

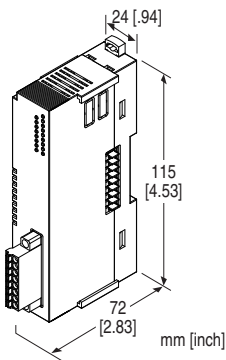
Remote I/O R8 Series

DC CURRENT OUTPUT MODULE

(4 points, non-isolated, Tension clamp terminal block)

Functions & Features

- 4 channels for DC current output, compact size remote I/O module
- 8 pins tension clamp connector
- Output range adjustment with DIP switch or PC configurator



MODEL: R8-YST4N[1]

ORDERING INFORMATION

- Code number: R8-YST4N[1]
- Specify a code from below for [1].
(e.g. R8-YST4N/Q)
- Specify the specification for option code /Q
(e.g. /C01)

[1] 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

- **Output:** Tension clamp
Applicable wire size: 0.2 - 1.5 mm²
Stripped length: 10 mm

- **Excitation supply, internal bus:**
Connected to internal bus connector
- **Internal power:** Via bus connector

Isolation: Output to exc. supply to internal bus or internal power

Output range: Selectable with the side DIP SW

Module address: With DIP switch

Output at the loss of communication: Selectable with the side DIP SW

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: Red LED; Refer to the instruction manual.

OUTPUT

Output range: Selectable between 0 - 20mA DC

Operational range: -5 - +105 % (in percentage of output range) ≤ 0 mA DC

Load resistance: ≤ 350Ω

INSTALLATION

Max. current consumption: 70 mA

Exc. supply current consumption: 90 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: 120 g (0.26 lb)

PERFORMANCE

Conversion accuracy (in percentage of output range)

±0.08 % (@ output range 0 - 20 mA)

Conversion accuracy is inversely proportional to output span.

Conversion accuracy computation example:

When output range is 4 - 20 mA: conversion accuracy =
output span standard value (20 mA) ÷ output span (16 mA)
× 0.08(%) = 0.1 (%)

output span standard value is the same as the span at output range 0 - 20 mA DC.

Conversion rate: 4 msec.

Output circuit time constant: ≤ 1 msec. (0 → 90 %)

Data range: 0 - 10000 of the output range

Data allocation: 2

Module addresses in use: 2

Temp. coefficient: $\pm 0.015 \text{ \%}/^{\circ}\text{C}$ ($\pm 0.008 \text{ \%}/^{\circ}\text{F}$)

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

Dielectric strength:

1500 V AC @ 1 minute (output to exc. supply to internal bus or internal power to ground)

STANDARDS & APPROVALS

EU conformity:

EMC Directive

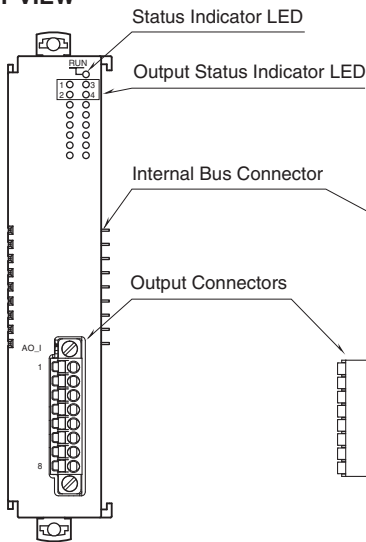
EMI EN 61000-6-4

EMS EN 61000-6-2

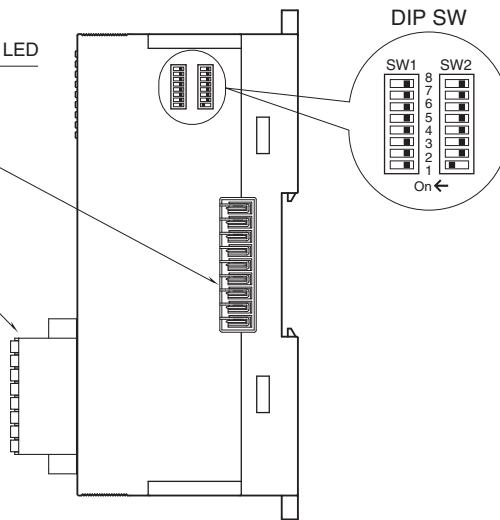
RoHS Directive

EXTERNAL VIEW

FRONT VIEW



SIDE VIEW



OPERATING MODE SETTING

(*) Factory setting

Caution ! - SW2-2, 2-3, 2-4, 2-7 are unused. Be sure to turn off unused ones.

■ Module Address

SW1-1, 1-2, 1-3, and 1-4 determine the tenth place digit, while SW1-5, 1-6, 1-7 and 1-8 do the ones place digit of the address. Address is selected between 0 to 30.

(Factory setting: 0)

MODULE ADDRESS	SW1				
	×10	1	2	3	4
	×1	5	6	7	8
0		OFF	OFF	OFF	OFF
1		OFF	OFF	OFF	ON
2		OFF	OFF	ON	OFF
3		OFF	OFF	ON	ON
4		OFF	ON	OFF	OFF
5		OFF	ON	OFF	ON
6		OFF	ON	ON	OFF
7		OFF	ON	ON	ON
8		ON	OFF	OFF	OFF
9		ON	OFF	OFF	ON

■ Range

Same range for all channels. Use PC Configurator to set independent ranges per channel.

OUTPUT RANGE	SW2
	1
0 – 20 mA DC	OFF
4 – 20 mA DC (*)	ON

■ Output at the Loss of Communication

Same output for all channels.

OUTPUT AT THE LOSS OF COMMUNICATION	SW2
	5
Output Hold (*) (last data correctly received is hold)	OFF
Stop output	ON

NOTE: For Stop output, output fixed at -5%, 0 mA min. when configuration mode is DIP switch setting.

Output fixed at scaling value at the loss of communication when configuration mode is PC.

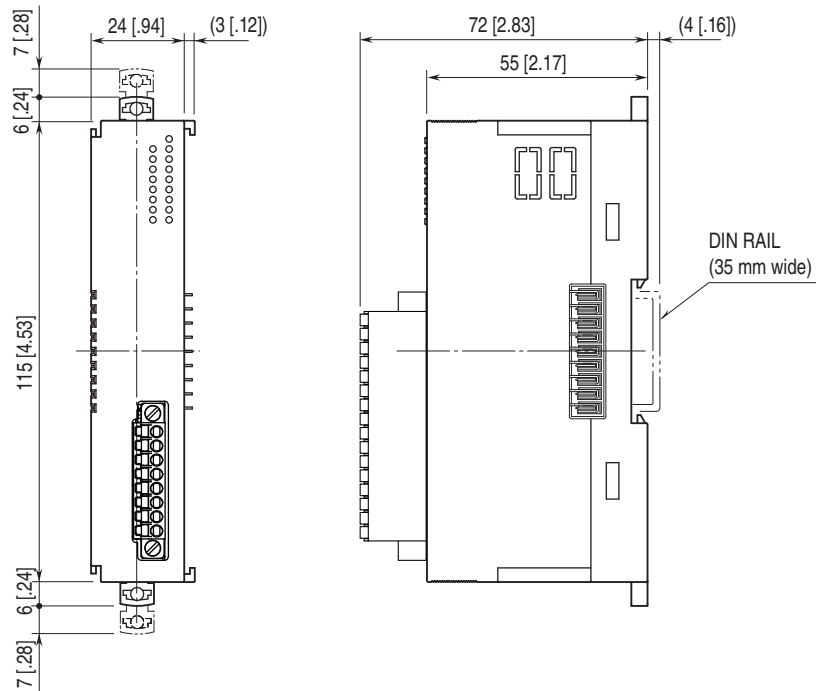
■ Terminator DIP SW

TERMINATOR SW	SW2
	6
Without (*)	OFF
With	ON

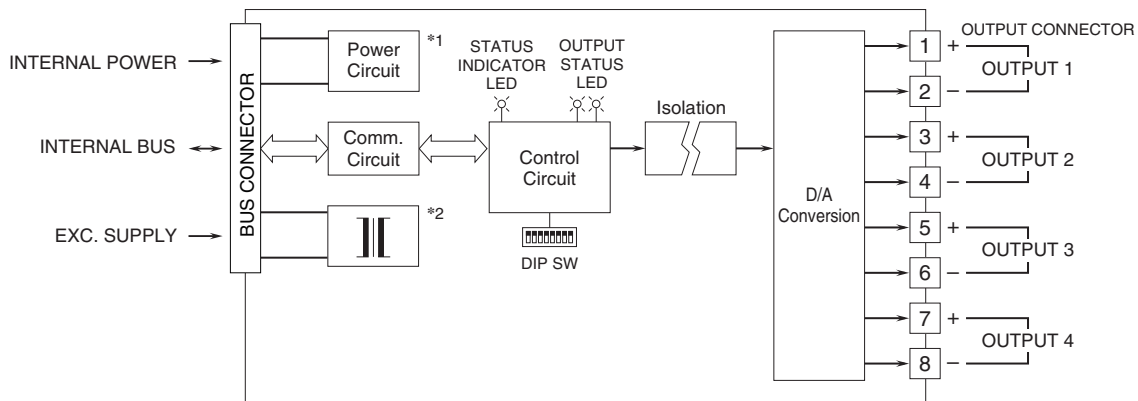
■ Configuration Mode

CONFIGURATION MODE	SW2
	8
DIP switch setting (*)	OFF
PC Configurator and communication	ON

EXTERNAL DIMENSIONS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*1. The power supply for control circuit, which is non-isolated from internal power.

*2. The power supply for output 1 through output 4, which is isolated from the Exc. supply and the internal power.



Specifications are subject to change without notice.