DISCRETE OUTPUT MODULE
(PNP transistor output, 16 points)

MODEL **R30YN16C**

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 and 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 CE conformity.

■ GENERAL PRECAUTIONS

• Before you remove the terminal block or mount it, turn off output signals for safety.

■ HOT INSERTION/REMOVAL OF MODULES

• It is possible to replace the module with the power supplied, provided that modules are of the same model number and that the same Installation Base slot is used.
• Turn off output signals before replacing the module for safety. Note that replacing multiple modules at once may greatly change line voltage levels. We recommend that you replace them one by one.

■ 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 10 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.
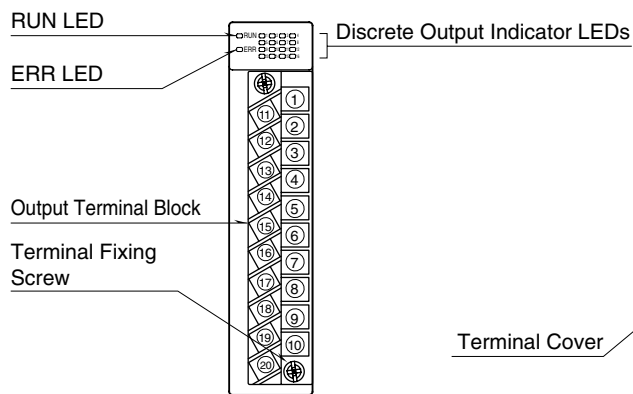• Be sure to attach the terminal cover for safety.

■ 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.
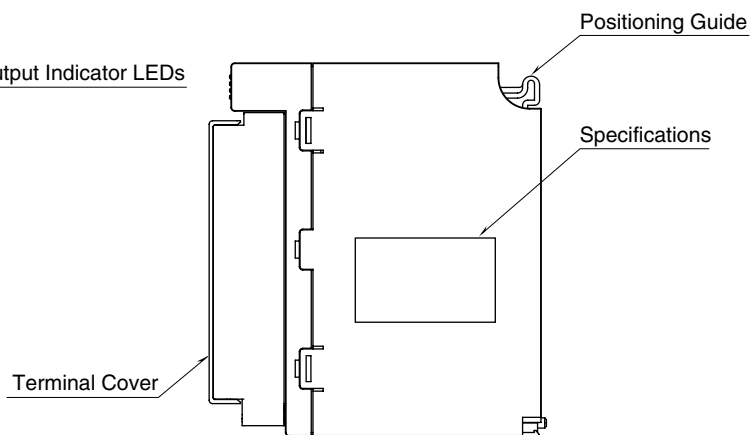
■ OUTPUT AT THE LOSS OF COMMUNICATION

• Holds the output of the last normally received data.
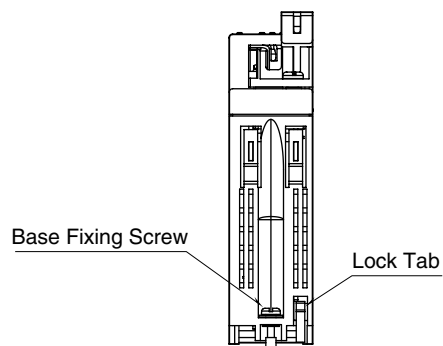• "Reset to 0" setting is not available.

COMPONENT IDENTIFICATION

■ FRONT VIEW

RUN LED

ERR LED

Discrete Output Indicator LEDs

Output Terminal Block

Terminal Fixing Screw

■ SIDE VIEW

Positioning Guide

Specifications

Terminal Cover

■ BOTTOM VIEW

Base Fixing Screw

Lock Tab

■ STATUS INDICATOR LED

ID	COLOR	FUNCTION
RUN	Green	ON in normal host communication OFF in host communication error
ERR	Red	OFF when internal bus operates normally ON when an internal bus error occurs
Discrete Output	Green	ON when discrete output is ON OFF when discrete output is OFF

■ TERMINAL ASSIGNMENT

| NO.	ID	FUNCTION	NO.	ID	FUNCTION
1	Y1	Output 1	11	Y9	Output 9
2	Y2	Output 2	12	Y10	Output 10
3	Y3	Output 3	13	Y11	Output 11
4	Y4	Output 4	14	Y12	Output 12
5	Y5	Output 5	15	Y13	Output 13
6	Y6	Output 6	16	Y14	Output 14
7	Y7	Output 7	17	Y15	Output 15
8	Y8	Output 8	18	Y16	Output 16
9	V +	24 V DC	19	V +	24 V DC
10	V −	0 V	20	V −	0 V

INSTALLATION

■ INSTALLATION TO THE BASE

Use the Installation Base (model: R30BS).

The I/O slots are numbered in the ascending order starting from the one on the immediate right side of the network module (slot 1, slot 2...).

A code indicating the I/O slot number is assigned to each I/O slot and I/O data is allocated in the order of this code. When an I/O slot is vacant, blank data is sent or received to/from the PLC, etc.
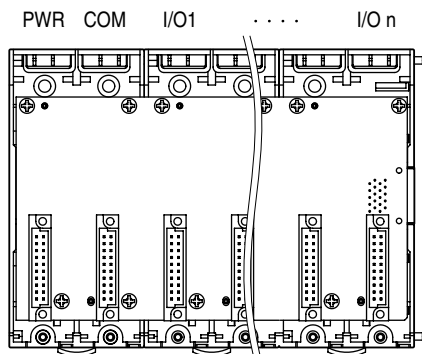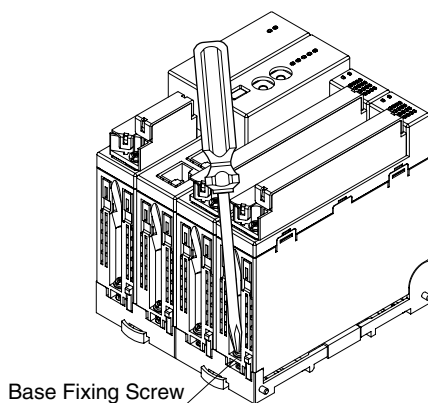

■ HOW TO MOUNT THE MODULE

1) Engage the positioning guide of the module with the Installation Base.

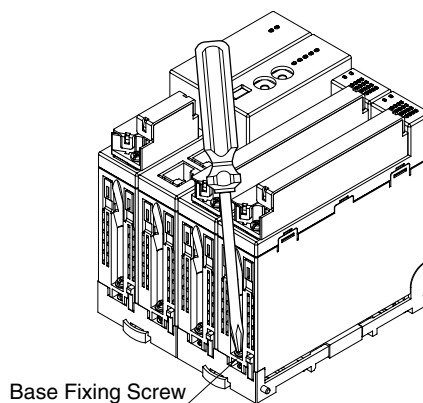2) Pivot the module on the positioning guide and press it down until the lock tab sits into place.

Positioning Guide
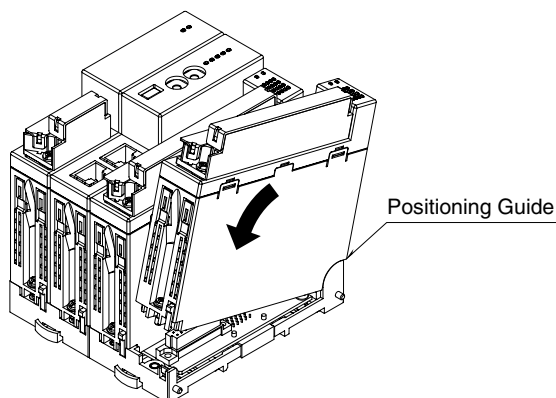
3) Tighten the base fixing screw using a screwdriver (stem length: 70 mm/2.76" or more) (torque 0.5 N·m).
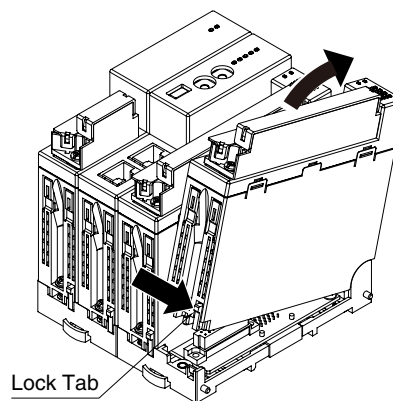

Base Fixing Screw

■ HOW TO REMOVE THE MODULE

1) Loosen the base fixing screw using a screwdriver (stem length: 70 mm/2.76" or more).
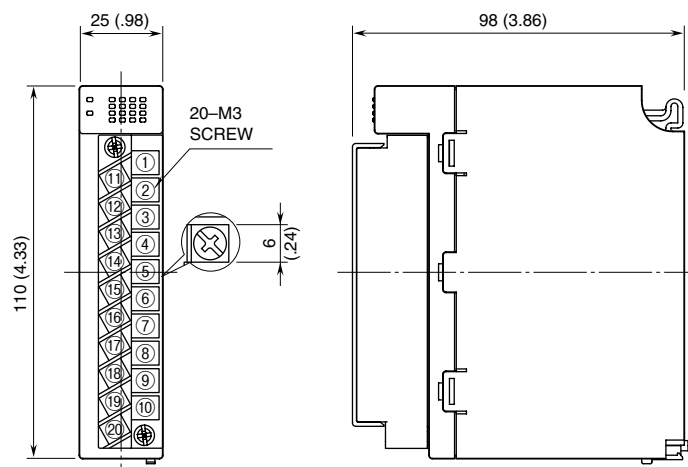

Base Fixing Screw

2) While pressing the projection on the lock tab, push the module upward.

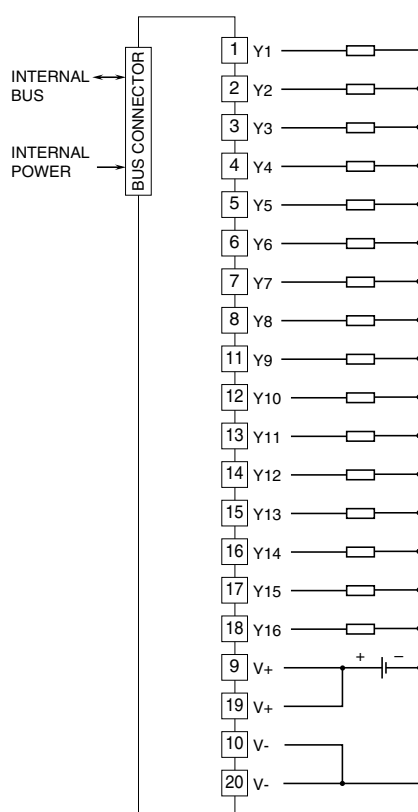3) Detach the positioning guide of the module from the Installation Base.

Lock Tab

TERMINAL CONNECTIONS
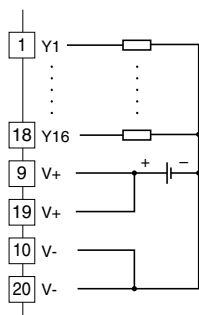
Connect the unit as in the diagram below.

■ EXTERNAL DIMENSIONS unit: mm (inch)

25 (.98)

20–M3
SCREW

110 (4.33)

6
(.24)

98 (3.86)

■ CONNECTION DIAGRAM

INTERNAL BUS

INTERNAL POWER

BUS CONNECTOR

1	Y1
2	Y2
3	Y3
4	Y4
5	Y5
6	Y6
7	Y7
8	Y8
11	Y9
12	Y10
13	Y11
14	Y12
15	Y13
16	Y14
17	Y15
18	Y16
9	V+
19	V+
10	V-
20	V-

■ Output Connection Example

1	Y1
18	Y16
9	V+
19	V+
10	V-
20	V-

WIRING INSTRUCTIONS

■ TIGHTENING TORQUE
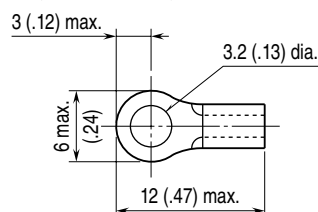
Separable screw terminal wiring screw: 0.5 N·m
Separable screw terminal fixing screw: 0.5 N·m

■ SOLDERLESS TERMINAL unit: mm (inch)

Refer to the drawing below for recommended ring tongue terminal size. Spade tongue type is also applicable. Solderless terminals with insulation sleeve do not fit.
Applicable wire size: 0.25 to 0.75 mm²
Recommended manufacturer: Japan Solderless Terminal MFG. Co., Ltd., Nichifu Co., Ltd.

3 (.12) max.

3.2 (.13) dia.

6 max.
(.24)

12 (.47) max.

■ HOW TO REMOVE SEPARABLE SCREW TERMINAL

The terminal block is separable in two pieces. Evenly loosen two screws on top and bottom of the terminal block to separate.