# NX-series EtherNet/IP™ Coupler Unit

# **NX-EIC**

CSM NX-FIC DS F 3 3

# Connecting to open industrial network standard EtherNet/IP

• The EtherNet/IP Coupler Unit is the link between the EtherNet/IP multivendor network and the NX-series I/O Units and Safety Units. With wide variety of the I/O Units and Safety Units, the NX-series is the perfect match for the CJ-series and multivendor Controllers.

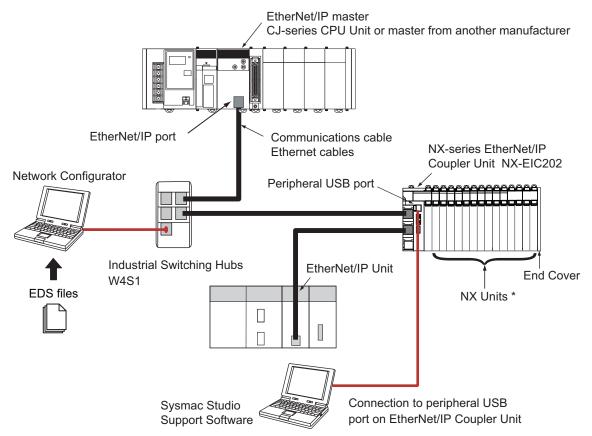


### **Features**

- Up to 63 NX-IO Units can be connected to one EtherNet/IP Coupler Unit. Standard and high-performance units can be mixed.\*
- Each Coupler plus its I/O form just a single EtherCAT node on the network.
- I/O control and safety control can be integrated by connecting Units for safety.
- The IP address can be found on the label on the Unit, without using software.
- Slave configuration by Sysmac Studio can be done centrally via the controller, or on-the-spot using the Coupler's built-in USB port.
- \* Input per Coupler Unit: Maximum 504 bytes, Output per Coupler Unit: Maximum 504 bytes

### **System Configuration**

### **System Configuration of Slave Terminals**



**Note:** Do not make a loop connection in the communications path between Ethernet switches.

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<sup>\*</sup> Refer to Configuration Unit on page 8 for the NX Units that can be connected to the NX-series EtherNet/IP Coupler Unit.

# **Ordering Information**

Applicable standards
Refer to the OMRON website (www.ia.omron.com) or ask your OMRON representative for the most recent applicable standards for each model.

### **EtherNet/IP Coupler Unit**

Product name	Current consumption	Maximum I/O power supply current	Model
EtherNet/IP Coupler Unit			
	1.60 W or lower	10 A	NX-EIC202

## **Automation Software Sysmac Studio**

Please purchase a DVD and required number of licenses the first time you purchase the Sysmac Studio. DVDs and licenses are available individually. Each model of licenses does not include any DVD.

Product name	Specifications	Number of licenses	Media	Model
Sysmac Studio NX-I/O Edition Ver.1.□□ *1 *2	Sysmac Studio NX-I/O Edition is a limited license that provides selected functions required for EtherNet/IP Coupler settings.  Because this product is a license only, you need the Sysmac Studio Standard Edition DVD media to install it.	1 license		SYSMAC-NE001L
Sysmac Studio Standard Edition Ver.1.□□ *2	The Sysmac Studio is the software that provides an integrated environment for setting, programming, debugging and maintenance of machine automation controllers including the NJ/NX-series CPU Units, NY-series Industrial PC, EtherCAT Slave, and the HMI.  Sysmac Studio runs on the following OS. Windows 7 (32-bit/64-bit version)/ Windows 8 (32-bit/64-bit version)/ Windows 8.1 (32-bit/64-bit version)/ Windows 10 (32-bit/64-bit version)  This software provides functions of the Vision Edition. Refer to your OMRON website for details such as supported models and functions.	 (Media only)	DVD	SYSMAC-SE200D

<sup>\*1.</sup> The Sysmac Studio Standard Edition with license(s) (SYSMAC-SE L) provides functions of the NX-I/O Edition (SYSMAC-NE001L).
\*2. With the Sysmac Studio Standard Edition with license(s) (SYSMAC-SE L) version 1.10 or higher, you can use the setup functions for the EtherNet/IP Coupler.

### **Connecting Cable**

### Peripheral (USB) Port

Use a commercially available USB-certified cable.

Specifications: USB 1.1 or 2.0 cable (A connector - B connector), 5.0 m max.

### Recommended EtherNet/IP Communications Cables

For EtherNet/IP, required specification for the communications cables varies depending on the baud rate. For 100BASE-TX/10BASE-T, use a straight or cross STP (shielded twisted-pair) cable of category 5 or higher. For 1000BASE-T, use a straight or cross STP cable of category 5e or higher with double shielding (aluminum tape and braiding).

### **Cable with Connectors**

Item	Appearance	Recommended manufacturer	Cable length (m)	Model									
Cable with Connectors on Both Ends			0.3	XS6W-6LSZH8SS30CM-Y									
(RJ45/RJ45)			0.5	XS6W-6LSZH8SS50CM-Y									
Standard RJ45 plugs type *1 Wire Gauge and Number of Pairs:		OMBON	1	XS6W-6LSZH8SS100CM-Y									
AWG26, 4-pair Cable		OIVINOIN	2	XS6W-6LSZH8SS200CM-Y									
Cable Sheath material: LSZH *2	4"		3	XS6W-6LSZH8SS300CM-Y									
Cable color: Yellow *3			5	XS6W-6LSZH8SS500CM-Y									
			0.3	XS5W-T421-AMD-K									
Cable with Connectors on Both Ends (RJ45/RJ45)			0.5	XS5W-T421-BMD-K									
Rugged RJ45 plugs type *1	a 0	OMBON	1	XS5W-T421-CMD-K									
Wire Gauge and Number of Pairs:										OMRON	2	XS5W-T421-DMD-K	
AWG22, 2-pair Cable Cable color: Light blue			5	XS5W-T421-GMD-K									
Cable Colon Light Slad			10	XS5W-T421-JMD-K									
Cable with Connectors on Both Ends			0.5	XS5W-T421-BM2-SS									
(M12 Straight/M12 Straight)	0	0				1	XS5W-T421-CM2-SS						
Shield Strengthening Connector cable *4 M12/Smartclick Connectors			OMRON	2	XS5W-T421-DM2-SS								
Wire Gauge and Number of Pairs:						0	6	0	OWIN	OWINON	OWRON	3	XS5W-T421-EM2-SS
AWG22, 2-pair Cable										5	XS5W-T421-GM2-SS		
Cable color: Black			10	XS5W-T421-JM2-SS									
Cable with Connectors on Both Ends			0.5	XS5W-T421-BMC-SS									
(M12 Straight/RJ45) Shield Strengthening Connector cable *4			1	XS5W-T421-CMC-SS									
M12/Smartclick Connectors		OMRON	2	XS5W-T421-DMC-SS									
Rugged RJ45 plugs type		OIVINOIN	3	XS5W-T421-EMC-SS									
Wire Gauge and Number of Pairs: AWG22, 2-pair Cable			5	XS5W-T421-GMC-SS									
Cable color: Black			10	XS5W-T421-JMC-SS									

<sup>\*1.</sup> Standard type cables length 0.2, 0.3, 0.5, 1, 1.5, 2, 3, 5, 7.5, 10, 15 and 20 m are available. Rugged type cables length 0.3, 0.5, 1, 2, 3, 5, 10 and 15 m are available. For details, refer to Cat.No.G019.

<sup>\*2.</sup> The lineup features Low Smoke Zero Halogen cables for in-cabinet use and PUR cables for out-of-cabinet use. Although the LSZH cable is single shielded, its communications and noise characteristics meet the standards.

<sup>\*3.</sup> Cables colors are available in blue, yellow, or Green.

<sup>\*4.</sup> For details, contact your OMRON representative.

### **Cables / Connectors**

Item			Recommended manufacturer	Model
	wire Gauge and Number of Pairs: AWG24, 4-pair Cable		Hitachi Cable, Ltd.	NETSTAR-C5E SAB 0.5 × 4P CP *1
Products for EtherNet/IP		Cables	Kuramo Electric Co.	KETH-SB *1
(TOODAGE-TA)			SWCC Showa Cable Systems Co.	FAE-5004 *1
			Panduit Corporation	MPS588-C *1
	Wire Gauge and	Cables	Kuramo Electric Co.	KETH-PSB-OMR *2
			JMACS Japan Co., Ltd.	PNET/B *2
Products for EtherNet/IP (100BASE-TX)	Number of Pairs: AWG22, 2-pair Cable	RJ45 Assembly Connector	OMRON	XS6G-T421-1 *2

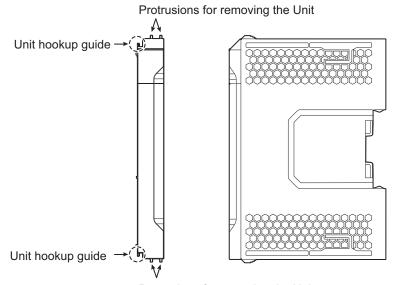
# **Optional Products**

Product name	Specification			Model		
Unit/Terminal Block Coding Pins	Pins for 10 Units (30 terminal block pins a	ns for 10 Units 0 terminal block pins and 30 Unit pins)			NX-AUX02	
	Specification					
Product name	No. of terminals	Terminal number indications	Ground terminal mark	Terminal current capacity	Model	
Terminal Block	8	A/B	Provided	10 A	NX-TBC082	

## **Accessories**

# **End Cover (NX-END01)**

One End Cover is provided together with the EtherNet/IP Coupler Unit.



Protrusions for removing the Unit

<sup>\*1.</sup> We recommend you to use above cable for EtherNet/IP and RJ45 Connector together.
\*2. We recommend you to use above cable for EtherNet/IP and RJ45 Assembly Connector together.

# **General Specification**

	Item	Specification
Enclosure		Mounted in a panel
Grounding me	ethod	Ground to 100 $\Omega$ or less
	Ambient operating temperature	0 to 55°C
	Ambient operating humidity	10% to 95% (with no condensation or icing)
	Atmosphere	Must be free from corrosive gases.
	Ambient storage temperature	-25 to 70°C (with no condensation or icing)
	Altitude	2,000 m max.
Operating	Pollution degree	Pollution degree 2 or less: Conforms to JIS B 3502 and IEC 61131-2.
environment	Noise immunity	Conforms to IEC 61000-4-4. 2 kV (power supply line)
	Overvoltage category	Category II: Conforms to JIS B 3502 and IEC 61131-2.
	EMC immunity level	Zone B
	Vibration resistance	Conforms to IEC 60068-2-6. 5 to 8.4 Hz with 3.5-mm amplitude, 8.4 to 150 Hz, acceleration of 9.8 m/s², 100 min each in X, Y, and Z directions (10 sweeps of 10 min each = 100 min total) *1
	Shock resistance	Conforms to IEC 60068-2-27. 147 m/s², 3 times each in X, Y, and Z directions *1
Applicable sta	andards *2	cULus: Listed UL508, ANSI/ISA 12.12.01 EU: EN 61131-2, C-Tick or RCM, KC: KC Registration

<sup>\*1.</sup> Refer to the NX-series Digital I/O Units User's Manual (Cat. No. W521) for the vibration and shock resistance specifications of the Relay Output Unit.

# **EtherNet/IP Coupler Unit Specifications**

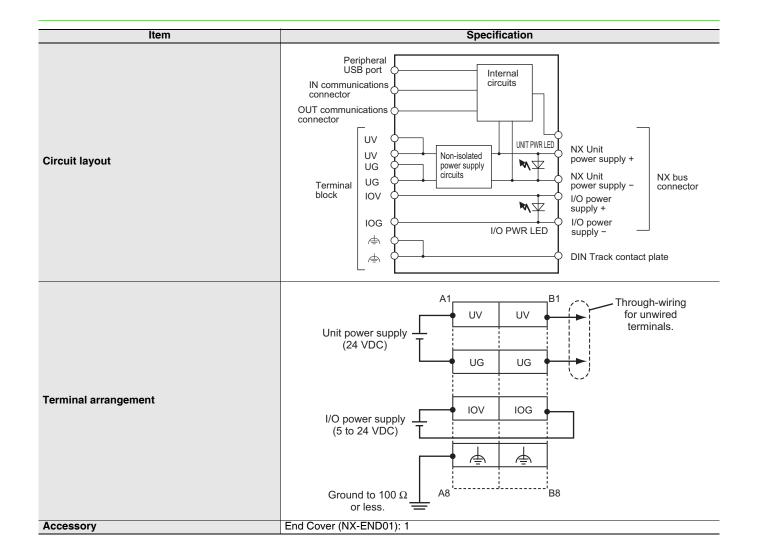
	Item	Sne	cification		
Model		NX-EIC202			
	nnectable NX Units	63 Units max.*1			
	miodiable tox office	EtherNet/IP			
Communications protocols		UDP/IP and TCP/IP (Message Services)	Number of buffers (sockets):  • 8 message buffers for server  • No message buffers for client  • Shared buffers for UDP/IP messages and TCP/IP messages  Maximum message size:  • Request: 492 bytes  • Response: 496 bytes  Maximum NX output data size:  • 490 bytes  Maximum NX input data size:  • 496 bytes		
Modulation		Baseband			
Link speed		100 Mbps			
Physical layer		100BASE-TX (IEEE 802.3)			
Number of connections		8			
Received Packet Interval (RPI, refresh cycle) Allowed communications bandwidth		4 to 1,000 ms			
addressing to	nunications bandwidth o the local node	1,000 pps			
Topology		Line, Tree, Star			
<b>Ethernet Swit</b>	ch	Layer 2 Ethernet switch			
Transmission	media	Category 5 or higher twisted-pair cable (Recommended cable: double-shielded cable with aluminum tape and braiding)			
Transmission	distance	Distance between nodes: 100 m or less			
NX bus I/O da	ıta size	Input: 512 bytes max. (including input data Output: 512 bytes max. (including output d	ata and unused areas)		
EtherNet/IP I/	O connection size	Input: 504 bytes max. (including input data, status, and unused areas) Output: 504 bytes max. (including output data and unused areas)			
Refreshing m		Free-Run refreshing			
	Power supply voltage	24 VDC (20.4 to 28.8 VDC)			
	NX Unit power supply capacity	10 W max. (Refer to Installation orientation	and restrictions for details.)		
Unit power	NX Unit power supply efficiency	70%			
supply *2	Isolation method	No isolation between NX Unit power supply	and Unit power supply terminals		
	Current capacity of power supply terminals	4 A max.			
	Power supply voltage	5 to 24 VDC (4.5 to 28.8 VDC) *3			
I/O power	Maximum I/O power supply current	10 A (Refer to Installation orientation and r	estrictions for details.)		
supply *2	Current capacity of power supply terminals	10 A max.			
<b>NX Unit powe</b>	r consumption	1.60 W max.			
Current cons	umption from I/O power supply	10 mA max. (for 24 VDC)			

<sup>\*2.</sup> Refer to the OMRON website (http://www.ia.omron.com/) or consult your OMRON representative for the most recent applicable standards for each model.

<sup>\*1.</sup> Refer to the *NX-series Safety Control Unit User's Manual* (Cat. No. Z930) for the number of Safety Control Units that can be connected. \*2. Refer to the *NX-series EtherNet/IP™Coupler Unit User's Manual* (Cat. No. W536) for procedures for designing the Unit power supply system and I/O power supply system.

<sup>\*3.</sup> Use a voltage that is appropriate for the I/O circuits of the NX Units and the connected external devices.

Item	Specification				
Dielectric strength	510 VAC for 1 min, leakage current: 5 mA max. (between isolated circuits)				
Insulation resistance	100 VDC, 20 M $\Omega$ min. (between isolated circuits)				
External connection terminals	Communications Connector For EtherNet/IP communications.  • RJ45 × 2 (shielded)  Screwless Clamping Terminal Block For Unit power supply, I/O power supply, and grounding. Removable.  Peripheral USB Port For Sysmac Studio connection.  • Physical layer: USB 2.0-compliant, B-type connector  • Transmission distance: 5 m max.				
Dimensions	46 × 100 × 71 mm (W×H×D)				
Weight	Installation orientation: 6 possible orientations Restrictions:  • Used in the upright installation orientation.  Unit power supply [W]  10 W output, 40°C  8.5 W output, 55°C  8 6 4 2 0 0 10 20 30 40 45 50 55 60  Ambient temperature [°C]  • Used in any other orientation than the upright installation orientation.  Unit power supply [W]				
Installation orientation and restrictions	12 10 8 6 6 0 10 20 30 40 45 50 55 60 Ambient temperature [°C]  I/O power supply [A]  10 A current, 45°C				
	12 10 8 6 A current, 55°C 4 2 0 10 20 30 40 45 50 55 60 Ambient temperature [°C]				



# **Configuration Unit**

Refer to the user's manuals for information on the NX Units that can be connected to the NX-series EtherNet/IP Coupler Unit.

### **EtherNet/IP Coupler Unit**

Unit	Model
EtherNet/IP Coupler Unit	NX-EIC202

### I/O Units

Unit	Model				
Unit	2-point Units	4-point Units	8-point Units	16-point Units	32-point Units
Digital Input Unit	-	NX-ID3317 NX-ID3343 NX-ID3417 NX-ID3443 NX-IA3117	NX-ID4342 NX-ID4442	NX-ID5142-1 NX-ID5142-5 NX-ID5342 NX-ID5442	NX-ID6142-5 NX-ID6142-6
Digital Output Unit	NX-OC2633 NX-OC2733	NX-OD3121 NX-OD3153 NX-OD3256 NX-OD3257 NX-OD3268	NX-OD4121 NX-OD4256 NX-OC4633	NX-OD5121 NX-OD5121-1 NX-OD5121-5 NX-OD5256 NX-OD5256-1 NX-OD5256-5	NX-OD6121-5 NX-OD6256-5
Digital Mixed I/O Unit	-	-	-	NX-MD6121-5 NX-MD6121-6 NX-MD6256-5	-
Analog Input Unit	NX-AD2603 NX-AD2604 NX-AD2608 NX-AD2203 NX-AD2204 NX-AD2208	NX-AD3603 NX-AD3604 NX-AD3608 NX-AD3203 NX-AD3204 NX-AD3208	NX-AD4603 NX-AD4604 NX-AD4608 NX-AD4203 NX-AD4204 NX-AD4208	-	_
Analog Output Unit	NX-DA2603 NX-DA2605 NX-DA2203 NX-DA2205	NX-DA3603 NX-DA3605 NX-DA3203 NX-DA3205	-	-	-
Temperature Input Unit	NX-TS2101 NX-TS2102 NX-TS2104 NX-TS2201 NX-TS2202 NX-TS2204	NX-TS3101 NX-TS3102 NX-TS3104 NX-TS3201 NX-TS3202 NX-TS3204	-	-	_
Heater Burnout Detection Unit	-	NX-HB3101 NX-HB3201	_	_	_

### **Temperature Control Units**

Unit	Model		
Unit	2CH	4CH	
Temperature Control Unit	NX-TC2405, NX-TC2406, NX-TC2407, NX-TC2408	NX-TC3405, NX-TC3406, NX-TC3407, NX-TC3408	

# **Load Cell Input Unit**

Unit	Model
Load Cell Input Unit	NX-RS1201

### **Position Interface Units**

Unit	Model			
Oilit	1CH	2CH		
Incremental Encoder Input Unit	NX-EC0112, NX-EC0122, NX-EC0132, NX-EC0142	NX-EC0212, NX-EC0222		
SSI Input Unit	NX-ECS112	NX-ECS212		
Pulse Output Unit	NX-PG0112, NX-PG0122	-		

### **Communications Interface Units**

Unit	Model
	NX-CIF101, NX-CIF105, NX-CIF210

### **System Units**

Unit	Model
Additional NX Unit Power Supply Unit	NX-PD1000
Additional I/O Power Supply Unit	NX-PF0630, NX-PF0730
I/O Power Supply Connection Unit	NX-PC0010, NX-PC0020, NX-PC0030
Shield Connection Unit	NX-TBX01

### **IO-Link Master Unit**

Unit	Model	
IO-Link Master Unit	NX-ILM400	

### **Safety Control Units**

Unit	Model		
Safety CPU Unit	NX-SL3300 *1		
Safety Input Unit	NX-SIH400 *2, NX-SID800		
Safety Output Unit	NX-SOH200, NX-SOD400		

<sup>\*1.</sup> Safety CPU Unit Ver.1.1 or higher.

<sup>\*2.</sup> Safety Input Unit Ver.1.1 or higher.

### **Version Information**

Depending on the type and model of the Unit, some Units do not have all of the versions given in the corresponding versions. If a Unit does not have the specified version, support is provided by the oldest available version after the specified version. Refer to the user's manuals for the specific Units for the relation between models and versions.

# Connection to the NJ/NX-series CPU Unit or NY-series Industrial PC NX-series CPU Unit or NY-series Industrial PC

EtherNet/IP Coupler Unit		Corresponding unit version/version			
Model Unit version		Unit version of CPU Unit or Industrial PC	Sysmac Studio version	Network Configurator for EtherNet/IP version	CX-ConfiguratorFDT version
NX-EIC202	Ver.1.2	Ver.1.14	Ver.1.19	Ver.3.21	Ver.2.4 *
INA-EIUZUZ	Ver.1.0	Not possible.	Not possible.	Not possible.	Not possible.

<sup>\*</sup> The CX-ConfiguratorFDT with version 2.2 or later can be used if it is connected to the peripheral USB port on the EtherNet/IP Coupler Unit.

### **NJ-series CPU Unit**

EtherNet/IP Cou	pler Unit	Corresponding unit version/version				
Model	Unit version	Unit version of CPU Unit	Unit version of CJ1W-EIP21	Sysmac Studio version	Network Configurator for EtherNet/IP version	CX- ConfiguratorFDT version
NV FICODO	Ver.1.2	Ver.1.14	Ver.2.1	Ver.1.19	Ver.3.21	Ver.2.4 *
NX-EIC202	Ver.1.0	Not possible.	Not possible.	Not possible.	Not possible.	Not possible.

<sup>\*</sup> The CX-ConfiguratorFDT with version 2.2 or later can be used if it is connected to the peripheral USB port on the EtherNet/IP Coupler Unit.

# Connection to CS/CJ/CP-series CPU Unit CS1G/CS1H/CJ1H/CJ1M CPU Units

EtherNet/IP Coupler Unit			Corres	ponding unit version/	version	
Model	Unit version	Unit version of CPU Unit	Unit version of CS1W-EIP21/CJ1W-EIP21	Network Configurator for EtherNet/IP version	NX-IO Configurator version	CX- ConfiguratorFDT version
NX-EIC202	Ver.1.2	Ver.3.0	Ver.2.1	Ver.3.00	Ver.1.00	Ver.2.4 *1
NX-EIG202	Ver.1.0	VEI.3.0			Ver.1.00 *2	Ver.2.2

<sup>\*1.</sup> The CX-ConfiguratorFDT with version 2.2 or later can be used if it is connected to the peripheral USB port on the EtherNet/IP Coupler Unit.

### CJ2H-CPU6□/CJ2M-CPU1□/CP1H CPU Unit

EtherNet/IP Cou	pler Unit	Corresponding unit version/version				
Model	Unit version	Unit version of CPU Unit	Unit version of CJ1W-EIP21	Network Configurator for EtherNet/IP version	NX-IO Configurator version	CX- ConfiguratorFDT version
NV FICODO	Ver.1.2	Ver.1.0	Ver.2.1 Ver.3.00	Var 2 00	Ver.1.00	Ver.2.4 *1
NX-EIC202	Ver.1.0	ver.i.u		ver.3.00	Ver.1.00 *2	Ver.2.2

<sup>\*1.</sup> The CX-ConfiguratorFDT with version 2.2 or later can be used if it is connected to the peripheral USB port on the EtherNet/IP Coupler Unit.

### CJ2H-CPU6□-EIP CPU Unit

EtherNet/IP Cou	pler Unit	Corresponding unit version/version				
Model	Unit version	Unit version of CPU Unit	Unit version of CJ1W-EIP21	Network Configurator for EtherNet/IP version	NX-IO Configurator version	CX- ConfiguratorFDT version
NV FICODO	Ver.1.2	Var. 1. F	Ver.2.1 Ver.3.00	Var 2 00	Ver.1.00	Ver.2.4 *1
NX-EIC202	Ver.1.0	Ver.1.5		Ver.1.00 *2	Ver.2.2	

<sup>\*1.</sup> The CX-ConfiguratorFDT with version 2.2 or later can be used if it is connected to the peripheral USB port on the EtherNet/IP Coupler Unit.

### CJ2M-CPU3□ CPU Unit

EtherNet/IP Coupler Unit			Corres	ponding unit version/\	version	
Model	Unit version	Unit version of CPU Unit	Unit version of CJ1W-EIP21	Network Configurator for EtherNet/IP version	NX-IO Configurator version	CX- ConfiguratorFDT version
NX-EIC202	Ver.1.2	Ver.1.0	Ver.2.1	Ver.3.21	Ver.1.00	Ver.2.4 *1
	Ver.1.0	Vei.1.0			Ver.1.00 *2	Ver.2.2

<sup>\*1.</sup> The CX-ConfiguratorFDT with version 2.2 or later can be used if it is connected to the peripheral USB port on the EtherNet/IP Coupler Unit.

<sup>\*2.</sup> You can connect only to the peripheral USB port on the EtherNet/IP Coupler Unit. You cannot connect with any other path.

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# **Connection to the Sysmac Gateway**

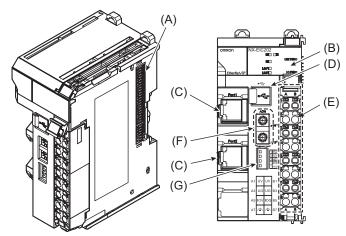
### **Sysmac Gateway**

EtherNet/IP Coupler Unit		Corresponding unit version/version			
Model Unit version		Sysmac Gateway version	ac Gateway version Network Configurator for EtherNet/IP version NX-IO Configurator version		CX-ConfiguratorFDT version
NV EICOOO	Ver.1.2	Vor 1 21	Ver.3.50	Ver.1.00	Ver.2.4 *1
NX-EIC202	Ver.1.0	Ver.1.31	ver.3.30	Ver.1.00 *2	Ver.2.2

<sup>\*1.</sup> The CX-ConfiguratorFDT with version 2.2 or later can be used if it is connected to the peripheral USB port on the EtherNet/IP Coupler Unit.
\*2. You can connect only to the peripheral USB port on the EtherNet/IP Coupler Unit. You cannot connect with any other path.

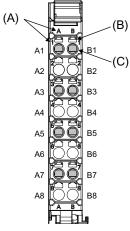
# **External Interface**

### EtherNet/IP Coupler Unit NX-EIC202



Letter	Name	Function				
(A)	NX bus connector	This connector is used to connect the EtherNet/IP Coupler Unit to the NX Unit on the right of the Coupler Unit.				
(B)	Indicators	The indicators show the current operating status of the Unit and the status of the power supp				
(C)	Communications connectors	These connectors are connected to the communications cables of the EtherNet/IP network.				
(D)	Peripheral USB port	This port is used to connect to the Sysmac Studio.				
(E)	Terminal block	The terminal block is used to connect to the power supply cables and ground wire.				
(F)	Rotary switches	The rotary switches are used to set the last octet of the IP address of the EtherNet/IP Coupler Unit as an EtherNet/IP Slave. The address is set in hexadecimal.				
(G)	DIP switch	The DIP switch is used to set the default node address of the EtherNet/IP Coupler Unit as an EtherNet/IP slave.				

### **Terminal Block**



Eight-terminal Block

Symbol	Name	Function				
(A)	Terminal number indications	The terminal numbers (A1 to A8 and B1 to B8) are displayed. The terminal number indicators are the same regardless of the number of terminals on the terminal block, as shown above.				
(B)	Release holes	Insert a flat-blade screwdriver into these holes to connect and remove the wires.				
(C)	Terminal holes	The wires are inserted into these holes.				

### **Applicable Wires**

### **Using Ferrules**

If you use ferrules, attach the twisted wires to them.

Observe the application instructions for your ferrules for the wire stripping length when attaching ferrules.

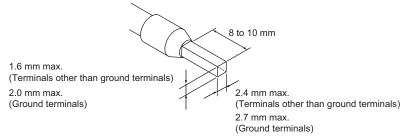
Always use plated one-pin ferrules. Do not use unplated ferrules or two-pin ferrules.

The applicable ferrules, wires, and crimping tool are given in the following table.

Terminal types	Manufacturer	Ferrule model	Applicable wire (mm² (AWG))	Crimping tool		
		AI0,34-8	0.34 (#22)			
		AI0,5-8	0.5 (#20)			
		AI0,5-10	0.3 (#20)			
Terminals other		AI0,75-8	0.75 (#18)			
than ground		AI0,75-10		Phoenix Contact (The figure in parentheses is the applicable wire size.) CRIMPFOX 6 (0.25 to 6 mm², AWG 24 to 10)		
terminals	Phoenix Contact	AI1,0-8	1.0 (#18)			
		Al1,0-10				
		Al1,5-8	4.5 (#40)			
		Al1,5-10	1.5 (#16)			
Ground terminals		AI2,5-10	2.0 *1			
	Weidmuller	H0.14/12	0.14 (#26)			
		H0.25/12	0.25 (#24)			
		H0.34/12	0.34 (#22)			
		H0.5/14	0.5 (#00)			
Terminals other		H0.5/16	0.5 (#20)			
than ground		H0.75/14	0.75 (#10)	Weidmueller (The figure in parentheses is the applicable wire size.) PZ6 Roto (0.14 to 6 mm <sup>2</sup> , AWG 26 to 10)		
terminals		H0.75/16	0.75 (#18)	1 20 11010 (0.17 to 0 111111 , AWG 20 to 10)		
		H1.0/14	1.0 (#10)			
		H1.0/16	1.0 (#18)			
		H1.5/14	1.5 (#16)			
		H1.5/16	1.5 (#16)			

<sup>\*1.</sup> Some AWG 14 wires exceed 2.0 mm² and cannot be used in the screwless clamping terminal block.

When you use any ferrules other than those in the above table, crimp them to the twisted wires so that the following processed dimensions are achieved.



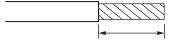
### **Using Twisted Wires/Solid Wires**

If you use the twisted wires or the solid wires, use the following table to determine the correct wire specifications.

Terr	Wire type						
Ten	Twisted wires		Solid wire		Wire size	Conductor length (stripping length)	
Classification	assification Current capacity		Unplated	Plated	Unplated		
	2 A max.	Possible	Possible	Possible	Possible	0.08 to 1.5 mm <sup>2</sup> AWG28 to 16	8 to 10 mm
All terminals except ground terminals	Greater than 2 A and 4 A or less		Not Possible	Possible *1	Not Possible		
ground terminals	Greater than 4 A	Possible *1		Not Possible			
Ground terminals		Possible	Possible	Possible *2	Possible *2	2.0 mm <sup>2</sup>	9 to 10 mm

<sup>1.</sup> Secure wires to the screwless clamping terminal block. Refer to the Securing Wires in the USER'S MANUAL for how to secure wires.

<sup>\*2.</sup> With the NX-TB□□□1 Terminal Block, use twisted wires to connect the ground terminal. Do not use a solid wire.

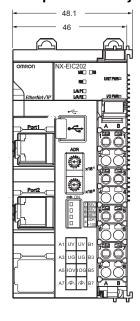


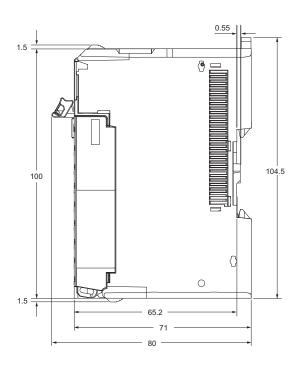
Conductor length (stripping length)

<sup>&</sup>lt; Additional Information > If more than 2 A will flow on the wires, use plated wires or use ferrules.

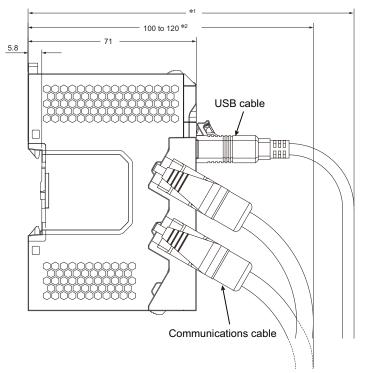
**Dimensions** (Unit: mm)

### ● EtherCAT Coupler Unit Only





### With Cables Connected

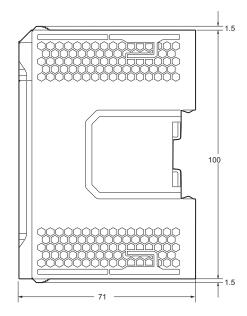


- \*1. This dimension depends on the specifications of the commercially available USB-certified cable. Check the specifications of the USB cable that is used.
- \*2. This is the dimension from the back of the Unit to the communications cables.
   \* 100 mm: When an MPS588-C Connector is used.

  - 120 mm: When an XS6G-T421-1 Connector is used.

### End Cover





# **Related Manuals**

Man. No	Model Manual		Application	Description	
W536	NX-EIC	NX-series EtherNet/IP Coupler Unit User's Manual	series Ether-Net/IP Coupler Unit and EtherNet/IP Slave	Introduces the system, configuration methods, Unit hardware, setting methods, and functions of EtherNet/IP Slave Terminals that consist of an EtherNet/IP Coupler Unit and NX Units.	

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