*INSTRUCTION MANUAL*

# NPN TRANSISTOR OUTPUT EXTENSION MODULE, 16 points (LonWorks)

MODEL **R7L-EC16A**

## 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:

Transistor output extension 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

### ■ POWER INPUT RATING & OPERATIONAL RANGE

- Locate the power input rating marked on the product and confirm its operational range as indicated below:
  24V AC rating: 24V ±10%, 50/60 Hz, approx. 30mA
  24V DC rating: 24V ±10%, approx. 20mA

### ■ GENERAL PRECAUTIONS

- Before you remove the unit or mount it, turn off the power supply and output 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 -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.

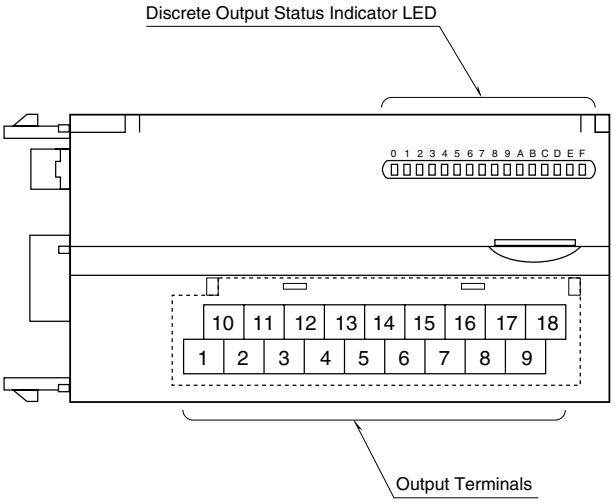
### ■ FUNCTIONAL BLOCK SETTING

- Functional blocks regarding the extension module are set by the basic module. Refer to the instruction manual for the basic module for detailed information.

### ■ 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




### ■ DISCRETE OUTPUT STATUS INDICATOR LED

Used to show discrete output signal status.

ON : LED ON
OFF : LED OFF

### ■ OUTPUT TERMINAL ASSIGNMENT

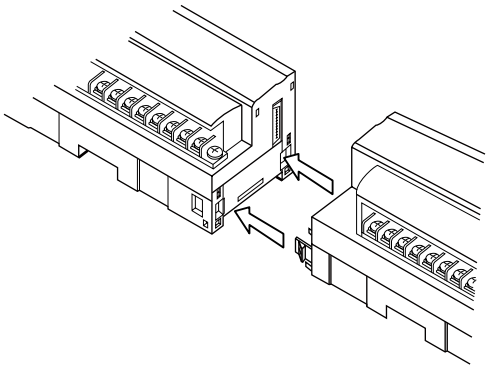
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10 +24V | 11 Y1 | 12 Y3 | 13 Y5 | 14 Y7 | 15 Y9 | 16 YB | 17 YD | 18 YF |
| 1 0V | 2 Y0 | 3 Y2 | 4 Y4 | 5 Y6 | 6 Y8 | 7 YA | 8 YC | 9 YE |

| NO. | ID | FUNCTION | NO. | ID | FUNCTION |
|---|---|---|---|---|---|
| 1 | 0V | 0V (common) | 10 | +24V | 24V DC |
| 2 | Y0 | Output 0 | 11 | Y1 | Output 1 |
| 3 | Y2 | Output 2 | 12 | Y3 | Output 3 |
| 4 | Y4 | Output 4 | 13 | Y5 | Output 5 |
| 5 | Y6 | Output 6 | 14 | Y7 | Output 7 |
| 6 | Y8 | Output 8 | 15 | Y9 | Output 9 |
| 7 | YA | Output 10 | 16 | YB | Output 11 |
| 8 | YC | Output 12 | 17 | YD | Output 13 |
| 9 | YE | Output 14 | 18 | YF | Output 15 |

## CONNECTING THE EXTENSION MODULE

1) Remove the extension connector cover located at the side of the basic module.

2) Connect the extension module.

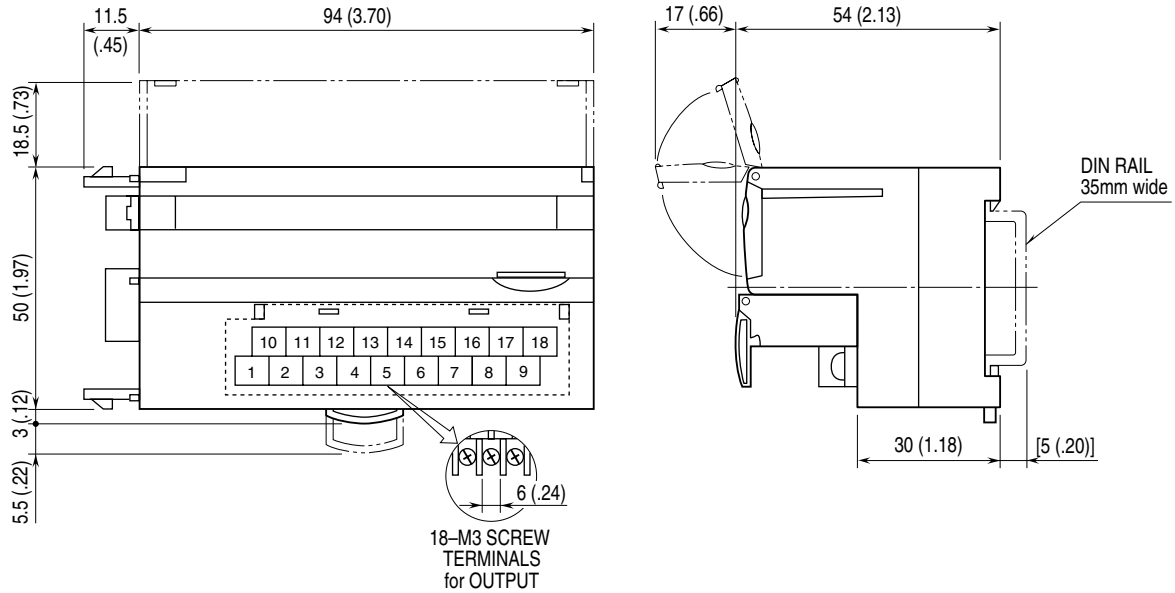


3) Mount the combined module on a DIN rail.

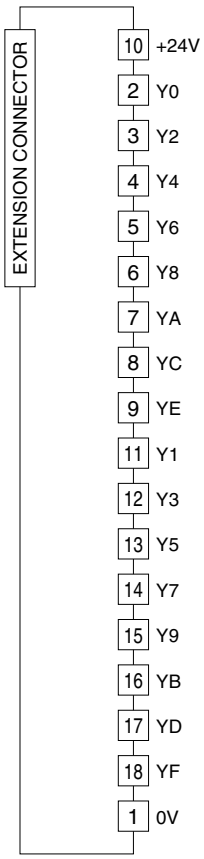
## TERMINAL CONNECTIONS

Connect the unit as in the diagram below.

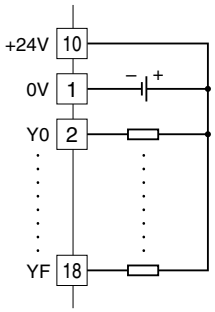
### ■ EXTERNAL DIMENSIONS unit: mm (inch)



## ■ CONNECTION DIAGRAM




### ■ Output Connection Example




# WIRING INSTRUCTIONS

### ■ SCREW TERMINAL

Torque: 0.5 N·m

### ■ SOLDERLESS TERMINAL

Refer to the drawing below for recommended ring tongue terminal size. Spade tongue type is also applicable.
Applicable wire size: 0.25 to 1.65 mm² (AWG 22 to 16)
Recommended manufacturer: Japan Solderless Terminal MFG. Co., Ltd, Nichifu Co., Ltd