

<b>PULSE ISOLATOR</b>	MODEL <b>M5PP</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:**

Signal conditioner .....(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**

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

- The equipment must be mounted inside a panel.
- Insert a noise filter for the input and output connected to the unit. TDK Noise Filter Model ZCAT 3035-1330 or equivalent is recommended.
- 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 or UKCA requirements in regard to the whole system and employ additional protective measures\* to ensure the CE or UKCA conformity.

\* For example, installation of noise filters and clamp filters for the power source, input and output connected to the unit, etc.

**■ POWER INPUT RATING & OPERATIONAL RANGE**

- Locate the power input rating marked on the product and confirm its operational range as indicated below:  
24V DC rating: 24V ±10%, approx. 1.5W

**■ GENERAL PRECAUTIONS**

- Before you remove the unit 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 -20 to +65°C (-4 to 149°F) with relative humidity within 30 to 90% RH in order to ensure adequate life span and operation.

**■ WIRING**

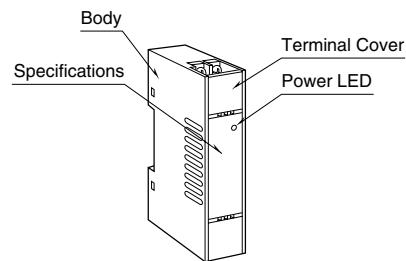
- Do not install cables close to noise sources (relay drive cable, high frequency line, etc.).

- Do not bind these cables together with those in which noises are present. Do not install them in the same duct.
- Install lightning surge protectors for those wires connected to remote locations. For 24V DC power supply line, choose a surge protector with its maximum surge voltage 40V or less between lines. Recommended model: MDP-D24.

**■ AND ....**

- The unit is designed to function as soon as power is supplied, however, a warm up for 10 minutes is required for satisfying complete performance described in the data sheet.

**COMPONENT IDENTIFICATION**

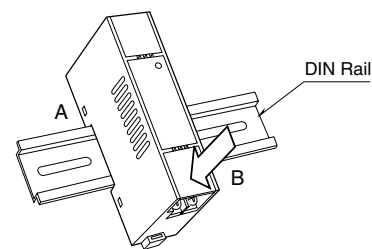


**INSTALLATION**

Set the unit so that its DIN rail adapter is at the bottom.

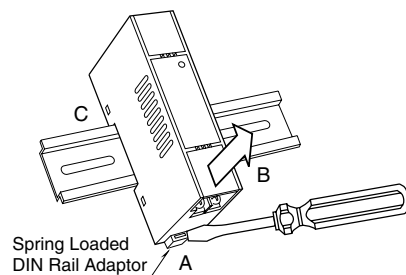
**■ MOUNTING THE UNIT ON A DIN RAIL**

- A) Hang the upper hook at the rear side of unit on the DIN rail.
- B) Push in the lower in keeping pressing the unit to the DIN rail.



**■ REMOVING THE UNIT**

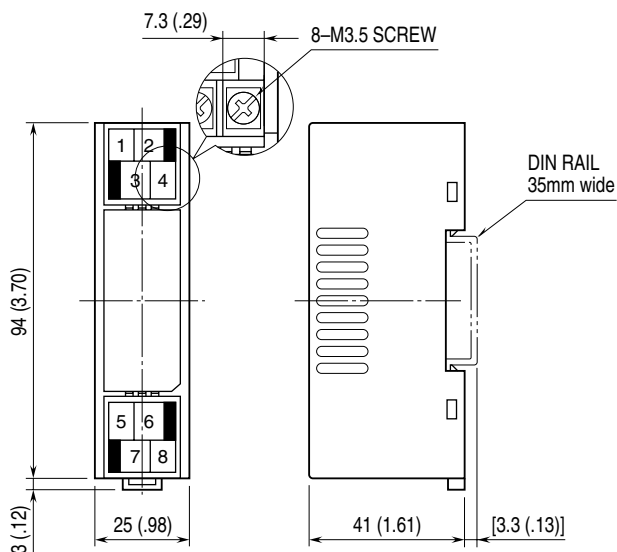
- A) Push down the DIN rail adaptor using a minus screwdriver.
- B) Pull out the lower part of the unit.
- C) Remove the upper part from the DIN rail.



## TERMINAL CONNECTIONS

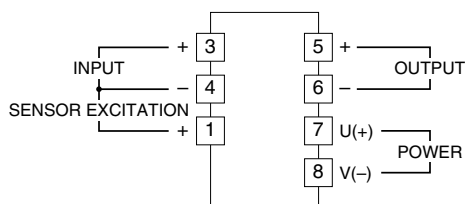
Connect the unit as in the diagram below or refer to the connection diagram on the front of the unit.

### EXTERNAL DIMENSIONS unit: mm (inch)



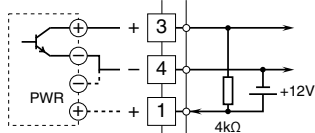
• When mounting, no extra space is needed between units.

### CONNECTION DIAGRAM

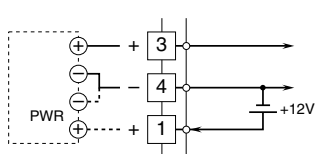


#### Input Connection Examples

##### Mechanical Contact, Open Collector or Clamp-on Pulse Sensor CLSP

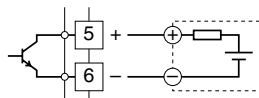


##### Voltage Pulse

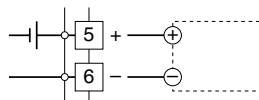


#### Output Connection Examples

##### Open Collector



##### Voltage Pulse



## CHECKING

- 1) Terminal wiring: Check that all cables are correctly connected according to the connection diagram.
- 2) Power input voltage: Check voltage across the terminal 7 – 8 with a multimeter.
- 3) Input: Check that the input frequency is 30 Hz or less for relay contact, 10 kHz or less for other types of input.  
Check also that the input pulse is of 10 msec. or wider for relay contact, 10 μsec. or wider for other types of input.
- 4) Output: Check that the load resistance meets the described specifications as shown below.

OUTPUT	LOAD REQUIREMENTS
Open collector	50 V DC @ 100 mA max.
Voltage pulse	1.0 kΩ min. for 5 V
	2.4 kΩ min. for 12 V
	4.8 kΩ min. for 24 V

## LIGHTNING SURGE PROTECTION

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

## WIRING INSTRUCTIONS

### SCREW TERMINAL

Torque: 0.8 N·m