NS-B-series Programmable Terminals Precautions for Compliance with UL Standards and CSA Standards (Only for UL type and CSA type)

INSTRUCTION MANUAL

Notice to Users of the NS-B-series 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. When using an attachment (NB☐☐☐-ATT0☐), refer to the INSTRUCTION SHEET (5845393-0) of the attachment.

There shall be a statement in the instructions that, if the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

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.

OMRON Corporation

© OMRON Corporation 2026-2027 All Rights Reserved.

3160266-6B

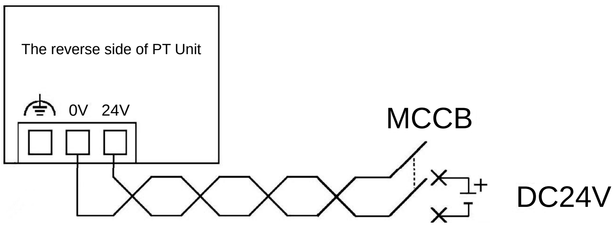
● Environment

Power Supply Voltage	DC: 24V (85% to 115%), SELV
Ambient Temperature	0 to 50 °C (Avoid freezing or condensation)
Humidity	10% to 90%RH
Altitude	2000m Max.
Installation Environment	Pollution Degree2 Overvoltage Category II
Indoor Use Only	

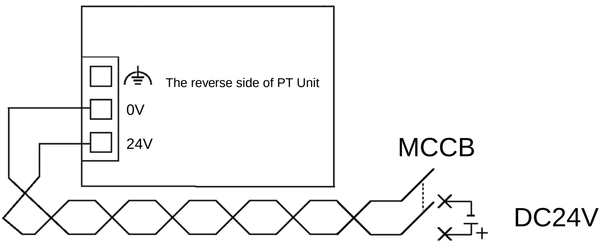
● Wiring for Unit power connector

Connect a 24V-DC isolated power supply to the power input terminals.

NB15W-TW01B-V1-S



NB10W/NB7W/NB5Q-TW01B-V1-S



The following table shows the specification for the power supply that can be connected.

Type	Rated voltage	Power supply capacity
NB15W-TW01B-V1-S	DC24V	14W
NB10W-TW01B-V1-S	DC24V	8W
NB7W-TW01B-V1-S	DC24V	7W
NB5Q-TW01B-V1-S	DC24V	7W

● Applicable wire size for Unit power source terminal block.

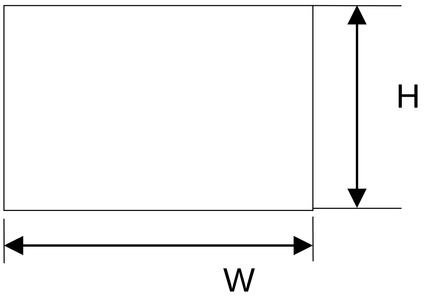
Type	Wire size	Strip length	Conductor surface
Solid Twisted-pair cable	AWG12-26	6.5mm	Plated

Tighten the terminals screw to a torque of 5 lb-in. Make sure the screws are properly tightened.

● Installing in a Control Panel

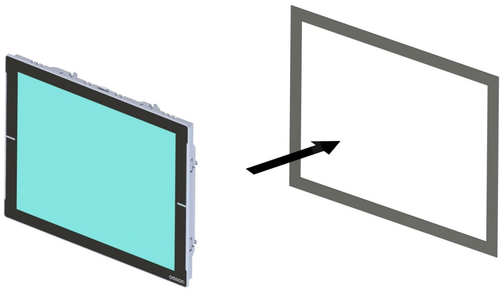
The NS-B-series are normally installed on a flat surface in an operation panel. Please refer to the following procedure.

1. Create an opening in the panel.Panel thickness: 1.6 to 4.8mm.



Type	Opening dimension (W*H mm)	Enclosure Type
NB15W-TW01B-V1-S	345.0*261.0	Type 1, indoor use only
NB10W-TW01B-V1-S	258.0*200.0	Type 1, indoor use only
NB7W-TW01B-V1-S	191.0*138.0	Type 1, indoor use only
NB5Q-TW01B-V1-S	172.4*131.0	Type 1, indoor use only

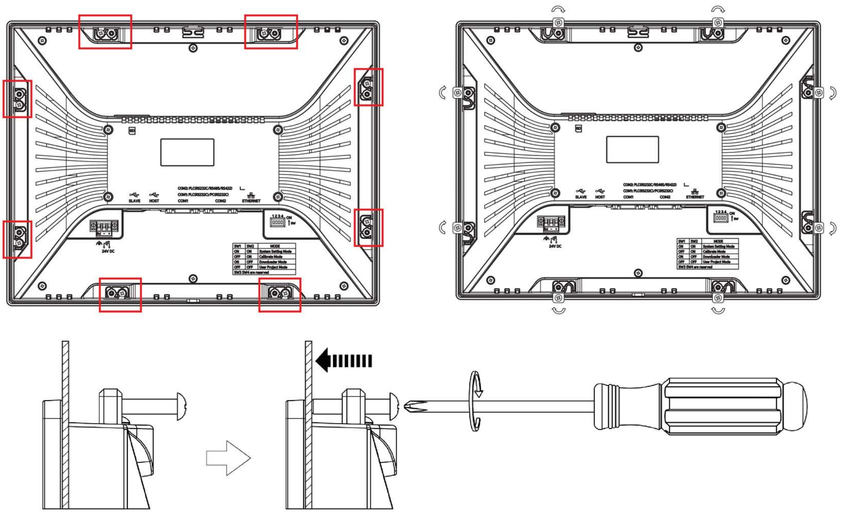
2. Install the NS-B-series from the front of the panel.



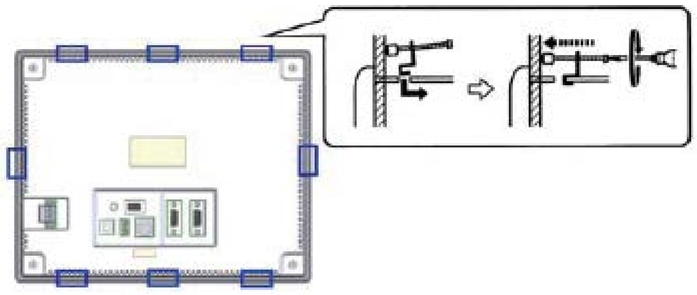
Direction of installing:horizontally or vertically
Angle of installing:180°

3. With the provided mounting brackets, secure the NS-B-series to the panel. Tighten them evenly to the specified torque. To maintain water-resistance performance , the tightening torque must be 0.5~0.6N·m.

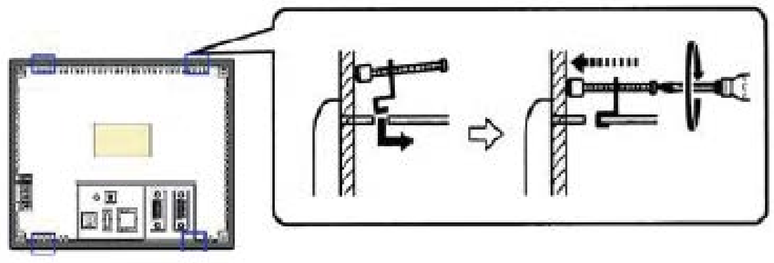
NB15W-TW01B-V1-S



NB10W-TW01B-V1-S



NB7W/NB5Q-TW01B-V1-S



- RS232C Cable for PT
  Use one of the recommended cables: XW2Z-200T or XW2Z-500T
- RS422A and RS485 Cable for PT
  1) Do not use ferrule terminals.
  2) Use the recommended cable: NB-RSEXT-2M.
  3) About the setup of terminal resistance, please refer to NS-B-series Programmable Terminal Hardware User's Manual (V130).
- These communication cables are Internal Wiring only. Segregate communication cables from live parts and all other wiring by minimum 6.4 mm (1/4 inch).

● Cable ⚠

Use Copper conductors only.
N'utilisez que des conducteurs en cuivre.

Conformance to EU Directives and UK legislation (Only for EU type)

This product is EMC-compliant when assembled in complete PLC system of the PLC series which type-name shows.
For earthing, selection of cable and any other conditions for EMC- compliance, please refer to the manual for installation.

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.

Compliance with EN Standard (Only for EN type)

- Surrounding Air Temperature : 0 – 50°C (Avoid freezing or condensation)
- Surrounding Air Humidity : Max. 90 %
- Indoor use only
- Altitude: Max. 2000 m
- Installation environment: Over Voltage Category II, Pollution Degree 2
- Terminal Temperature: 80°C

Conformance to KC Standards

Observe the following precaution if you use NS-B-series Programmable Terminals in Korea.

사 용 자 안 내 문
이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

This device obtained EMC registration for office use (Class A), and it is intended to be used in places other than homes.
Sellers and/or users need to take note of this.

OMRON Corporation (Manufacturer)
Shiokoji Horikawa, Shimogyo-ku, Kyoto, 600-8530 Japan
Tel: (81)75-344-7109 Fax: (81)75-344-7149

Regional Headquarters
OMRON EUROPE B.V.
Wegalaan 67-69,2132 JD Hoofddorp, The Netherlands
Tel: (31)2356-81-300 Fax: (31)2356-81-388

OMRON ASIA PACIFIC PTE. LTD.
438B Alexandra Road, #08-01/02 Alexandra Technopark, Singapore 119968
Tel: (65) 6835-3011 Fax: (65) 6835-3011

OMRON ELECTRONICS LLC
2895 Greenspoint Parkway, Suite 200 Hoffman Estates, IL 60169 U.S.A.
Tel: (1) 847-843-7900 Fax: (1) 847-843-7787

OMRON INDUSTRIAL AUTOMATION (CHINA) CO., LTD.
19th Floor, Tower 2, Shanghai Landmark Center, No. 88 North Sichuan Road,
Hongkou District, Shanghai, 200085, China
Tel: (86) 21-6023-0333

Note: Specifications subject to change without notice.