

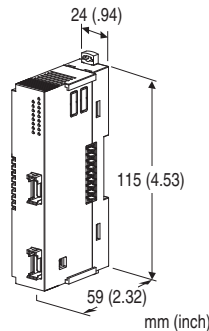
Remote I/O R8 Series

DC CURRENT OUTPUT MODULE

(2 points, isolated)

Functions & Features

- 2 channels for DC current output, compact size remote I/O module
- Output range adjustment with DIP switch or PC configurator



MODEL: R8-YS2

ORDERING INFORMATION

- Code number: R8-YS2

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
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:** Output 1 to output 2 to exc. supply to internal bus or internal power

Module address: DIP switches

Terminating resistor: Built-in (DIP Switch, default: disable)
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: ≤ 500Ω

INSTALLATION

Max. current consumption: 80 mA

Exc. supply current consumption: 60 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: 110 g (0.24 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: 2 msec.

Output circuit time constant: ≤ 0.5 msec. (0 → 90 %)

Data range: 0 - 10000 of the output range

Data allocation: 2

Module addresses in use: 1

Temp. coefficient: ±0.015 %/°C (±0.008 %/°F)

Insulation resistance: ≥ 100 MΩ with 500 V DC

Dielectric strength:

1000 V AC @ 1 minute (output 1 to output 2 to exc. supply
to internal bus or internal power to ground)

STANDARDS & APPROVALS

CE conformity:

EMC Directive (2004/108/EC)

EMI EN 61000-6-4: 2007

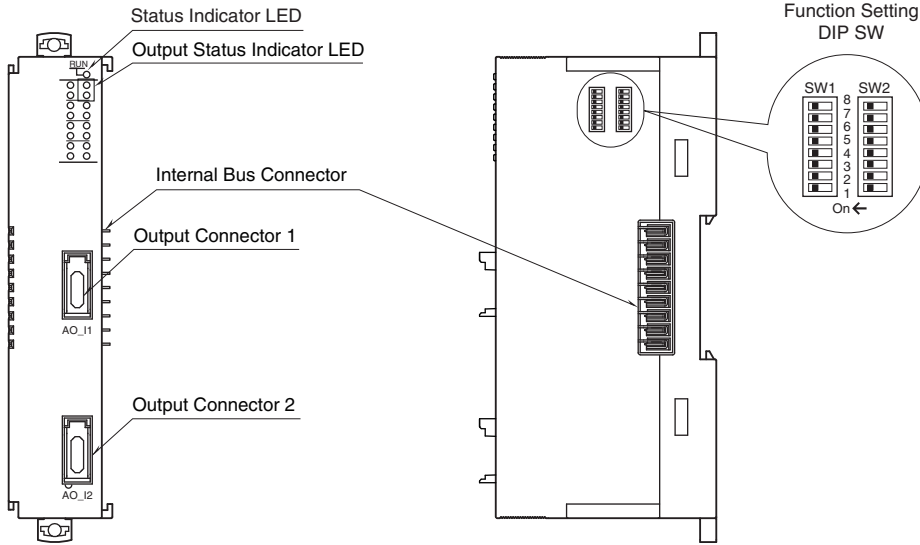
EMS EN 61000-6-2: 2005



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

The SW1-1, SW1-2, SW1-3, SW1-4 determines the tenth place digit, while the SW1-5, SW1-6, SW1-7, SW1-8 does the ones place digit of the address.

Address is selected between 0 to 31.

(Factory setting: 0)

MODULE ADDRESS	SW1				
	x10	1	2	3	4
	x1	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

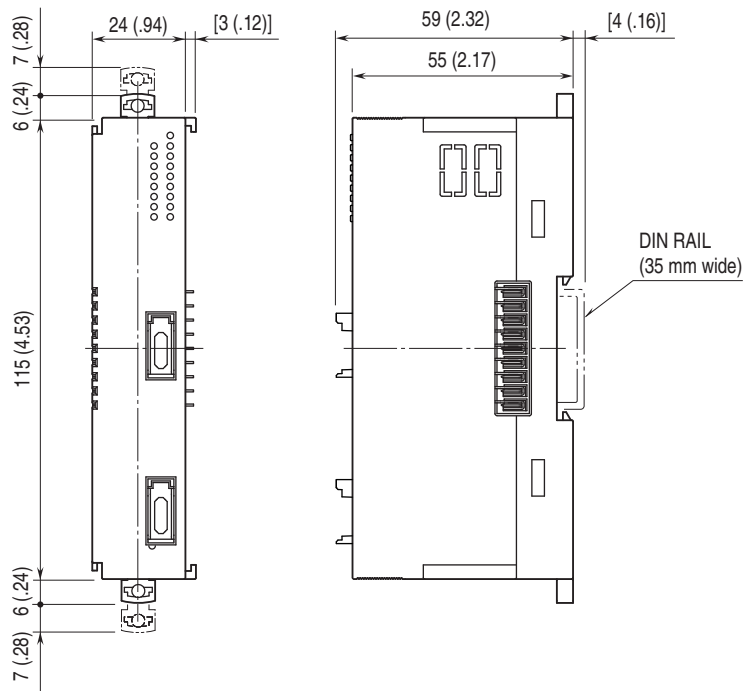
TERMINATOR SW	SW2
	6
Without (*)	OFF
With	ON

Configuration Mode

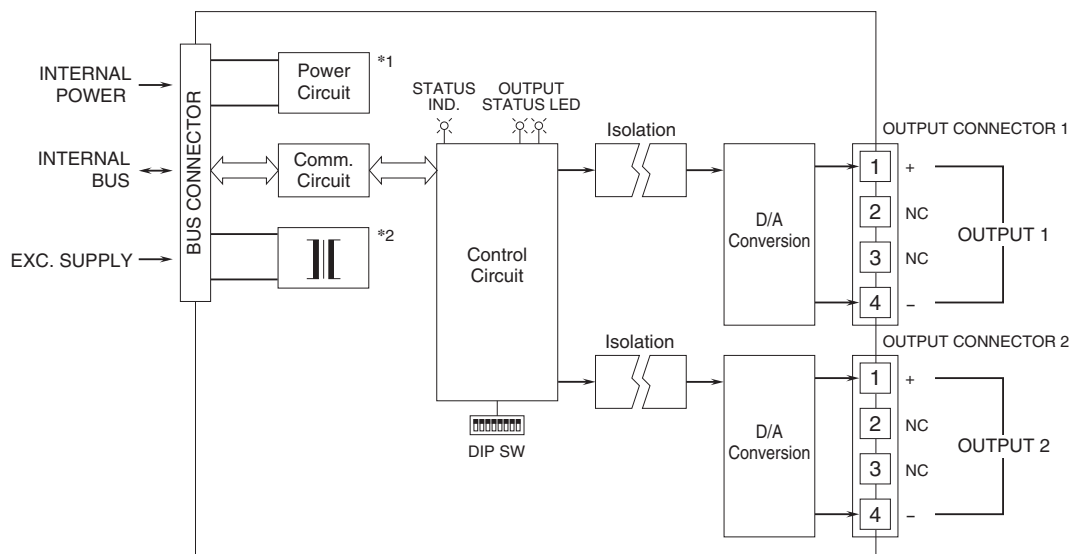
CONFIGURATION MODE	SW2
	8
DIP switch setting (*)	OFF
PC Configurator and communication	ON



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.