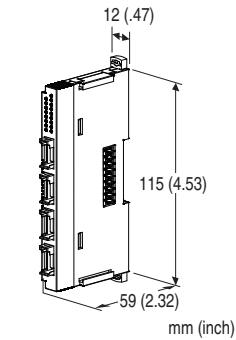


Remote I/O R8 Series

PULSE OUTPUT MODULE

(NPN transistor output, 4 points, voltage contact)

- 4-channel transistor output, compact size remote I/O module
- Configurable with PC configurator (model: R8CFG)



MODEL: R8-PC4A[1]

ORDERING INFORMATION

- Code number: R8-PC4A[1]
Specify a code from below for [1].
(e.g. R8-PC4A/A/Q)
- Specify the specification for option code /Q
(e.g. /C01)

[1] OPTIONS (multiple selections)

0V Output for Excitation Supply

/A: With (must be specified.)

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

- **Output:** 4-pin e-CON connector
Unit side connector XN2D-1474-S002 (Omron)
Recommended cable side connector XN2A-1470 (Omron)
Applicable wire size 0.08 - 0.5 mm² (AWG28 - 20)
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: Output or exc. supply to internal bus or internal power

ON/OFF pulse width: Set with the side DIP switch

Module address: With rotary switch

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

Configuration mode: With DIP switches on the side panel

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

Output status indicators: Green LED; Refer to the instruction manual.

OUTPUT SPECIFICATIONS

Output: NPN transistor 4 points

Maximum frequency: Approx. 80 Hz (DIP SW selectable)

Max. output pulse number per setting: 2000

(The number of pulse output by one writing is up to 2000.
No output when the setting, in which difference between the present value is not less than 2001 pulses, is set.)

Totalized pulse range: 1 - 10000 (Max. pulse range selectable from 1 to 65535 using the PC Configurator Software (model: R8CFG). '0' at reset)

Count at overflow: Reset and restart at '1.'

Isolation: Photo coupler

Rated load voltage: 24 V DC \pm 10 % (from exc. supply)
24 V DC (from external power supply*)

Rated output current: 0.2 A per point (from exc. supply)
0.2 A per point (from external power supply*)

*A power supply different from exc. supply is required.

Exc. supply must be used even when using external power supply.

Residual voltage: \leq 0.5 V

Leakage current: \leq 0.1 mA

Shortcircuit protection: Included

Overheat Protection Function: Included

INSTALLATION

Max. current consumption: 100 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: 2

Insulation resistance: $\geq 100 \text{ M}\Omega$ with 500 V DC

Dielectric strength: 1500V AC @1 minute

(output 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

OPERATING MODES

When writing the number of output pulse (target value) from a host, R8-PC4A outputs the difference from the number of pulse outputs until now (present value) as the remainder number of pulse.

The present value of the R8-PC4A is held even with power off. If target value is '0' or higher than totalized pulse upper limit, it is invalid. When the target value is not less than 2001 for the present value, the unit does not output the pulse and the present value is equal to the target value.

E.g.1 Present value = 1000 and target value = 1500, it outputs 500 pulses.

E.g.2 Present value = 9000 and target value = 500, it outputs 1500 pulses.

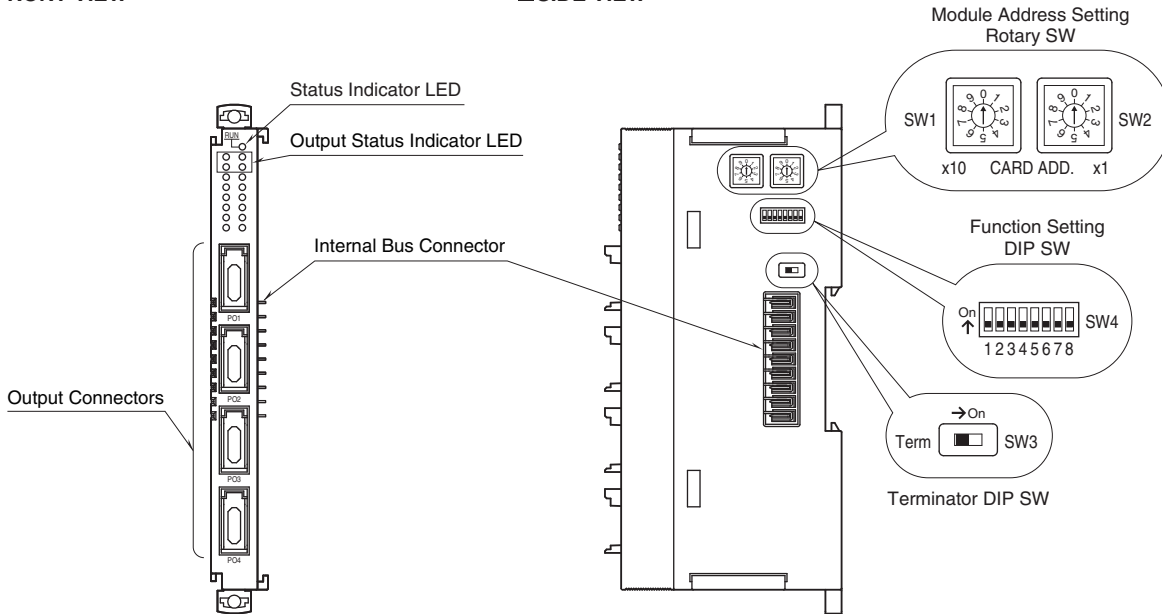
E.g.3 Present value = 1000 and target value = 3001, it does not outputs any pulse, present value = 3001.

(When the totalized pulse upper limit is initial setting, 10000.)

EXTERNAL VIEW

FRONT VIEW

SIDE VIEW



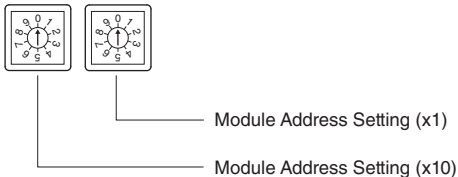
OPERATING MODE SETTING

(*) Factory setting

Module Address

The left switch determines the tenth place digit, while the right one does the ones place digit of the module address. Address is selected between 0 to 30.

(Factory setting: 0)



Counter Reset (SW4-1)

- 1) Turn the power off.
 - 2) Turn ON the Counter Reset SW (SW4-1).
 - 3) Return the module to the base and turn the power supply ON.
The status indicator LED turns ON in amber.
 - 4) Wait at least 5 seconds. Turn the power supply OFF.
 - 5) Turn OFF the Counter Reset SW (SW4-1).
 - 6) Return the module to the base and turn the power supply ON.
- Note: Counter Reset SW must be turned OFF after this procedure because the module does not start counting with ON state.

ON/OFF Pulse Width: (SW4-2, 3, 4, 5, 6, 7)

Setting for all outputs.

Setting for each output can be done with a PC.

ON		OFF				PULSE WIDTH TIME *1
2	3	4	5	6	7	
OFF	OFF	OFF	OFF	OFF	OFF	5 msec.(*)
ON	OFF	OFF	ON	OFF	OFF	10 msec.
OFF	ON	OFF	OFF	ON	OFF	15 msec.
ON	ON	OFF	ON	ON	OFF	100 msec.
OFF	OFF	ON	OFF	OFF	ON	500 msec.
ON	OFF	ON	ON	OFF	ON	1 sec.
OFF	ON	ON	OFF	ON	ON	1.5 sec.
ON	ON	ON	ON	ON	ON	2 sec.

*1. Minimum ensured time duration. For example, with 5 msec. setting, the minimum pulse width is 5 msec. (Max. value = Setting time + 2 msec.)

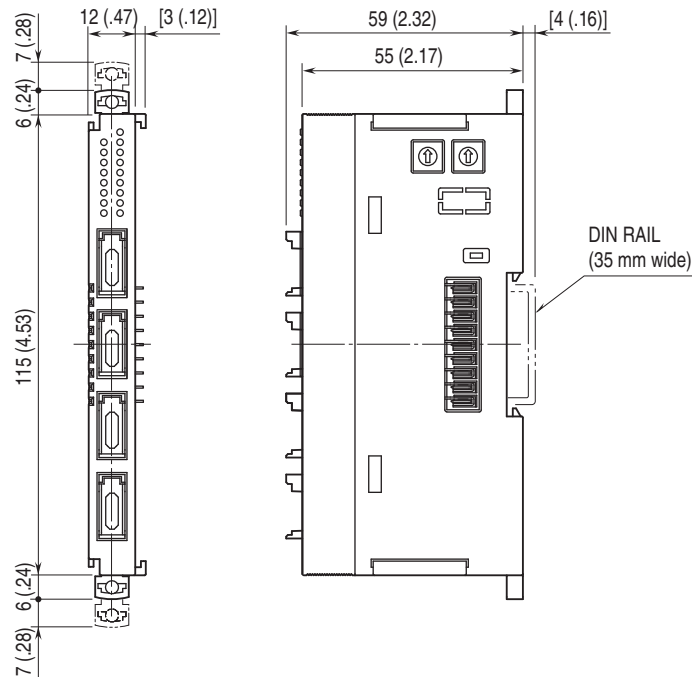
Configuration Mode

CONFIGURATION MODE	SW4
DIP switch setting (*)	8
PC Configurator and communication	OFF
Terminator DIP SW	ON

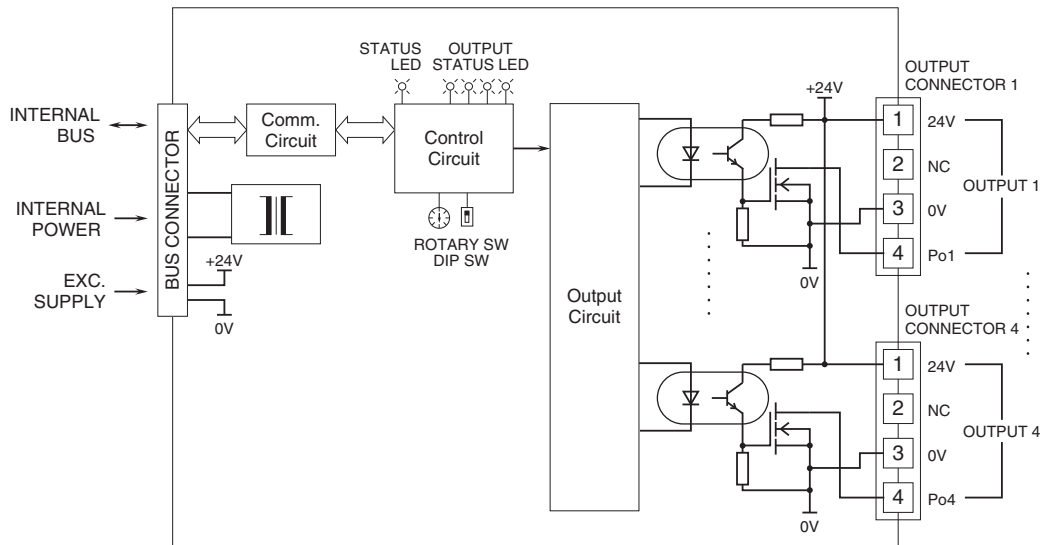
Terminator DIP SW

TERMINATOR SW	SW3
Without (*)	OFF
With	ON

EXTERNAL DIMENSIONS unit: mm (inch)



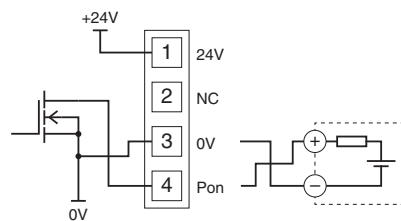
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



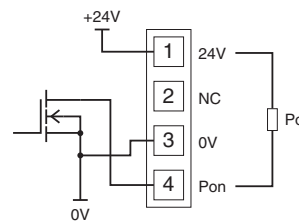
Note: Pin 1 of output connector is connected to 24V of the excitation supply.
Pin 3 of output connector is connected to 0V of the excitation supply.

Output Connection Examples

■ Open Collector



■ Wet Contact





Specifications are subject to change without notice.