# NPN TRANSISTOR OUTPUT EXTENSION MODULE, 16 points (MECHATROLINK-I / -II)

MODEL R7ML-EC16A

### BEFORE USE ....

Thank you for choosing us. 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 our sales office or representatives.

#### **■ PACKAGE INCLUDES:**

Discrete 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 DC rating: 24V ±10%, approx. 30mA

#### **■ 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 0 to 55°C (32 to 131°F) with relative humidity within 30 to 90% RH in order to ensure adequate life span and operation.

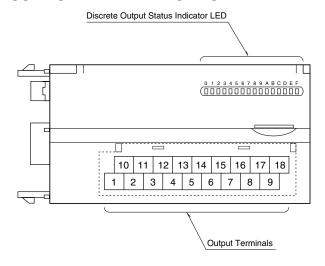
#### **■** WIRING

- 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.

#### ■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**

Discrete output modules including those for extensions have LED indicators showing output signal status.

Contact ON : LED ON Contact OFF : LED OFF

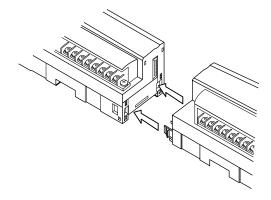
#### **■ OUTPUT TERMINAL ASSIGNMENT**

	10		11		12		13		14		15		16		17		18	
	+2	4V	Y	1	Y	3	Y	5	Υ	7	Υ	9	Υ	В	Υ	D	Υ	F
1		2		3		4		5		6		7		8		9		
0V		Υ	0	Y	2	Y	4	Y	6	Y	8	Y	Α	Υ	С	Υ	E	

_1	NO.	ID	FUNCTION	NO.	ID	FUNTION
	1	0V	0V (Common)	10	+24V	24V DC
	2	Y0	Output 0	11	Y1	Output 1
Π	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

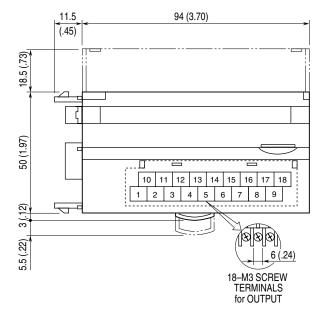
# **CONNECTING THE EXTENSION MODULE**

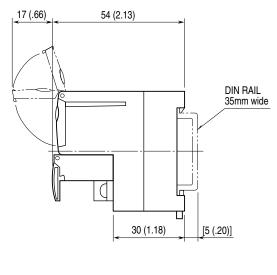
- 1) Remove the extension connector cover located at the side of the basic module.
- 2) Connect the extension module.



3) Mount the combined module on a DIN rail.

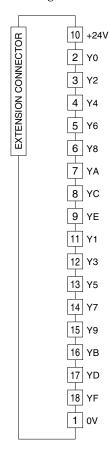
# **EXTERNAL DIMENSIONS** unit: mm (inch)



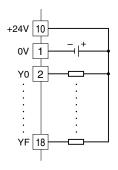


# **CONNECTION DIAGRAM**

Connect the unit as in the diagram below.



#### **■** Output Connection Example



# WIRING INSTRUCTIONS

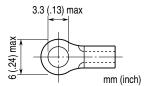
#### ■ SCREW TERMINAL

Torque:  $0.5 \text{ N} \cdot \text{m}$ 

#### ■ SOLDERLESS TERMINAL mm (inch)

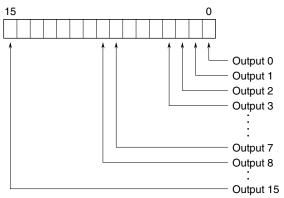
Refer to the drawing below for recommended ring tongue terminal size. Spade tongue type is also applicable. Solderless terminal:

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



# I/O DATA DESCRIPTION

#### **■ DISCRETE OUTPUT**



0:OFF 1:ON