

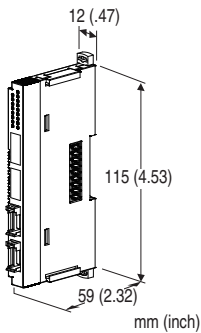
## Remote I/O R8 Series

### DC VOLTAGE INPUT MODULE

(2 points, isolated)

#### Functions & Features

- 2 channels for DC voltage input, compact size remote I/O module
- Isolation between channels
- Input range adjustment with DIP switch or PC configurator



## MODEL: R8-SV2

### ORDERING INFORMATION

- Code number: R8-SV2

### 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  
PWB connector XN2D-1474-S002 (Omron)  
Recommended cable connector XN2A-1470 (Omron)  
Applicable wire size 0.08 mm<sup>2</sup> (AWG28) - 0.5 mm<sup>2</sup> (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:** Input 1 to input 2 to exc. supply to internal bus or internal power
- Module address:** With rotary switch
- Terminating resistor:** Built-in (DIP Switch, default: disable)

**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:** -10 - +10 V DC configurable

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

**Input resistance:** ≥ 1 MΩ

### INSTALLATION

**Max. current consumption:** 100 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)**

±0.05 % (@ input range -10 - +10 V)

Conversion accuracy is inversely proportional to input span.

Conversion accuracy computation example:

When input range is 1 - 5 V: conversion accuracy =  
nominal input span (20 V) ÷ input span (4 V) × 0.05(%) =  
0.25 (%).

Nominal input span is the same as the span at input range  
-10 - +10 V DC.

**Conversion rate:** 2 msec.

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

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

**Data allocation:** 2

**Module addresses in use:** 1

**Max. consumption current:** 100 mA

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

**Insulation resistance:** ≥ 100 MΩ with 500 V DC

**Dielectric strength:**

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

1000 V AC @ 1 minute (for modules combined with this  
device)

### STANDARDS & APPROVALS

**CE conformity:**

EMC Directive (2004/108/EC)

EMI EN 61000-6-4: 2007

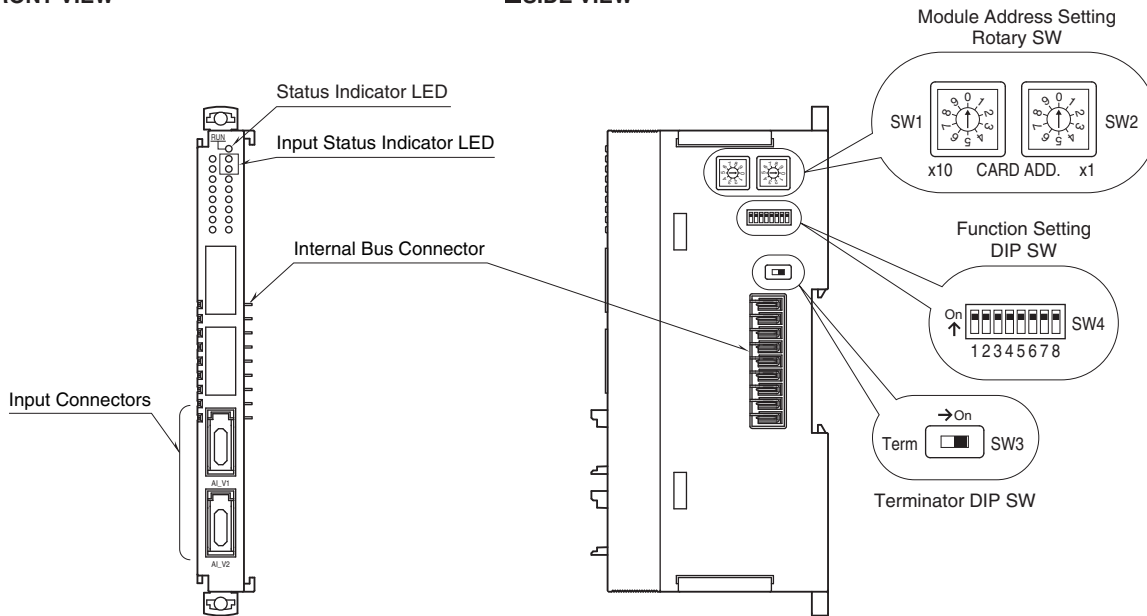
EMS EN 61000-6-2: 2005



## EXTERNAL VIEW

### FRONT VIEW

### SIDE VIEW



## OPERATING MODE SETTING

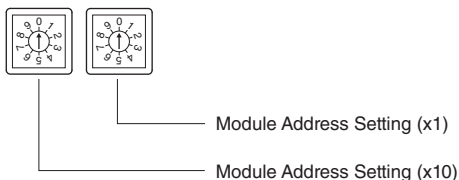
(\*) Factory setting

Caution ! - 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 31.

(Factory setting: 0)



### Terminator DIP SW

Terminator switch	SW3
Without (*)	OFF
With	ON

### Range

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

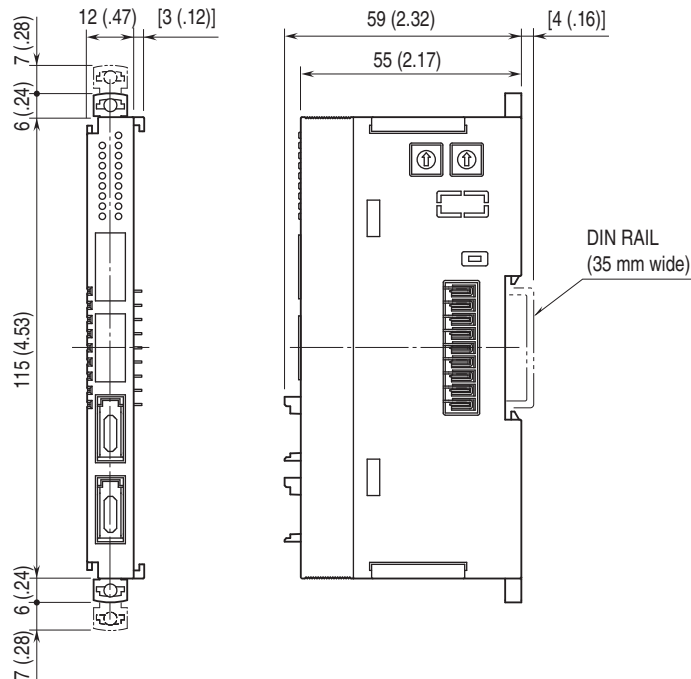
INPUT RANGE	SW4	
	1	2
-10 - 10V DC (*)	OFF	OFF
0 - 10V DC	ON	OFF
0 - 5V DC	OFF	ON
1 - 5V DC	ON	ON

### Configuration Mode

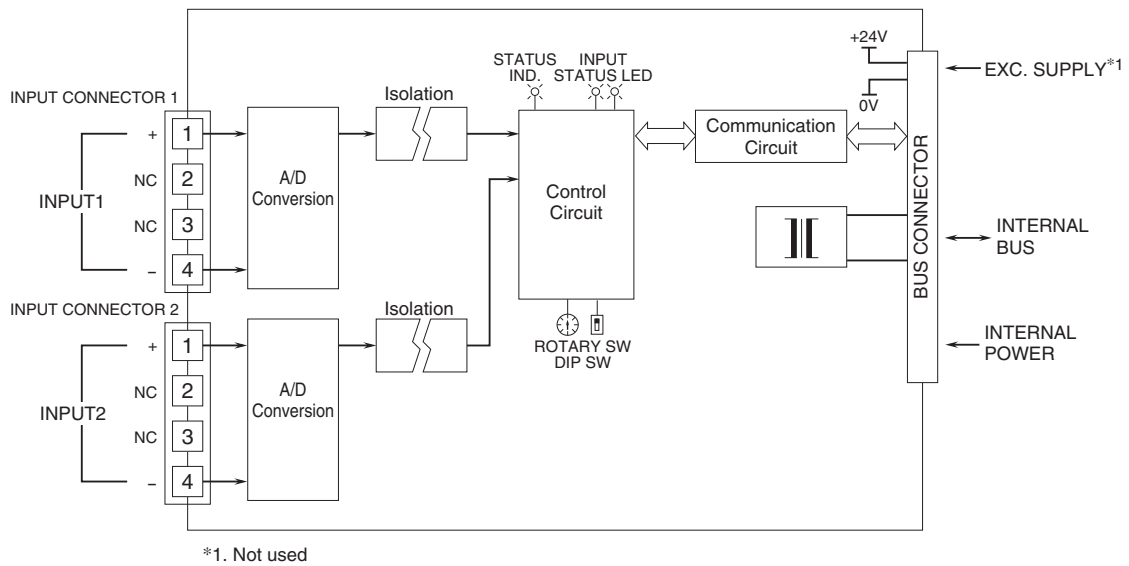
CONFIGURATION MODE	SW4
	8
DIP switch setting (*)	OFF
PC Configurator and communication	ON



## DIMENSIONS unit: mm (inch)



## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.