

## Safety Precautions

\*3604736-9F\*

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## NX bus connector NX bus connector

## 3604736-9D

お断りなく仕様などを変更することがありますのでご了承ください。



OMRON

NX series INSTRUCTION SHEET

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Precautions for Compliance with

UL/CSA Standards

and EU Directives

Notice to Users of the NX series components (NX-V680C1/-V680C2) in USA, Canada and Europe

This manual must be consulted in all cases in order to find out the nature of the potential HAZARDS and any actions which have to be taken to avoid them.  
If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

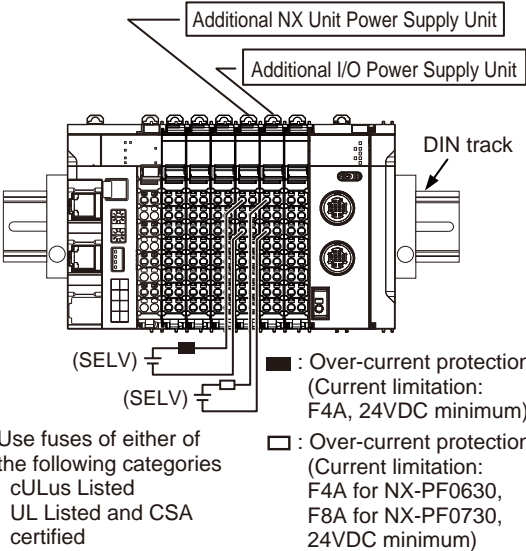
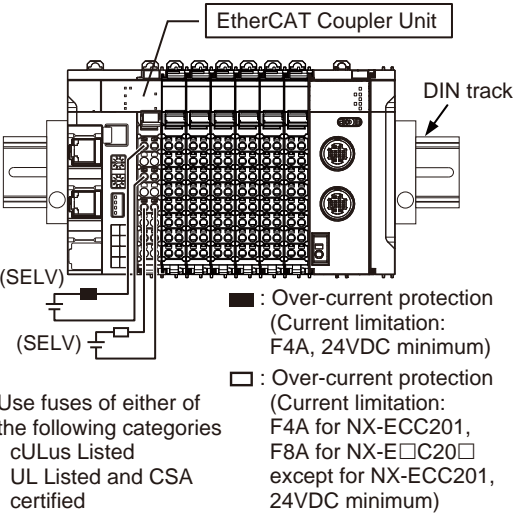
This product is defined as an in-panel device and must be installed within a control panel.

●Environment

Surrounding Air Temperature: 0 to 55°C  
Surrounding Air Humidity: 10% to 95%  
Indoor use only  
Altitude: Max. 2,000 m  
Pollution Degree 2

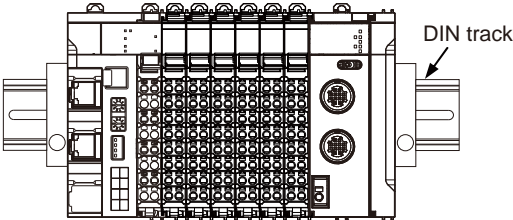
●External Power Supply Condition and Current Restriction

The external power supplies must be DC power supplies that satisfy the SELV requirements. It must be equipped with an over-current protection with current limitation.



●Direction of installation

Vertical only.



●Cleaning

Do not use paint thinner or similar chemical to clean with. Use a dry cloth.

●Cable for Ground terminal

Please select the cable by which rated temperature is 80°C or above.

●Enclosure type

Please use this product in a control panel.  
Enclosure type: Type 1 or more.

●Marking

⏏ : Functional Earth Terminal

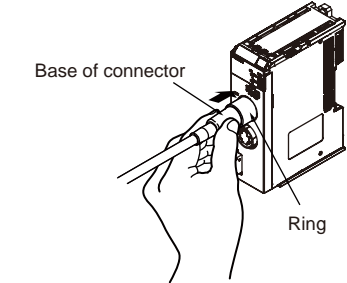
●Electrical Ratings

	NX-V680C1	NX-V680C2
Unit power supply	3.63 to 6Vdc (280 to 170 mA),SELV, LIM	3.63 to 6Vdc (280 to 170 mA),SELV, LIM
I/O power supply	20.4 to 28.8Vdc(250 to 200mA),SELV	20.4 to 28.8Vdc(380 to 280mA),SELV
Antenna Output	V680-H01-V2 connection: 12 V, 260 mA, SELV V680-HA63□ connection: 7.5 V, 335 mA, SELV	V680-HA63□ connection: 7.5 V, 670 mA, SELV
Unit Power consumption	Connector to CPU Unit: 1.00W max. Connector to Communications Coupler Unit: 0.90W max.	Connector to CPU Unit: 1.00W max. Connector to Communications Coupler Unit: 0.90W max.
Current consumption from I/O power supply	V680-H01-V2 connection: 250 mA max. V680-HA63□ connection: 210 mA max.	V680-HA63□ connection: 380 mA max.

Mounting method

●Connecting the Antenna

- Holding the base of the connector, align the white mark on the Unit with the white mark on the connector and insert the connector.



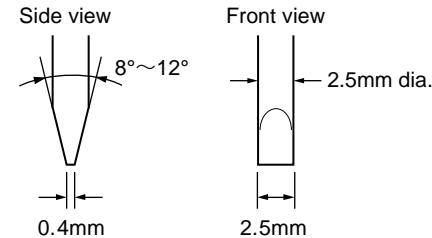
- Press in on the connector until it locks in place.

●Connectable Antenna and Amplifier

Antenna unit:  
V680-H01-V2 (connecting to NX-V680C1 only)  
Amplifier unit:  
V680-HA63A and V680-HA63B

●Connecting Strand Wires/Solid Wires

Use a flat-blade screwdriver to connect and remove wires.  
Use the following flat-blade screwdriver



Recommended screwdriver

Model	Manufacturer
SZF 0-0,4x2,5	Phoenix Contact

Applicable wire size for Ground terminal

Wire type				Wire size	Strip length
Strand wires		Solid wire			
Plated	Unplated	Plated	Unplated		
Possible	Possible	Possible	Possible	AWG 24-15	9 to 10 mm

The diagram shows a horizontal wire. A portion of the wire's insulation has been removed, exposing the conductive material underneath. This exposed section is shaded with diagonal lines. A dimension line with arrows at both ends is positioned below the shaded area, with the text 'Strip length' centered underneath it.

Leave the flat-blade screwdriver pressed into the release hole and insert the strand wire or the solid wire into the terminal hole.  
Insert the strand wire or the solid wire until the stripped portion is no longer visible to prevent shorting.



After you make a connection, make sure that the strand wire or the solid wire is securely connected to the terminal block.

Conformance to

UL/CSA Standards

- There is a danger of burns if it is used at surround air temperture exceeding 50°C.  
Do not touch the RFID Unit.

- Il y a un risque de brûlure si elle est utilisée à temperture air surround supérieure à 50°C. Ne touchez pas l'unité RFID.

Conformance to EU Directives

This product is EMC-compliant when assembled in PLC system or Machine Automation Controller. To ensure the EU Directive conformance of customer's machinery or equipment in which the product is incorporated, be sure to observe the following precautions.

- This product is defined as an in-panel device and must be installed within a control panel.
- This product complies with the common emission standard (EN61131-2, EN61000-6-4) with regard to EMI. For the radiated emission requirement (10-m regulations), in particular, please note that the actual emission varies depending on the configuration of the control panel to be used, the connected devices, and wiring methods. Therefore, the customer must confirm the EU Directive conformance of the overall machinery or equipment by themselves, even if this EU conforming product is used.

This is a class A product. In residential areas it may cause radio interference, in which case the user may be required to take adequate measures to reduce interference.

Conformance to KC Standards

Observe the following precaution if you use NX-series Unit in Korea.

사용자안내문
이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

This device is conformity evaluated for business use.  
When used in home, there is a risk of radio interference.

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

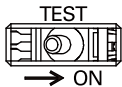
Current limitation	Type	Strip length	Conductor surface
4A max.	Solid/Strand	9mm	Plated
Exceeds 4A	Strand	9mm	Plated

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

Operation Modes

An RFID Unit has two operation modes, namely the “Normal mode” and the “Test mode”. These operation modes are switched with the help of the test switch provided on the front side of the Unit.



Status	Description
OFF	Normal mode status (factory default state)
ON	Test mode status

●Normal Mode

This is an operation mode in which communications with an RF Tag are performed according to the command instructions from a user program by exchanging data with the CPU Unit with the help of I/O refreshing. The RFID Unit can be switched to the normal mode by turning the test switch OFF.

●Test Mode

This is a mode in which the RFID Unit autonomously tests (measures the communications distance level) communications with an RF Tag.  
The RFID Unit can be switched to the test mode by turning the test switch ON.

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**Note:** Specifications are subject to change without notice.