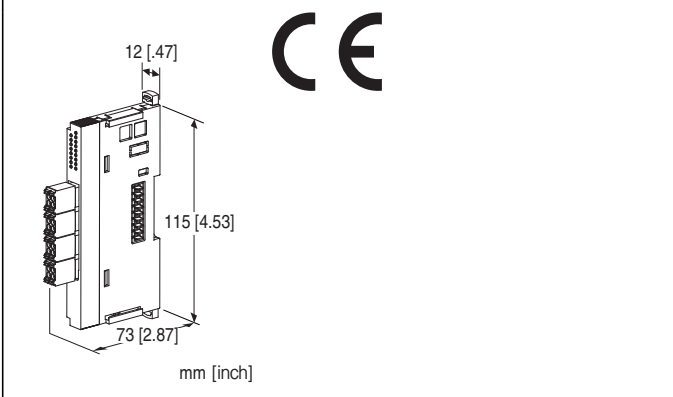# MODEL: R8-PCT4A

Remote I/O R8 Series

PULSE OUTPUT MODULE
(NPN transistor output, 4 points)

• 4-channel transistor output, compact size remote I/O module
• Configurable with PC configurator (model: R8CFG)
• Each channel is atachable/detachable independently with separable tension clamp terminal

12 [.47]

115 [4.53]

73 [2.87]

mm [inch]

MODEL: R8-PCT4A[1]

ORDERING INFORMATION
• Code number: R8-PCT4A[1]
Specify a code from below for [1].
  (e.g. R8-PCT4A/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.)
Other Options
blank: none
/Q: Option other than the above (specify the specification)

SPECIFICATIONS OF OPTION: Q
COATING (For the detail, refer to our web site.)
/C01: Silicone coating
/C02: Polyurethane coating

RELATED PRODUCTS
• PC Configurator cable (model: MCN-CON or COP-US)
• PC configurator software (model: R8CFG)
Downloadable at our web site.

GENERAL SPECIFICATIONS
Connection
  • **Output**: Separable tension clamp terminal
  • **Excitation supply, internal bus**:
    Connected to internal bus connector
  • **Internal power**: Via 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. ouptut 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 ±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: ≤ 0.5 V
Leakage current: ≤ 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: 80 g (2.8 oz)

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PERFORMANCE

Data allocation: 2
Module addresses in use: 2
Insulation resistance: ≥ 100 MΩ 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

OPERATING MODES

When writing the number of output pulse (target value) from a host, R8-PCT4A 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-PCT4A 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.
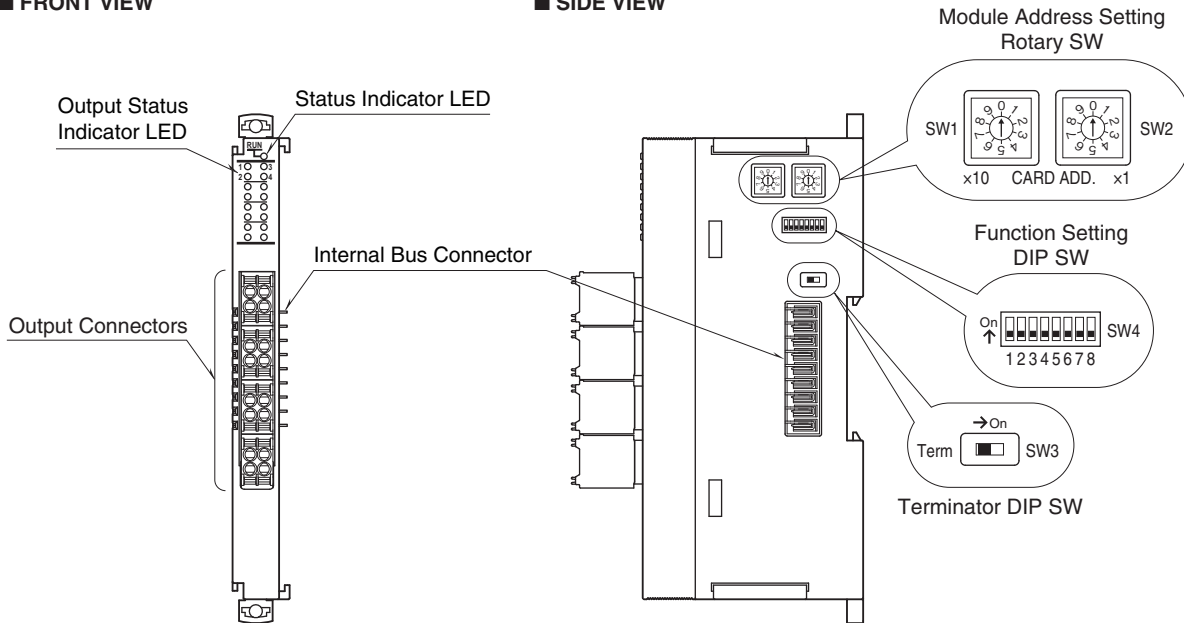
E.g.3 Present value = 1000 and target value = 3001, it does not outputs any pulse, present value = 3001.

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

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EXTERNAL VIEW

■ **FRONT VIEW**   ■ **SIDE VIEW**

Module Address Setting
Rotary SW

Output Status
Indicator LED

Status Indicator LED

SW1   CARD ADD.   SW2
×10   ×1

Function Setting
DIP SW

Internal Bus Connector

On
↑   SW4
1 2 3 4 5 6 7 8

Output Connectors

→On
Term ■■ SW3

Terminator DIP SW

WIRING

■ **SEPARABLE TENSION CLAMP TERMINAL**

Unit side connector: MG's product

Cable side connector: DFMC1,5/2-ST-3,5 (Phoenix Contact)
(included in the package)

Applicable wire size: 0.2 - 1.5 mm^2

Stripped length: 10 mm

Recommended solderless terminal
- AI0,25-10YE 0.25 mm^2 (Phoenix Contact)
- AI0,34-10TQ 0.34 mm^2 (Phoenix Contact)
- AI0,5-10WH 0.5 mm^2 (Phoenix Contact)
- AI0,75-10GY 0.75 mm^2 (Phoenix Contact)
- A1-10 1.0 mm^2 (Phoenix Contact)
- A1,5-10 1.5 mm^2 (Phoenix Contact)

1 Po 1	2 NC
3 24V	4 0V

5 Po 2	6 NC
7 24V	8 0V

9 Po 3	10 NC
11 24V	12 0V

13 Po 4	14 NC
15 24V	16 0V

| PIN No.	ID	FUNCTION
1	Po 1	Output 1
2	NC	No connection
3	24V	Excitation supply (+)
4	0V	Excitation supply (−)
5	Po 2	Output 2
6	NC	No connection
7	24V	Excitation supply (+)
8	0V	Excitation supply (−)
9	Po 3	Output 3
10	NC	No connection
11	24V	Excitation supply (+)
12	0V	Excitation supply (−)
13	Po 4	Output 4
14	NC	No connection
15	24V	Excitation supply (+)
16	0V	Excitation supply (−)

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)

Module Address Setting (x1)

Module Address Setting (x10)
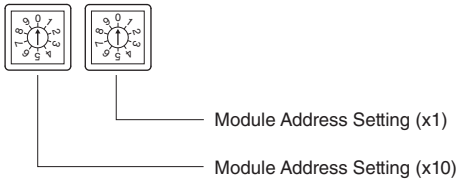
■ Counter Reset (SW4-1)

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.)
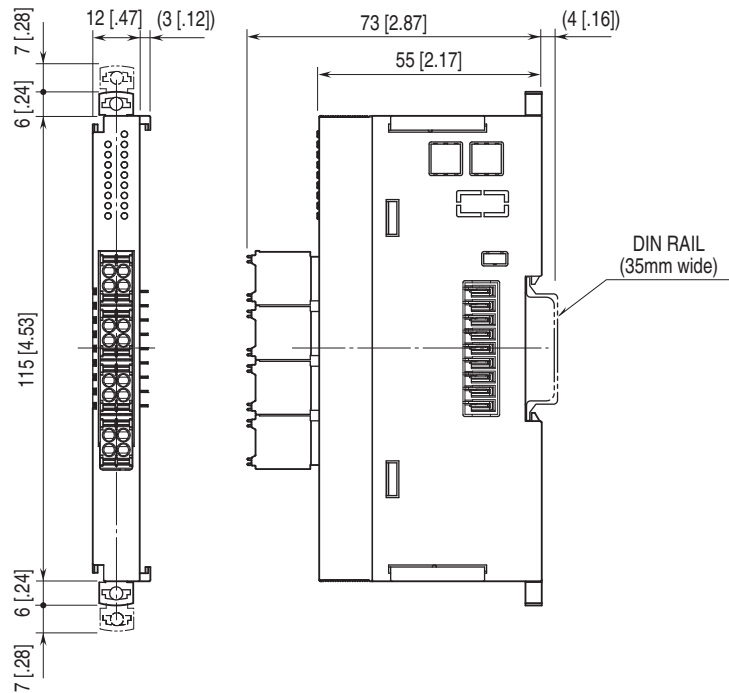
■ Configuration Mode

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

■ Terminator DIP SW

TERMINATOR DIP SW	SW3
Without (*)	OFF
With	ON

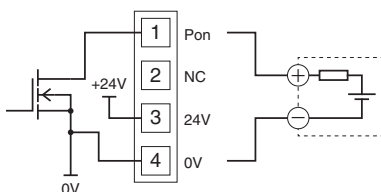## EXTERNAL DIMENSIONS unit: mm [inch]

DIN RAIL
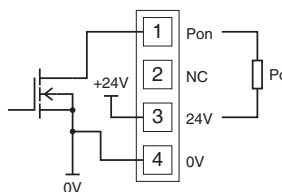(35mm wide)

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM
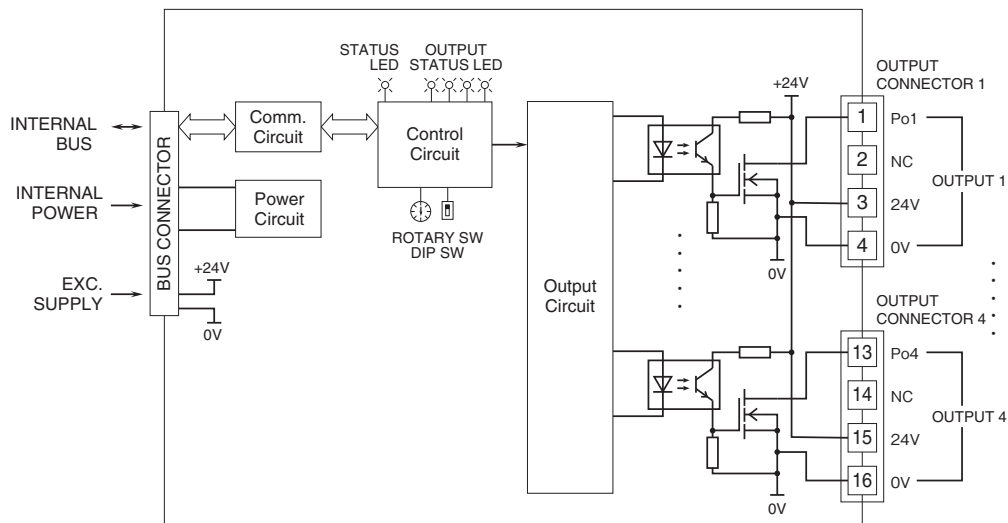
Note: Pin 3, 7, 11 and 15 of output connector are connected to 24V of the excitation supply.
Pin 4, 8, 12 and 16 of output connector are connected to 0V of the excitation supply.

Output Connection Examples

■ **Open Collector**   ■ **Wet Contact**

R8-PCT4A SPECIFICATIONS   ES-9656 Rev.0   Page 5/6

⚠ Specifications are subject to change without notice.

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