

<b>INSTALLATION BASE</b> (16 positions; Omron I/O connector)	MODEL <b>M2BS-16U2</b>
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**BEFORE USE ....**

Thank you for choosing us. Before use, please check contents of the package you received as outlined below. If you have any problems or questions with the product, please contact our sales office or representatives.

**■ PACKAGE INCLUDES:**

Installation base.....(1)

**■ MODEL NO.**

Confirm Model No. marking on the product to be exactly what you ordered.

**■ INSTRUCTION MANUAL**

This manual describes necessary points of caution when you use this product, including installation, connection and basic maintenance procedures.

**POINTS OF CAUTION**

**■ NONINCENDIVE APPROVAL OPTION**

- This equipment is suitable for use in Class I, Div. 2, Groups A, B, C and D or Non-Hazardous Locations only.
- **WARNING!** Before You Remove the Signal Conditioner from Its Base or Mount It, Turn Off the Power Supply and Input Signal for Safety.
- **WARNING!** – **Explosion Hazard** – Substitution of Components May Impair Suitability for Class I, Div. 2.
- **WARNING!** – **Explosion Hazard** – Do Not Disconnect Equipment Unless Power Has Been Switched Off or The Area is Known To Be Non-Hazardous.
- The equipment was evaluated for use in the ambient temperature and relative humidity as mentioned in 'ENVIRONMENT' section.
- The input and output wiring must be in accordance with Class I, Div. 2 wiring methods and in accordance with the authority having jurisdiction for use in these hazardous locations.

**■ CONFORMITY WITH EU DIRECTIVES, UK LEGISLATION OR UL**

- This equipment is suitable for Pollution Degree 2 and Installation Category II (transient voltage 2500V). Reinforced insulation (signal input or output to power input: 300V) and basic insulation (signal input to output: 300V) are maintained. Prior to installation, check that the insulation class of this unit satisfies the system requirements.
- Voltage at the field I/O terminals (except power input terminals) limited within 30V DC for UL.
- The equipment must be mounted inside a panel.
- Altitude up to 2000 meters.
- The equipment must be installed such that appropriate clearance and creepage distances are maintained to conform to CE/UKCA/UL requirements. Failure to observe these requirements may invalidate the CE/UKCA/UL conformance.

- The actual installation environments such as panel configurations, connected devices, connected wires, may affect the protection level of this unit when it is integrated in a panel system. The user may have to review the CE/UKCA requirements in regard to the whole system and employ additional protective measures\* to ensure the CE/UKCA conformity.
  - \* For example, installation of noise filters and clamp filters for the power source, input and output connected to the unit, etc.
- Install lightning surge protectors for those wires connected to remote locations.

**■ POWER INPUT RATING & OPERATIONAL RANGE**

- Refer to signal conditioner data sheet. Choose the same power input specification for all units.

**■ GENERAL PRECAUTIONS**

- Before you remove the unit from the base or mount it, turn off the power supply and input signal for safety.

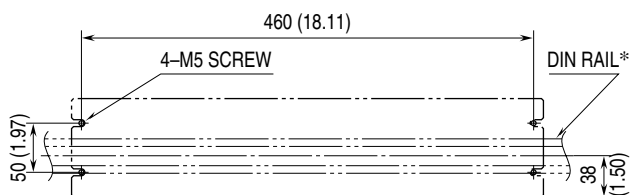
**■ ENVIRONMENT**

- Indoor use.
- When heavy dust or metal particles are present in the air, install the unit inside proper housing with sufficient ventilation.
- Do not install the unit where it is subjected to continuous vibration. Do not subject the unit to physical impact.
- Environmental temperature must be within -5 to +55°C (23 to 131°F) with relative humidity within 30 to 90% RH in order to ensure adequate life span and operation.
- Be sure that the ventilation slits are not covered with cables, etc.

**■ WIRING**

- Do not install cables close to noise sources (relay drive cable, high frequency line, etc.).
- Do not bind these cables together with those in which noises are present. Do not install them in the same duct.

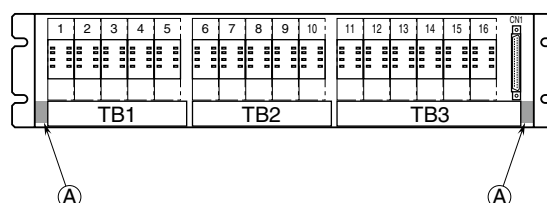
**MOUNTING REQUIREMENTS unit: mm (inch)**



\*Installed in horizontal direction only.

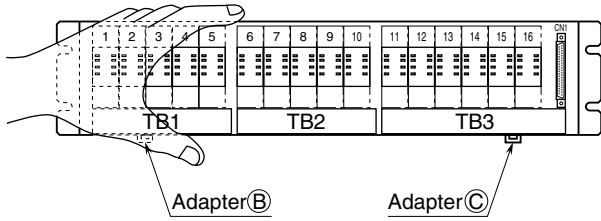
**■ HOW TO MOUNT THE M2BS-16 ON A DIN RAIL**

Push in the sections A on the base.



■ HOW TO REMOVE THE M2BS-16

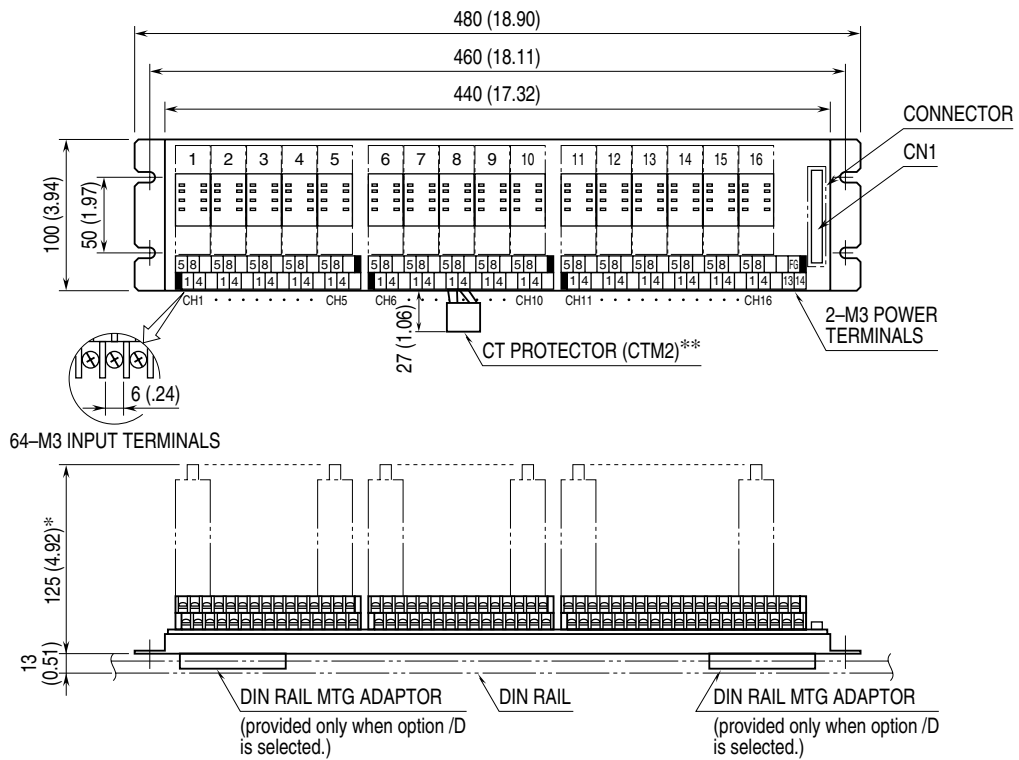
- 1) Open the terminal covers for TB1 and TB3.
- 2) Hold the base as in the figure below. Push down the DIN rail adaptors B and then C utilizing a minus screwdriver, and pull.



**TERMINAL CONNECTIONS**

Connect the unit as in the diagram below.

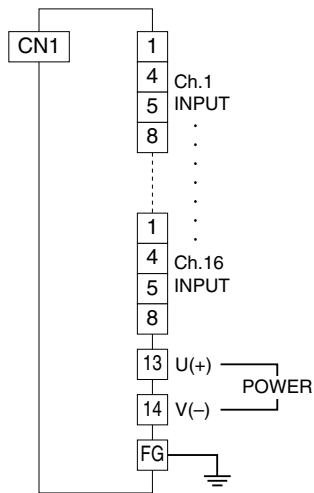
■ EXTERNAL DIMENSIONS unit: mm (inch)



\*165 (6.50) required for pneumatic tubing for M2PV.

\*\*Attached to M2CA and M2CE.

## CONNECTION DIAGRAM



## CONNECTOR PIN ASSIGNMENT

I/O Connector: Omron XG4A-3431

CN1: output

PIN NO.	ASSIGNMENT	PIN NO.	ASSIGNMENT
1	ch. 1 +	2	ch. 1 -
3	ch. 2 +	4	ch. 2 -
5	ch. 3 +	6	ch. 3 -
7	ch. 4 +	8	ch. 4 -
9	ch. 5 +	10	ch. 5 -
11	ch. 6 +	12	ch. 6 -
13	ch. 7 +	14	ch. 7 -
15	ch. 8 +	16	ch. 8 -
17	ch. 9 +	18	ch. 9 -
19	ch. 10 +	20	ch. 10 -
21	ch. 11 +	22	ch. 11 -
23	ch. 12 +	24	ch. 12 -
25	ch. 13 +	26	ch. 13 -
27	ch. 14 +	28	ch. 14 -
29	ch. 15 +	30	ch. 15 -
31	ch. 16 +	32	ch. 16 -
33, 34: Unused			

## WIRING INSTRUCTIONS

### SCREW TERMINAL

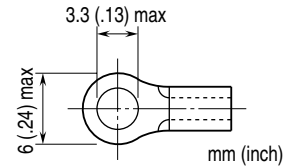
Torque: 0.8 N·m

### SOLDERLESS TERMINAL

Refer to the drawing below for recommended ring tongue terminal size. Spade tongue type is also applicable.

Applicable wire size: 0.25 to 1.65 mm<sup>2</sup> (AWG 22 to 16)

Recommended manufacturer: Japan Solderless Terminal MFG.Co.Ltd, Nichifu Co.,Ltd



## CHECKING

- 1) Terminal wiring: Check that all cables are correctly connected according to the connection diagrams of the installation base and the mounted signal conditioners.
- 2) Power input voltage
- 3) Installation & environments

## LIGHTNING SURGE PROTECTION

We offer a series of lightning surge protector for protection against induced lightning surges. Please contact us to choose appropriate models.