

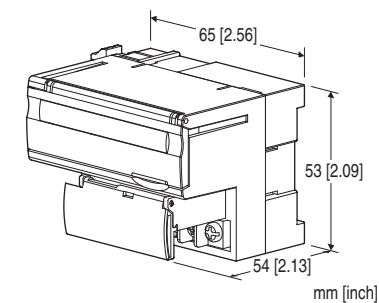
## Remote I/O R7 Series

### MODBUS I/O MODULE

(NPN transistor output for extension, 8 points)

#### Functions & Features

- 8 points NPN transistor output extension module connected to Modbus I/O module (model: R7M)



### MODEL:R7M-EC8A[1]

#### ORDERING INFORMATION

- Code number: R7M-EC8A[1]

Specify a code from below for [1].

- (e.g. R7M-EC8A/Q)
- Specify the specification for option code /Q (e.g. /C01)

#### I/O TYPE

EC8A: NPN transistor output for extension, 8 points

#### [1] OPTIONS

blank: none

/Q: With options (specify the specification)

#### SPECIFICATIONS OF OPTION: Q

**COATING (For the detail, refer to our web site.)**

/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating

#### GENERAL SPECIFICATIONS

**Connection:** M3 separable screw terminal (torque 0.5 N·m)

**Solderless terminal:** Refer to the drawing at the end of the section.

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

**Applicable wire size:** 0.25 to 1.65 mm<sup>2</sup> (AWG 22 to 16)

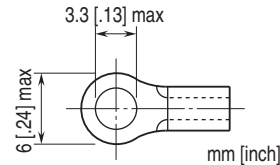
**Screw terminal:** Nickel-plated steel

**Housing material:** Flame-resistant resin (gray)

**Isolation:** Output to internal circuits

**Discrete output status indicator LED:** LED turns on with output ON

#### ■Recommended solderless terminal



#### OUTPUT SPECIFICATIONS

**Common:** Negative common (NPN) per 8 points

**Maximum outputs applicable at once:** No limit (at 24 V DC)

**Rated load voltage:** 24 V DC  $\pm 10\%$

**Rated output current:** 0.25 A per point, 2.0 A per common

**Residual voltage:**  $\leq 1.2$  V

**Leakage current:**  $\leq 0.1$  mA

**ON delay:**  $\leq 0.5$  msec.

**OFF delay:**  $\leq 1.5$  msec.

(When driving an inductive load, connect a diode in parallel with the load.)

#### INSTALLATION

**Current consumption**

- DC: Approx. 10 mA

**Operating temperature:** -10 to +55°C (14 to 131°F)

**Storage temperature:** -20 to +65°C (-4 to +149°F)

**Operating humidity:** 30 to 90 %RH (non-condensing)

**Atmosphere:** No corrosive gas or heavy dust

**Mounting:** DIN rail (35 mm rail)

**Weight:** 90 g (0.2 lb)

#### PERFORMANCE

**Insulation resistance:**  $\geq 100$  M $\Omega$  with 500 V DC

**Dielectric strength:** 1500 V AC @ 1 minute (output to internal circuits)

#### STANDARDS & APPROVALS

Refer to the manuals to comply with the standards.

**EU conformity:**

EMC Directive

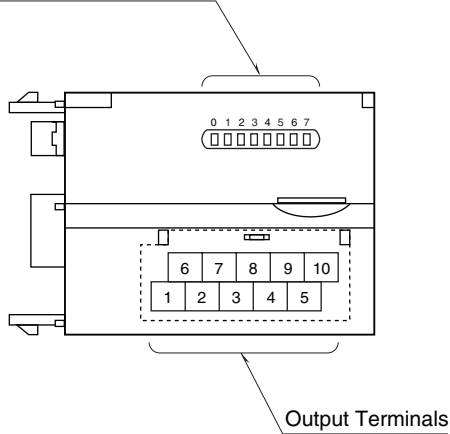
EMI EN 61000-6-4

EMS EN 61000-6-2

RoHS Directive

## EXTERNAL VIEW

Discrete Output Status Indicator LED



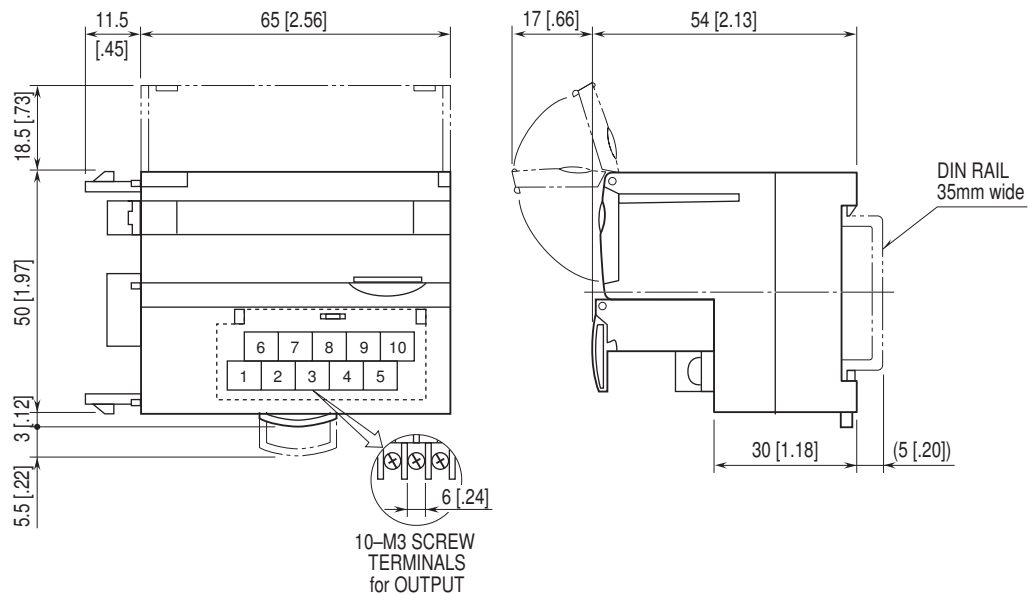
## TERMINAL ASSIGNMENTS

### ■ OUTPUT TERMINAL ASSIGNMENT

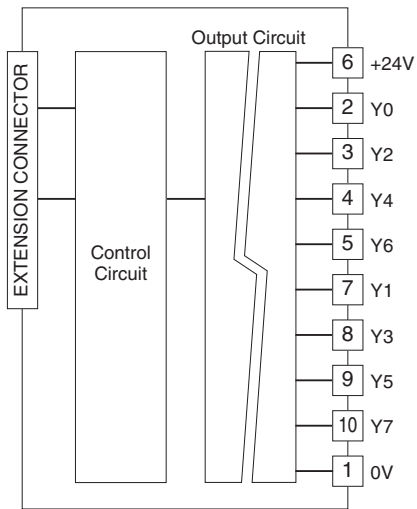
6	7	8	9	10
+24V	Y1	Y3	Y5	Y7
1	2	3	4	5
0V	Y0	Y2	Y4	Y6

NO.	ID	FUNCTION	NO.	ID	FUNCTION
1	0V	0V (common)	6	+24V	24V DC
2	Y0	Output 0	7	Y1	Output 1
3	Y2	Output 2	8	Y3	Output 3
4	Y4	Output 4	9	Y5	Output 5
5	Y6	Output 6	10	Y7	Output 7

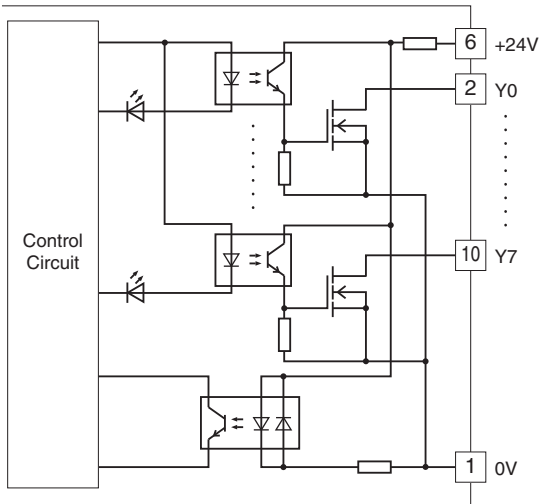
## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



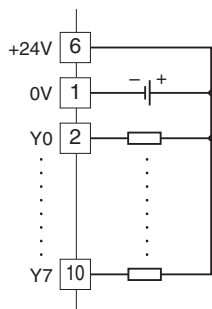
## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



### ■ Output Circuit



### ■ Output Connection Example



Specifications are subject to change without notice.