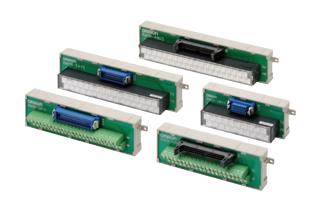
# **Standard-type Connector-Terminal Block Conversion Units**

# XW2B

CSM\_XW2B\_DS\_E\_4\_1

# 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).



# **Ordering Information**

# **Connectors**

Туре	Terminal Block	Connector	No. of poles	Appearance	Model
			20		XW2B-20G4
			34		XW2B-34G4
	Terminal block with M3 screws		40		XW2B-40G4
	WO SOLOWS		50		XW2B-50G4
E O			60		XW2B-60G4
Flat Cable			20		XW2B-20G5
			34		XW2B-34G5
	Terminal block with M3.5 screws	Flat Cable Connectors	40		XW2B-40G5
	WIS.S SCIEWS	*1	50		XW2B-50G5
			60		XW2B-60G5
Twin-connector	Terminal block with		40		XW2B-40G5-T
Daisy Chain	M3.5 screws		20		XW2B-20G5-D
			20		XW2B-20Y4
	Terminal block with M3 screws	Multi-pole, Square Connector	34		XW2B-34Y4
	Wo sciews		50		XW2B-50Y4
		Plugs *2	20	<i>b</i> ~	XW2B-20Y5
Multi-pole, Square Connector			34		XW2B-34Y5
	Terminal block with		50		XW2B-50Y5
	M3.5 screws	Multi-pole, Square Connector	20		XW2B-20X5
		Plugs	34		XW2B-34X5
		*2	50		XW2B-50X5
Board I/O	Terminal block with M3.5 screws	Multi-pole, Square Connector Plugs *3	40		XW2B-40F5-P

<sup>\*1.</sup> Flat Cable Connectors have one polarity slot.

# **Accessories (Order Separately)**

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

For details on the Connecting Cable used between XW2B Daisy Chain-type Connectors, refer to the XW2Z datasheet.

<sup>\*2.</sup> These Plugs and Sockets are made by Honda Tsushin Kogyo.

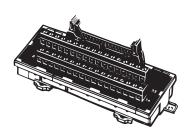
<sup>\*3.</sup> These Plugs are made by Fujitsu component.

# **Ratings and Specifications**

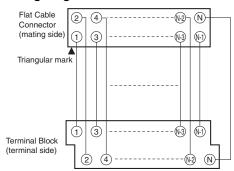
Type Item	XW2B-□□G□ Flat Cable Units	XW2B-□□Y□ Multi-pole, Square-connector Units	XW2B-40F5-P Board I/O Unit
Rated current	1 A		
Rated voltage	125 VAC		
Insulation resistance	100 MΩ min. (at 500 VDC)		
Dielectric strength	500 VAC for 1 min (leakage current: 1 mA max.)		
Ambient operating temperature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

**Dimensions** (Unit: mm)

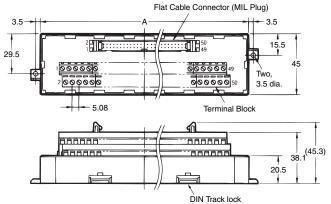
# Flat Cable Units with a Terminal Block with M3 Screws



# **Wiring Diagram**



Note: All pins on the Flat Cable 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 *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	157.5	XG4A-5031
XW2B-60G4	60	180.0	XG4A-6031

\*Flat Cable Connectors have one polarity slot.

Note: Terminal block pitch is 5.08 mm.

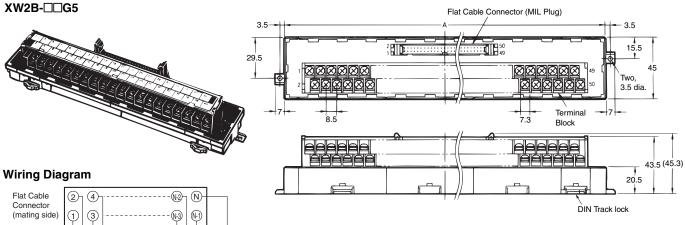
Use a wire size between 0.3 and 1.25 mm<sup>2</sup> (AWG22 to AWG16).

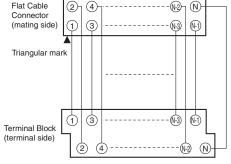
The wire insertion holes are 1.8  $\times$  2.5 (H  $\times$  W) mm.

	Applicable Connectors (order separately)				
Model	Flat Cable Connectors, MIL Sockets with	Discrete-wire IDC Connectors, Double-row Sockets			
	Strain Reliefs	Connectors *1	Semi-covers *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		

<sup>\*1.</sup> Either the XG5M-\\_32-N or the XG5M-\\_35-N may be used. \*2. Each Connector requires two Semi-covers.

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





Note: All pins on the Flat Cable 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 *
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

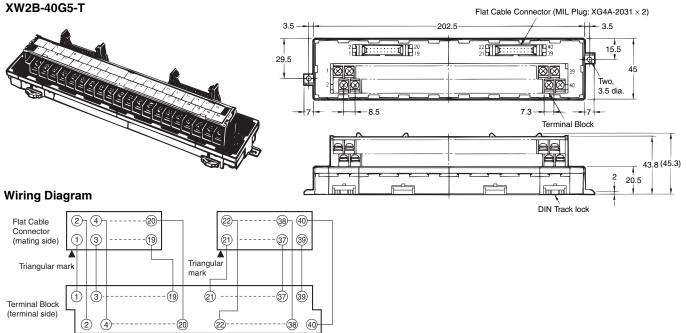
\*Flat Cable Connectors have one polarity slot.

Note: Terminal block pitch is 8.5 mm.

	Applicable Connectors (order separately)			
Model	Flat Cable Connectors, MIL Sockets with	Discrete-wire IDC Connectors, Double-row Sockets		
	Strain Reliefs	Connectors *1	Semi-covers *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	

<sup>\*1.</sup> Either the XG5M-□□32-N or the XG5M-□□35-N may be used. \*2. Each Connector requires two Semi-covers.

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



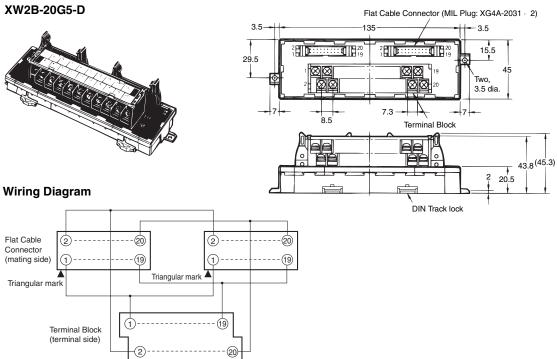
# **Applicable Connectors**

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

<sup>\*1.</sup> Either the XG5M-\\_32-N or the XG5M-\\_35-N may be used. \*2. Each Connector requires two Semi-covers.

Note: All pins on the Flat Cable Connector correspond 1-to-1 to the terminal of the same number on the terminal block as shown above.

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



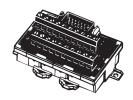
Note: All pins on the Flat Cable Connector correspond 1-to-1 to the terminal of the same number on the terminal block as shown above.

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

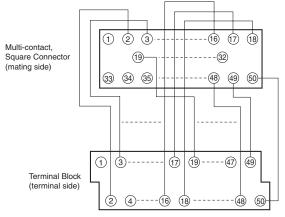
<sup>\*1.</sup> Either the XG5M-\\_\32-N or the XG5M-\\35-N may be used. \*2. Each Connector requires two Semi-covers.

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

# XW2B-□□Y4

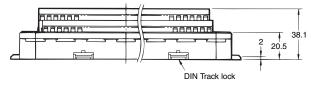


# Wiring Diagram (Example for Terminal **Block with 50 Poles)**



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.

# Multi-contact Connector (Plug) 000000 00000 3.5 dia Terminal Block 5.08



# **Dimensions**

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

\*These Connectors are made by Honda Tsushin Kogyo.

Note: Terminal block pitch is 5.08 mm.

Use a wire size between 0.3 and 1.25 mm<sup>2</sup> (AWG22 to AWG16).

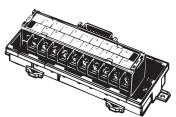
The wire insertion holes are 1.8  $\times$  2.5 (H  $\times$  W) mm.

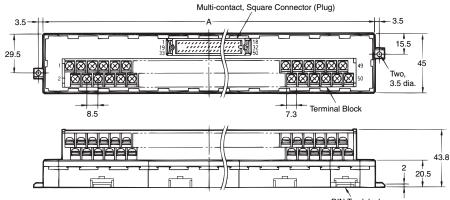
Model	Applicable Connectors *1	Hood *1
XW2B-20Y4	MR-20F (soldered) MRP-20F01 (crimped) *2 MR-20FW (wrapped)	MR-20L
XW2B-34Y4	MR-34F (soldered) MRP-34F01 (crimped) *2 MR-34FW (wrapped)	MR-34L
XW2B-50Y4	MR-50F (soldered) MRP-50F01 (crimped) *2 MR-50FW (wrapped)	MR-50L

<sup>\*1.</sup> All applicable Connector Hoods are made by Honda Tsushin Kogyo.
\*2. Use MRP-F113 or MRP-F103 crimp terminals made by Honda Tsushin Kogyo.

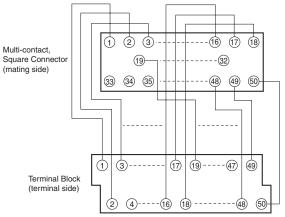
# Multi-pole, Square-connector Plug Units with a Terminal Block with M3.5 Screws

# 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**

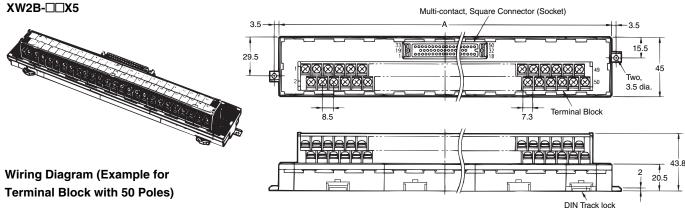
Model	No. of poles	Dimension A (mm)	Applicable Connector models *
XW2B-20Y5	20	112.5	MR-20RMD2
XW2B-34Y5	34	180.0	MR-34RMD2
XW2B-50Y5	50	247.5	MR-50RMD2

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

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

<sup>\*1.</sup> All applicable Connector Hoods are made by Honda Tsushin Kogyo.
\*2. Use MRP-F113 or MRP-F103 crimp terminals made by Honda Tsushin Kogyo.

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



# 49 (50) Multi-contact, Square Connector (mating side) (17) (18) 3 1 17 19 ------(47)

# **Dimensions**

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

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

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

16) 18

4

# **Applicable Connectors**

Terminal Block (terminal side)

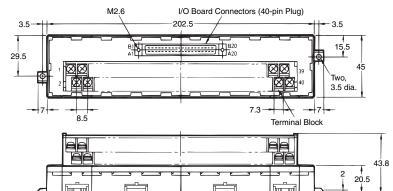
Model	Applicable Connectors *1	Hood *1
XW2B-20X5	MR-20M (soldered) MRP-20M01 (crimped) *2 MR-20MW (wrapped)	MR-20L
XW2B-34X5	MR-34M (soldered) MRP-34M01 (crimped) *2 MR-34MW (wrapped)	MR-34L
XW2B-50X5	MR-50M (soldered) MRP-50M01 (crimped) *2 MR-50MW (wrapped)	MR-50L

48

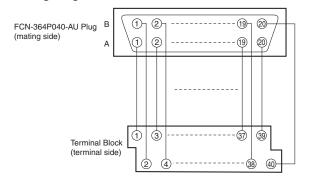
<sup>\*1.</sup> All applicable Connector Hoods are made by Honda Tsushin Kogyo.
\*2. Use MRP-F113 or MRP-F103 crimp terminals made by Honda Tsushin Kogyo.

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

# XW2B-40F5-P



# **Wiring Diagram**



# **Dimensions**

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

DIN Track lock

\*These Connectors and circuits are made by Fujitsu component. Note: Terminal block pitch is 8.5 mm.

Model	Applicable Connectors *1	Hood *1
XW2B-40F5-F	FCN361J040-AU (soldered) FCN363J040-AAU (crimped)	FCN360C040- B

<sup>\*1.</sup> All applicable Connectors and Covers are made by Fujitsu component.
\*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.

# **Safety Precautions**

# **Precautions for Correct Use**

# Wiring

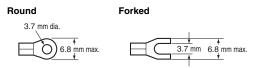
- Always turn OFF the power supply before wiring.
   Otherwise, cables or other conductors can short the terminals and cause the Unit to fail.
- Do not connect or disconnect Connectors with the power turned ON. Otherwise, it may cause malfunctions.

# 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<sup>2</sup> (AWG22 to AWG16).
  - 2. Prepare the end of each wire as shown in the following diagram.



- 3. The wire insertion holes are 1.8  $\times$  2.5 (H  $\times$  W) mm on the terminal block with M3 screws.
- Direct Wire Connections with a Terminal Block with M3.5 Screws



Applicable crimp terminals		Applicable wires
Round	1.25-3.5	AWG22 to AWG16 (0.30 to 1.25 mm <sup>2</sup> )
Hourid	2-3.5	AWG16 to AWG14 (1.25 to 2.0 mm <sup>2)</sup>
Forked	1.25Y-3.5	AWG22 to AWG16 (0.30 to 1.25 mm <sup>2</sup> )
Forked	2Y-3.5	AWG16 to AWG14 (1.25 to 2.0 mm²)

(With a Terminal Block with M3 Screws)

Blade

### Round rod





Applicable crimp terminals		Applicable wires
Rod	TC-05 Dia. = 1	AWG22 to AWG18 (0.30 to 0.75 mm <sup>2</sup> )
	TC-1.25S Dia. = 1.5	AWG22 to AWG16 (0.30 to 1.25 mm <sup>2</sup> )
Blade	BT1.25-9-1 BT1.25-10-1 W = 2.2	AWG22 to AWG16 (0.30 to 1.25 mm²)

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

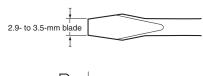
# ● Terminal Screw Tightening Torque

• 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

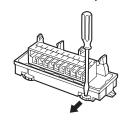
# Mounting Units to and Removing Units from DIN Track

• 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.



### Read and Understand This Catalog

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments

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- Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this catalog.
- Nuclear energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
- Systems, machines, and equipment that could present a risk to life or property.

Please know and observe all prohibitions of use applicable to the products.

NEVER USE THE PRODUCTS FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCTS ARE PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

# PROGRAMMABLE PRODUCTS

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# **Disclaimers**

### **CHANGE IN SPECIFICATIONS**

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It is our practice to change model numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the products may be changed without any notice. When in doubt, special model numbers may be assigned to fix or establish key specifications for your application on your request. Please consult with your OMRON representative at any time to confirm actual specifications of purchased products.

# **DIMENSIONS AND WEIGHTS**

Dimensions and weights are nominal and are not to be used for manufacturing purposes, even when tolerances are shown.

### PERFORMANCE DATA

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2012.4

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# AMEYA360 Components Supply Platform

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