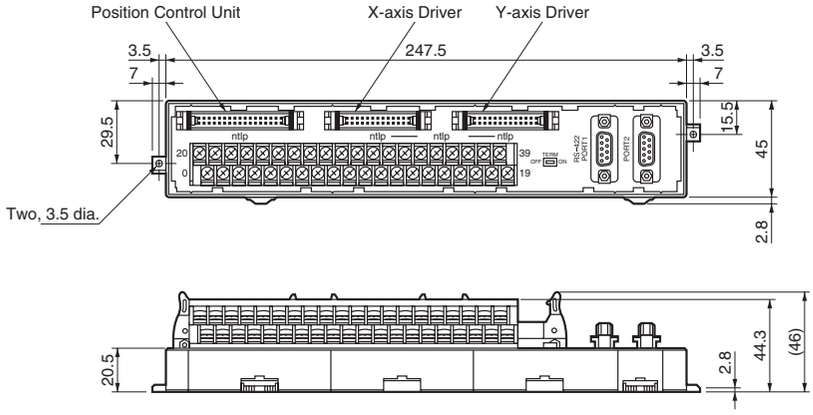
XW2B Servo Relay Unit

For the CS1W-NC1□3/2□3/4□3, CJ1W-NC1□3/2□3/4□3 (with Terminal Block with M3 Screws)

■ Dimensions

XW2B-40J6-4A



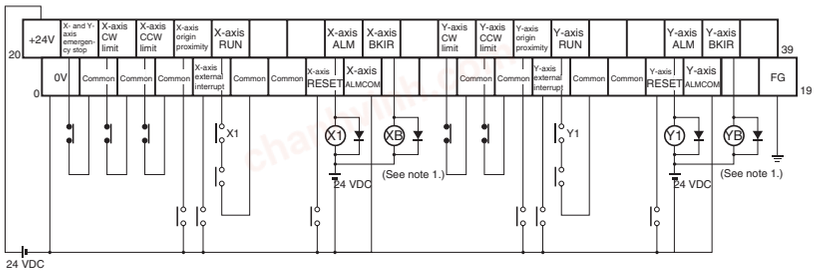


Note: Terminal block pitch is 7.62 mm.

Wiring Terminal Blocks

Signal names for the terminal block depend on the Servo Driver that is connected.
Refer to the user's manual provided with the Servo Driver for details.
(Terminal nameplates are provided and the correct one must be inserted into the terminal covers according to the type of Servo Driver that is connected.)

CS1W-NC1□3/2□3/4□3, CJ1W-NC1□3/2□3/4□3: SMARTSTEP Series



Note: Do not connect signal lines to the Y-axis terminals when connected to a Position Control Unit used for one-axis control.

Note: 1. The YB/XB contact is used to turn ON/OFF the electromagnetic brake.
2. Do not connect unused terminals.
3. The 0 V terminal is internally connected to the common terminals.
4. The following crimp terminal is applicable: R1.25-3 (round or forked)

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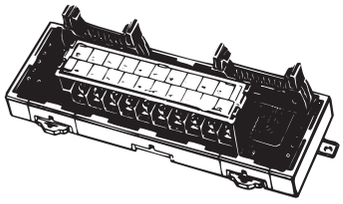
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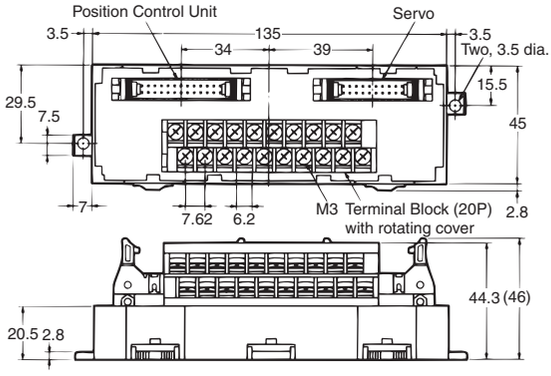
XW2B Servo Relay Unit

For the CS1W-HCP22, CMQ1-CPU43, CQM1H-PLB21 (with Terminal Block with M3 Screws)

■ Dimensions

XW2B-20J6-3B



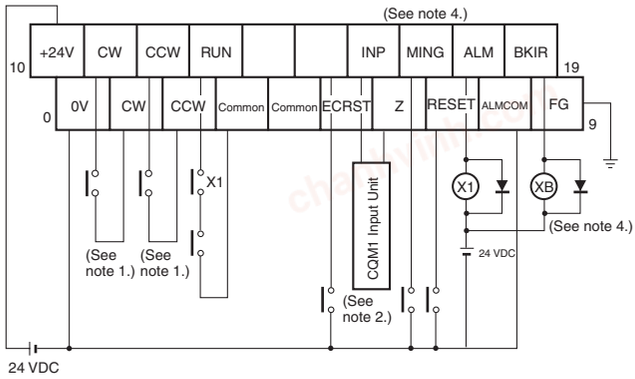


Note: Terminal block pitch is 7.62 mm.

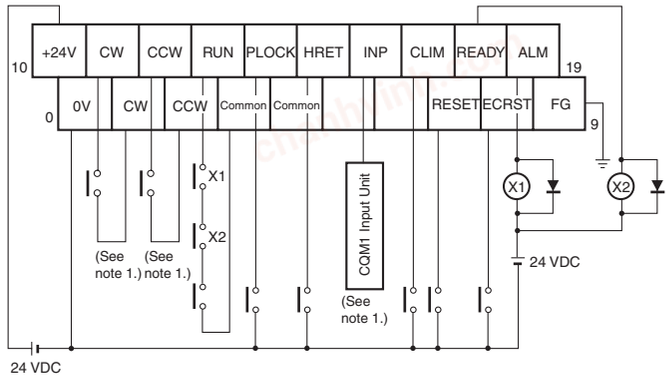
Wiring Terminal Blocks

Signal names for the terminal block depend on the Servo Driver that is connected.
Refer to the user's manual provided with the Servo Driver for details.
(Terminal nameplates are provided and the correct one must be inserted into the terminal covers according to the type of Servo Driver that is connected.)

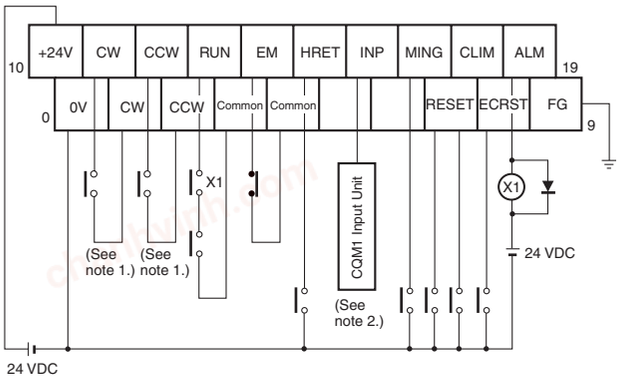
CQM1-CS1W-HCP: SMARTSTEP and OMNUC W, U, and UE Series



CQM1: OMNUC M Series



CQM1: OMNUC H Series



Note: 1. Inputting these signals will return the CQM1 output pulses and input the to the high-speed counter.
2. Input this output signal to a CQM1 Input Unit.
3. The XB contact is used to turn ON/OFF the electromagnetic brake.
4. The MING input is disabled for SMARTSTEP.
5. An open-collector output is used for the phase Z.
6. Do not connect unused terminals.
7. The 0 V terminal is internally connected to the common terminals.
8. The following crimp terminal is applicable: R1.25-3 (round or forked)

Type	Nameplate color
SMARTSTEP and OMNUC W, U, and UE Series	Black
OMNUC M Series	Red
OMNUC H Series	Green

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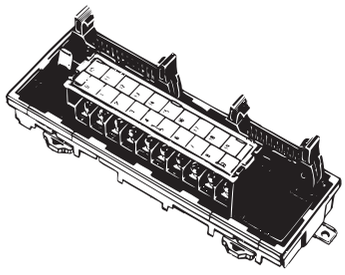
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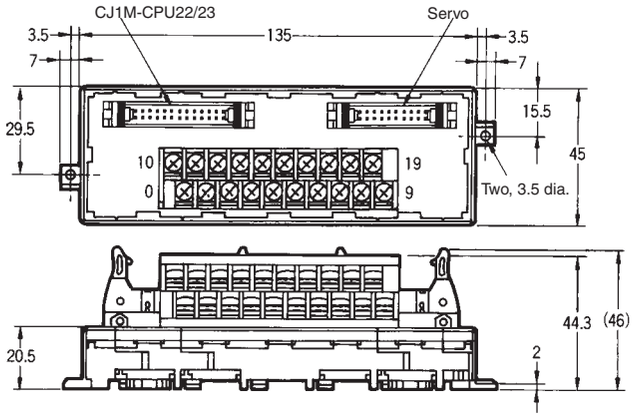
XW2B Servo Relay Unit

For the CJ1M-CPU22/23 (with Terminal Block with M3 Screws) (For One-axis Control)

■ Dimensions

XW2B-20J6-8A





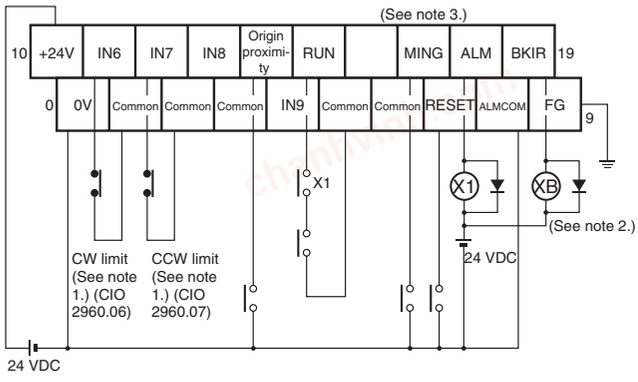
Note: Terminal block pitch is 7.62 mm.

Wiring Terminal Blocks

Signal names for the terminal block depend on the Servo Driver that is connected.
Refer to the user's manual provided with the Servomotor and Servo Driver for signal name details.

CJ1M-CPU22/23: SMARTSTEP and OMNUC W Series

Use mode 2 for origin searches.



Note: 1. CW and CCW input signals may be used after inputting them to an Input Unit. The signals that function as CW/CCW limit inputs in the CJ1M are A540.08/A540.09 (CW/CCW) for pulse output 0 and A541.08/A541.09 (CW/CCW) for pulse output 1. Output the bit shown on the left to one of these bits using the ladder program as the actual CW/CCW limit input.

Example



2. The XB contact is used to turn ON/OFF the electromagnetic brake.

3. The MING input is disabled for SMARTSTEP.

4. Signal names depend on the Servo Driver that is connected.

5. Refer to the user's manual provided with the Servomotor and Servo Driver for signal name details.

6. Do not connect unused terminals.

7. The 0 V terminal is internally connected to the common terminals.

8. The following crimp terminal is applicable: R1.25-3 (round or forked)

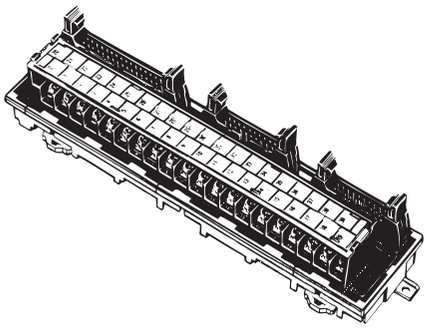
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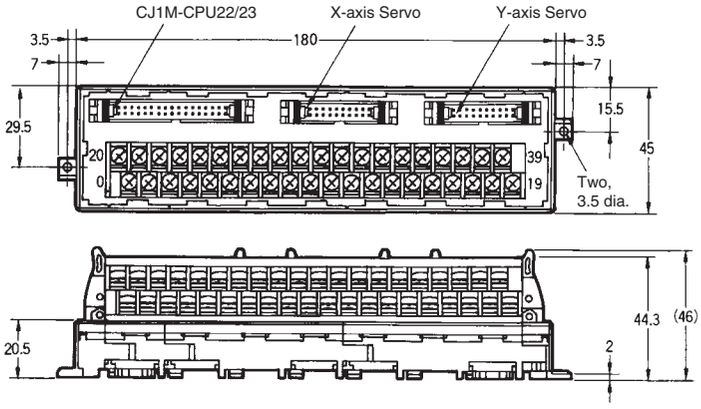
XW2B Servo Relay Unit

For the CJ1M-CPU22/23 (with Terminal Block with M3 Screws) (For Two-axis Control)

■ Dimensions

XW2B-40J6-9A





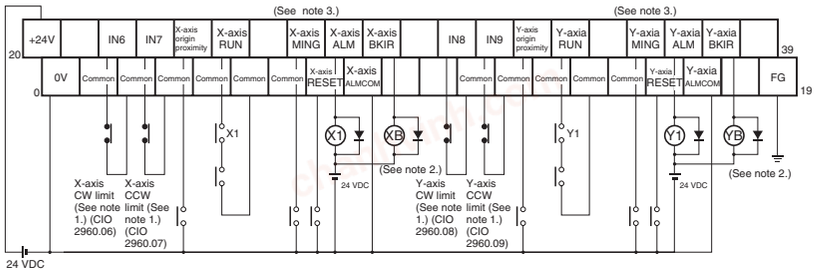
Note: Terminal block pitch is 7.62 mm.

Wiring Terminal Blocks

Signal names for the terminal block depend on the Servo Driver that is connected.
Refer to the user's manual provided with the Servomotor and Servo Driver for signal name details.

CJ1M-CPU22/23: SMARTSTEP and OMNUC W Series

Use mode 2 for origin searches.



Note: 1. CW and CCW input signals may be used after inputting them to an Input Unit. The signals that function as CW/CCW limit inputs in the CJ1M are A540.08/A540.09 (CW/CCW) for pulse output 0 and A541.08/A541.09 (CW/CCW) for pulse output 1. Output the bit shown on the left to one of these bits using the ladder program as the actual CW/CCW limit input.

Example 

2. The YB/XB contact is used to turn ON/OFF the electromagnetic brake.

3. The MING input is disabled for SMARTSTEP.

4. Signal names depend on the Servo Driver that is connected.

5. Refer to the user's manual provided with the Servomotor and Servo Driver for signal name details.

6. Do not connect unused terminals.

7. The 0 V terminal is internally connected to the common terminals.

8. The following crimp terminal is applicable: R1.25-3 (round or forked)

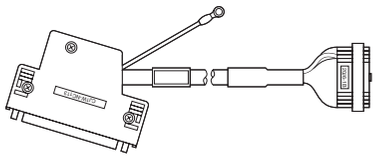
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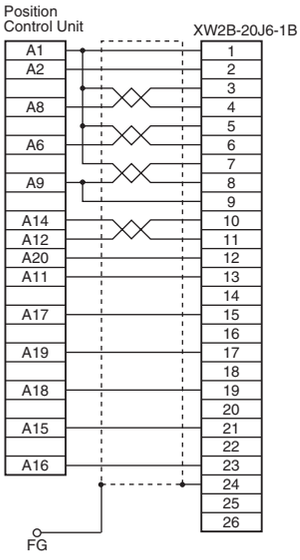
XW2Z Servo Relay Unit Connecting Cable

Position Control Unit and Servo Relay Unit Connections

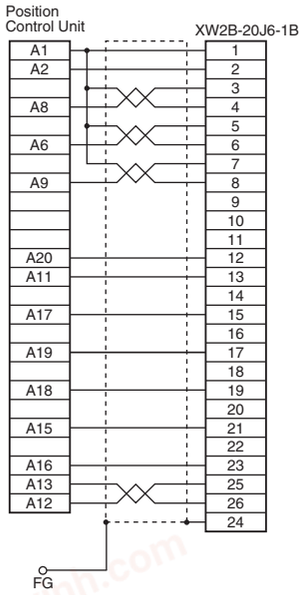
For the CJ1W-NC113



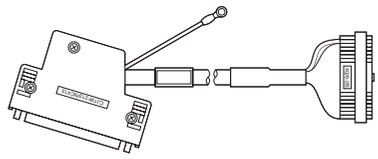
XW2Z-□□□J-A14
(for the R88D-WT/U/H/M)



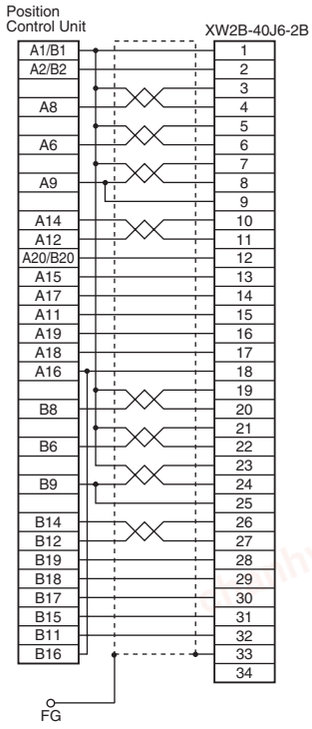
XW2Z-□□□J-A16
(for the R7D-AP and R88D-UEP□□□)



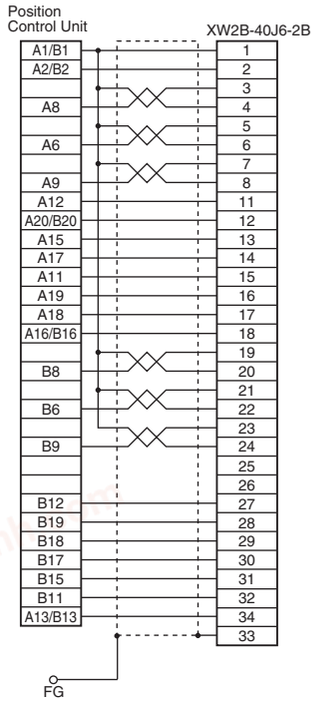
For the CJ1W-NC213/413



XW2Z-□□□J-A15
(for the R88D-WT/U/H/M)



XW2Z-□□□J-A17
(for the R7D-AP and R88D-UEP□□□)



Position Control Unit Connecting Cable

Cable length (cm)	Model	Applicable Position Control Units	Applicable Servo Relay Units
50	XW2Z-050J-A14	CJ1W-NC113	XW2B-20J6-1B
100	XW2Z-100J-A14		
50	XW2Z-050J-A16		
100	XW2Z-100J-A16		

Position Control Unit Connecting Cable

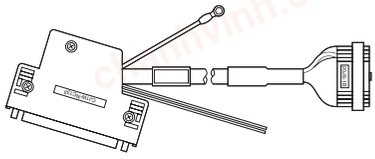
Cable length (cm)	Model	Applicable Position Control Units	Applicable Servo Relay Units
50	XW2Z-050J-A15	CJ1W-NC213/413	XW2B-40J6-2B XM2B-40J6-4A (See note.)
100	XW2Z-100J-A15		
50	XW2Z-050J-A17		
100	XW2Z-100J-A17		

Note: For SMARTSTEP only.

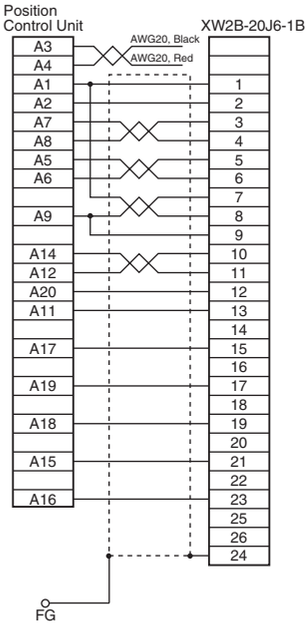
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Position Control Unit and Servo Relay Unit Connections

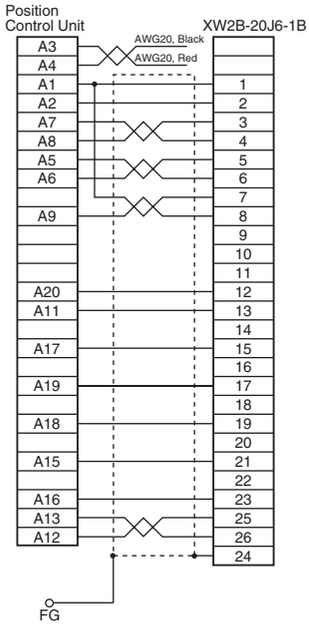
For the CJ1W-NC133



XW2Z-□□□J-A18
(for the R88D-WT/U/H/M)



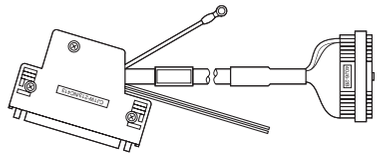
XW2Z-□□□J-A20
(for the R7D-AP and R88D-UEP□□□)



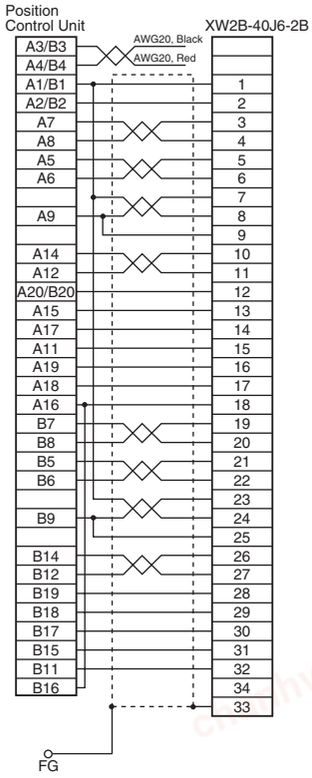
Position Control Unit Connecting Cable

Cable length (cm)	Model	Applicable Position Control Units	Applicable Servo Relay Units
50	XW2Z-050J-A18	CJ1W-NC133	XW2B-20J6-1B
100	XW2Z-100J-A18		
50	XW2Z-050J-A20		
100	XW2Z-100J-A20		

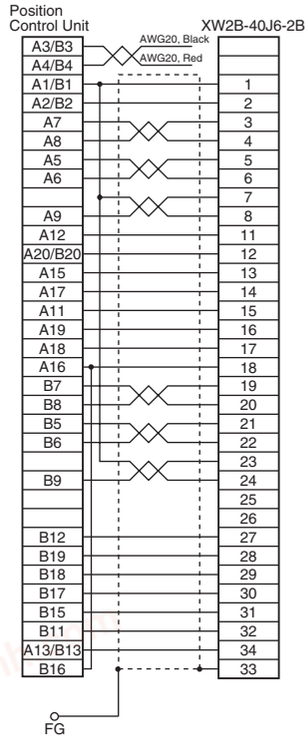
For the CJ1W-NC233/433



XW2Z-□□□J-A19
(for the R88D-WT/U/H/M)



XW2Z-□□□J-A21
(for the R7D-AP and R88D-UEP□□□)



Position Control Unit Connecting Cable

Cable length (cm)	Model	Applicable Position Control Units	Applicable Servo Relay Units
50	XW2Z-050J-A19	CJ1W-NC233/433	XW2B-40J6-2B XM2B-40J6-4A (See note.)
100	XW2Z-100J-A19		
50	XW2Z-050J-A21		
100	XW2Z-100J-A21		

Note: For SMARTSTEP only.

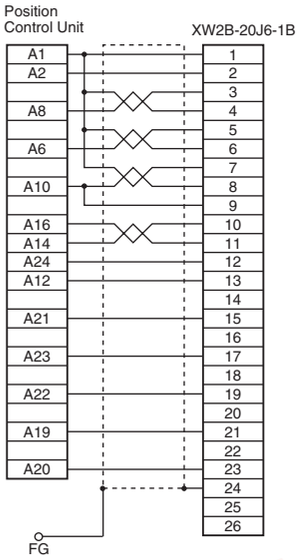
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Position Control Unit and Servo Relay Unit Connections

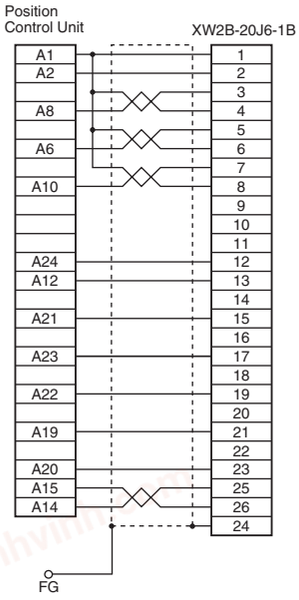
For the CS1W-NC113, C200HW-NC113



XW2Z-□□□J-A6
(for the R88D-WT/U/H/M)



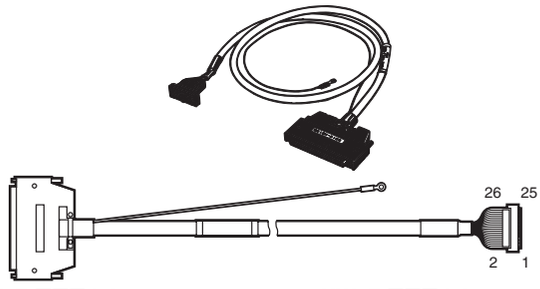
XW2Z-□□□J-A8
(for the R7D-AP and R88D-UEP□□□)



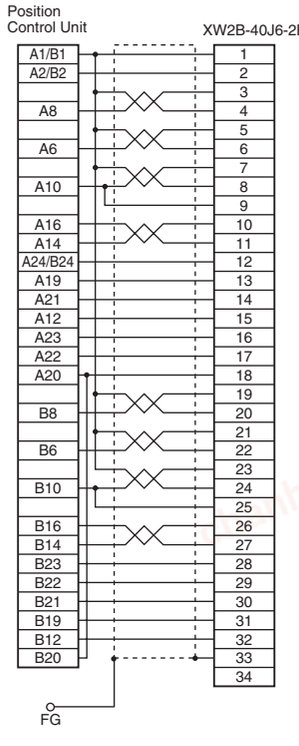
Position Control Unit Connecting Cable

Cable length (cm)	Model	Applicable Position Control Units	Applicable Servo Relay Units
50	XW2Z-050J-A6	CS1W-NC113 C200HW-NC113	XW2B-20J6-1B
100	XW2Z-100J-A6		
50	XW2Z-050J-A8		
100	XW2Z-100J-A8		

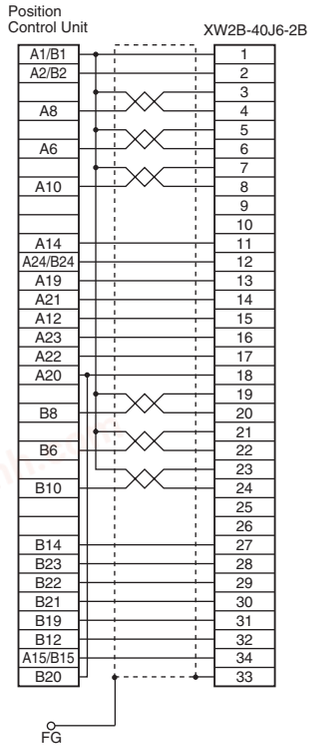
For the CS1W-NC213/413, C200HW-NC213/413



XW2Z-□□□J-A7
(for the R88D-WT/U/H/M)



XW2Z-□□□J-A9
(for the R7D-AP and R88D-UEP□□□)



Position Control Unit Connecting Cable

Cable length (cm)	Model	Applicable Position Control Units	Applicable Servo Relay Units
50	XW2Z-050J-A7	CS1W-NC213/413 C200HW-NC213/413	XW2B-40J6-2B XM2B-40J6-4A (See note.)
100	XW2Z-100J-A7		
50	XW2Z-050J-A9		
100	XW2Z-100J-A9		

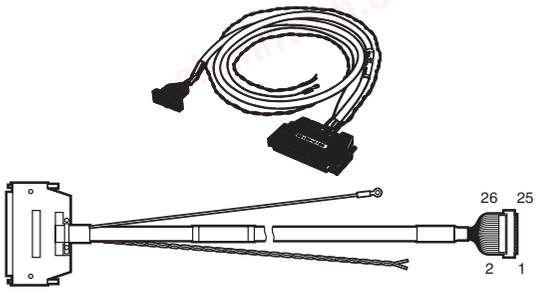
Note: For SMARTSTEP only.

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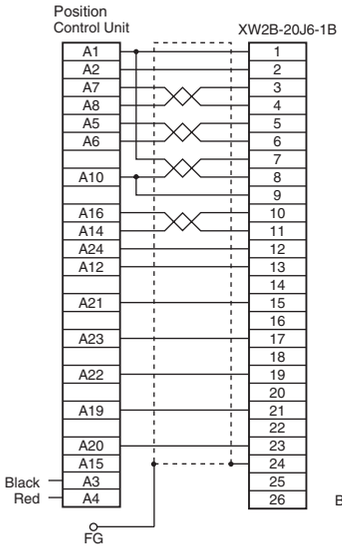
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Position Control Unit and Servo Relay Unit Connections

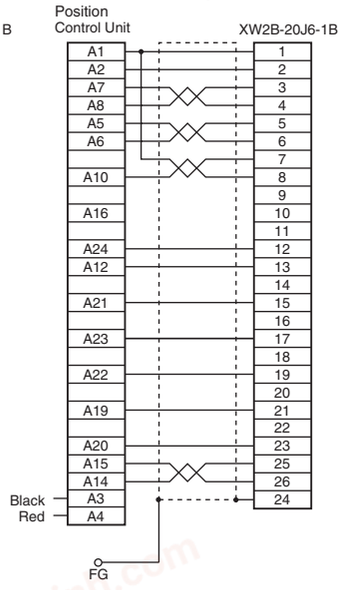
For the CS1W-NC133



XW2Z-□□□J-A10
(for the R88D-WT/U/H/M)



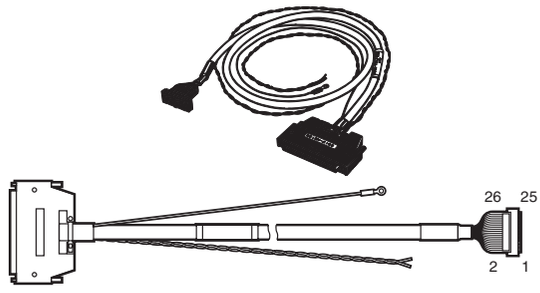
XW2Z-□□□J-A12
(for the R7D-AP and R88D-UEP□□□)



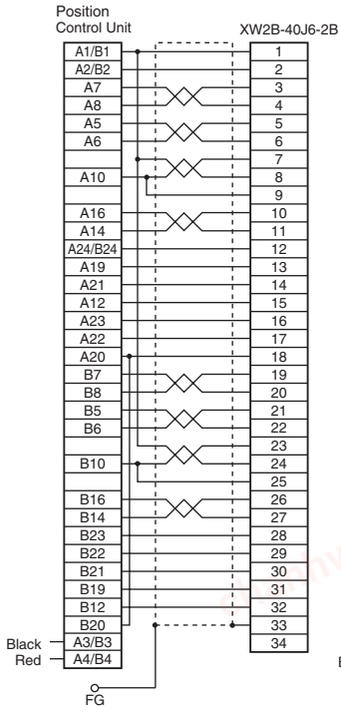
Position Control Unit Connecting Cable

Cable length (cm)	Model	Applicable Position Control Units	Applicable Servo Relay Units
50	XW2Z-050J-A10	CS1W-NC133	XW2B-20J6-1B
100	XW2Z-100J-A10		
50	XW2Z-050J-A12		
100	XW2Z-100J-A12		

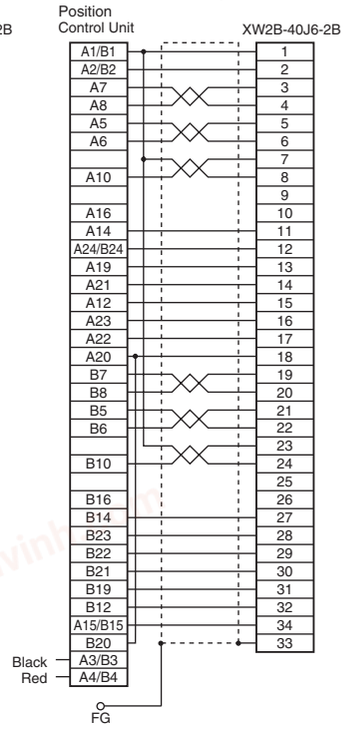
For the CS1W-NC233/433



XW2Z-□□□J-A11
(for the R88D-WT/U/H/M)



XW2Z-□□□J-A13
(for the R7D-AP and R88D-UEP□□□)



Position Control Unit Connecting Cable

Cable length (cm)	Model	Applicable Position Control Units	Applicable Servo Relay Units
50	XW2Z-050J-A11	CS1W-NC233/433	XW2B-40J6-2B XM2B-40J6-4A (See note.)
100	XW2Z-100J-A11		
50	XW2Z-050J-A13		
100	XW2Z-100J-A13		

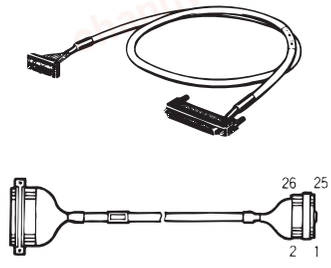
Note: For SMARTSTEP only.

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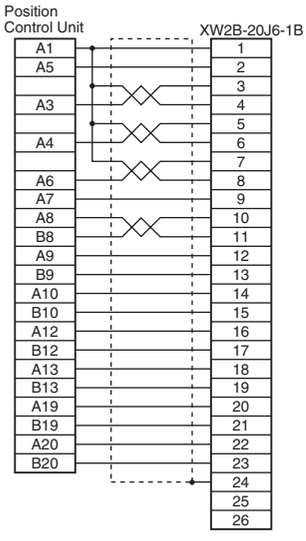
OMRON

Position Control Unit and Servo Relay Unit Connections

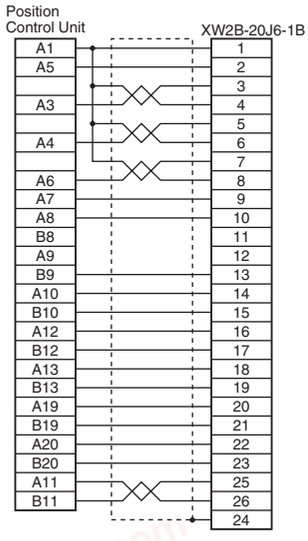
For the C200H-NC112



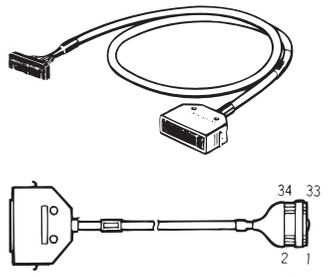
XW2Z-□□□J-A1
(for the R88D-WT/U/H/M)



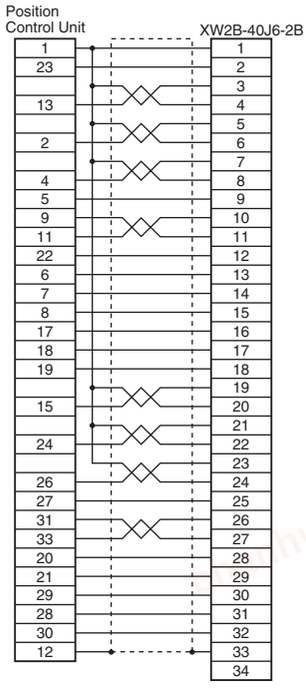
XW2Z-□□□J-A4
(for the R7D-AP and R88D-UEP□□□)



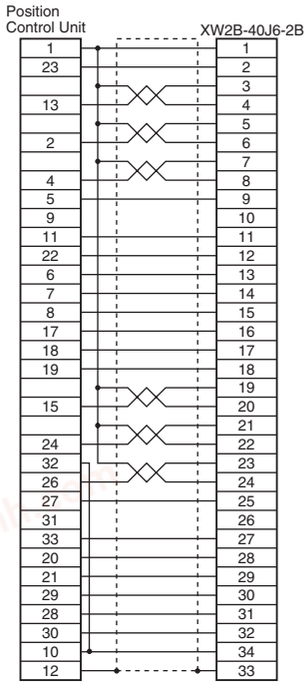
For the C200H-NC211



XW2Z-□□□J-A2
(for the R88D-WT/U/H/M)



XW2Z-□□□J-A5
(for the R7D-AP and R88D-UEP□□□)



Position Control Unit Connecting Cable

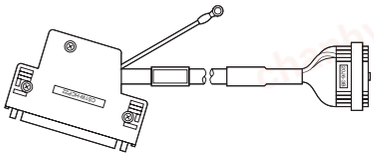
Cable length (cm)	Model	Applicable Position Control Units	Applicable Servo Relay Units
50	XW2Z-050J-A1	For the C200H-NC112 (one-axis)	XW2B-20J6-1B
100	XW2Z-100J-A1		
50	XW2Z-050J-A4		
100	XW2Z-100J-A4		
50	XW2Z-050J-A2	For the C200H-NC211 (two-axis)	XW2B-40J6-2B
100	XW2Z-100J-A2		
50	XW2Z-050J-A5		
100	XW2Z-100J-A5		

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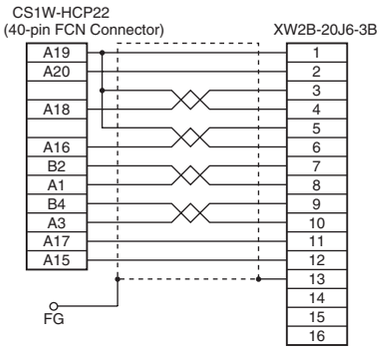
OMRON

Position Control Unit and Servo Relay Unit Connections

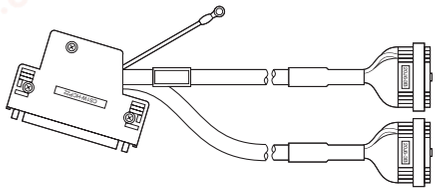
CS1W-HCP22 (for 1 axis)



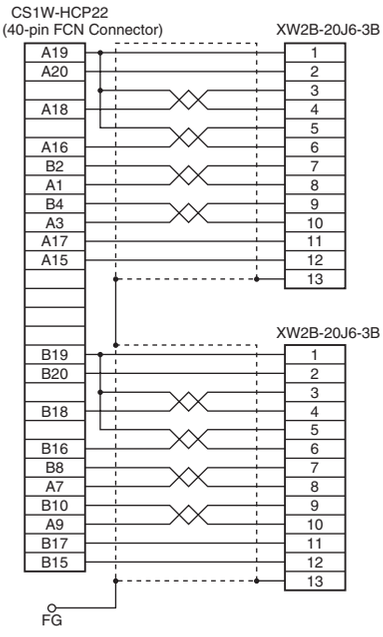
XW2Z-□□□J-A22



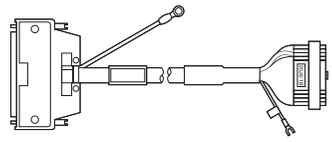
CS1W-HCP22 (for 2 axes)



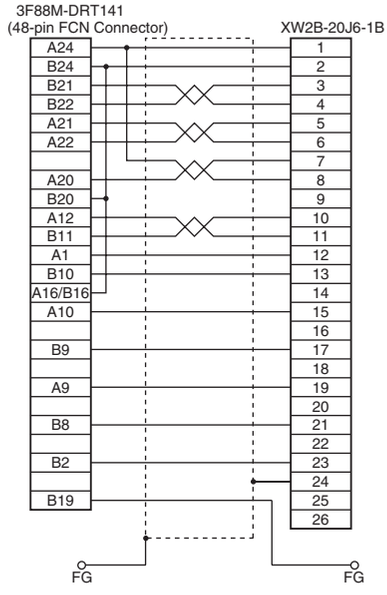
XW2Z-□□□J-A23



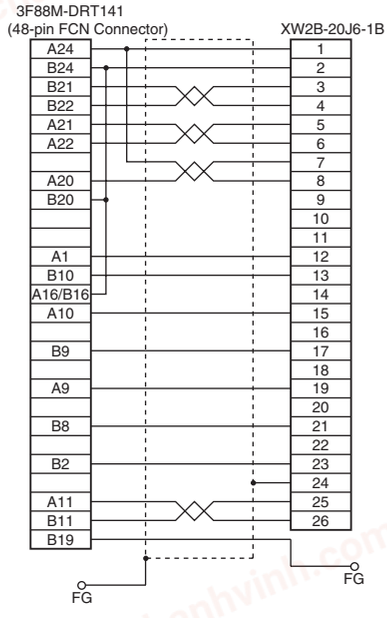
For the 3F88M-DRT141



XW2Z-□□□J-A24
(for the R88D-WT/U/H/M)



XW2Z-□□□J-A25
(for the R7D-AP and R88D-UEP□□□)



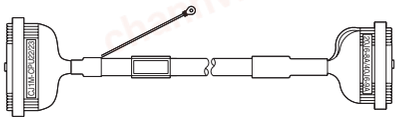
Servo Driver Connecting Cable

Cable length (cm)	Model	Applicable Position Control Units	Applicable Servo Relay Units
50	XW2Z-050J-A22	CS1W-HCP22	XW2B-20J6-3B
100	XW2Z-100J-A22		
50	XW2Z-050J-A23		
100	XW2Z-100J-A23		
50	XW2Z-050J-A24	3F88M-DRT141	XW2B-20J6-1B
100	XW2Z-100J-A24		
50	XW2Z-050J-A25		
100	XW2Z-100J-A25		

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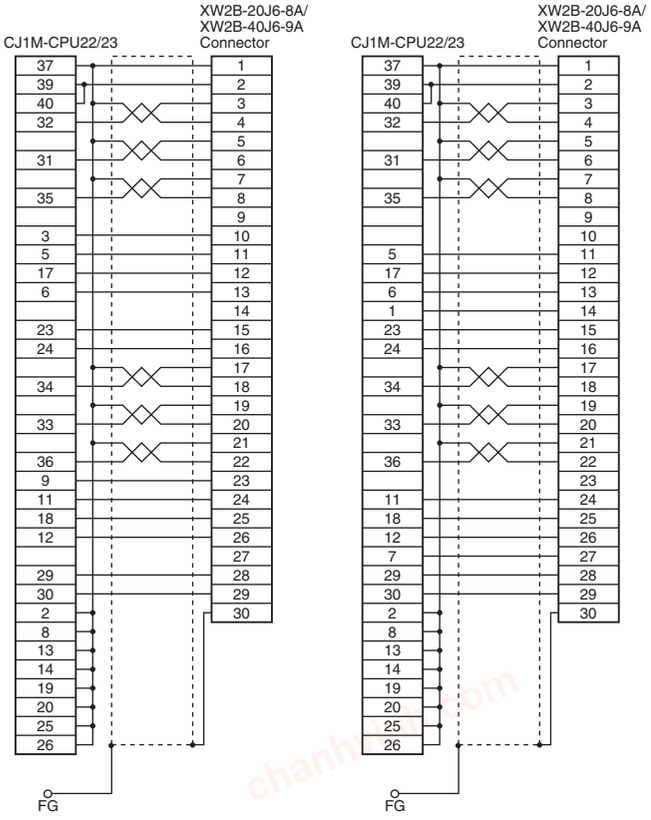
CJ1M Pulse Output Function and Servo Relay Unit Connections

For the CJ1M-CPU22/23



XW2Z-100J-A27
(for the R88D-WT)

XW2Z-100J-A26
(for the R7D-AP)



Position Control Unit Connecting Cable

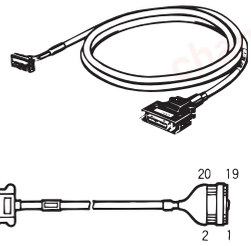
Cable length (cm)	Model	Applicable Units	Applicable Servo Relay Units
100	XW2Z-100J-A27	CJ1M-CPU22/23	XW2B-20J6-8A XW2B-40J6-9A
	XW2Z-100J-A26		

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Servo Driver and Servo Relay Unit Connections

SMARTSTEP/W and U Series



XW2Z-□□□J-B1

(36-pin R88D-UP□□□ Half-pitch Connector) — XW2B-□□J6-□ (XG4M-2030)

13	1
10	2
3	3
4	4
1	5
2	6
5	7
6	8
	9
24	10
25	11
8	12
14	13
	14
15	15
18	16
7	17
34	18
35	19
36	20

XW2Z-□□□J-B4

(50-pin R88D-WT□□H□ and R88D-UT□□H Half-pitch Connectors) — XW2B-□□J6-□ (XG4M-2030)

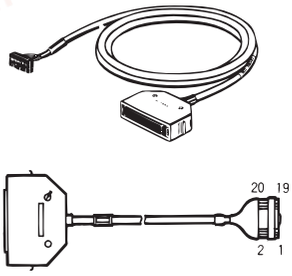
47	1
26	2
11	3
12	4
7	5
8	6
15	7
14	8
28	9
19	10
20	11
25	12
40	13
	14
41	15
44	16
27	17
31	18
32	19
50	20

XW2Z-□□□J-B5

(36-pin R7D-AP□□□ and R88D-UEP□□□ Half-pitch Connectors) — XW2B-□□J6-□ (XG4M-2030)

13	1
10	2
33	
3	3
4	4
1	5
2	6
5	7
6	8
32	11
	14
8	12
14	13
15	15
18	16
7	17
34	18
35	19
36	20

M Series

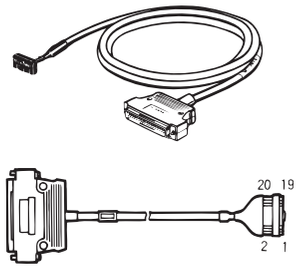


XW2Z-□□□J-B2

(50-pin R88D-MT□□□ Multi-contact, Square Connector) — XW2B-□□J6-□ (XG4M-2030)

	1
41	2
11	3
10	4
9	5
8	6
	7
	8
14	9
	10
	11
45	12
50	13
30	14
29	15
49	16
42	17
46	18
13	19
1	20

H Series



XW2Z-□□□J-B3

R88D-H□□□□ (XM2A-3701) — XW2B-□□J6-□ (XG4M-2030)

19	1
18	
36	
37	2
14	3
33	4
15	5
34	6
	7
	8
11	9
	10
	11
28	12
13	13
6	14
31	15
30	16
27	17
32	18
10	19
26	20

Hood Cover

Servo Driver Connecting Cable

Cable length (cm)	Model	Applicable Servo Driver	Applicable Servo Relay Units
100	XW2Z-100J-B1	R88D-UP□□□	XW2B-20J6-1B XW2B-40J6-2B (See note 1.) XW2B-20J6-3B XW2B-40J6-4A (See notes 1 and 2.) XW2B-20J6-8A (See note 3.) XW2B-40J6-9A (See notes 1 and 3.)
200	XW2Z-200J-B1		
100	XW2Z-100J-B2	R88D-MT□□□	
200	XW2Z-200J-B2		
100	XW2Z-100J-B3	R88D-H□□□	
200	XW2Z-200J-B3		
100	XW2Z-100J-B4	R88D-WT□□H□ R88D-UT□□H	
200	XW2Z-200J-B4		
100	XW2Z-100J-B5	R7D-AP□□□ R88D-UEP□□□	
200	XW2Z-200J-B5		

Note: 1. Two Servo Driver Connecting Cables are required with the Two-axis XW2B-40J6-2B.

2. For SMARTSTEP only.

3. For SMARTSTEP and the W Series only.

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■ Precautions

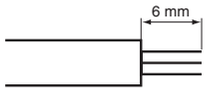
Wiring Precautions

- Do not connect unused terminals.
- The 0 V terminal is internally connected to the common terminals.
- Always turn OFF the power supply before wiring. Otherwise, cables or other conductors can short the terminals and cause the Unit to fail.
- Do not connect or disconnect Connectors with the power turned ON. Otherwise, it may cause malfunctions.

Wiring Terminal Blocks

- Direct Wire Connections

1. Use a wire size between 0.3 and 1.25 mm^2 (AWG22 to AWG16).
2. Prepare the end of each wire as shown in the following diagram.



- Using Crimp Terminals

1. The following crimp terminal is applicable:
   R1.25-3 (round or forked)

DIN Track Mounting

- XW2B Servo Relay Units can be mounted side-to-side on DIN Track. The flanges for mounting screws are located on each side at the bottom of the XW2B.
- Secure both ends of the XW2B with End Plates.

Terminal Screw Tightening Torque

- Use a tightening torque of 0.5 to 0.8 N·m when connecting wires or crimp terminals to the terminal block.

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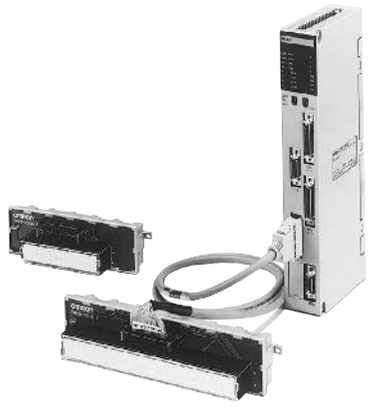
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Terminal Blocks for Motion Control Units

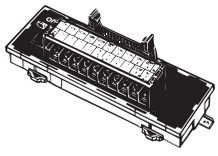
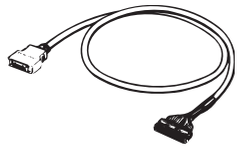
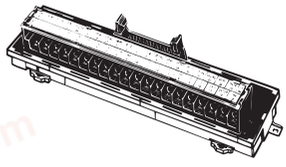
XW2B

Significantly reduces wiring manhours for Motion Control Units from the SYSMAC CVM1/CV Series.

- A special cable connects all the Motion Control I/O Connector and terminal block contacts at once.
- Terminal labeling shows wiring status at a glance.
- Space-saving terminal blocks with M3 screws.
- Mount to DIN Track or via screws.



■ Combinations

Applicable Motion Control Units	Special Terminal Block	Special Connecting Cable
CV500-MC221 (Two Axes)	 XW2B-20J6-6	 XW2Z-100J-F1 (For two/four axes)
CV500-MC421 (Four Axes)	 XW2B-40J6-7	

■ Ratings and Characteristics

Item	XW2B-□□J6-□
Rated current	1 A
Rated voltage	24 VDC
Insulation resistance	5 MΩ min. (at 500 VDC)
Dielectric strength	500 VAC for 1 min (leakage current: 1 mA max.)
Operating temperature	0 to 55°C

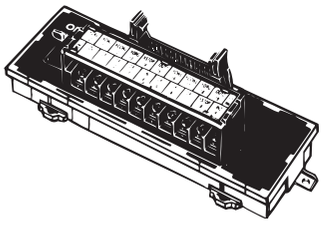
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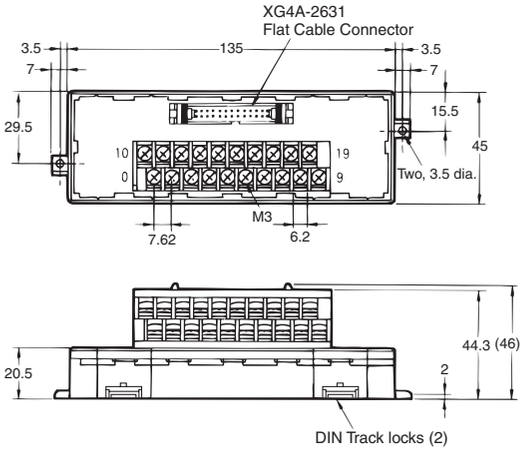
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For the Two-axis CV500-MC221 (with Terminal Block with M3 Screws)

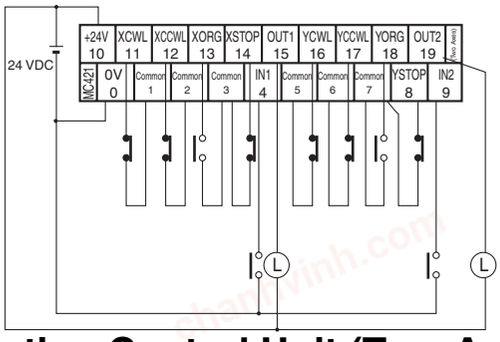
■ Dimensions

XW2B-20J6-6





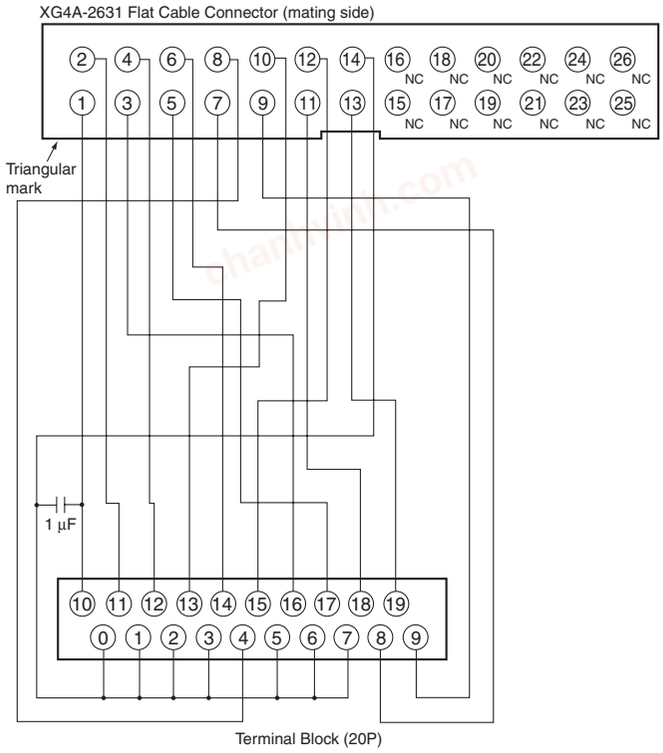
■ Terminal Block Labeling and Arrangement Example



■ Motion Control Unit (Two Axes) Terminal Table

XW2B		CV500-MC221		
Terminal No.	Label	Symbol	Name	Pin No.
0	0V	DC GND	24-V input ground	14
1	Common	DC GND	24-V input ground	14
2	Common	DC GND	24-V input ground	14
3	Common	DC GND	24-V input ground	14
4	IN1	IN1	General-purpose input 1	8
5	Common	DC GND	24-V input ground	14
6	Common	DC GND	24-V input ground	14
7	Common	DC GND	24-V input ground	14
8	YSTOP	YSTOP	Y-axis emergency stop input	7
9	IN2	IN2	General-purpose input 2	9
10	+24V	+24V	24-V input	1
11	XCWL	XCWL	X-axis CW limit input	2
12	XCCWL	XCCWL	X-axis CCW limit input	4
13	XORG	XORG	X-axis origin proximity input	10
14	XSTOP	XSTOP	X-axis emergency stop input	6
15	OUT1	OUT1	General-purpose output 1	12
16	YCWL	YCWL	Y-axis CW limit input	3
17	YCCWL	YCCWL	Y-axis CCW limit input	5
18	YORG	YORG	Y-axis origin proximity input	11
19	OUT2	OUT2	General-purpose output 2	13

■ Circuit and Terminal Arrangement Diagram



■ Ordering Information

Model	Applicable Units
XW2B-20J6-6	CV500-MC221 (Two Axes)

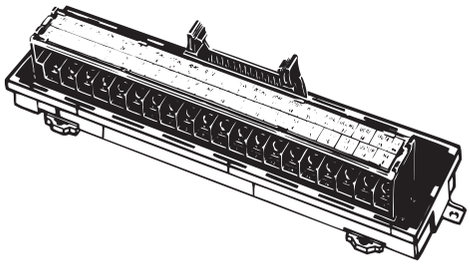
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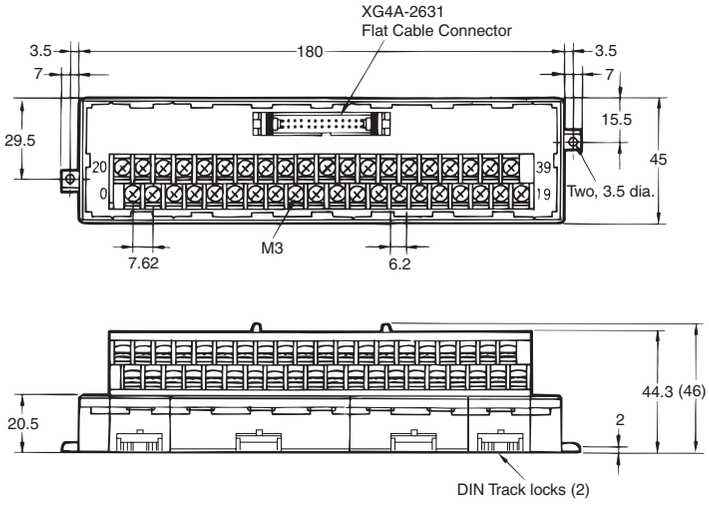
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For the Four-axis CV500-MC421 (with a Terminal Block with M3 Screws)

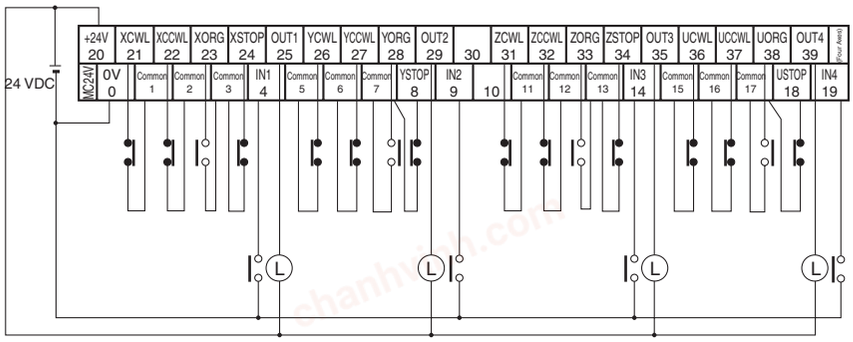
■ Dimensions

XW2B-40J6-7





■ Terminal Block Labeling and Arrangement Example



■ Motion Control Unit (Four Axes) Terminal Table

XW2B		CV500-MC421		
Terminal No.	Label	Symbol	Name	Pin No.
0	0V	DC GND	24-V input ground	14
1	Common	DC GND	24-V input ground	14
2	Common	DC GND	24-V input ground	14
3	Common	DC GND	24-V input ground	14
4	IN1	IN1	General-purpose input 1	8
5	Common	DC GND	24-V input ground	14
6	Common	DC GND	24-V input ground	14
7	Common	DC GND	24-V input ground	14
8	YSTOP	YSTOP	Y-axis emergency stop input	7
9	IN2	IN2	General-purpose input 2	9
10	(See note.)	---	---	---
11	Common	DC GND	24-V input ground	14
12	Common	DC GND	24-V input ground	14
13	Common	DC GND	24-V input ground	14
14	IN3	IN3	General-purpose input 3	21
15	Common	DC GND	24-V input ground	14
16	Common	DC GND	24-V input ground	14
17	Common	DC GND	24-V input ground	14
18	USTOP	USTOP	U-axis emergency stop input	20
19	IN4	IN4	General-purpose input 4	22

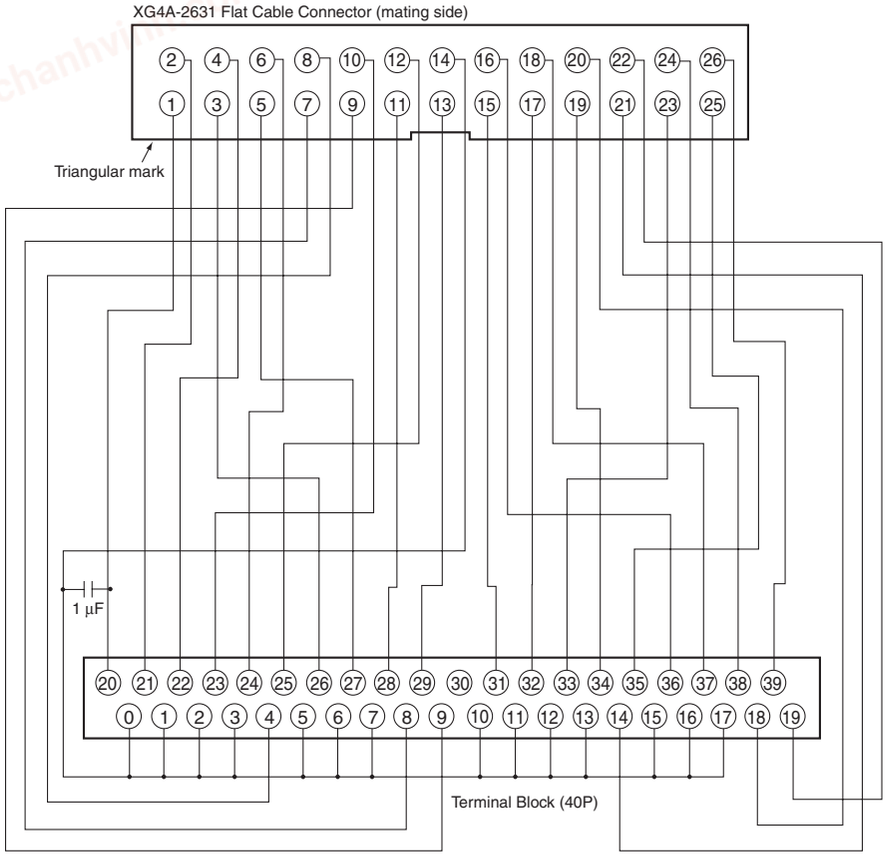
XW2B		CV500-MC421		
Terminal No.	Label	Symbol	Name	Pin No.
20	+24V	+24V	24-V input	1
21	XCWL	XCWL	X-axis CW limit input	2
22	XCCWL	XCCWL	X-axis CCW limit input	4
23	XORG	XORG	X-axis origin proximity input	10
24	XSTOP	XSTOP	X-axis emergency stop input	6
25	OUT1	OUT1	General-purpose output 1	12
26	YCWL	YCWL	Y-axis CW limit input	3
27	YCCWL	YCCWL	Y-axis CCW limit input	5
28	YORG	YORG	Y-axis origin proximity input	11
29	OUT2	OUT2	General-purpose output 2	13
30	(See note.)	---	---	---
31	ZCWL	ZCWL	Z-axis CW limit input	15
32	ZCCWL	ZCCWL	Z-axis CCW limit input	17
33	ZORG	ZORG	Z-axis origin proximity input	23
34	ZSTOP	ZSTOP	Z-axis emergency stop input	19
35	OUT3	OUT3	General-purpose output 4	25
36	UCWL	UCWL	U-axis CW limit input	16
37	UCCWL	UCCWL	U-axis CCW limit input	18
38	UORG	UORG	U-axis origin proximity input	24
39	OUT4	OUT4	General-purpose output 4	26

Note: Unused terminals.

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■ Circuit and Terminal Arrangement Diagram



■ Ordering Information

Model	Applicable Units
XW2B-40J6-7	CV500-MC421 (Four Axes)

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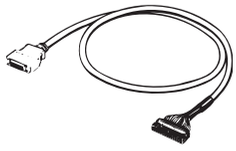
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XW2Z Terminal Block Connecting Cables for Two-/four-axis Motion Control Units

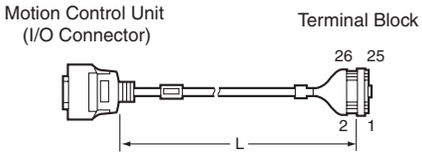
Motion Control Unit and Terminal Block Connections

For the CV500-MC221/MC421

XW2Z-100J-F1



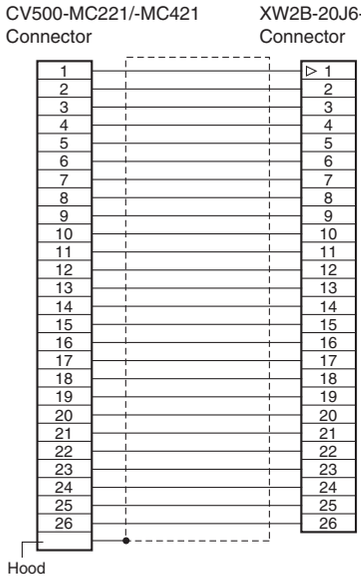
Applicable Connector



10126-6000EL (Connector)
10326-3210-000 (Hood)
(Made by Sumitomo 3M)

XG4M-2630-T

Wiring Diagram



■ Ratings and Characteristics

Rated current	0.5 A
Rated voltage	24 VDC
Contact resistance	20 mΩ max. (at 20 mV, 100 mA max.) 35 mΩ max. (at 20 mA, 1.5 mA max.)
Insulation resistance	5 MΩ min. (at 500 VDC)
Dielectric strength	500 VAC for 1 min (leakage current: 1 mA max.)
Operating temperature	0 to 55°C

Note: 1. Contact resistance of the terminal block Connector.
2. Contact resistance of the Motion Control Unit Connector.
3. Dielectric strength of the terminal block and Motion Control Unit Connectors.

■ Materials and Finish

Item	Part name	Materials and finish
XG4A-2630-T Connector	Housing	Fiber-glass reinforced PBT resin (UL94V-0)/black
	Strain Relief	Fiber-glass reinforced PBT resin (UL94V-0)/black
	Contacts	Copper alloy/nickel base, 0.15-µm gold plating (mating end)
10126-6000EL Connector, 26-pin, press-fit Plug (made by Sumitomo 3M)	Housing	Fiber-glass reinforced polyester resin (UL94V-0)/black
	Contacts	Copper alloy/nickel base, 0.3-µm gold plating (mating end)
10326-3210-000 Hood (Made by Sumitomo 3M)	Straight plastic shell	ABS resin (UL94V-0)/beige
Cable	UL20276, BC14P-SB, AWG28 (7/0.127) or the equivalent	

■ Ordering Information

Cable length L (mm)	Model	Applicable Units	Applicable terminal block
1,000	XW2Z-100J-F1	CV500-MC221 (Two Axes) CV500-MC421 (Four Axes)	XW2B-20J6-6 XW2B-40J6-7

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■ Precautions

Correct Use

Wiring

- Do not connect unused terminals.
- The 0 V terminal is internally connected to the common terminals.
- Always turn OFF the power supply before wiring. Otherwise, cables or other conductors can short the terminals and cause the Unit to fail.
- Do not connect or disconnect Connectors with the power turned ON. Otherwise, it may cause malfunctions.

Wiring Terminal Blocks

Using Crimp Terminals

The following crimp terminal is applicable:
R1.25-3 (round and forked)

DIN Track Mounting

- XW2B Motion Control Unit terminal blocks can be mounted side-to-side on DIN Track. The flanges for mounting screws are located on each side at the bottom of the XW2B.
- Secure both ends of the XW2B with End Plates.

Terminal Screw Tightening Torque

- Use a tightening torque of 0.5 to 0.8 N·m when connecting wires or crimp terminals to the terminal block.

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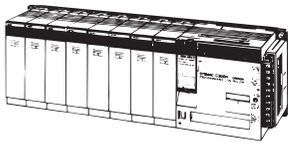
OMRON

Host Link Cables (RS-232C Cables for Programmable Controllers)

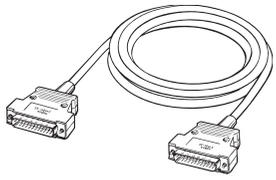
XW2Z

Ideal cables for connecting Programmable Controllers to personal computers and other host devices.

■ Connection Example



SYSMAC PLC
CQM1
C Series
CV Series
CVM1



XW2Z Host Link Cable

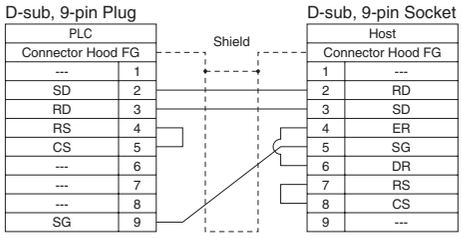


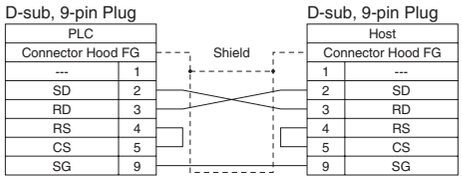
Host
Personal computer
Factory Intelligent Terminal
Programmable Terminal

■ Ordering Information

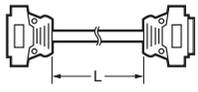
SYSMAC PLC Units	SYSMAC Host Link Cable (RS-232C Cable for Programmable Controllers)			Host
	Wiring patterns	Cable length L (See note.)	Model	
C20-LK201-V1 C500-LK203 C500-LK201-V1 C120-LK201-V1 C200H-LK201 CV500-LK201 (Port 1, full-duplex mode)	D-sub, 25-pin Plug (PLC: Connector Hood FG, FG 1, SD 2, RD 3, RS 4, CS 5, SG 7, DR 6, ER 20) — Shield — D-sub, 25-pin Plug (Host: Connector Hood FG, 1 FG, 2 SD, 3 RD, 4 RS, 5 CS, 7 SG, 6 DR, 20 ER)	2 m 5 m	XW2Z-200P XW2Z-500P	Programmable Terminal (PT) NT20M/ NT600M NT610C/ NT610G
C200HS-CPU31/33/21/23 CQM1-CPU21/41/42/43/44 (Units that use RS-232C cable) C20H (Internal Host Link) C28H (Internal Host Link) C40H (Internal Host Link) C60H (Internal Host Link)	D-sub, 9-pin Plug (PLC: Connector Hood FG, FG 1, SD 2, RD 3, RS 4, CS 5, SG 7, SG 9) — Shield — D-sub, 25-pin Plug (Host: Connector Hood FG, 1 FG, 2 SD, 3 RD, 4 RS, 5 CS, 7 SG, 6 DR, 20 ER)	2 m 5 m	XW2Z-200R XW2Z-500R	
C200HS-CPU31/33/21/23 CQM1-CPU21/41/42/43/44 (Units that use RS-232C cable) CV500/1000/2000 (Internal Host Link) CVM1 (Internal Host Link) CV500-LK201 (Port 2, full-duplex mode) C200HE-CPU42 C200HG-CPU43/63 C200HX-CPU44/64 C200HW-COM02/04/05/06 CPM1-CIF01	D-sub, 9-pin Plug (PLC: Connector Hood FG, --- 1, SD 2, RD 3, RS 4, CS 5, SG 9) — Shield — D-sub, 25-pin Plug (Host: Connector Hood FG, 1 FG, 2 SD, 3 RD, 4 RS, 5 CS, 7 SG, 6 DR, 20 ER)	2 m 5 m	XW2Z-200S XW2Z-500S	
C20-LK201-V1 C500-LK203 C500-LK201-V1 C120-LK201-V1 C200H-LK201 CV500-LK201 (Port 1, full-duplex mode)	D-sub, 25-pin Plug (PLC: Connector Hood FG, FG 1, SD 2, RD 3, RS 4, CS 5, DR 6, SG 7, to to, ER 20) — Shield — D-sub, 9-pin Socket (Host: Connector Hood FG, 1 ---, 2 RD, 3 SD, 4 ER, 5 SG, 6 DR, 7 RS, 8 CS, 9 ---)	2 m 5 m	XW2Z-200P-V XW2Z-500P-V	Personal computer: IBM PC/AT or compatible

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SYSMAC PLC Units	SYSMAC Host Link Cable (RS-232C Cable for Programmable Controllers)			Host
	Wiring patterns	Cable length L (See note.)	Model	
C200HS-CPU31/33/21/23 CQM1-CPU21/41/42/43/44 CV500/1000/2000 CVM1 CV500-LK201 (Communications port 2) C200HE-CPU42 C200HG-CPU43/63 C200HX-CPU44/64 C200HW-COM02/04/05/06 CPM1-CIF01		2 m	XW2Z-200S-V	Personal computer: IBM PC/AT or compatible
		5 m	XW2Z-500S-V	

SYSMAC PLC	Programmable Terminal (PT): NT20S cable			Host
	Wiring patterns	Cable length L (See note.)	Model	
CQM1-CPU21/41/42/43/44 (Units that use RS-232C cable) C200HS-CPU31/33/21/23 CV500-1000/2000-CPU01 CVM1-CPU01/11 CV500-LK201 (Communications port 2) C200HE-CPU42 C200HG-CPU43/63 C200HX-CPU44/64 C200HW-COM02/04/05/06 CPM1-CIF01		2 m	XW2Z-200T	Programmable Terminal (PT) NT20S NT600S/ NT620S NT620C NT30/NT30C
		5 m	XW2Z-500T	

Note: Cable length L



■ Ratings and Characteristics

Item	XW2Z-□P/R/S/T
Rated current	1 A
Rated voltage	125 VAC
Contact resistance	15 mΩ max. (at 20 mV, 100 mA max.) (See note 1.)
Insulation resistance	100 MΩ min. (at 500 VDC)
Dielectric strength	500 VAC for 1 min (leakage current: 1 mA max.) (See note 2.)
Degree of protection	IP00
Electrical protection class	Class 0
Operating temperature	–25 to 80°C

Note: **1.** Contact resistance of the Connector.
2. Dielectric strength of the Connector.

■ Materials and Finish

Item	Part name			Materials and finish
Connectors	XM2A-0901 XM2A-2501	Housing		Polyamide resin (UL94V-0)/milky white
		Contacts	Mating ends	Brass/nickel base, 0.2-μm gold plating
			Terminals	
		Shell		Steel/nickel plated
	XM2S-0911/2511	Housing		ABS resin/nickel plated
Cable	UL2464 Interface Cable			AWG28 or the equivalent

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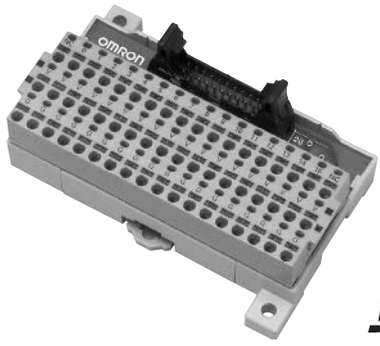
OMRON

Connector-Terminal Block Conversion Units with 16-point Terminal Block with Common and Screwless Terminals

XW2F

Accelerates Reductions in Factory Wiring and Labor with Screwless Terminals.

- Clamp terminals eliminate the need to tighten screws.
- Just insert pole terminals to complete one-touch wiring.



NEW

■ Ordering Information

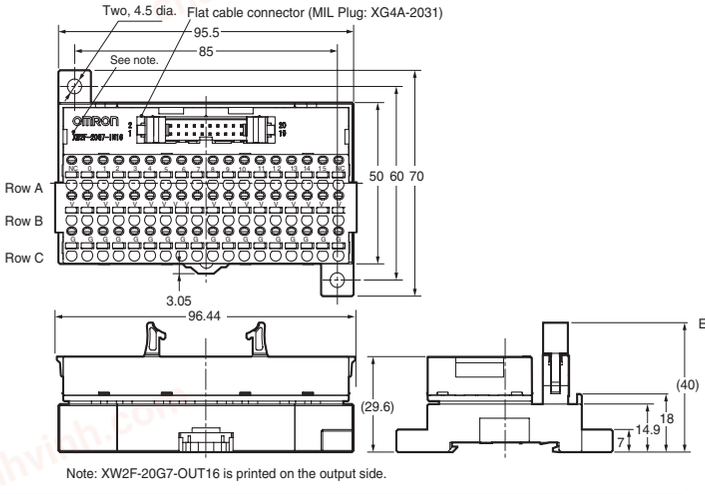
Number of input/outputs	Number of contacts	I/O	Model	Mounted Connector model	Cable Connector model
16	20	Inputs	XW2F-20G7-IN16	XG4A-2031	XG4M-2030-T
		Outputs	XW2F-20G7-OUT16		

■ Ratings and Characteristics

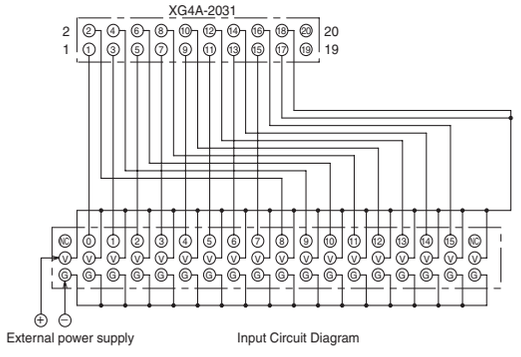
Rated current		1 A/point, 4 A/common
Rated voltage		24 VDC
Insulation resistance		100 MΩ min. (at 500 VDC)
Dielectric strength		500 VAC for 1 min
Operating temperature		–10 to 55°C
Applicable wires	Applicable wire sizes	AWG24 to AWG16 (core cross-sectional area: 0.2 to 1.5 mm^2) Outer diameter of insulation must be 3.3 mm max.
	Stripped length	9 to 11 mm

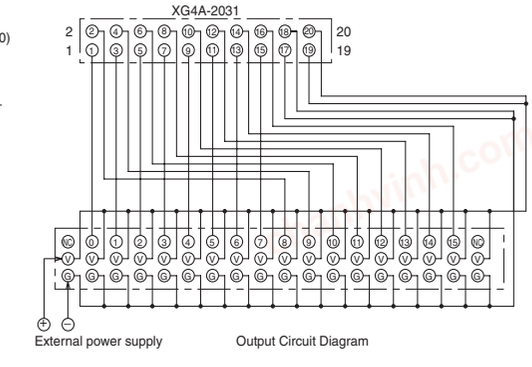
■ Dimensions (Unit: mm)

XW2F-20G7-IN16



Note: XW2F-20G7-OUT16 is printed on the output side.





Input Terminal Block (XW2F-20G7-IN16 (Orange))																		
Row A	NC	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	NC
Row B	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
Row C	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Output Terminal Block (XW2F-20G7-OUT16 (Yellow))																		
Row A	NC	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	NC
Row B	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
Row C	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G

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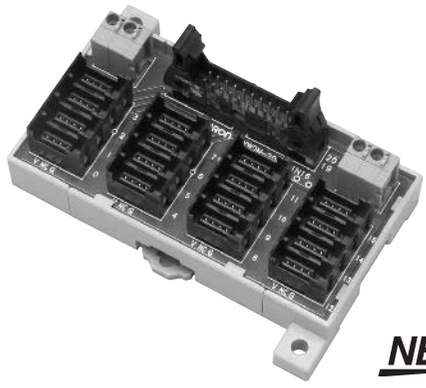
OMRON

Connector-Terminal Block Conversion Units with 16-input *e-CON* Terminal Block with Common

XW2N

Conversion Unit with Industrial Standard *e-CON* Terminal Block Connectors

- I/O connectors for easier wiring.
- Easy connections via connectors (no special tools required).
- Compatible with e-CON connectors from other companies.



NEW

■ Ordering Information

Number of inputs	Number of contacts	I/O	Model	Mounted Connector model	Cable Connector Model
16	20	Inputs	XW2N-20G8-IN16	XG4A-2031 (PLC side) XN2D-4431 (input side)	XG4M-2030-T (PLC side) XN2A-1430 (input side)

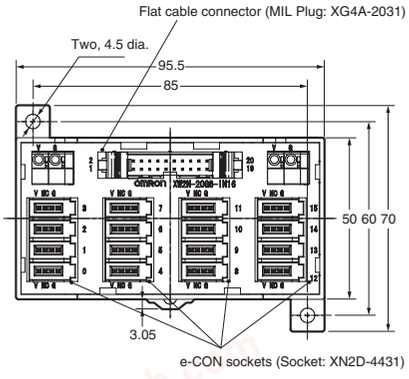
■ Ratings and Characteristics

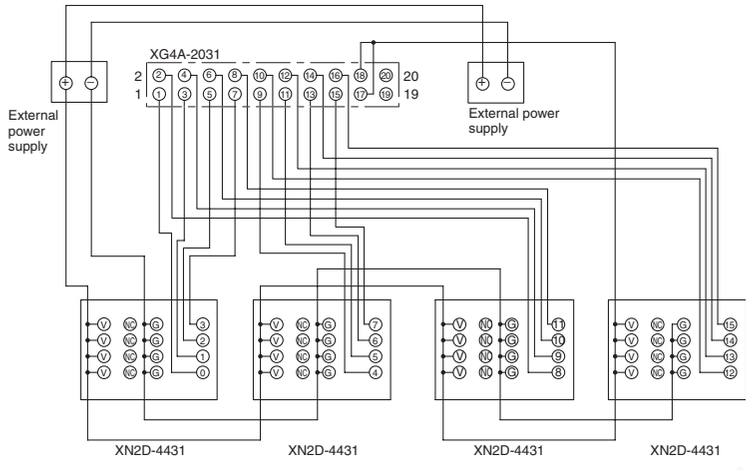
Rated current		0.5 A/input, 4 A/common
Rated voltage		24 VDC
Insulation resistance		100 MΩ min. (at 500 VDC)
Dielectric strength		500 VAC for 1 min
Operating temperature		–10 to 55°C
Applicable wires	Applicable wire sizes	AWG24 to AWG16 (core cross-sectional area: 0.2 to 1.5 mm^2);
	Stripped length	9.5 to 10.5 mm

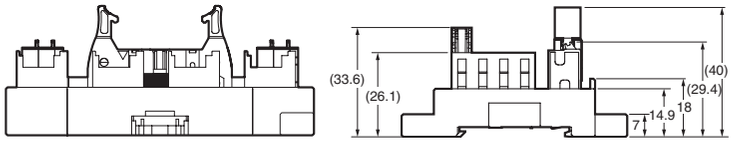
Note: These are the applicable sizes for the terminal block.
Refer to information on the applicable connector for input connector wire sizes.

■ Dimensions (Unit: mm)

XW2N-20G8-IN16







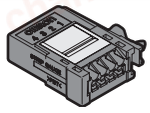
Note: The XN2A-143 Input Connector is sold separately. Please order it separately.

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Connector Cables

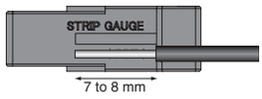
■ I/O Device Connectors (For the XW2N-20G8-IN16)

Model	Appearance	Applicable wire size
XN2A-1430		AWG28 to AWG20 (0.08 to 0.5 mm²), outer diameter of wire insulation: 1.5 mm max.

■ Connection Procedure

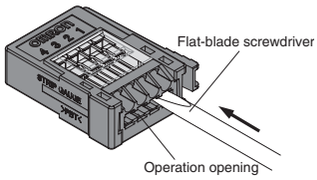
Preparing Wires

Strip 7 to 8 mm of the wire insulation using the STRIP GAUGE on the Connector as a guide, and twist the wire strands together several times.

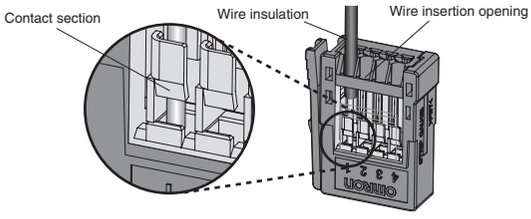


Connecting Wires

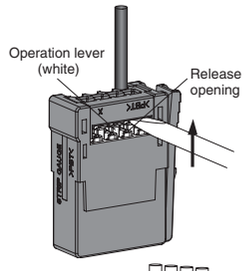
1. Insert a flat-bladed screw driver and press the operation lever inside the operation opening until it locks open.



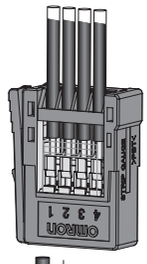
2. Insert the wire all the way to the back of the wire insertion opening. Confirm that the wire insulation has entered the wire insertion opening and that the end of the core has passed through the contact section.



3. Insert the screwdriver in the release opening and gently press the lever until it clicks back to its original position.

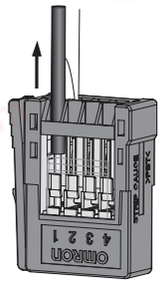


4. Confirm the following items.
   - The operation level has returned to its original position.
   - That the wire and wire insulation are in the proper positions, as described in step 2. (Pull on the wire lightly to be sure it is connected.)



Removing Wires

1. Insert a flat-bladed screw driver and press the operation lever inside the operation opening until it locks open and then pull out the wire.
2. Always return the operation lever to its original position after removing a wire. If another wire is to be connected, however, it can be connected immediately without returning the operation lever first.



■ Special PLC Connecting Cables

Model	Description
XW2Z-□□□A	For 16 points, PLC connector (24 poles) to MIL connector (20 poles)
XW2Z-□□□D (See note 3.)	For 32 inputs, PLC connector (40 poles) to MIL connector (20 poles) x 2
XW2Z-□□□L (See note 3.)	For 32 outputs, PLC connector (40 poles) to MIL connector (20 poles) x 2

Note: **1.** The boxes are replaced by the cable length code as follows: 100: 1 m, 150: 1.5 m, 200: 2m, 300: 3 m, 500: 5m.
2. These Cables branch into two 16-point cables. Two XW2F or XW2N Connector-Terminal Block Conversion Units are thus required.

Precautions

■ Precautions for Correct Use

XW2F-20G7-IN16, XW2F-20G7-OUT16, and XW2F-20G8-IN16

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, confirm that the cable is connected.
- After wiring, route the cable so that force is not applied directly to the connections.
- Insert only one wire in each wire insertion opening. It may not be possible to remove the wires if more than one wire is inserted.
- Do not apply a current higher than the rated value. Be sure to check the rated current, which depends on the model of the cable.

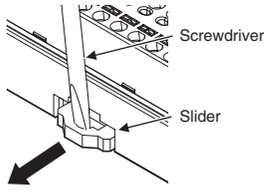
Wires for Terminal Blocks

- 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.

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Mounting to and Removing from DIN Track

- When mounting the Unit to a DIN Track, release the lock on the slider, mount the Unit to DIN Track, and then lock the slider back in place.
- After locking the slider, confirm that the Unit is actually locked on the DIN Track.
- When removing the Unit from a DIN Track, insert a screwdriver into the slider, release the lock, and remove the Unit from the DIN Track.
- Always secure the Unit(s) on the DIN Track by mounting End Plates on either end. The following products are sold separately.

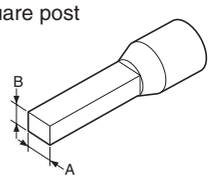


DIN Track	PFP-50N PNP-100N
End Plates	PFP-M

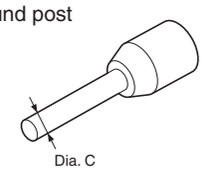
Applicable Post Terminals

- Use post terminals 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.
- **Post Terminal Ranges (for XW2F-20G7-IN16/0UT16 and XW2F-20G8-IN16 power supply terminals)**

Square post



Round post



XW2F-20G7-IN16 or XW2F-20G7-OUT16			
Square posts	Dimension A	1.0 to 2.3	The cross-sectional area after crimping must be 4.8 mm² or less
	Dimension B	0.8 to 2.65	
Round posts	Dimension C	0.8 to 2.3 dia.	
XW2F-20G8-IN16 (power supply terminals)			
Square posts	Dimension A	1.0 to 2.0	
	Dimension B	0.8 to 1.3	
Round posts	Dimension C	0.8 to 1.3 dia.	

- **Recommended Post Terminals and Crimp Tools**

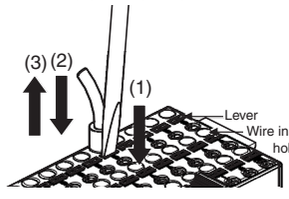
Type of terminal	Manufacturer	Size	Post terminal model	Recommended crimp tool
Square post terminal	Phoenix Contact	AWG24	AI0.25-8YE	UD6 ZA3
		AWG22	AI0.34-8TQ	
		AWG20	AI0.5-10WH	
			AI0.5-8WH	
		AWG18	AI0.75-10GY	
			AI0.75-8GY	
		AWG16	AI1.5-10BK (See note.)	
	Nihon Wielder-muller	AWG24	H0.25/12	PZ6 roto
		AWG22	H0.34/12	
		AWG20	H0.5/16	
			H0.5/14	
		AWG18	H0.75/16	
			H0.75/14	
		AWG16	H1.5/16 (See note.)	
Round post terminal	Nichifu	AWG22	TGV TC-1.25-11T TGN TC-1.25-11T	NH11 NH21 NH65
		AWG20		
		AWG18		
		AWG16		

Note: The AWG16 post terminals from Phoenix Contact and Nihon Wieldermuller cannot be used for the power supply terminals on the XW2N-20G8-IN16.

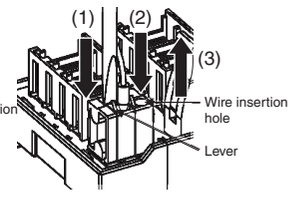
Wiring Terminal Blocks

- Insert wires as follows:
  Stranded wires: Press in on the lever with a flat-blade screwdriver (1). Insert the wire (2).
  Solid wires or post terminals: Insert the wire/post to the back of the wire insertion opening. (The lever does not need to be used.)
- Remove wires as follows: Press in on the lever with a flat-blade screwdriver (1). Remove the wire (3).

XW2F-20G7-IN16
XW2F-20G7-OUT16



XW2N-202G-IN16

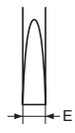


- To operate the lever, use a flat-blade screwdriver with a fixed thickness from the tip to the base of the screwdriver, as specified below.

Side



Front



Dimension D	0.3 to 0.8
Dimension E	2.9 to 3.6

OMRON provides the following flat-blade screwdrivers for use in operating the lever.

Recommended Flat-blade Screwdrivers

Model
XW4Z-00B
XW4Z-00C

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Singapore

■ **OMRON ELECTRONICS PTE. LTD. (Industrial)**
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Tel: 65-6547-6789/Fax: 65-6547-6766

■ **OMRON ELECTRONIC COMPONENTS PTE LTD.**
(Consumer & Commercial)
750D Chai Chee Road #05-02/03,
Techno Park@Chai Chee,
Singapore 469004 *Singapore*
Tel: 65-6244-3939/Fax: 65-6244-3938

Taiwan

■ **OMRON TAIWAN ELECTRONICS INC. HEAD**
QUARTERS
6F, Home Young Bldg, No.363,
Fu-Shing N. Road,
Taipei *Taiwan*
Tel: 886-2-2715-3331/Fax: 886-2-2712-6712

Thailand

■ **OMRON ELECTRONICS CO., LTD. (Industrial)**
Rasa Tower 20th Floor, 555 Phaholyothin Road,
Ladyao, Chatuchak, Bangkok 10900 *Thailand*
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■ **OMRON ELECTRONIC COMPONENTS CO., LTD.**
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41st Floor, Phaholyothin Road, Samsen-nai,
Phayathai, Bangkok 10400 *Thailand*
Tel: 662-619-0292/Fax: 662-619-0624/0625

Vietnam

■ **OMRON ASIA PACIFIC PTE. LTD.**
HO CHI MINH REPRESENTATIVE OFFICE
99 Nguyen Thi Minh Khai, Dist. 1
Ho Chi Minh *Vietnam*
Tel: 84-8-830-1105/839-6666
Fax: 84-8-830-1279

Australia

■ **OMRON ELECTRONICS PTY. LTD.**
71 Epping Road, North Ryde, N.S.W 2113
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Tel: 61-2-9878-6377/Fax: 61-2-9878-6981

New Zealand

■ **OMRON ELECTRONICS LTD.**
65 Boston Road, Private Bag 92620,
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NORTH/SOUTH AMERICA

U.S.A.

■ **OMRON ELECTRONICS LLC**
1 East Commerce Drive,
Schaumburg, IL 60173 *U.S.A.*
Tel: 1-847-843-7900/Fax: 1-847-843-7787

Canada

■ **OMRON CANADA INC.**
885 Milner Avenue,
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Brazil

■ **OMRON ELETRONICA DO BRASIL LTDA.**
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EUROPE

Austria

■ **OMRON ELECTRONICS G.m.b.H.**
Altmannsdorfer Strasse 142, A-1231 Vienna
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Belgium

■ **OMRON ELECTRONICS N.V./S.A.**
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Czech

■ **OMRON ELECTRONICS SPOL. S.R.O.**
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Denmark

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Finland

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France

■ **OMRON ELECTRONICS S.a.r.l.**
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Germany

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Hungary

■ **OMRON ELECTRONICS KFT.**
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Italy

■ **OMRON ELECTRONICS S.r.l.**
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The Netherlands

■ **OMRON ELECTRONICS B.V.**
Wegalaan 61, NL-2132 JD Hoofddorp
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Norway

■ **OMRON ELECTRONICS NORWAY A/S**
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Poland

■ **OMRON ELECTRONICS SP. Z.O.O**
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Portugal

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Switzerland

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Turkey

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NOTE:

1. *Each of OMRON Sales offices has its branch offices.*
2. *Some of abovementioned offices do not deal all of OMRON products.*
3. *Information subject to change without notice.*