

NX-series EtherNet/IP™ Coupler Unit

NX-EIC

CSM_NX-EIC_DS_E_4_9

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.

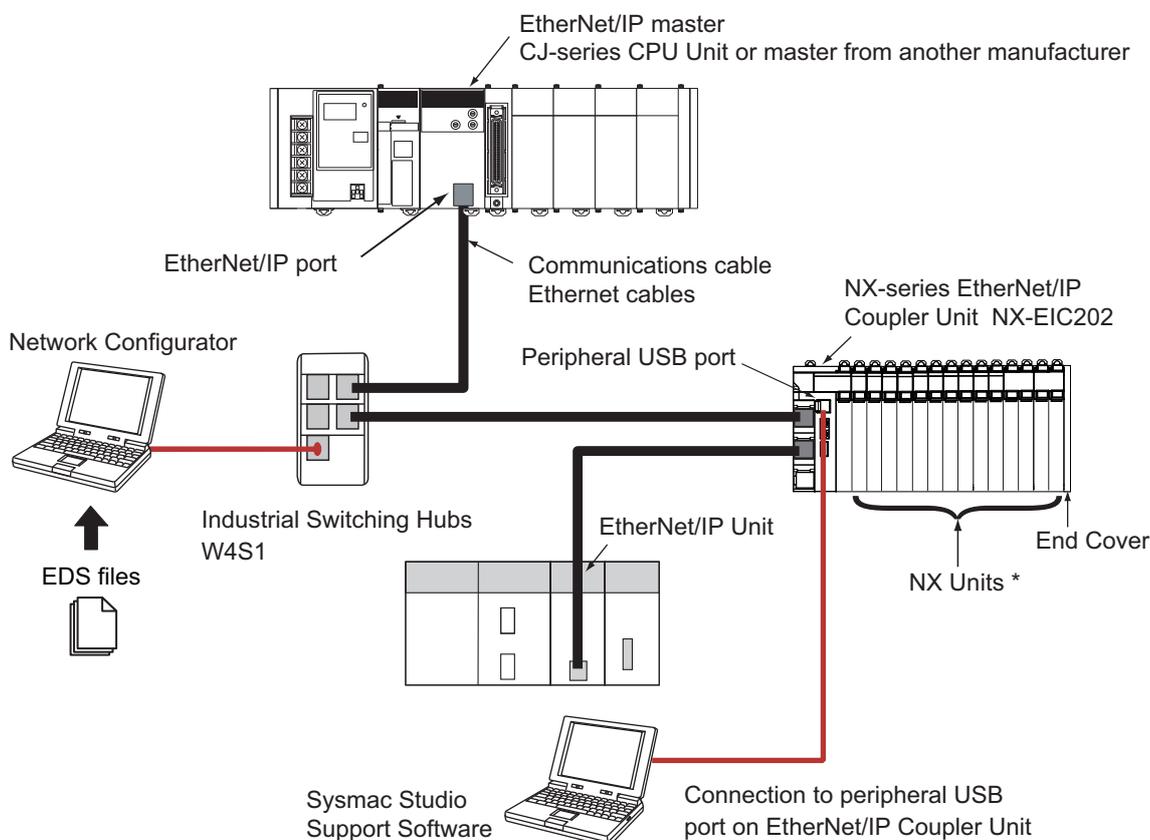


Features

- 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.

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

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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

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.

For details, refer to your local OMRON website and *Sysmac Studio Catalog* (Cat. No. P138).

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 (RJ45/RJ45) Standard RJ45 plugs type *1 Wire Gauge and Number of Pairs: AWG26, 4-pair Cable Cable Sheath material: PUR Cable color: Yellow *2 EtherCAT/ EtherNet/IP (10BASE/100BASE) |  | OMRON | 0.3 | XS6W-6PUR8SS30CM-YF |
| | | | 0.5 | XS6W-6PUR8SS50CM-YF |
| | | | 1 | XS6W-6PUR8SS100CM-YF |
| | | | 2 | XS6W-6PUR8SS200CM-YF |
| | | | 3 | XS6W-6PUR8SS300CM-YF |
| Cable with Connectors on Both Ends (RJ45/RJ45) Rugged RJ45 plugs type *1 Wire Gauge and Number of Pairs: AWG22, 2-pair Cable Cable color: Light blue EtherCAT/ EtherNet/IP (10BASE/100BASE) |  | OMRON | 0.3 | XS5W-T421-AMD-K |
| | | | 0.5 | XS5W-T421-BMD-K |
| | | | 1 | XS5W-T421-CMD-K |
| | | | 2 | XS5W-T421-DMD-K |
| | | | 5 | XS5W-T421-GMD-K |
| Cable with Connectors on Both Ends (M12 Straight/M12 Straight) Shield Strengthening Connector cable *3 M12/Smartclick Connectors Wire Gauge and Number of Pairs: AWG22, 2-pair Cable Cable color: Black EtherCAT/ EtherNet/IP (10BASE/100BASE) |  | OMRON | 0.5 | XS5W-T421-BM2-SS |
| | | | 1 | XS5W-T421-CM2-SS |
| | | | 2 | XS5W-T421-DM2-SS |
| | | | 3 | XS5W-T421-EM2-SS |
| | | | 5 | XS5W-T421-GM2-SS |
| Cable with Connectors on Both Ends (M12 Straight/RJ45) Shield Strengthening Connector cable *3 M12/Smartclick Connectors Rugged RJ45 plugs type Wire Gauge and Number of Pairs: AWG22, 2-pair Cable Cable color: Black EtherCAT/ EtherNet/IP (10BASE/100BASE) |  | OMRON | 0.5 | XS5W-T421-BMC-SS |
| | | | 1 | XS5W-T421-CMC-SS |
| | | | 2 | XS5W-T421-DMC-SS |
| | | | 3 | XS5W-T421-EMC-SS |
| | | | 5 | XS5W-T421-GMC-SS |
| | | | 10 | XS5W-T421-JMC-SS |

*1. Cables with standard RJ45 plugs are available in the following lengths: 0.2 m, 0.3 m, 0.5 m, 1 m, 1.5 m, 2 m, 3 m, 5 m, 7.5 m, 10 m, 15 m, 20 m. Cables with rugged RJ45 plugs are available in the following lengths: 0.3 m, 0.5 m, 1 m, 2 m, 3 m, 5 m, 10 m, 15 m.

For details, refer to the *Industrial Ethernet Connectors Catalog* (Cat. No. G019).

*2. Cables colors are available in blue, yellow, or Green.

*3. For details, contact your OMRON representative.

Cables / Connectors

| Item | | Recommended manufacturer | | Model |
|---------------------------------------|---|--------------------------|-----------------------|------------------------|
| Products for EtherNet/IP (100BASE-TX) | Wire Gauge and Number of Pairs: AWG24, 4-pair Cable | Cables | Kuramo Electric Co. | KETH-SB *1 |
| | | RJ45 Connectors | Panduit Corporation | MPS588-C *1 |
| Products for EtherNet/IP (100BASE-TX) | Wire Gauge and Number of Pairs: AWG22, 2-pair Cable | Cables | Kuramo Electric Co. | KETH-PSB-OMR *2 |
| | | | JMACS Japan Co., Ltd. | PNET/B *2 |
| | | RJ45 Assembly Connector | OMRON | XS6G-T421-1 *2 |

*1. 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.

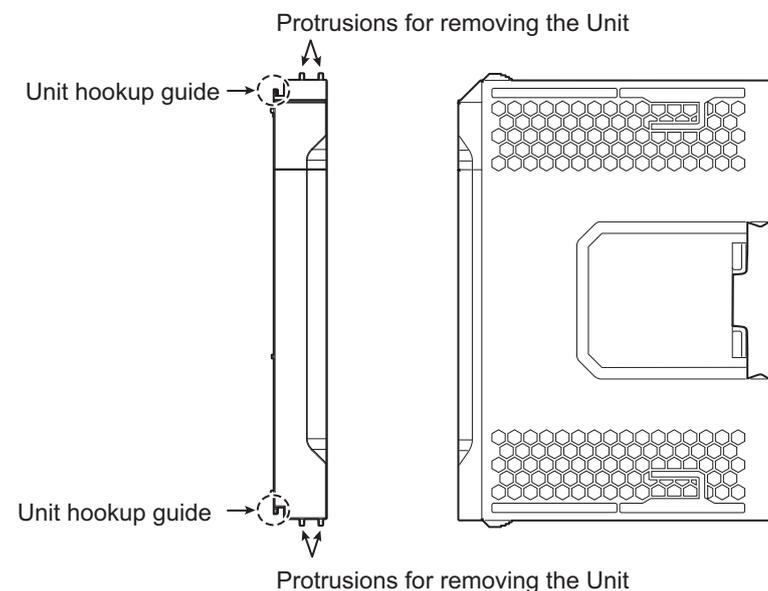
Optional Products

| Product name | Specification | | | | Model |
|---------------------------------|--|-----------------------------|----------------------|---------------------------|------------------|
| Unit/Terminal Block Coding Pins | Pins for 10 Units (30 terminal block pins and 30 Unit pins) | | | | NX-AUX02 |
| Product name | Specification | | | | Model |
| | No. of terminals | Terminal number indications | Ground terminal mark | Terminal current capacity | |
| 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.



General Specification

| Item | Specification | |
|-------------------------|---|---|
| Enclosure | Mounted in a panel | |
| Grounding method | Ground to 100 Ω or less | |
| Operating environment | 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. |
| | Pollution degree | Pollution degree 2 or less: Meets IEC 61010-2-201. |
| | Noise immunity | Conforms to IEC 61000-4-4. 2 kV (power supply line) |
| | Overvoltage category | Category II: Meets IEC 61010-2-201. |
| | 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/s ² , 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/s ² , 3 times each in X, Y, and Z directions *1 | |
| Applicable standards *2 | cULus: Listed UL508, ANSI/ISA 12.12.01 EU: EN 61131-2, C-Tick or RCM, KC: KC Registration | |

*1. 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.

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

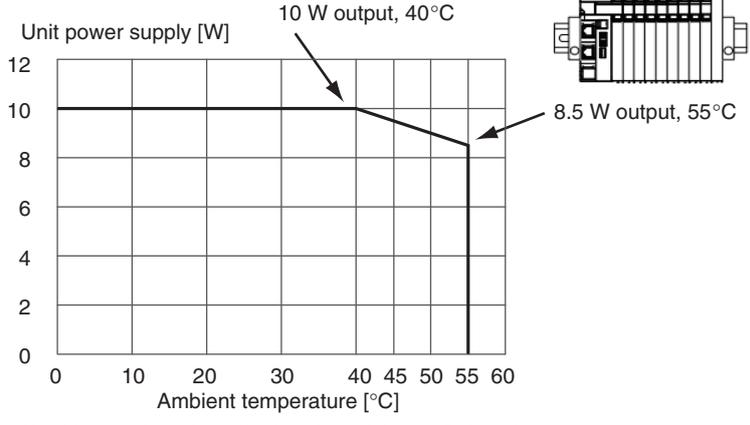
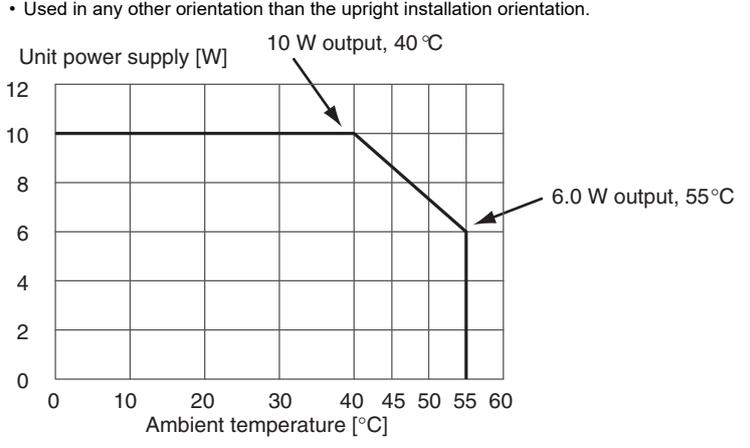
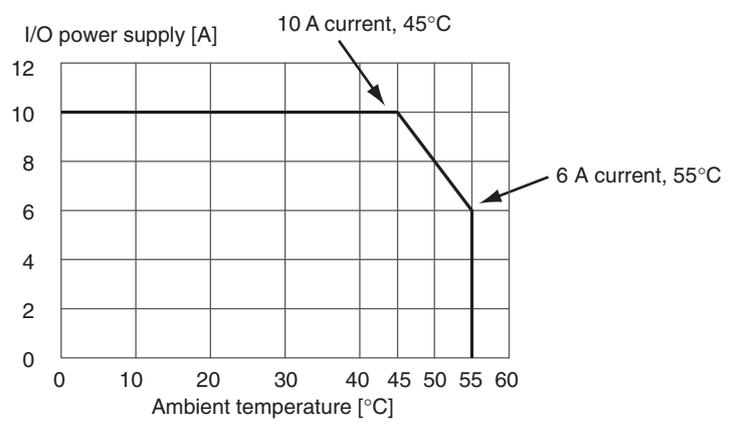
EtherNet/IP Coupler Unit Specifications

| Item | Specification | |
|---|---|---|
| Model | NX-EIC202 | |
| Number of connectable NX Units | 63 Units max.*1 | |
| Communications protocols | EtherNet/IP | |
| | UDP/IP and TCP/IP (Message Services) | Number of buffers (sockets): <ul style="list-style-type: none"> • 8 message buffers for server • No message buffers for client • Shared buffers for UDP/IP messages and TCP/IP messages Maximum message size: <ul style="list-style-type: none"> • Request: 492 bytes • Response: 496 bytes Maximum NX output data size: <ul style="list-style-type: none"> • 490 bytes Maximum NX input data size: <ul style="list-style-type: none"> • 496 bytes |
| Modulation | Baseband | |
| Link speed | 100 Mbps | |
| Physical layer | 100BASE-TX (IEEE 802.3) | |
| Received Packet Interval (RPI, refresh cycle) | 4 to 1,000 ms | |
| Allowed communications bandwidth addressing to the local node | 1,000 pps | |
| Topology | Line, Tree, Star | |
| Ethernet Switch | 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 data size | Input: 512 bytes max. (including input data, status, and unused areas) Output: 512 bytes max. (including output data 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 methods | Free-Run refreshing | |
| Unit power supply *2 | Power supply voltage | 24 VDC (20.4 to 28.8 VDC) |
| | NX Unit power supply capacity | 10 W max. (Refer to <i>Installation orientation and restrictions</i> for details.) |
| | NX Unit power supply efficiency | 70% |
| | Isolation method | No isolation between NX Unit power supply and Unit power supply terminals |
| | Current capacity of power supply terminals | 4 A max. |
| I/O power supply *2 | Power supply voltage | 5 to 24 VDC (4.5 to 28.8 VDC) *3 |
| | Maximum I/O power supply current | 10 A (Refer to <i>Installation orientation and restrictions</i> for details.) |
| | Current capacity of power supply terminals | 10 A max. |
| NX Unit power consumption | 1.60 W max. | |
| Current consumption from I/O power supply | 10 mA max. (for 24 VDC) | |

*1. 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.

*3. 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 MΩ 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 | 150 g max. |
| Installation orientation and restrictions | Installation orientation: 6 possible orientations Restrictions: • Used in the upright installation orientation. |
| |  <p>Unit power supply [W]</p> <p>Ambient temperature [°C]</p> <p>10 W output, 40°C</p> <p>8.5 W output, 55°C</p> |
| | <p>• Used in any other orientation than the upright installation orientation.</p>  <p>Unit power supply [W]</p> <p>Ambient temperature [°C]</p> <p>10 W output, 40°C</p> <p>6.0 W output, 55°C</p> |
| |  <p>I/O power supply [A]</p> <p>Ambient temperature [°C]</p> <p>10 A current, 45°C</p> <p>6 A current, 55°C</p> |

| Item | Specification |
|------------------------------------|--------------------------------|
| <p>Circuit layout</p> | |
| <p>Terminal arrangement</p> | |
| <p>Accessory</p> | <p>End Cover (NX-END01): 1</p> |

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 | | | | |
|-------------------------------|--|--|--|--|---|
| | 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 NX-ID6342 NX-ID6442 |
| 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 NX-OD6121-5 NX-OD6121-6 NX-OD6256 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 | | |
|--------------------------|---|---|--------------|
| | 2CH | 4CH | 8CH |
| Temperature Control Unit | NX-TC2405, NX-TC2406, NX-TC2407, NX-TC2408 | NX-TC3405, NX-TC3406, NX-TC3407, NX-TC3408, NX-HTC3510-5 | NX-HTC4505-5 |

Load Cell Input Unit

| Unit | Model |
|----------------------|-----------|
| Load Cell Input Unit | NX-RS1201 |

Position Interface Units

| Unit | Model | |
|--------------------------------|--|----------------------|
| | 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 |
|-------------------------------|------------------------------------|
| Communications Interface Unit | NX-CIF101, NX-CIF105, NX-CIF210 |

IO-Link Master Unit

| Unit | Model |
|---------------------|-----------|
| IO-Link Master Unit | NX-ILM400 |

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 |

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 |

*1. Safety CPU Unit Ver.1.1 or higher.

*2. 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.

The versions of each unit and support tool listed in the Corresponding unit version/version indicate whether the EtherNet/IP Coupler Unit can be connected or configured.

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 * |
| | Ver.1.0 | Not possible. | Not possible. | Not possible. | Not possible. |

* 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 Coupler Unit | | Corresponding unit version/version | | | | | |
|--------------------------|--------------|------------------------------------|--|----------------------------|-----------------------|--|----------------------------|
| Model | Unit version | Unit version of CPU Unit | Unit version of CJ1W-EIP21S | Unit version of CJ1W-EIP21 | Sysmac Studio version | Network Configurator for EtherNet/IP version | CX-ConfiguratorFDT version |
| NX-EIC202 | Ver.1.2 | Ver.1.14 | Ver.1.0 (Lot number 241001□ or later) | Ver.2.1 | Ver.1.19 | Ver.3.21 | Ver.2.4 * |
| | Ver.1.0 | Not possible. | Not possible. | Not possible. | Not possible. | Not possible. | Not possible. |

* 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

* Final order entry date for CJ1M: The end of March, 2021

| EtherNet/IP Coupler Unit | | Corresponding unit version/version | | | | | |
|--------------------------|--------------|------------------------------------|-----------------------------|--|--|----------------------------|----------------------------|
| Model | Unit version | Unit version of CPU Unit | Unit version of CS1W-EIP21S | 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.1.0 | Ver.2.1 | Ver.3.00 | Ver.1.00 | Ver.2.4 *1 |
| | Ver.1.0 | | | | | Ver.1.00 *2 | Ver.2.2 |

*1. 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.

CJ2H-CPU6□/CJ2M-CPU1□/CP1H CPU Unit

| EtherNet/IP Coupler Unit | | Corresponding unit version/version | | | | | |
|--------------------------|--------------|------------------------------------|-----------------------------|----------------------------|--|----------------------------|----------------------------|
| Model | Unit version | Unit version of CPU Unit | Unit version of CJ1W-EIP21S | 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.1.0 | Ver.2.1 | Ver.3.00 | Ver.1.00 | Ver.2.4 *1 |
| | Ver.1.0 | | | | | Ver.1.00 *2 | Ver.2.2 |

*1. 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.

CJ2H-CPU6□-EIP CPU Unit

| EtherNet/IP Coupler Unit | | Corresponding unit version/version | | | | | |
|--------------------------|--------------|------------------------------------|-----------------------------|----------------------------|--|----------------------------|----------------------------|
| Model | Unit version | Unit version of CPU Unit | Unit version of CJ1W-EIP21S | Unit version of CJ1W-EIP21 | Network Configurator for EtherNet/IP version | NX-IO Configurator version | CX-ConfiguratorFDT version |
| NX-EIC202 | Ver.1.2 | Ver.1.5 | Ver.1.0 | Ver.2.1 | Ver.3.00 | Ver.1.00 | Ver.2.4 *1 |
| | Ver.1.0 | | | | | Ver.1.00 *2 | Ver.2.2 |

*1. 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.

CJ2M-CPU3□ CPU Unit

| EtherNet/IP Coupler Unit | | Corresponding unit version/version | | | | | |
|--------------------------|--------------|------------------------------------|-----------------------------|----------------------------|--|----------------------------|----------------------------|
| Model | Unit version | Unit version of CPU Unit | Unit version of CJ1W-EIP21S | 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.1.0 | Ver.2.1 | Ver.3.21 | Ver.1.00 | Ver.2.4 *1 |
| | Ver.1.0 | | | | | Ver.1.00 *2 | Ver.2.2 |

*1. 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.

Connection to the Sysmac Gateway

Sysmac Gateway

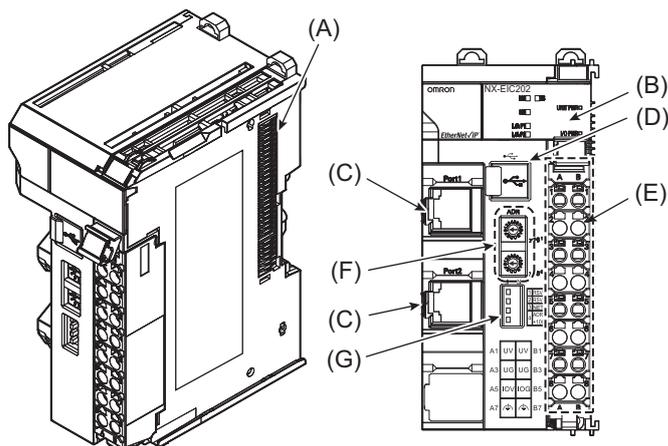
| EtherNet/IP Coupler Unit | | Corresponding unit version/version | | | |
|--------------------------|--------------|------------------------------------|--|----------------------------|----------------------------|
| Model | Unit version | Sysmac Gateway version | Network Configurator for EtherNet/IP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

*1. 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.

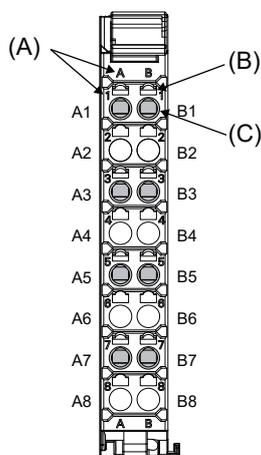
External Interface

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 supply. |
| (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.

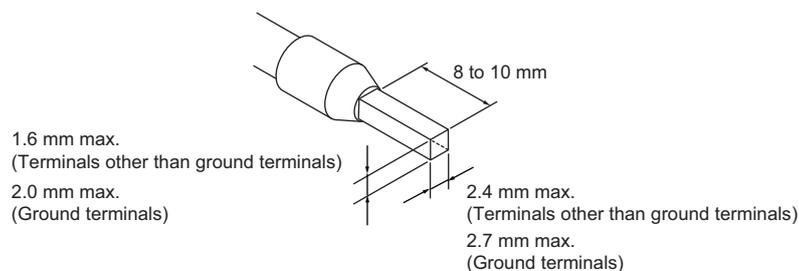
Always use plated one-pin ferrules. Do not use unplated ferrules or two-pin ferrules.

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

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

*1. 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.



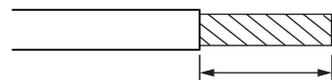
Using Twisted Wires/Solid Wires

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

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

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

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

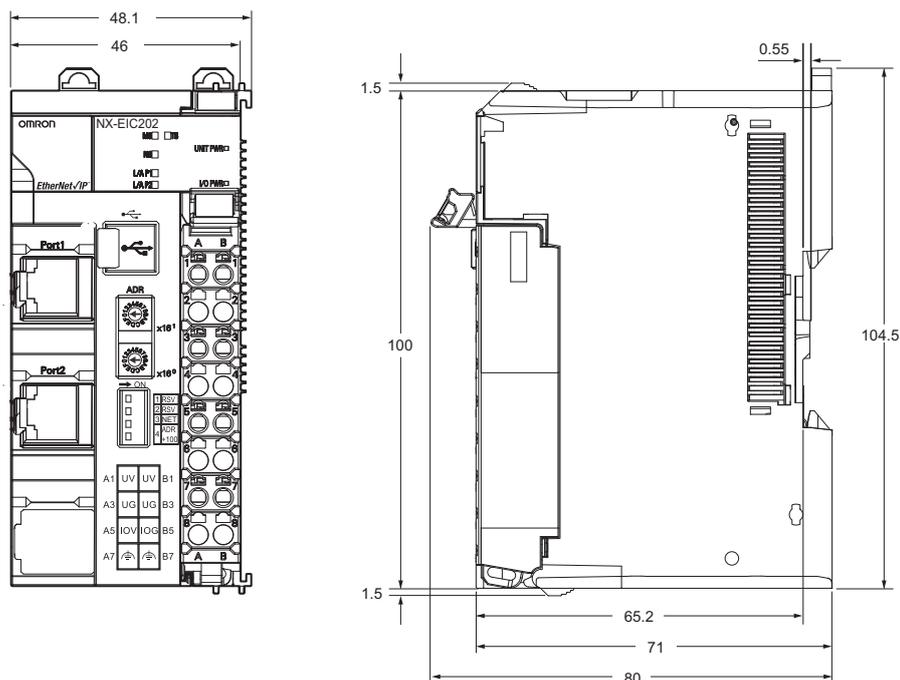


Conductor length (stripping length)

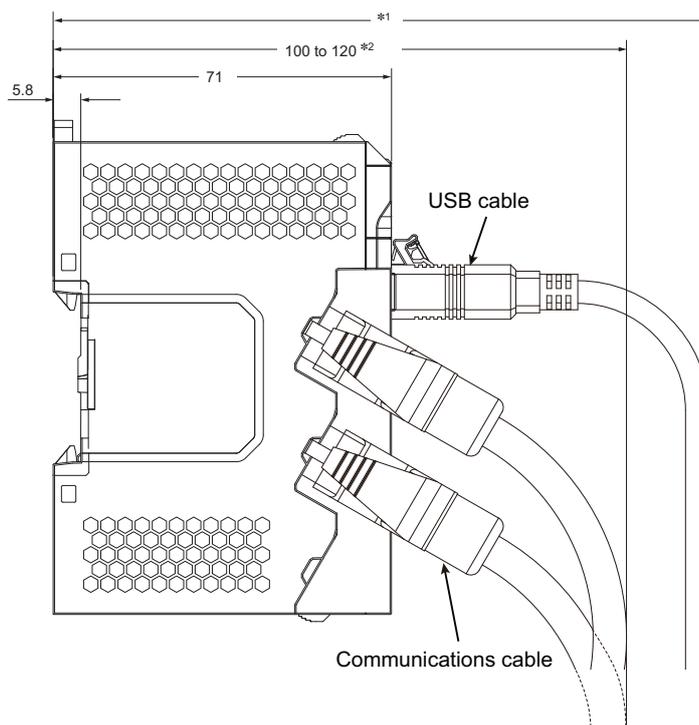
<Additional Information> If more than 2 A will flow on the wires, use plated wires or use ferrules.

Dimensions

● EtherCAT Coupler Unit Only



● With Cables Connected

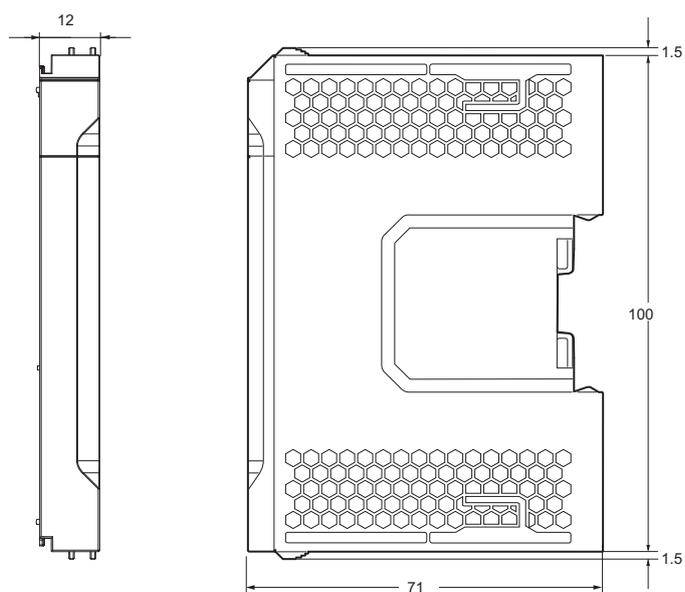


*1. This dimension depends on the specifications of the commercially available USB-certified cable. Check the specifications of the USB cable that is used.

*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 | Learning how to use an NX-series Ether-Net/IP Coupler Unit and EtherNet/IP Slave Terminals | 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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