## DISCRETE INPUT EXTENSION MODULE, 16 points
### (LONWORKS)

MODEL **R7L-EA16**

## 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 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 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 -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
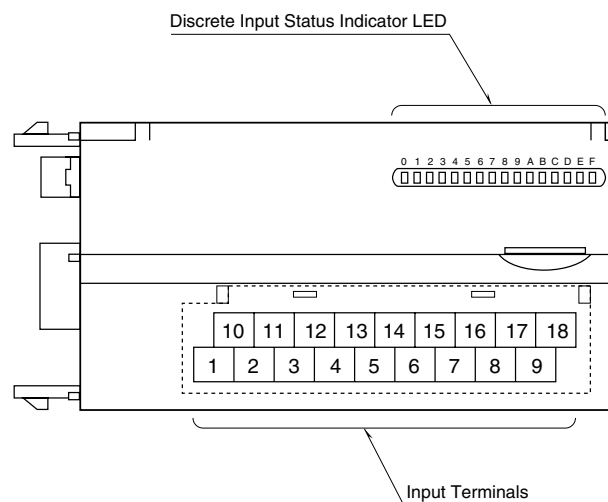


### ■ DISCRETE INPUTS STATUS INDICATOR LED

Used to show discrete input signal status.
  ON    : LED ON
  OFF   : LED OFF

### ■ INPUT TERMINAL ASSIGNMENT

| 10 NC | 11 X1 | 12 X3 | 13 X5 | 14 X7 | 15 X9 | 16 XB | 17 XD | 18 XF |
|---|---|---|---|---|---|---|---|---|
| 1 COM | 2 X0 | 3 X2 | 4 X4 | 5 X6 | 6 X8 | 7 XA | 8 XC | 9 XE |

| NO. | ID | FUNCTION | NO. | ID | FUNCTION |
|---|---|---|---|---|---|
| 1 | COM | Common | 10 | NC | No Connection |
| 2 | X0 | Input 0 | 11 | X1 | Input 1 |
| 3 | X2 | Input 2 | 12 | X3 | Input 3 |
| 4 | X4 | Input 4 | 13 | X5 | Input 5 |
| 5 | X6 | Input 6 | 14 | X7 | Input 7 |
| 6 | X8 | Input 8 | 15 | X9 | Input 9 |
| 7 | XA | Input 10 | 16 | XB | Input 11 |
| 8 | XC | Input 12 | 17 | XD | Input 13 |
| 9 | XE | Input 14 | 18 | XF | Input 15 |

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## CONNECTING THE EXTENSION MODULE

1) Remove the extension connector cover located at the side of the basic module.
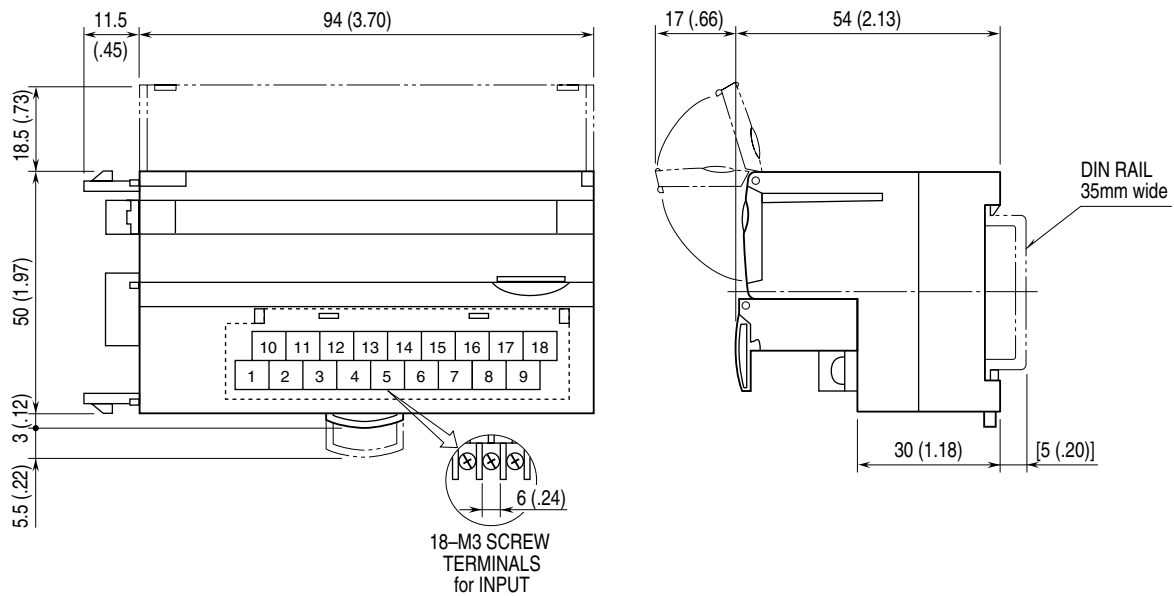
2) Connect the extension module.
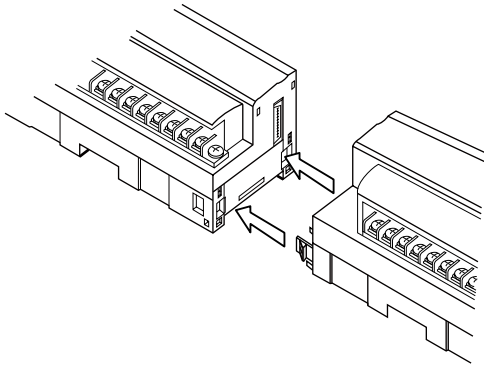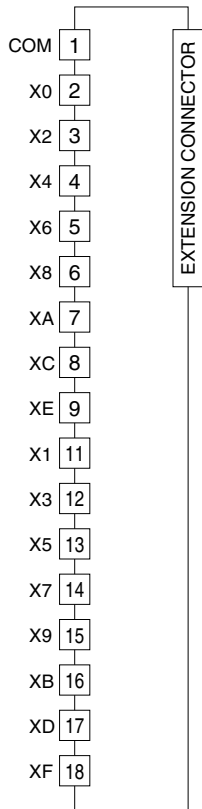
3) Mount the combined module on a DIN rail.

## TERMINAL CONNECTIONS

Connect the unit as in the diagram below.

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



18–M3 SCREW
TERMINALS
for INPUT

DIN RAIL
35mm wide

**M-SYSTEM CO., LTD.**

SENTRONIC AG    056 222 38 18    mailbox@sentronic.com    www.sentronic.com

■ **CONNECTION DIAGRAM**

| | | |
|---|---|---|
| COM | 1 | |
| X0 | 2 | |
| X2 | 3 | |
| X4 | 4 | |
| X6 | 5 | |
| X8 | 6 | EXTENSION CONNECTOR |
| XA | 7 | |
| XC | 8 | |
| XE | 9 | |
| X1 | 11 | |
| X3 | 12 | |
| X5 | 13 | |
| X7 | 14 | |
| X9 | 15 | |
| XB | 16 | |
| XD | 17 | |
| XF | 18 | |

# WIRING INSTRUCTIONS

■ **SCREW TERMINAL**

Torque: 0.5 N·m

■ **SOLDERLESS TERMINAL**

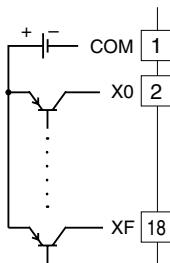Refer to the drawing below for recommended ring tongue terminal size. Spade tongue type is also applicable.

Applicable wire size: 0.25 to 1.65 mm$^2$ (AWG 22 to 16)

Recommended manufacturer: Japan Solderless Terminal MFG. Co., Ltd, Nichifu Co., Ltd

3.3 (.13) max

6 (.24) max

mm (inch)
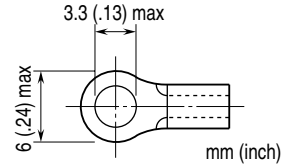
■ **Input Connection Examples**

PNP Connection

NPN Connection

| | |
|---|---|
| + − | COM 1 |
| | X0 2 |
| ⋮ | |
| | XF 18 |

| | |
|---|---|
| − + | COM 1 |
| | X0 2 |
| ⋮ | |
| | XF 18 |