

**BEFORE USE ....**

Thank you for choosing M-System. 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 M-System's Sales Office or representatives.

**PACKAGE INCLUDES:**

- Signal conditioner..... (1)
- Shortcircuit bar ..... (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 EC DIRECTIVES**

- Functional insulation is maintained between the input and output.
- The equipment must be mounted inside a panel.
- Insert noise filters for the input and output connected to the unit. Densei-Lambda Model MZS-1206-33, TDK Model ZCAT3035-1330 or equivalent is recommended.
- Be sure to ground the shield wire of PROFIBUS-PA cable.
- 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 requirements in regard to the whole system and employ additional protective measures to ensure the CE conformity.

**SAFETY PRECAUTION**

- 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 -40 to +85°C (-40 to +185°F) with relative humidity within 0 to 95% RH in order to ensure adequate life span and operation.
- Be sure that the ventilation slits are not covered with cables, etc.

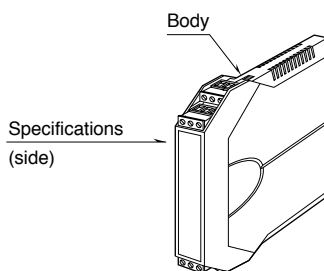
**WIRING**

- Do not install cables (input and output) 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.

**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.

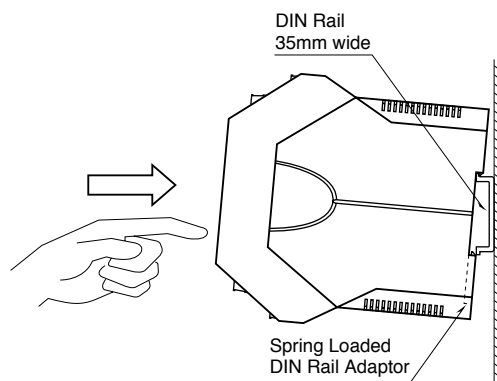
**COMPONENT IDENTIFICATION**



**INSTALLATION**

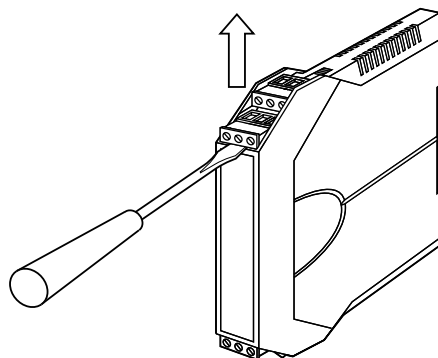
**DIN RAIL MOUNTING**

Set the unit so that its DIN rail adaptor is at the bottom. Position the upper hook at the rear side of the unit on the DIN rail and push in the lower. When removing the unit, push down the DIN rail adaptor utilizing a minus screwdriver and pull.



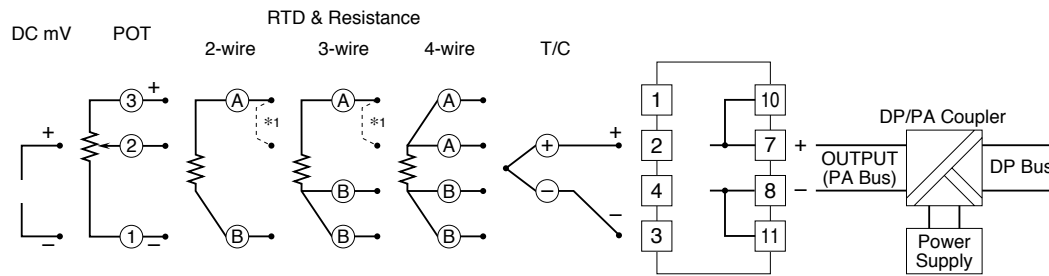
**HOW TO SEPARATE THE TERMINAL BLOCKS**

When you need to separate the terminal blocks from the transmitter body for wiring, insert a minus driver between the terminal block and the housing body, pull up the driver and pull out the terminal block.



## TERMINAL CONNECTIONS

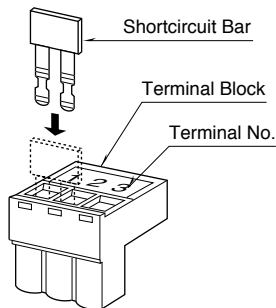
Connect the unit as in the diagram below.



\*1. Short across the terminals 1 & 2 for a resistance or RTD input with 2- or 3-wire connection.

### RTD/RESISTANCE SHORTCIRCUIT BAR

For a RTD/resistance input with 2- or 3-wire connection, short across the terminals 1 and 2 with the shortcircuit bar included in the product package. Remove it for other inputs/connection.



### WIRING INSTRUCTIONS

#### Applicable wire size

Solid: 0.2 to 2.5 mm<sup>2</sup> (0.55 to 1.75 dia.)

Stranded: 0.2 to 2.5 mm<sup>2</sup>

Tinning wire ends may cause contact failure and therefore is not recommended.

Ferruled: 0.2 to 1.5 mm<sup>2</sup> (0.55 to 1.35 dia.)

The following Phoenix Contact terminals are recommended:

AI 0.25-8YE 0.2 to 0.25 mm<sup>2</sup>

AI 0.34-8TQ 0.25 to 0.34 mm<sup>2</sup>

AI 0.5-8WH 0.34 to 0.5 mm<sup>2</sup>

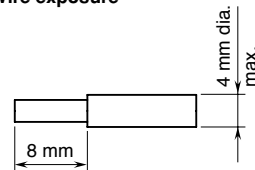
AI 0.75-8GY 0.5 to 0.75 mm<sup>2</sup>

AI 1.0-8RD 0.75 to 1.0 mm<sup>2</sup>

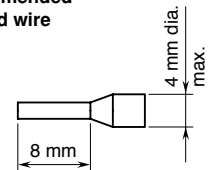
AI 1.5-8BK 1.0 to 1.5 mm<sup>2</sup>

#### Expose wire conductors by 8 mm (0.31").

#### Wire exposure



#### Recommended ferruled wire



## CHECKING

- 1) Terminal wiring: Check that all cables are correctly connected according to the connection diagram.
- 2) Input type and range: Check that the input type and range is correctly programmed.
- 3) Input signal: Confirm that the input signal is in normal status.
- 4) Output signal: Confirm that the output signal is in normal status. Check that the PROFIBUS-PA communication is established.

## ADJUSTMENT PROCEDURE

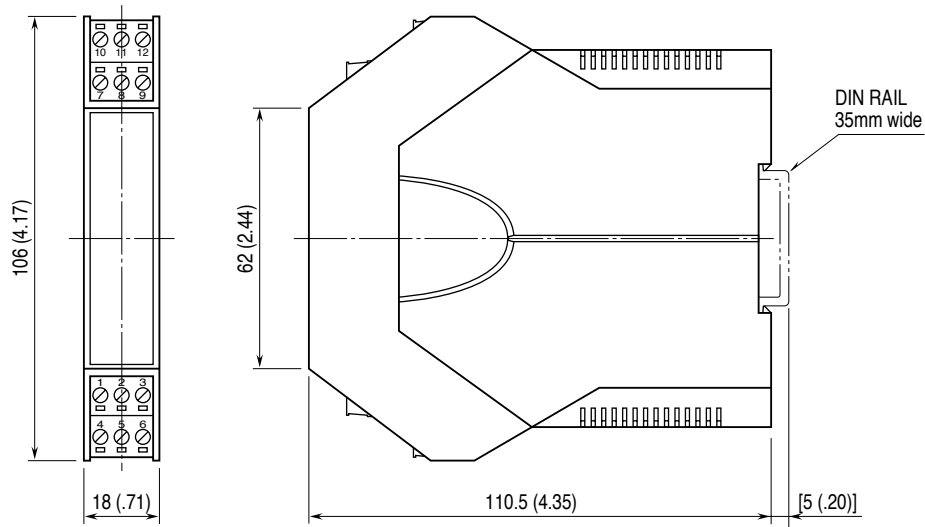
### SIEMENS SIMATIC PDM

EDDL file that enables the B3PU to be identified, programmed and calibrated by Siemens Simatic PDM program is available.

For detailed information, refer to the B3PU Configuration Manual (EM-7503-B).

The EDDL file and the B3PU Configuration Manual are downloadable at M-System's web site:

<http://www.m-system.co.jp/>

**EXTERNAL DIMENSIONS** mm (inch)

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

**M-SYSTEM WARRANTY**

M-System warrants such new M-System product which it manufactures to be free from defects in materials and workmanship during the 36-month period following the date that such product was originally purchased if such product has been used under normal operating conditions and properly maintained, M-System's sole liability, and purchaser's exclusive remedies, under this warranty are, at M-System's option, the repair, replacement or refund of the purchase price of any M-System product which is defective under the terms of this warranty. To submit a claim under this warranty, the purchaser must return, at its expense, the defective M-System product to the below address together with a copy of its original sales invoice.

THIS IS THE ONLY WARRANTY APPLICABLE TO M-SYSTEM PRODUCT AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. M-SYSTEM SHALL HAVE NO LIABILITY FOR CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES OF ANY KIND WHATSOEVER.

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