

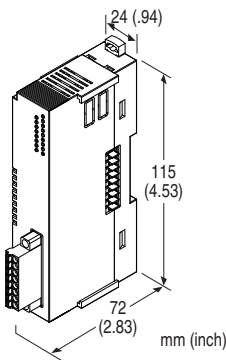
## Remote I/O R8 Series

### 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 mm<sup>2</sup>  
**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

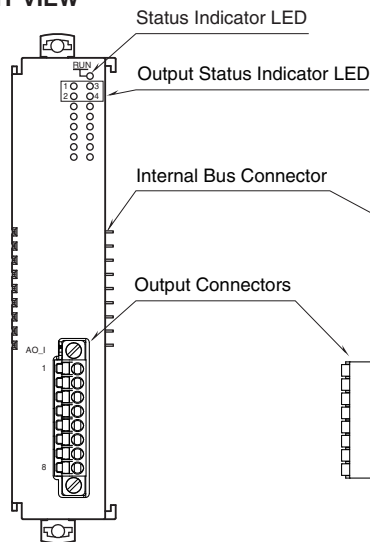
EMS EN 61000-6-2

RoHS Directive

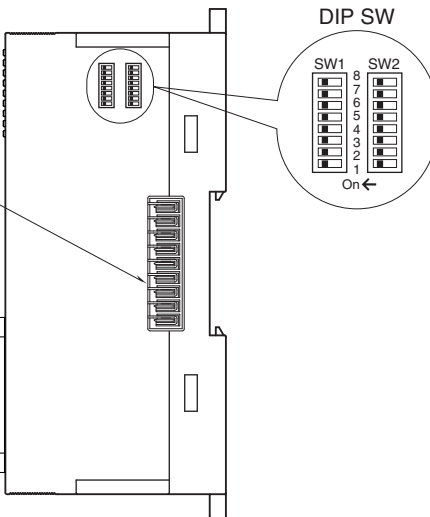
EN 50581

## 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.

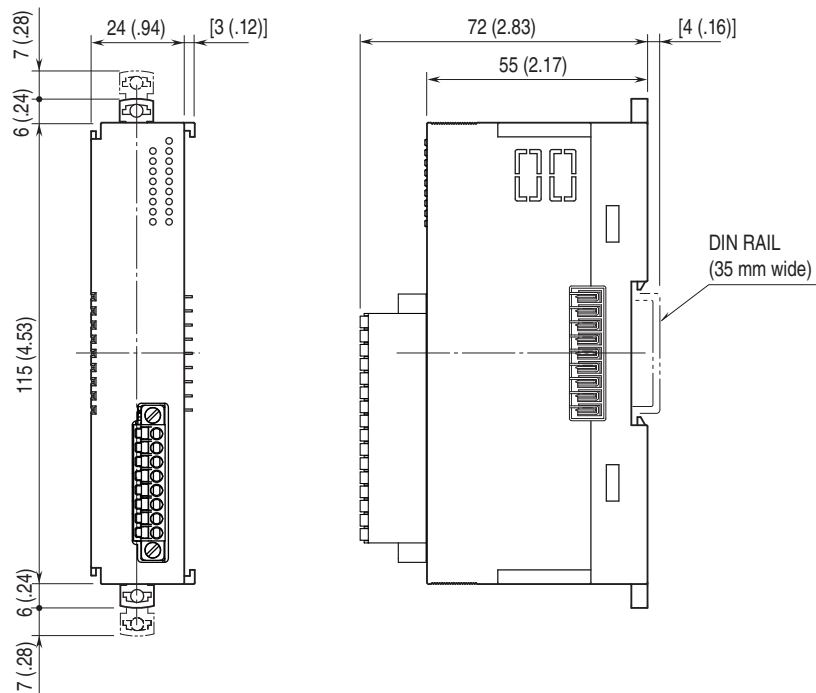
**■ Terminator DIP SW**

TERMINATOR SW	SW2
	6
Without (*)	OFF
With	ON

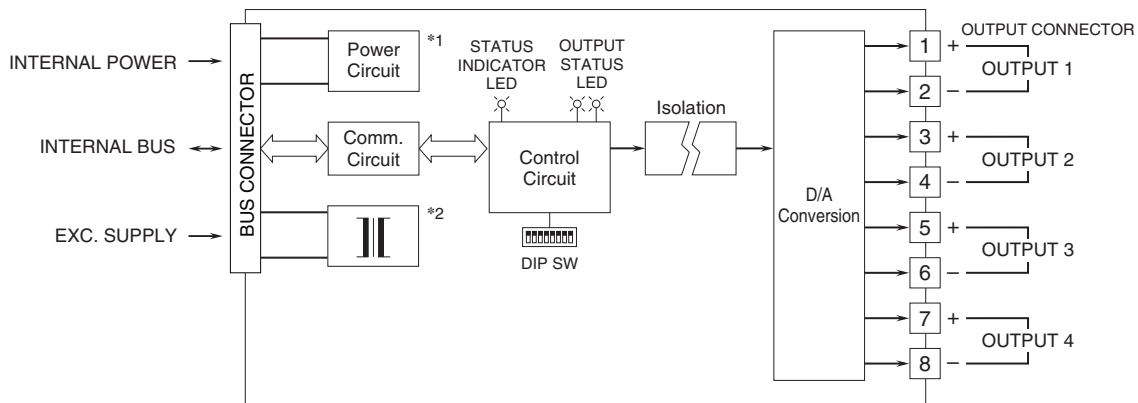
**■ Configuration Mode**

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

## 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 and output 2, which is isolated from the Exc. supply and the internal power.



Specifications are subject to change without notice.