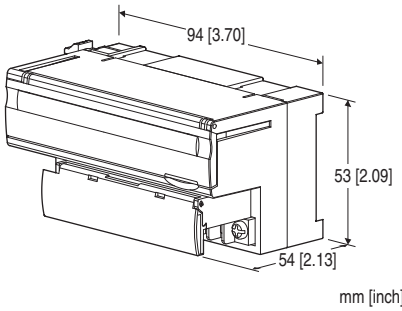
Remote I/O R7 Series

MODBUS I/O MODULE

(NPN transistor output for extension, 16 points)

Functions & Features

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



MODEL:R7M-EC16A[1]

ORDERING INFORMATION

• Code number: R7M-EC16A[1]

Specify a code from below for [1].
(e.g. R7M-EC16A/Q)

• Specify the specification for option code /Q
(e.g. /C01)

I/O TYPE

EC16A: NPN transistor output for extension, 16 points

[1] OPTIONS

Standards & Approvals

blank: CE marking

/UL: UL approval, CE marking

Other Options

blank: none

/Q: Option other than the above (specify the specification) (UL not available)

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^2 (AWG 22 to 16)

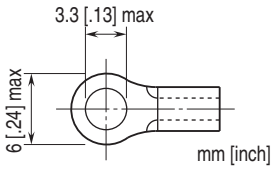
Screw terminal: Nickel-plated steel

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 16 points

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

Rated load voltage: 24 V DC ±10 %

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

Residual voltage: ≤ 1.2 V

Leakage current: ≤ 0.1 mA

ON delay: ≤ 0.5 msec.

OFF delay: ≤ 1.5 msec.

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

INSTALLATION

Current consumption

•**DC**: Approx. 20 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: 150 g (0.33 lb)

PERFORMANCE

Insulation resistance: ≥ 100 MΩ 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

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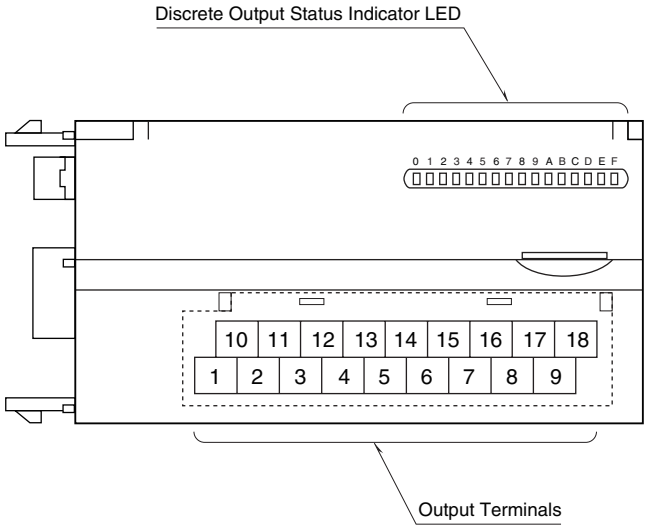
Approval:
UL/C-UL nonincendive Class I, Division 2,
Groups A, B, C, and D
(ANSI/UL 121201, CAN/CSA-C22.2 No.213-17)
UL/C-UL general safety requirements
(UL 61010-1, CAN/CSA-C22.2 No.61010-1)
Note: This equipment is to be supplied by a Class 2 power supply when using as conformity with UL/C-UL.

EXTERNAL VIEW



TERMINAL ASSIGNMENTS

■ OUTPUT TERMINAL ASSIGNMENT

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

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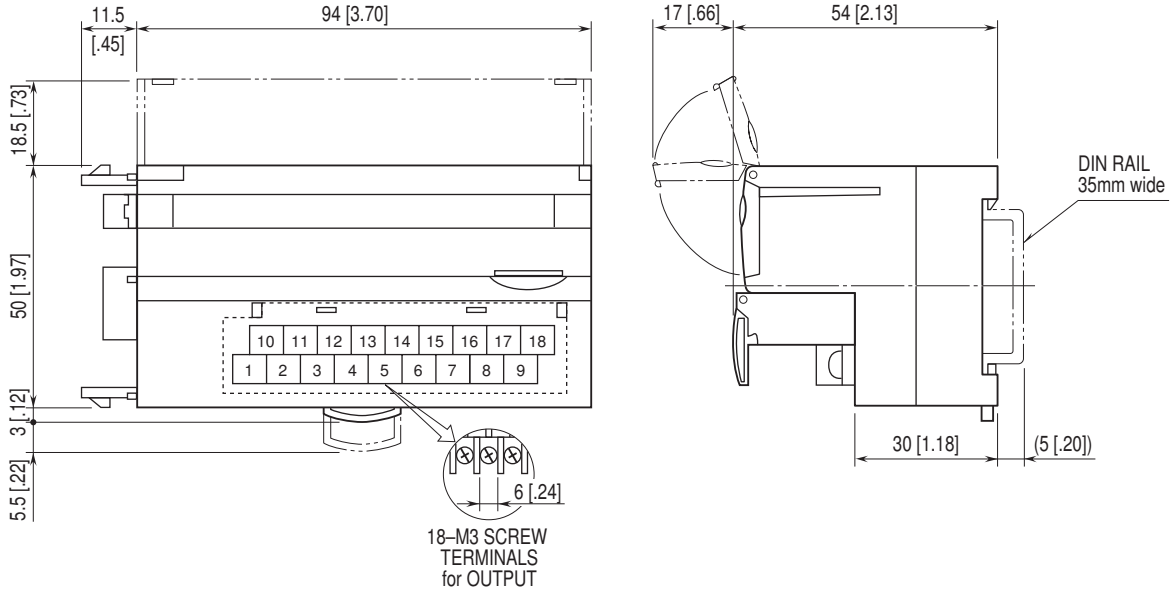
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



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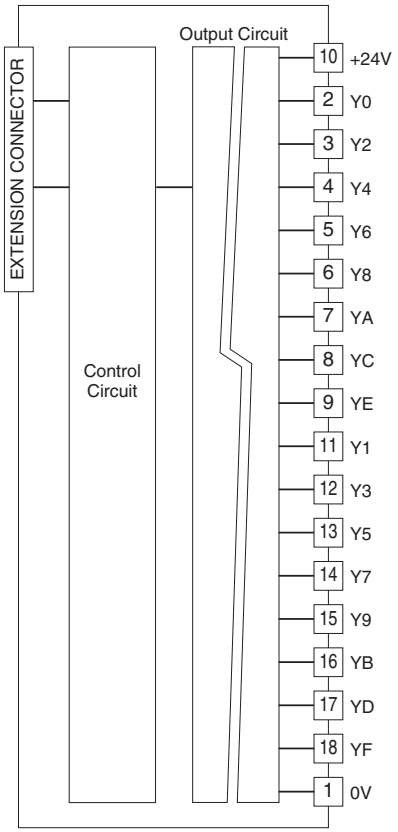
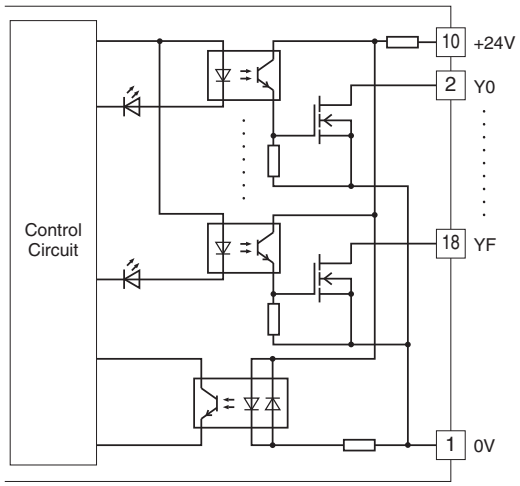
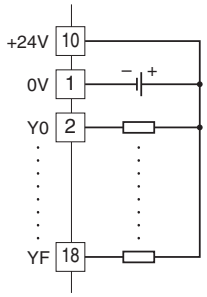
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



■ **Output Circuit**



■ **Output Connection Example**



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⚠ Specifications are subject to change without notice.

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