

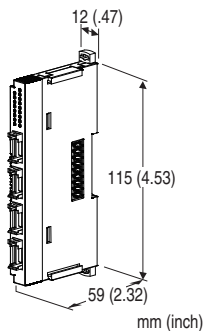
## Remote I/O R8 Series

### DC CURRENT INPUT MODULE

(built-in excitation, 4 points, non-isolated)

#### Functions & Features

- Accepts direct input from DC signal, compact size remote I/O module
- Accepts direct input from power output as sensor power and outputs from terminals



## MODEL: R8-SS4NJ[1]

### ORDERING INFORMATION

- Code number: R8-SS4NJ[1]  
Specify a code from below for [1].  
(e.g. R8-SS4NJ/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

- **Input:** 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 mm<sup>2</sup> (AWG28 - AWG20)  
Outer sheath diameter: max. 1.5 dia  
(The cable side 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:** Input to exc. supply to internal bus or internal power

**Input range:** Selectable with the side DIP SW

**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.

**Input status indicators:** Red LED; Refer to the instruction manual.

### INPUT

**Input range:** -20 - +20 mA DC configurable

**Input range:** -5 - +105 % (in percentage of input range)

**Input resistance:** 50 Ω

### INSTALLATION

**Max. current consumption:** 80 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:** 60 g (2.12 oz)

### PERFORMANCE

**Conversion accuracy (in percentage of input range)**

±0.1 % (@ input range -20 - +20 mA)

Conversion accuracy is inversely proportional to input span.

Conversion accuracy computation example:

When input range is 4 - 20 mA: conversion accuracy =  
nominal input span (40 mA) ÷ input span (16 mA) × 0.1(%)  
= 0.25 (%).

Nominal input span is the same as the span at input range  
-20 - +20 mA DC.

**Conversion rate:** 4 msec. @ 4 input

**Input circuit time constant:** Approx. 1 msec.

**Data range:** 0 - 10000 of the input range

**Data allocation:** 2

**Module addresses in use:** 2

**Power output (input terminal):** Rated current DC 0.5 A DC per channel (rated current 3 A for internal fuse (slow blow fuse  $i^2t$  (A<sup>2</sup>sec) max. 5.04); Total: 1 A DC

**Temp. coefficient:**  $\pm 0.015$  %/°C ( $\pm 0.008$  %/°F)

**Insulation resistance:**  $\geq 100$  M $\Omega$  with 250 V DC

**Dielectric strength:** 300 V AC @1 minute

(input to exc. supply)

1500V AC @1 minute

(input 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

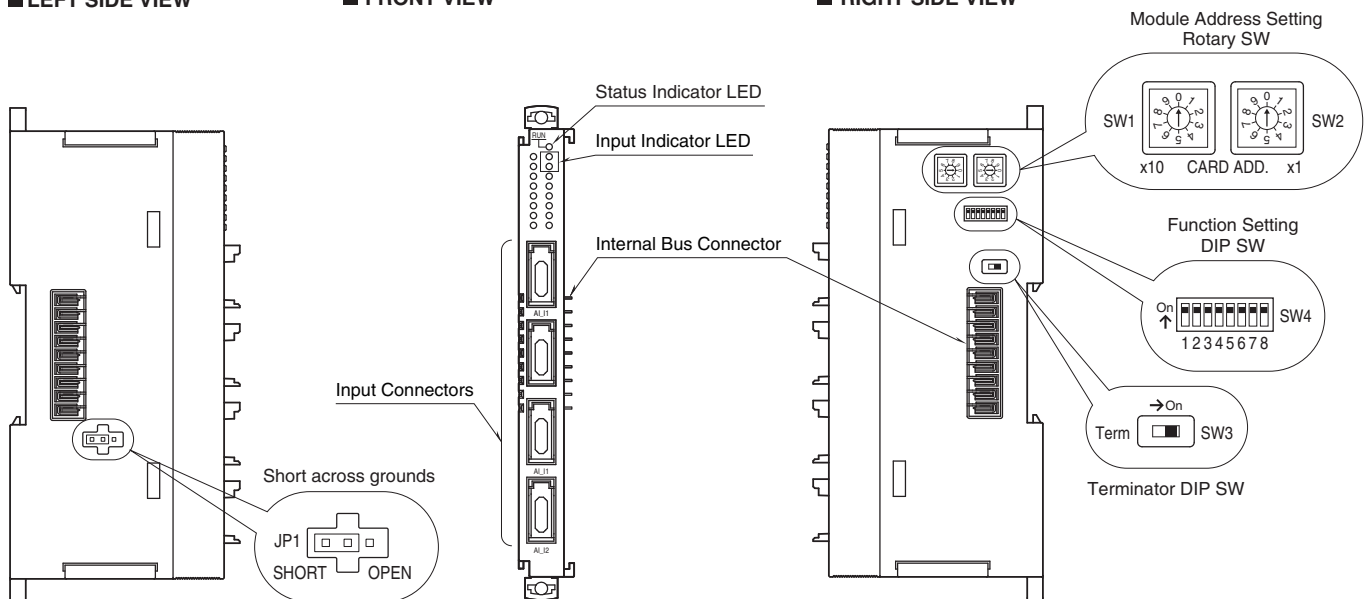
EN 50581

## EXTERNAL VIEW

■ LEFT SIDE VIEW

■ FRONT VIEW

■ RIGHT SIDE VIEW



## SHORT ACROSS GROUNDS

Choose to open or short across grounds of excitation supply and input.

In case of shorting across, insert short-plug on center pin of JP1 and SHORT side.

In case of opening, insert short-plug on center pin of JP1 and OPEN side.

Factory default is on SHORT side.

## OPERATING MODE SETTING

(\*) Factory setting

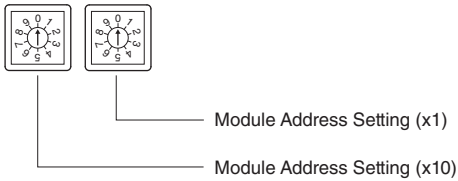
Caution ! - SW4-3 through 4-7 are unused. Be sure to turn off unused ones.

### ■ 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 30.

(Factory setting: 0)



### ■ Input Range

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

INPUT RANGE	SW4	
	1	2
0 – 20 mA DC	OFF	OFF
4 – 20 mA DC (*)	ON	OFF

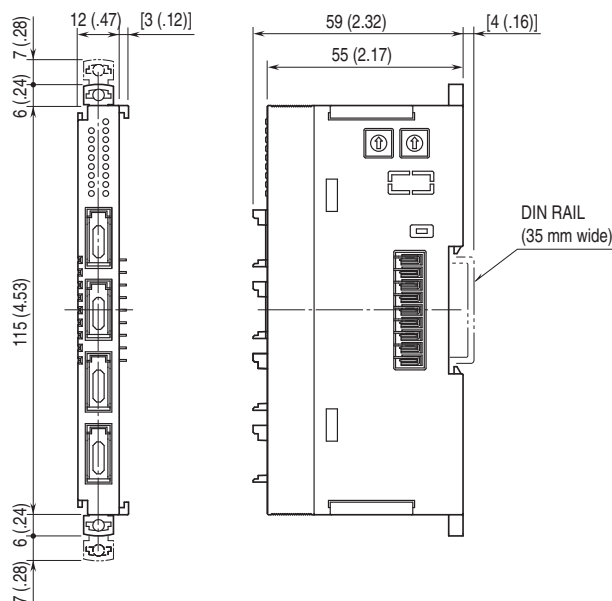
### ■ Configuration Mode

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

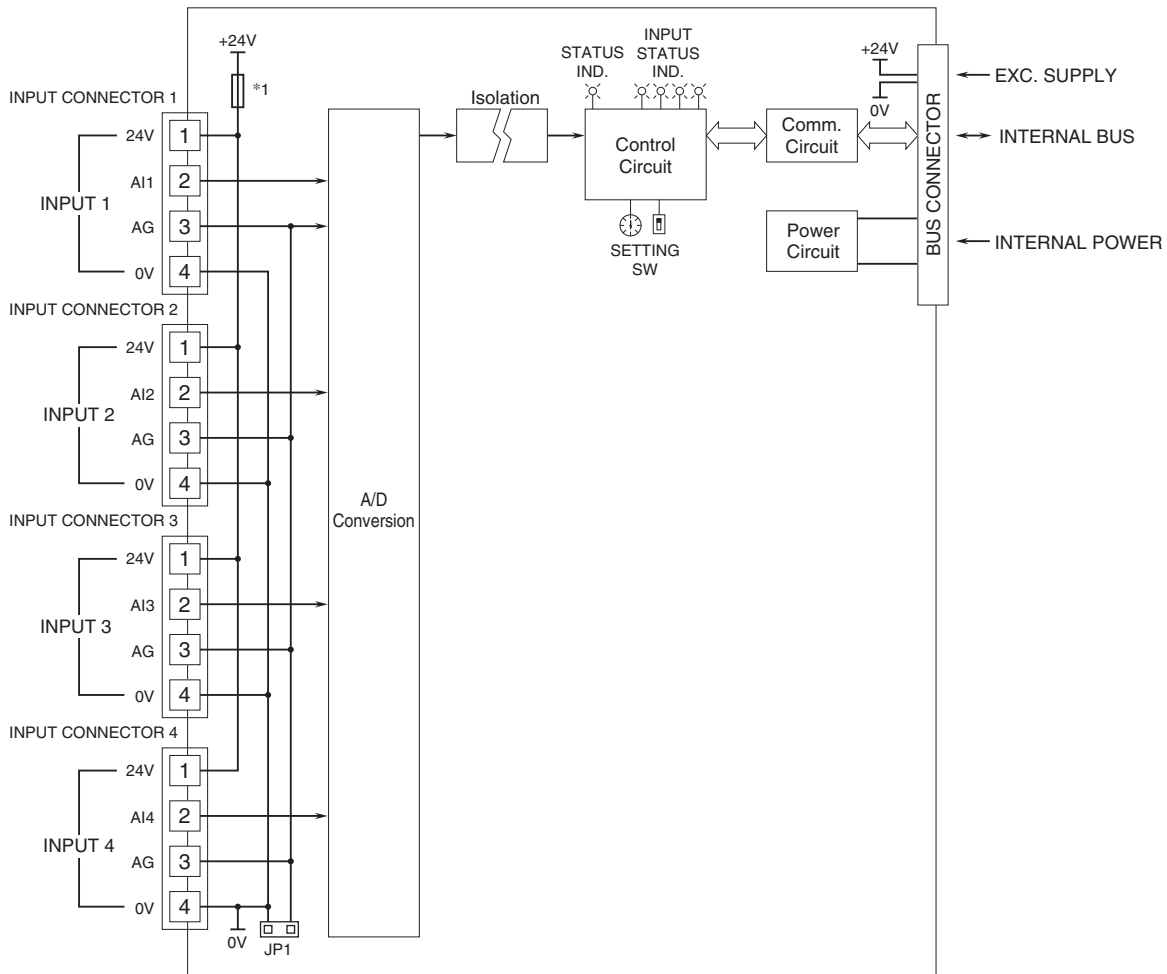
### ■ Terminator DIP SW

TERMINATOR SW	SW3
Without (*)	OFF
With	ON

## DIMENSIONS unit: mm (inch)



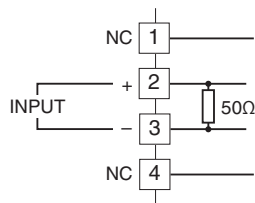
## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



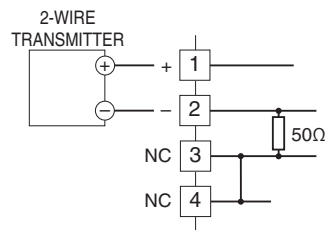
\*1. Fuse is not replaceable.

### ■ INPUT CONNECTION

- When Used as DC Current Input  
JP1 can be open or short.



- When Used as DC Supply  
Short the JP1.



Specifications are subject to change without notice.