

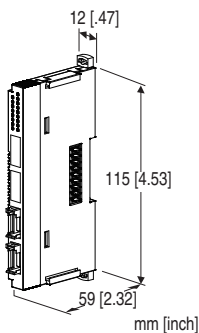
Remote I/O R8 Series

DC CURRENT OUTPUT MODULE

(built-in excitation, 2 points, non-isolated)

Functions & Features

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



MODEL: R8-YS2NJ[1]

ORDERING INFORMATION

- Code number: R8-YS2NJ[1]
Specify a code from below for [1].
(e.g. R8-YS2NJ/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:** 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 1 or output 2 to exc. supply to internal bus or internal power

Output range: Selectable with the side DIP SW

Module address: With rotary 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: ≤ 500Ω

INSTALLATION

Max. current consumption: 70 mA

Exc. supply: 24 V DC ±10%

Exc. supply current consumption: 50 mA

(Power supply for output circuit is generated from exc. supply)

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

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: ≤ 1 msec. (0 → 90 %)

Data range: 0 - 10000 of the output range

Data allocation: 2

Module addresses in use: 1

Power output (between 1 to 4 pin of output connector):

Rated current 0.5 A DC per channel (rated current 3 A for internal fuse (slow blow fuse i^2t (A²sec.) max. 5.04); Total: 1 A DC

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

Insulation resistance: ≥ 100 MΩ with 250 V DC

Dielectric strength:

1500 V AC @ 1 minute (output 1 or output 2 or exc. supply to internal bus or internal power to ground)

300 V AC @ 1 minute (output 1 or output 2 to exc. supply)

STANDARDS & APPROVALS

EU conformity:

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

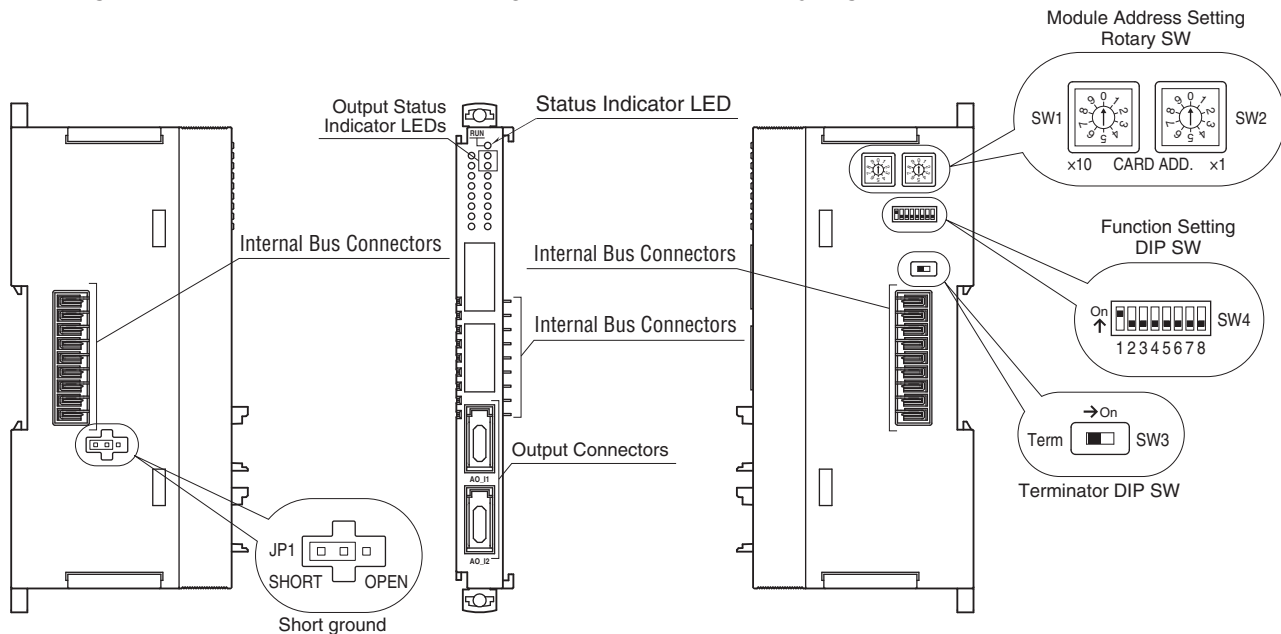
RoHS Directive

EXTERNAL VIEW

LEFT SIDE VIEW

FRONT VIEW

RIGHT SIDE VIEW



SHORT ACROSS GROUNDS

Choose to open or short across grounds of excitation supply and output.
 In case of shorting across, insert short-plug in the center pin of JP1 and SHORT side.
 In case of opening, insert short-plug in the center pin of JP1 and OPEN side.
 Factory default is on SHORT side.

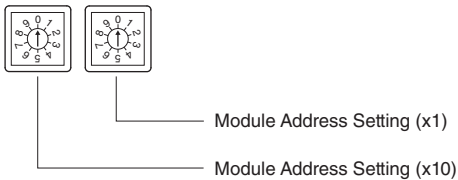
OPERATING MODE SETTING

(*) Factory setting

Caution ! - SW4-2 through 4-6 are unused. Be sure to turn off unused ones.

■ Module Address

The left switch determines the tenth place digit, while the right switch does the ones place digit of the address.
 Address is selected between 0 to 31.
 (Factory setting: 0)



■ Range

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

OUTPUT RANGE	SW4
	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	SW4
	7
Output Hold (*) (last data correctly received is hold)	OFF
Stop output (Output fixed at -5%, 0 mA min.)	ON

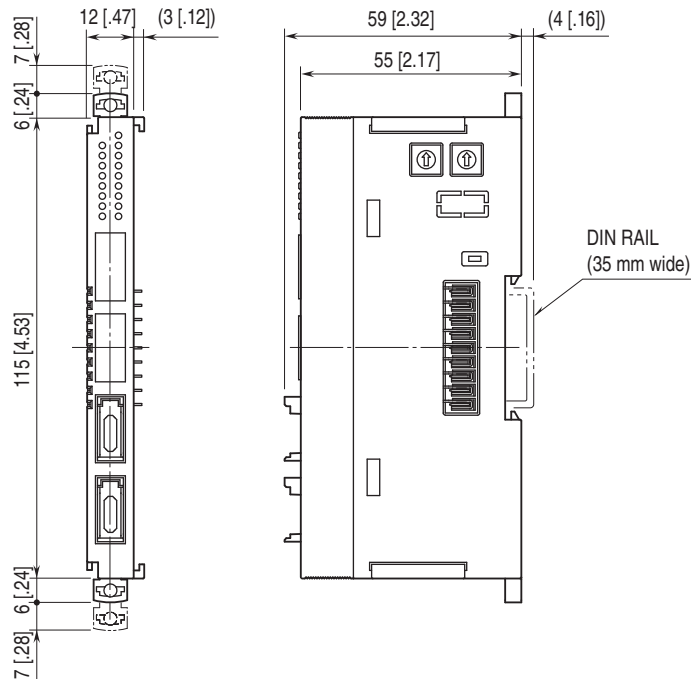
■ Configuration Mode

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

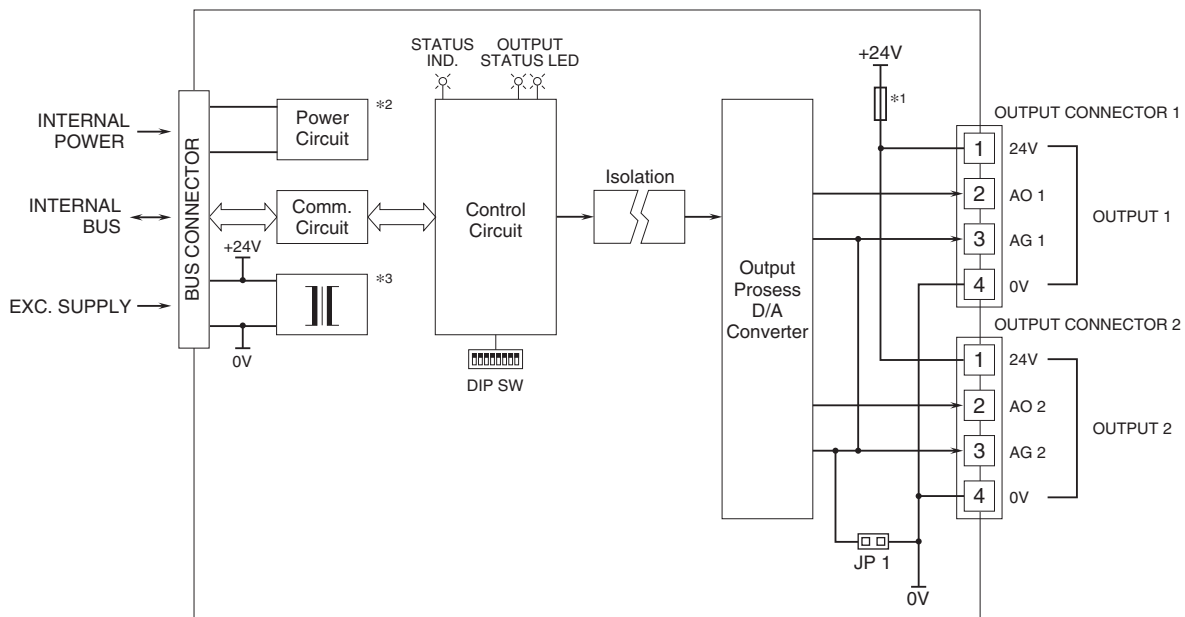
■ Terminator DIP SW

TERMINATOR SW	SW3
Without (*)	OFF
With	ON

EXTERNAL DIMENSIONS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*1. Fuse is not replaceable.

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

*3. 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.