

**DISCRETE INPUT MODULE**

(Di 16 points; with external excitation supply, connector type)

**MODEL R3Y-DA16A****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:**

Discrete input module.....(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**

- The equipment must be mounted inside the instrument panel of a metal enclosure.
- 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.

**■ HOT SWAPPABLE MODULES**

- Replacing the module does not affect other modules on the same base. Thus, the module can be replaced while the power is ON. However, replacing multiple modules at once may greatly change live voltage levels. We highly recommend to replace them one by one.

**■ GENERAL PRECAUTIONS**

- DO NOT set the switches on the module while the power is supplied. The switches are used only for maintenance without the power.

**■ 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 -10 to +55°C (14 to 131°F) with relative humidity within 30 to 90% RH in order to ensure adequate life span and operation.

**■ WIRING**

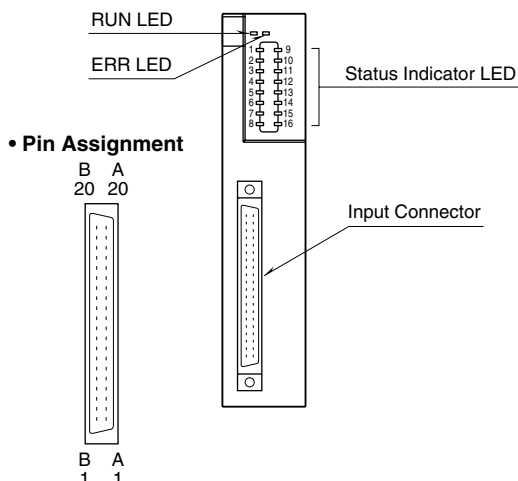
- Do not install cables close to noise sources (relay drive cable, high frequency line, etc.).
- Do not bind these cables together with those in which noises are present. Do not install them in the same duct.

**INSTALLATION**

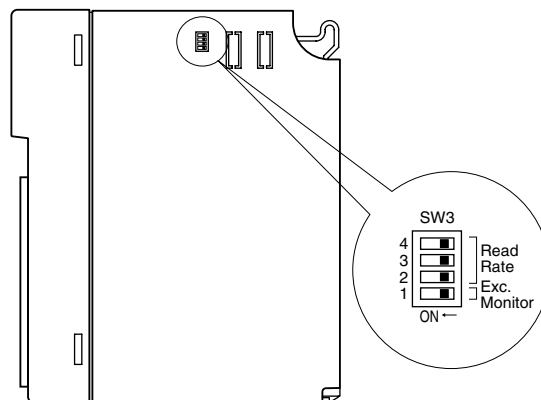
Use the Installation Base (model: R3-BSx).

## COMPONENT IDENTIFICATION

### FRONT VIEW



### SIDE VIEW



### STATUS INDICATOR LED

**RUN indicator:** Bi-color (red/green) LED;  
 Red when the bus A operates normally;  
 Green when the bus B operates normally;  
 Amber when both buses operate normally.

**ERR indicator:** Bi-color (red/green) LED;  
 Red with excitation abnormality;  
 Green in normal operating conditions.

**Input status indicator:** Red LED; turns on with the input ON.

### SIDE DIP SW

(\*) Factory setting

#### Excitation Monitor: SW3-1

| SW    | EXCITATION MONITOR |         |
|-------|--------------------|---------|
|       | WITH (*)           | WITHOUT |
| SW3-1 | OFF                | ON      |

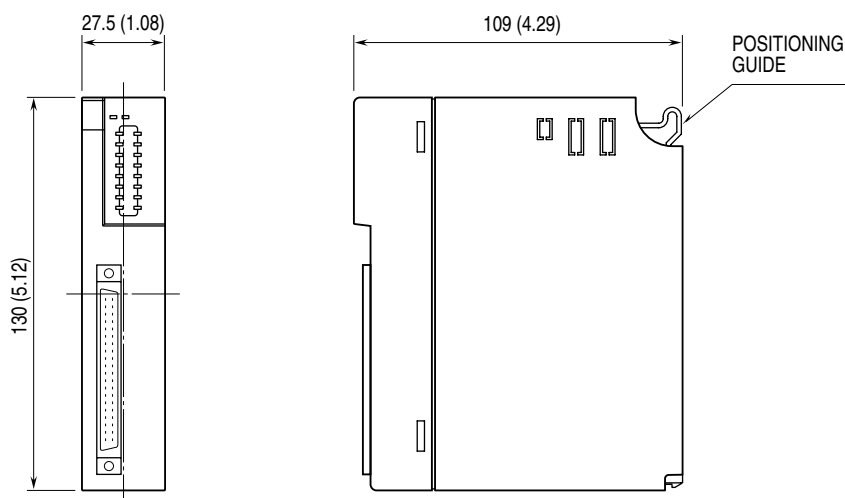
#### Read Rate: SW3-2, 3-3, 3-4

| SW    | READ RATE ( $\leq$ msec.) |     |     |     |     |     |     |     |
|-------|---------------------------|-----|-----|-----|-----|-----|-----|-----|
|       | 10 (*)                    | 1   | 5   | 20  | 50  | 70  | 100 | 200 |
| SW3-2 | OFF                       | ON  | OFF | ON  | OFF | ON  | OFF | ON  |
| SW3-3 | OFF                       | OFF | ON  | ON  | OFF | OFF | ON  | ON  |
| SW3-4 | OFF                       | OFF | OFF | OFF | ON  | ON  | ON  | ON  |

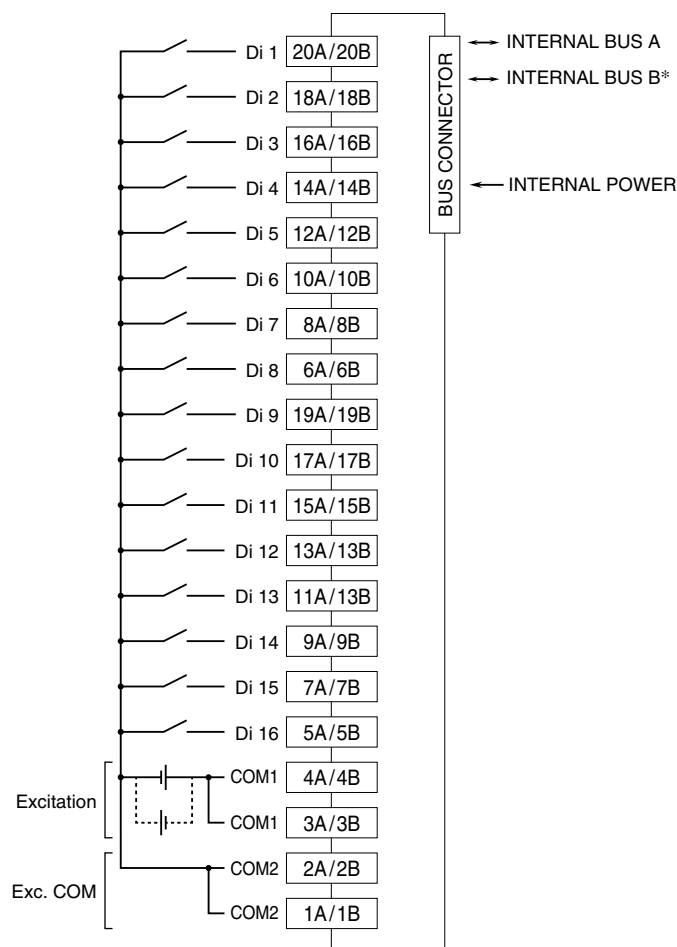
## TERMINAL CONNECTIONS

Connect the unit as in the diagram below.

### EXTERNAL DIMENSIONS unit: mm (inch)

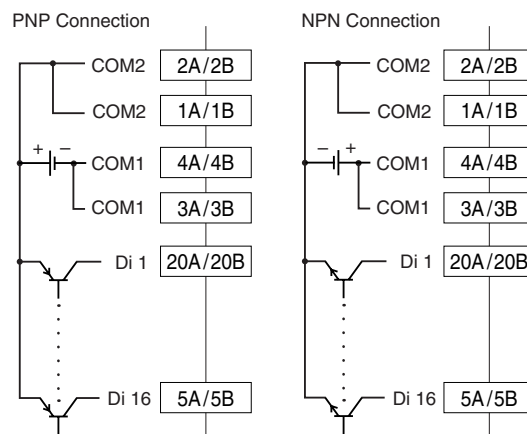


## CONNECTION DIAGRAM



\*For dual redundant communication.

## Input Connection Examples



## INPUT CONNECTOR (40-pin)

| PIN NO. | ASSIGNMENT  | PIN NO. | ASSIGNMENT  |
|---------|-------------|---------|-------------|
| 1A      | 0V (24V DC) | 1B      | 0V (24V DC) |
| 2A      | 0V (24V DC) | 2B      | 0V (24V DC) |
| 3A      | 24V DC (0V) | 3B      | 24V DC (0V) |
| 4A      | 24V DC (0V) | 4B      | 24V DC (0V) |
| 5A      | Di 16       | 5B      | Di 16       |
| 6A      | Di 8        | 6B      | Di 8        |
| 7A      | Di 15       | 7B      | Di 15       |
| 8A      | Di 7        | 8B      | Di 7        |
| 9A      | Di 14       | 9B      | Di 14       |
| 10A     | Di 6        | 10B     | Di 6        |
| 11A     | Di 13       | 11B     | Di 13       |
| 12A     | Di 5        | 12B     | Di 5        |
| 13A     | Di 12       | 13B     | Di 12       |
| 14A     | Di 4        | 14B     | Di 4        |
| 15A     | Di 11       | 15B     | Di 11       |
| 16A     | Di 3        | 16B     | Di 3        |
| 17A     | Di 10       | 17B     | Di 10       |
| 18A     | Di 2        | 18B     | Di 2        |
| 19A     | Di 9        | 19B     | Di 9        |
| 20A     | Di 1        | 20B     | Di 1        |

## FUNCTIONS

### Excitation Monitor Active

The input is held at the last status when the loss of excitation is detected. The excitation must be connected across 4A/4B (or 3A/3B) and 2A/2B (or 1A/1B).

### Excitation Monitor Inactive

All input signals are turned off when the loss of excitation is detected.