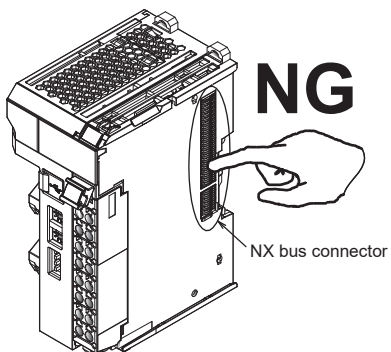


Do not touch the NX bus connector



5667064-0B

■ Compliance with EN Standard

- Surrounding Air Temperature : 0 - 55 °C (Avoid freezing or condensation)
- Surrounding Air Humidity : Max. 95 %
- Indoor use only
- Altitude: Max. 2000 m
- Installation environment: Over Voltage Category II, Pollution Degree 2
- Terminal Temperature: 85 °C

■ 关于对EN规格的符合情况

- 使用环境温度: 0-55 °C (ただし、氷結、結露しないこと)
- 最大使用環境湿度: 95 %
- 室内専用
- 高度: 2000 m以下
- 設置環境: 過電圧種類Ⅱ、汚染度 2
- 最大端子温度: 85 °C

■ EN規格への適合について

- 使用周囲温度: 0-55°C (ただし、氷結、結露しないこと)
- 最大使用周囲湿度: 95 %
- 室内使用専用
- 高度: 2000 m以下
- 設置環境: 過電圧カテゴリⅡ、汚染度2
- 最大端子温度: 85 °C

OMRON NX-PNC202 INSTRUCTION SHEET

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Precautions for Compliance with UL Standards and CSA Standards

Notice to Users of the NX series NX-PNC202 in USA and Canada

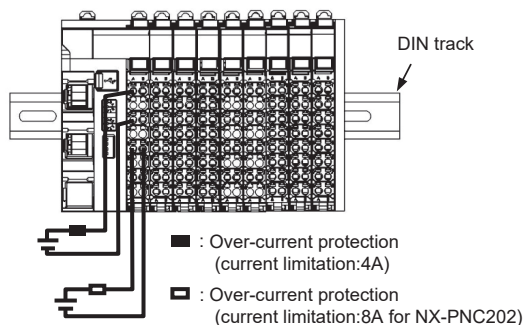
Please use the following installation information instead of the general information in the instruction manuals in order to use the product under certified conditions of UL and CSA when the product is installed in the USA or Canada. These conditions are required by NFPA 70, National Electrical Code in the USA and the Canadian Electrical Code, Part I in Canada and may vary from information given in the product manuals or safety precautions.

● Environment

Ambient Temperature: 0°C to +55°C

● Current restrictions from power supply connector

The external power supply must be an isolated DC source.
It must be equipped with an over-current protection with current limitation.



● Applicable wire size for Unit power source and IO power source terminal

Current limitation	Type	Strip length	Conductor surface
4A max.	Solid/Strand	9mm	Plated
Exceeds 4A	Strand	9mm	Plated

Do not use ferrule terminals. Insert the strand or solid wire directly into the holes on the terminal block.

Please select wire size suitable for rated current.

Wire size	Current (MAX)
AWG 24	2A
AWG 22	3A
AWG 20	5A
AWG 18	7A
AWG 16	10A

● LAN Cable

Product name	Comment
Twisted-pair cable (Cable with connectors below are also allowed)	100BASE-TX (Category 5 or higher) Single-shield (foil or braided shielding)
RJ45 connector	Category 5e or higher shielded

● Peripheral USB port is used to connect to the Sysmac Studio.

● Compliance with Class I Division 2 Hazardous Location:

Input and output wiring must be in accordance with Class I Div.2 wiring methods and in accordance with the authority having jurisdiction. T-Code: T4.

1. This equipment is suitable for use in Class I, Div.2, Group A, B, C, D or Non-Hazardous Locations Only.

CET APPAREILLAGE EST UTILISABLE DANS LES EMPLACEMENTS DE CLASSE I, DIVISION 2, GROUPE A, B, C ET D, OU DANS LES EMPLACEMENTS NON DANGEREUX SEULEMENT.

2. WARNING: Explosion Hazard – Substitution of Components may Impair Suitability for Class I, Div.2.

AVERTISSEMENT - RISQUE D'EXPLOSION – LA SUBSTITUTION DE COMPOSANTS PEUT RENDRE CE MATERIEL INACCEPTABLE POUR LES EMPLACEMENTS DE CLASSE I, DIVISION 2.

3. WARNING: Explosion Hazard – Do not Disconnect Equipment Unless Power Has Been Switched off or the Area Is Known to Be Non-Hazardous.

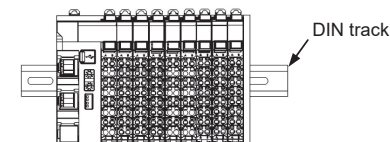
AVERTISSEMENT - RISQUE D'EXPLOSION - AVANT DE DECONNECTER L'EQUIPEMENT, COUPER LE COURANT OU S'ASSURER QUE L'EMPLACEMENT EST DESIGNÉ NON DANGEREUX.

4. This device is open-type and is required to be installed in an enclosure suitable for the environment and can only be accessed with the use of a tooenvironment and/or key.

CE DISPOSITIF EST DE TYPE OUVERT ET DOIT ETRE INSTALLE DANS UN COFFRET ADAPTE A L'ENVIRONNEMENT ET AUQUEL ON NE POURRA ACCEDER UNIQUEMENT AU MOYEN D'UN OUTIL OU D'UNE CLE.

● Direction for installation

Vertically only.



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Note: Specifications subject to change without notice.
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OMRON

NX Series

Safety Precautions

Thank you for purchasing an NX-Series Communications Coupler Units.

To ensure the safe usage of the Controller, read and understand this document and the manuals for all other Units in the Controller.

Contact your OMRON representative and make sure that you use the most recent version of each manual.

Keep this document and all relative manuals in a safe place, and make sure that they are delivered to the final user of the Controller.

OMRON Corporation

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Safety Precautions

● Definition of Precautionary Information



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury. Additionally, there may be severe property damage.



Caution

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury, or property damage.

● Safety Precautions

WARNING

Always confirm safety at the destination before you transfer the Unit configuration information, parameters, set values, or other data from the Sysmac Studio or other Support Software. The devices or machines may perform unexpected operation regardless of the operating mode of the CPU Unit.

Provide safety measures in external circuits to ensure safety in the system if an abnormality occurs due to malfunction of the CPU Unit, other Units, or slaves or due to other external factors affecting operation. Not doing so may result in serious accidents due to incorrect operation.

(1) Emergency stop circuits, interlock circuits, limit circuits, and similar safety measures must be provided in external control circuits.

(2) The CPU Unit will turn OFF all outputs from Basic Output Units in the following cases. The remote I/O slaves will operate according to the settings in the slaves.

If an error occurs in the power supply

If the power supply connection becomes faulty

If a CPU watchdog timer error or CPU reset occurs

If a major fault level Controller error occurs

While the CPU Unit is in standby until RUN mode is entered after the power is turned ON

External safety measures must be provided to ensure safe operation of the system in such cases.

(3) The Controller outputs may remain ON or OFF due to deposition or burning of the output relays or destruction of the output transistors. As a countermeasure for such problems, external safety measures must be provided to ensure safe operation of the system.

(4) If external power supplies for slaves or other devices are overloaded or short-circuited, the voltage will drop, outputs will turn OFF, and the system may be unable to read inputs. Provide external safety measures in controls with monitoring of external power supply voltage as required so that the system operates safely in such a case.

(5) You must take fail-safe measures to ensure safety in the event of incorrect, missing, or abnormal signals caused by broken signal lines, momentary power interruptions, or other causes. Not doing so may result in serious accidents due to incorrect operation.

Make sure that the voltages and currents that are input to the Units and slaves are within the specified ranges. Inputting voltages or currents that are outside of the specified ranges may damage the Unit or cause fire.

Do not touch any of the terminals or terminal blocks while the power is being supplied. Doing so may result in electric shock.

Do not attempt to take any Unit apart. In particular, high-voltage parts are present in the Unit that supplies power while power is supplied or immediately after power is turned OFF. Touching any of these parts may result in electric shock. There are also sharp internal parts that may cause injury.



Caution

Execute online editing only after confirming that no adverse effects will be caused by deviations in the timing of I/O. If you perform online editing, the task execution time may exceed the task period, I/O may not be refreshed with external devices, input signals may not be read, and output timing may change.

Precautions for Safe Use

- Do not drop any Unit or subject it to abnormal vibration or shock. Doing so may result in Unit malfunction or burning.
- When transporting any Unit, use the special packing box for it. Also, do not subject the Unit to excessive vibration or shock during transportation.
- Do not pull on the cables or bend the cables beyond their natural limit. Also, do not place heavy objects on top of the cables or other wiring lines. Doing so may break the cables.
- Use the I/O power supply capacity within the range that is given in the Unit specifications.
- When wiring or installing the Units, do not allow metal fragments to enter the Units.
- When you replace a Unit, start operation only after you transfer the settings and variables that are required for operation to the new Unit.
- Before you start operation, always register the NX Units that are connected to the Communications Coupler Unit in the host communications master as the Unit configuration information.
- Check the user program, data, and parameter settings for proper execution before you use them for actual operation.
- Provide suitable power supply capacity according to the reference manuals.
- Use the power supply voltage that is specified in the related manuals.
- Always turn OFF the power supply to the Units before you attempt any of the following.
 - Mounting or removing NX Units, Communications Coupler Units, or the CPU Unit
 - Assembling the Units
 - Setting DIP switches or rotary switches
 - Connecting cables or wiring the system
 - Connecting or disconnecting connectors, or removing or attaching terminal blocks

Power Supply Unit may continue to supply power to the rest of the Units for a few seconds after the power supply turns OFF. The PWR indicator is lit during this time. Confirm that the PWR indicator is not lit before you perform any of the above.

- Confirm that no adverse effect will occur in the system before you attempt any of the following.

Changing the operating mode of the CPU Unit (including changing the setting of the Operating Mode at Startup)
Changing the user program or settings
Changing set values or present values
Forced refreshing

- Do not exceed the ranges that are given in the specifications for the communications distance and number of connected Units.
- Mount terminal blocks and connectors only after checking the mounting location carefully. Be sure that the terminal blocks, expansion cables, and other items with locking devices are properly locked into place.
- When you set the Operating Mode at Startup, confirm that no adverse effect will occur in the system.
- Do not apply voltages that exceed the rated value to any Input Unit.
- Double-check all wiring and switch settings to make sure that they are correct before turning ON the power supply.
- Double-check all wiring before turning ON the power supply. Use the correct wiring parts and tools when you wire the system.
- If the cold junction sensor is not connected to any Unit that requires one, the correct temperature will not be measured regardless of whether cold junction compensation is enabled or disabled. Make sure that the cold junction sensor does not become disconnected.
- For any Unit that has a cold junction sensor, the Unit and the connection circuit are calibrated for that specific cold junction sensor. The correct temperature will not be measured if you use the sensor from a different Unit or switch the sensors between two Units. Always use the sensor that is delivered with each Unit.

Precautions for Correct Use

- Do not turn OFF the power supply while data is being transferred.
- Follow the instructions in the relevant manuals to correctly perform installation and wiring.
- Do not operate or store the Controller in the following locations.
 - Burnout may occur, operation may stop or malfunctions may occur.

Locations subject to direct sunlight

Locations subject to temperatures or humidity outside the range specified in the specifications

Locations subject to condensation as the result of severe changes in temperature

Locations subject to corrosive or flammable gases

Locations subject to dust (especially iron dust) or salts

Locations subject to exposure to water, oil, or chemicals

Locations subject to shock or vibration

- Take appropriate and sufficient countermeasures during installation in the following locations.

Locations subject to strong, high-frequency noise

Locations subject to static electricity or other forms of noise

Locations subject to strong electromagnetic fields

Locations subject to possible exposure to radioactivity

Locations close to power lines

- Before touching a Unit, be sure to first touch a grounded metallic object in order to discharge any static build-up.
- Use the rated power supply voltage for the Units that supply power. Take appropriate measures to ensure that the specified power with the rated voltage and frequency is supplied in locations

Conformance to EC Directives

- These products comply with the EMC Directives when they are built into a PLC system or Machine Automation Controller. Observe the following precautions and follow the installation methods that are given in Relevant Manuals to ensure compliance with the EMC Directives.

The Controller must be installed within a control panel.

You must use reinforced insulation or double insulation for the DC power supplies connected to Units that supply DC power. Also refer to the relevant manuals.

- This is a Class A product (for industrial environments). In a residential environment, it may cause radio interference, in which case the user may be required to take appropriate measures.

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Relevant Manuals

Model numbers and manual name		Cat. No.
NX-PNC202	Machine Automation Controller NX-series PROFINET Coupler Units User's Manual	W623
NX-ID/IA/OD/OC/MD □□□□	Machine Automation Controller NX-series Digital I/O Units User's Manual	W521
NX-AD/DA/TS □□□□	Machine Automation Controller NX-series Analog I/O Units User's Manual	W522
NX-PD/PI/PC □□□□ NX-TBX□□	Machine Automation Controller NX-series System Units User's Manual	W523
NX-EC□□□□ NX-ECSC□□ NX-PG□□□□	Machine Automation Controller NX-series Position Interface Units User's Manual	W524
NX Series	Machine Automation Controller NX-series Data Reference Manual	W525
SYSMAC-SE2□□□	Sysmac Studio Version 1 Operation Manual	W504

Suitability for Use

Omnion Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT 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 PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

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