DISCRETE OUTPUT MODULE
(relay contact output, 16 points, connector type)

MODEL **R3Y-DC16**

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 output 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.
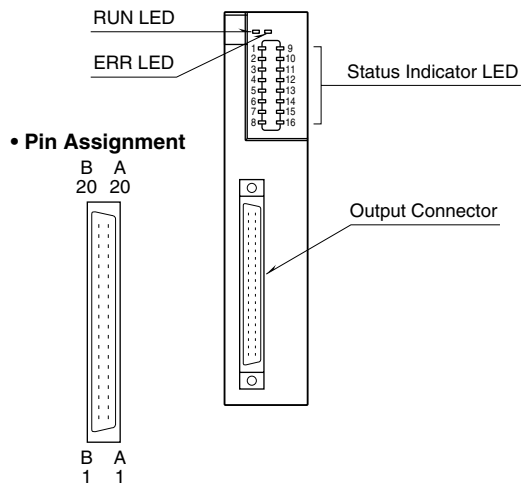
■ WIRING

• 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.
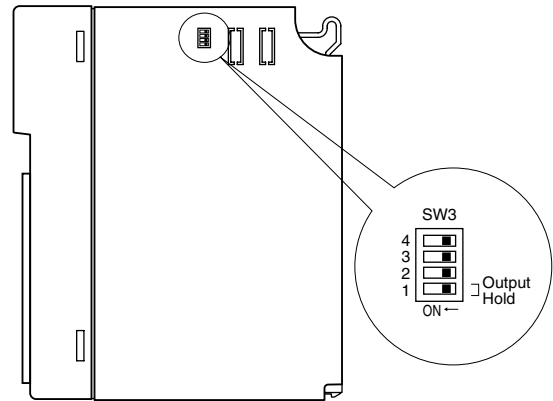
INSTALLATION

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

COMPONENT IDENTIFICATION

■ **FRONT VIEW**

RUN LED

ERR LED

Status Indicator LED

• **Pin Assignment**

B A
20 20

Output Connector

B A
1 1

■ **SIDE VIEW**

SW3

4
3
2
1
ON ←

Output Hold

■ **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: Green LED turns on in normal operating conditions.
Output status indicator: Red LED; turns on with the output ON.

■ **SIDE DIP SW**

• **Output Hold: SW3-1**

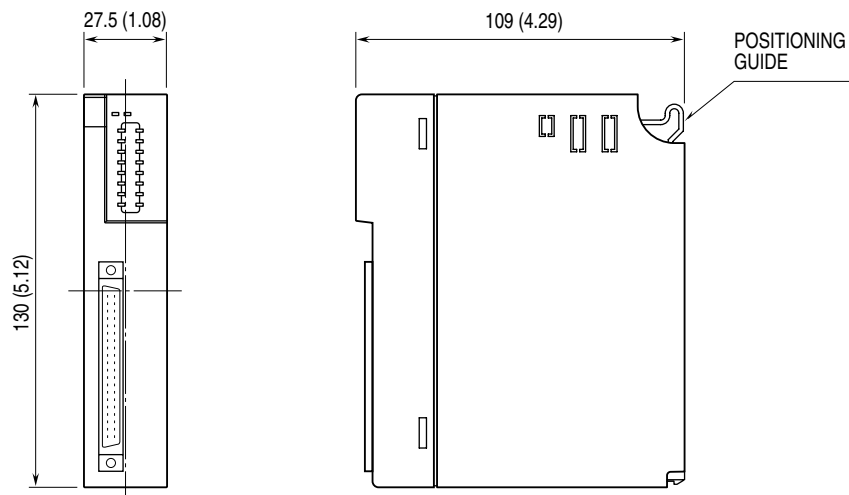| SW	OUTPUT HOLD	
	HOLD (*)	OFF
SW3-1	OFF	ON

(*) Factory setting
Note: Be sure to set unused SW3-2 through 3-4 to OFF.

TERMINAL CONNECTIONS

Connect the unit as in the diagram below.

■ **EXTERNAL DIMENSIONS unit: mm (inch)**

27.5 (1.08)

130 (5.12)

109 (4.29)

POSITIONING GUIDE

■ **CONNECTION DIAGRAM**

```
INTERNAL BUS A  ←→  ┌──────────┐  ─1─  ┌─────────┐
                    │          │       │ 20A/20B │ Do 1
*INTERNAL BUS B ←→  │          │  ─2─  │ 18A/18B │ Do 2
                    │          │  ─3─  │ 16A/16B │ Do 3
                    │   BUS    │  ─4─  │ 14A/14B │ Do 4
INTERNAL POWER  →   │CONNECTOR │  ─5─  │ 12A/12B │ Do 5
                    │          │  ─6─  │ 10A/10B │ Do 6
                    │          │  ─7─  │ 8A/8B   │ Do 7
                    │          │  ─8─  │ 6A/6B   │ Do 8
                    │          │  ─9─  │ 19A/19B │ Do 9
                    │          │ ─10─  │ 17A/17B │ Do 10
                    │          │ ─11─  │ 15A/15B │ Do 11
                    │          │ ─12─  │ 13A/13B │ Do 12
                    │          │ ─13─  │ 11A/11B │ Do 13
                    │          │ ─14─  │ 9A/9B   │ Do 14
                    │          │ ─15─  │ 7A/7B   │ Do 15
                    │          │ ─16─  │ 5A/5B   │ Do 16
                    │          │       │ 4A/4B   │ COM
                    │          │       │ 3A/3B   │ COM
                    │          │       │ 2A/2B   │ COM
                    └──────────┘       │ 1A/1B   │ COM
```
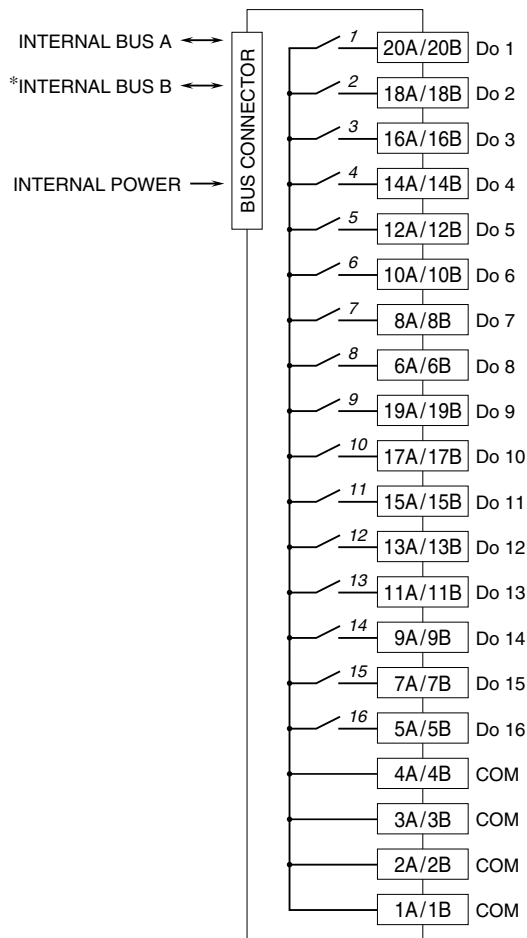
Numbers in italic indicate LED No.s assigned to the front panel LEDs.
＊For dual redundant communication.

OUTPUT CONNECTOR (40-pin)

PIN NO.	ASSIGNMENT	PIN NO.	ASSIGNMENT
1A	COM	1B	COM
2A	COM	2B	COM
3A	COM	3B	COM
4A	COM	4B	COM
5A	Do 16	5B	Do 16
6A	Do 8	6B	Do 8
7A	Do 15	7B	Do 15
8A	Do 7	8B	Do 7
9A	Do 14	9B	Do 14
10A	Do 6	10B	Do 6
11A	Do 13	11B	Do 13
12A	Do 5	12B	Do 5
13A	Do 12	13B	Do 12
14A	Do 4	14B	Do 4
15A	Do 11	15B	Do 11
16A	Do 3	16B	Do 3
17A	Do 10	17B	Do 10
18A	Do 2	18B	Do 2
19A	Do 9	19B	Do 9
20A	Do 1	20B	Do 1

FUNCTIONS

■ **OUTPUT HOLD or OUTPUT OFF**

In normal conditions, the module outputs the signal from the preferred bus A.

When an error is detected, the output is switched to the data from the bus B.

• **Output Hold**

  If both are in error, the module holds the signal and stands by until one of the communications recovers.

• **Output OFF**

  If both are in error, the module outputs OFF signals and stands by until one of the communications recovers.

  At the startup, it outputs OFF until the communication is established and normal data is received.