

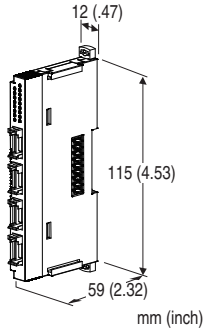
Remote I/O R8 Series

TOTALIZED PULSE INPUT MODULE, 4 points

(NPN / PNP / Voltage pulse input)

Functions & Features

- Space-saving remote I/O module of 4 points input pulse counter



MODEL: R8-PA4[1][2]

ORDERING INFORMATION

- Code number: R8-PA4-[1][2]
Specify a code from below for each [1] and [2].
(e.g. R8-PA4A/Q)
- Specify the specification for option code /Q
(e.g. /C01)

[1] INPUT

- A: NPN input
B: PNP input
C: Voltage pulse input

[2] OPTIONS

- blank: none
/Q: With options (specify the specification)

SPECIFICATIONS OF OPTION: Q

COATING (For the detail, refer to M-System's web site.)

- /C01: Silicone coating
/C02: Polyurethane coating

RELATED PRODUCTS

- PC configurator software (model: R8CFG)
Downloadable at M-System's web site.
A dedicated cable is required to connect the module to the PC. Please refer to the internet software download site or the users manual for the PC configurator for applicable cable types.

GENERAL SPECIFICATIONS

Connection

- **Input:** 4-pin e-CON connector
PWB connector XN2D-1474-S002 (Omron)
Recommended cable connector XN2A-1470 (Omron)
Applicable wire size 0.08 mm² (AWG28) - 0.5 mm² (AWG20)
Outer sheath diameter: max. 1.5 dia
(The cable connector is not included in the package.
Refer to the specifications of the product.)

•Excitation supply, internal bus:

Connected to internal bus connector

•Internal power:

Supplied from internal bus connector
Isolation: Input or exc. supply to internal bus or internal power

Module address: With rotary switch

Terminating resistor: Built-in (DIP Switch, default: disable)

Status indicator: Bi-color (red/green) LED; Refer to the instruction manual.

Input status indicator: Green LED; Refer to the instruction manual.

INPUT SPECIFICATIONS

Common: Positive or negative common (NPN/PNP) per 4 points

Number of inputs: 4

I/O status indicator: LED turns on with closed contact.

• **NPN/PNP input** (internal supply with excitation supply input from network power module)

Rated load voltage: 24 V DC $\pm 10\%$; ripple 5 %p-p max.

ON voltage / ON resistance: ≤ 4 V (input terminal to COM) / $\leq 900 \Omega$

OFF voltage / OFF resistance: ≥ 16 V (input terminal to COM) / $\geq 10 \text{ k}\Omega$

•Voltage pulse input

Max. input voltage amplitude: 24 V DC + $\leq 10\%$

ON voltage / ON current: ≥ 16 V DC (input terminal to COM) / $\geq 3.7 \text{ mA}$

OFF voltage / OFF current: ≤ 5 V DC (input terminal to COM) / $\leq 1 \text{ mA}$

Input current: $\leq 5.5 \text{ mA}$ / point (@24 V DC)

Input resistance: Approx. 4.4 k Ω

ON delay: $\leq 2.0 \text{ msec.}$

OFF delay: $\leq 2.0 \text{ msec.}$

Max. Frequency: 100 Hz

Minimum ON/OFF pulse requirements: 5 ms

Accumulated pulse count: 0 - 4 294 967 295

Max. accumulable pulse: 1 - 4,294,967,295 (factory setting: 4,294,967,295)

Overflow reset value: 0 or 1 (factory setting: 0)

INSTALLATION

Max. current consumption: 80 mA
Operating temperature: -10 to +55°C (14 to 131°F)
Operating humidity: 30 to 90 %RH (non-condensing)
Atmosphere: No corrosive gas or heavy dust
Mounting: DIN rail
Weight: 60 g (2.12 oz)

PERFORMANCE

Data allocation: 2
Module addresses in use: 4
Power output (input terminal): Rated current 0.1A DC per channel
 (rated current 3 A for internal fuse (slow blow fuse i^2t (A²sec) max. 0.31)
 Total 0.4 A DC
Insulation resistance: ≥ 100 M Ω with 500 V DC
Dielectric strength: 1500 V AC @ 1 minute
 (input or exc. supply to internal bus or internal power to ground)

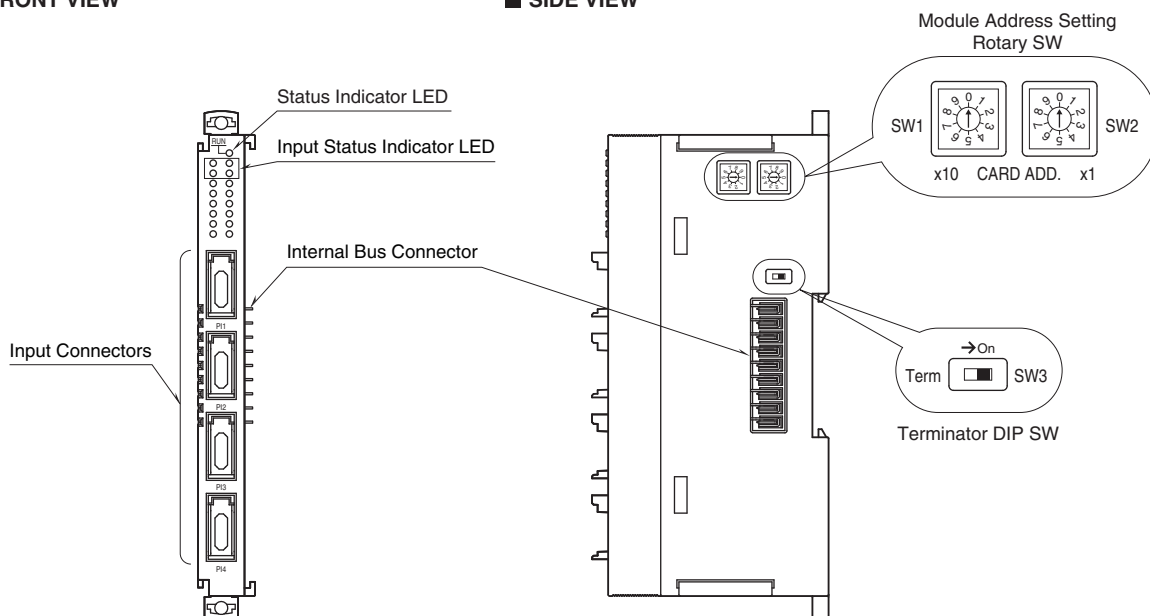
STANDARDS & APPROVALS

EU conformity:
 EMC Directive
 EMI EN 61000-6-4
 EMS EN 61000-6-2
 RoHS Directive
 EN 50581

EXTERNAL VIEW

■ FRONT VIEW

■ SIDE VIEW



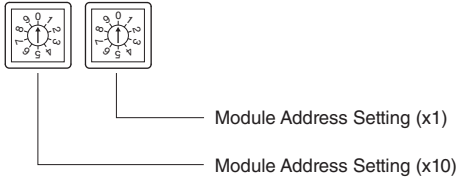
OPERATING MODE SETTING

(*) Factory setting

■ Module Address

The left switch determines the tenth place digit, while the right switch does the ones place digit of the address. Address is selected between 0 to 28.

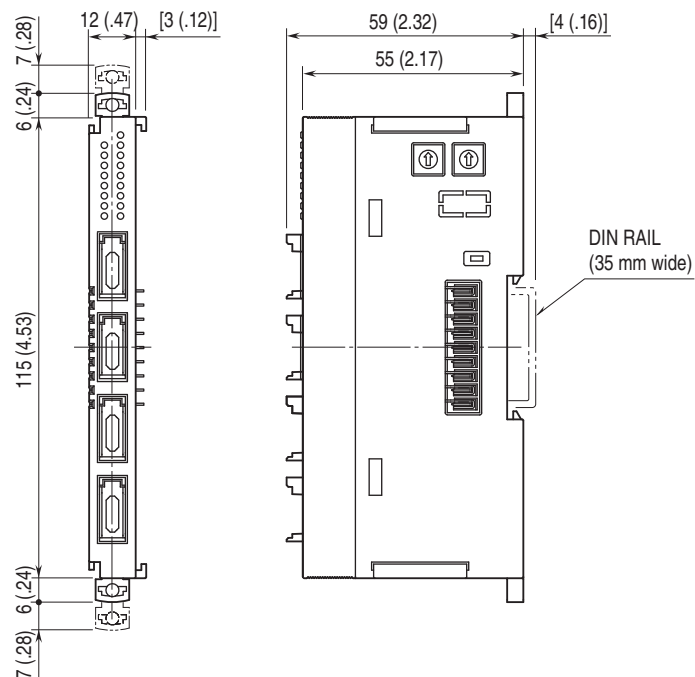
(Factory setting: 0)



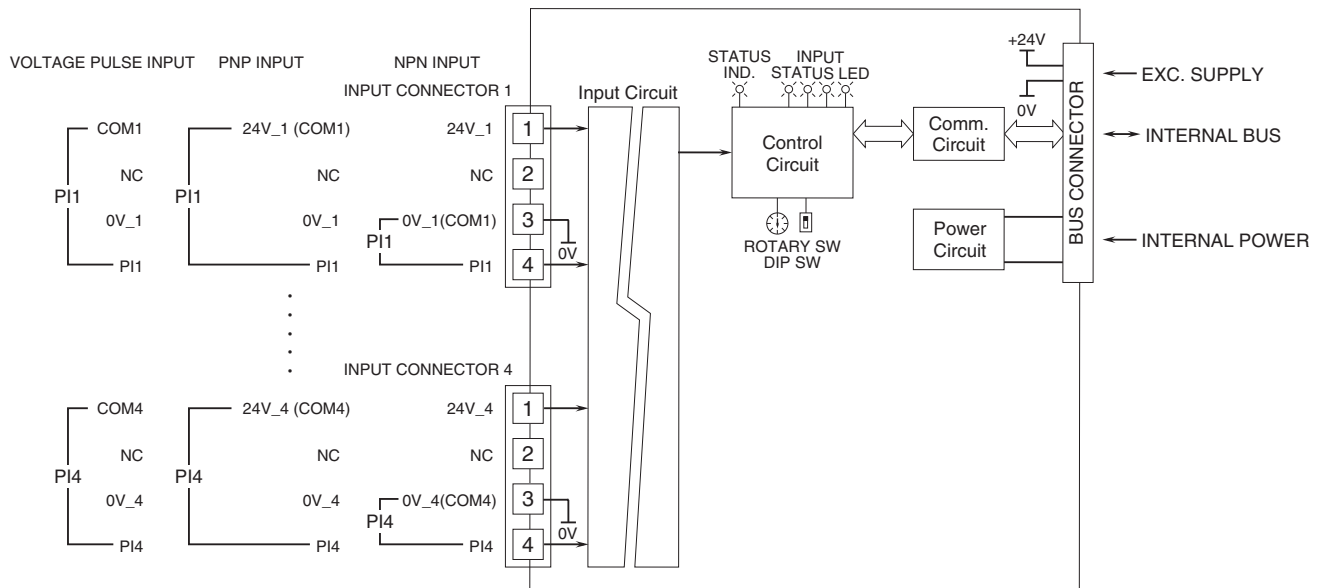
■ Terminator DIP SW

TERMINATOR SW	SW3
Without (*)	OFF
With	ON

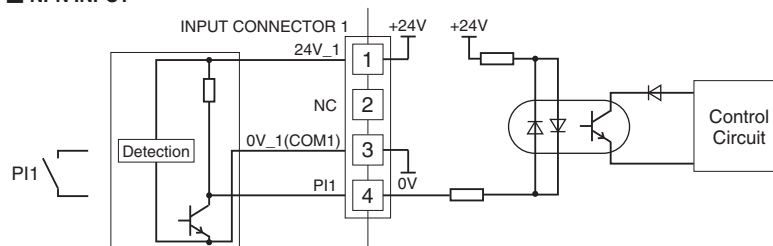
DIMENSIONS unit: mm (inch)



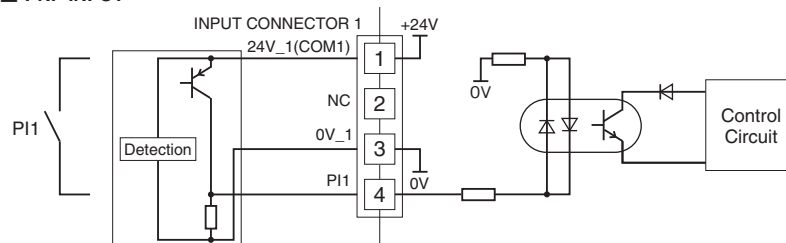
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



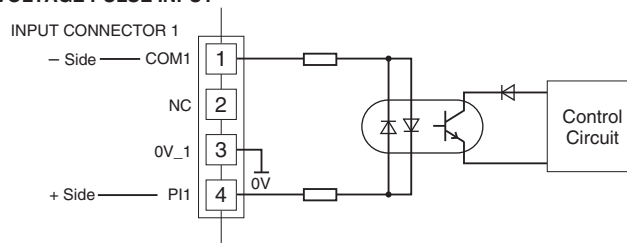
■ NPN INPUT



■ PNP INPUT



■ VOLTAGE PULSE INPUT



Specifications are subject to change without notice.