Connector-Terminal Block Conversion Unit with 16-input e-CON Terminal Block with Common

XW2N

CSM_XW2N_DS_E_3_1

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.**

Ordering Information

Connector-Terminal Block Conversion Unit

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-1470 (input side)

Accessories (Order Separately)

Connecting Cables for Connector-Terminal Block Conversion Units

Refer to the *XW2Z datasheet*.

Ratings and Specifications

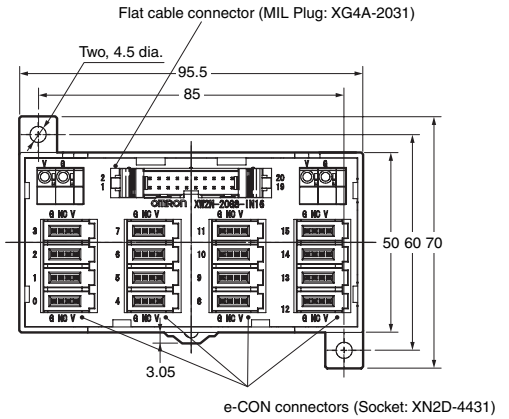
Rated current		0.5 A/input, 4 A/common
Rated voltage		24 VDC
Insulation resistance		100 MΩ min. (at 500 VDC)
Dielectric strength		500 VAC for 1 min
Ambient operating temperature		–10 to 55°C
Applicable wires (power supply terminals)	**Applicable wire sizes ***	AWG24 to AWG16 (core cross-sectional area: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

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

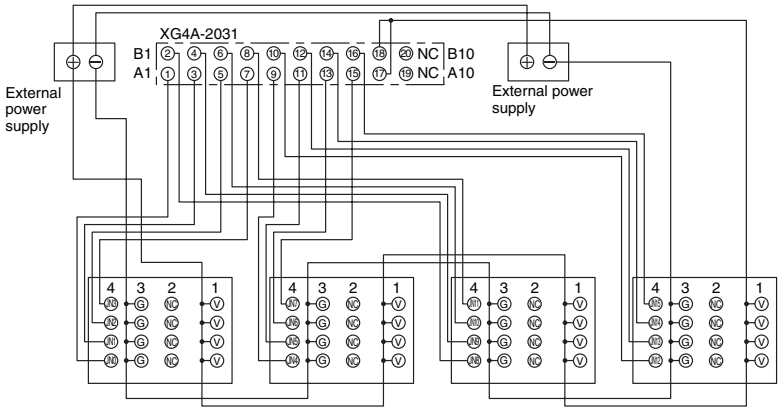
Dimensions

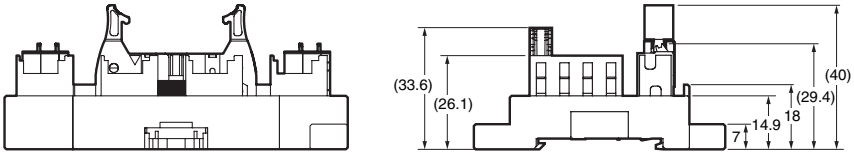
(Unit: mm)

XW2N-20G8-IN16



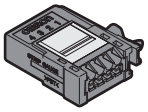
Wiring Diagram





Note: The XN2A-1470 Input Connector is sold separately. Please order it separately.

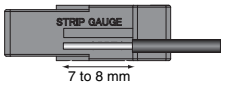
I/O Device Connectors (For the XW2N-20G8-IN16)

Model	Appearance	Applicable wire size
XN2A-1470		Stranded wire AWG28 to AWG20 (0.08 to 0.5 mm^2), outer diameter of wire insulation: 1.5 mm max.

Connection Procedure

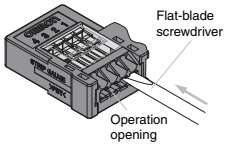
● Preparing Wires

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.

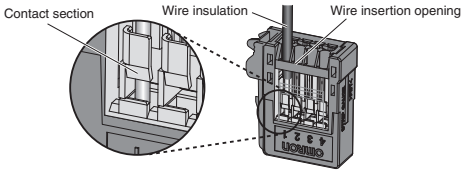


● Connecting Wires

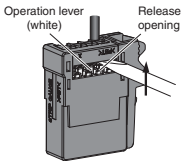
1. Insert a flat-bladed screw driver and press the operation lever inside the operation opening until it locks open.



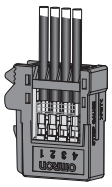
2. Insert the wire all the way to the back of the wire insertion opening. Confirm that the wire insulation has entered the wire insertion opening and that the end of the core has passed through the contact section.



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

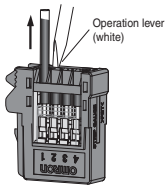


4. Confirm the following items.
   - The operation level has returned to its original position.
   - That the wire and wire insulation are in the proper positions, as described in step 2. (Pull on the wire lightly to be sure it is connected.)



● 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.



Note: For details, ask your OMRON sales representative.

Special PLC Connecting Cables

Model	Description
XW2Z-□□□A	For 16 points, PLC connector (24 poles) to MIL connector (20 poles)
XW2Z-□□□D *	For 32 inputs, PLC connector (40 poles) to MIL connector (20 poles) × 2
XW2Z-□□□L *	For 32 outputs, PLC connector (40 poles) to MIL connector (20 poles) × 2

Note: 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.
*These Cables branch into two 16-point cables. Two Connector-Terminal Block Conversion Units are thus required.

Safety Precautions

Precautions for Correct Use

● Wiring Precautions

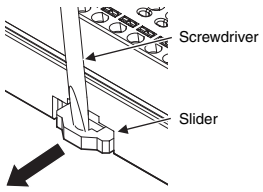
- Do not perform wiring work, remove connectors, or connect connectors while power is being supplied. Electric shock or damage to the device may result.
- Double-check all wiring before turning ON the power supply.
- After wiring, confirm that the cable is connected.
- After wiring, route the cable so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

● 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.

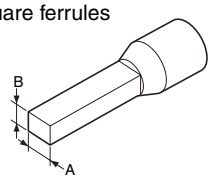


DIN Track	PFP-50N PFP-100N
End Plates	PFP-M

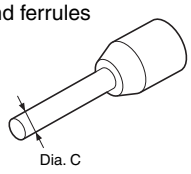
● Applicable Ferrules

- Use ferrules of the lengths and thicknesses specified below. If other lengths or thicknesses are used, connection may not be possible or it may not be possible to insert or remove the posts.
- Ferrule Ranges (for XW2N-20G8-IN16 power supply terminals)

Square ferrules



Round ferrules



XW2F-20G8-IN16 (power supply terminals)

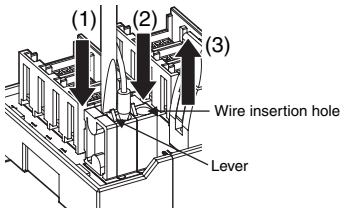
Square ferrules	**Dimension A**	1.0 to 2.0
	Dimension B	0.8 to 1.3
Round ferrules	**Dimension C**	0.8 to 1.3 dia.

- Recommended Ferrules and Crimp Tools

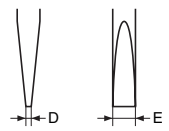
Type of ferrule	Manufacturer	Size	Ferrule model	Recommended crimp tool
Square ferrules	Phoenix Contact	AWG24	AI0.25-8YE	UD6 ZA3
		AWG22	AI0.34-8TQ	
		AWG20	AI0.5-10WH AI0.5-8WH	
		AWG18	AI0.75-10GY AI0.75-8GY	
	Nihon Wieldermuller	AWG24	H0.25/12	PZ6 roto
		AWG22	H0.34/12	
		AWG20	H0.5/16 H0.5/14	
		AWG18	H0.75/16 H0.75/14	
Round ferrules	Nichifu	AWG22	TGV TC-1.25-11T TGN TC-1.25-11T	NH11 NH21 NH65
		AWG20		
		AWG18		
		AWG16		

● 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 ferrules: Insert the wire/post to the back of the wire insertion opening. (The lever does not need to be used.)
- Remove the wire using the following procedure. (This procedure can be used for twisted wire, solid wire, or ferrules.) Press in on the lever with a flat-blade screwdriver (1). Remove the wire (3).



- 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.



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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