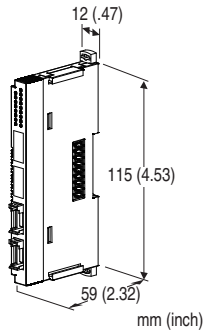
Remote I/O R8 Series

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[1]

ORDERING INFORMATION

• Code number: R8-SV2[1]
Specify a code from below for [1].
(e.g. R8-SV2/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
PWB connector XN2D-1474-S002 (Omron)
Recommended cable connector XN2A-1470 (Omron)
Applicable wire size 0.08 mm^2 (AWG28) - 0.5 mm^2 (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
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: -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

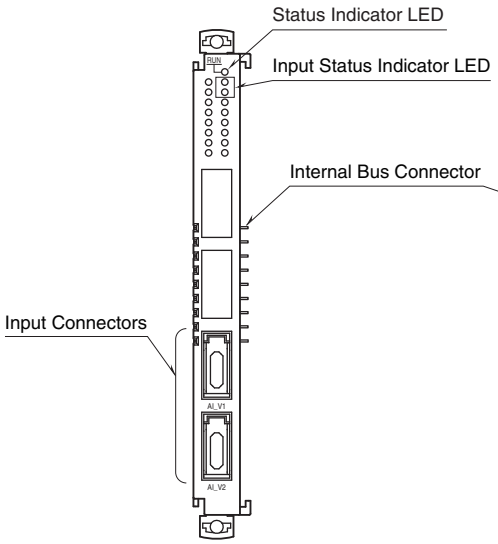
Module addresses in use: 1
Max. consumption current: 100 mA
Temp. coefficient: ±0.015 %/°C (±0.008 %/°F)
Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength:
1000 V AC @ 1 minute (input 1 to input 2 to exc. supply to internal bus or internal power to FG)
1000 V AC @ 1 minute (for modules combined with this device)

STANDARDS & APPROVALS

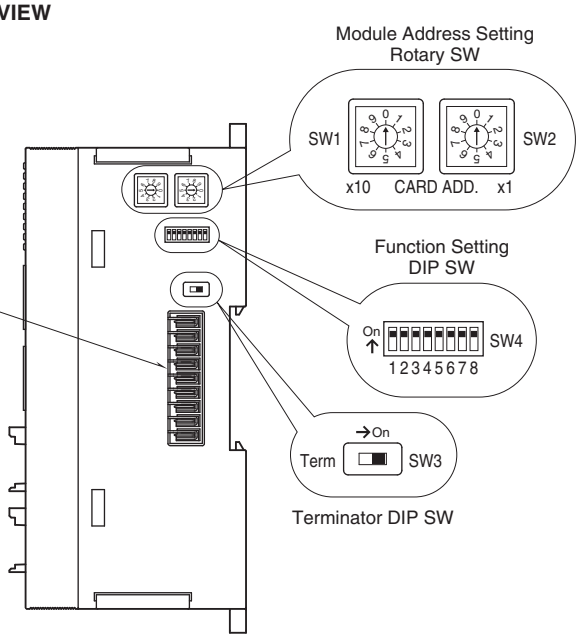
EU conformity:
EMC Directive
EMI EN 61000-6-4
EMS EN 61000-6-2
RoHS Directive
EN 50581

EXTERNAL VIEW

■**FRONT VIEW**



■**SIDE VIEW**



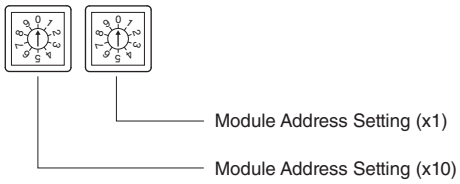
OPERATING MODE SETTING

(*) Factory setting

Caution ! - 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)



■ 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

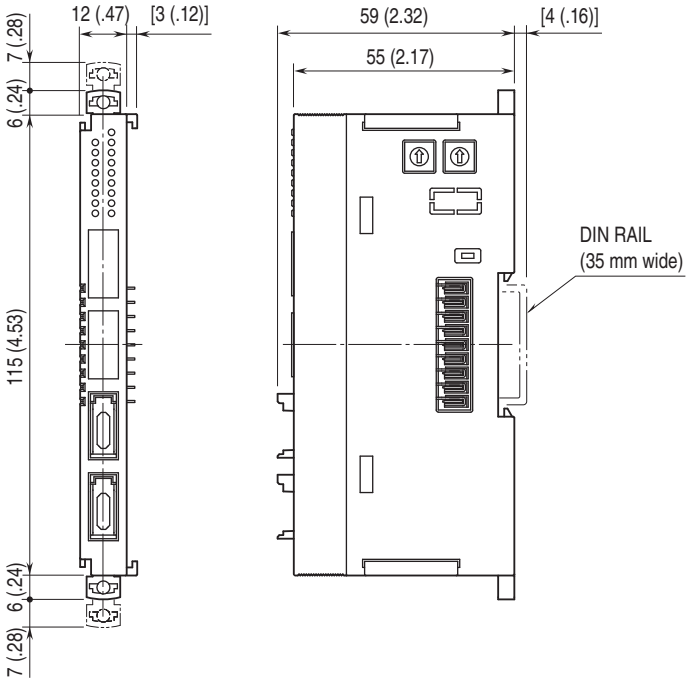
■ Configuration Mode

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

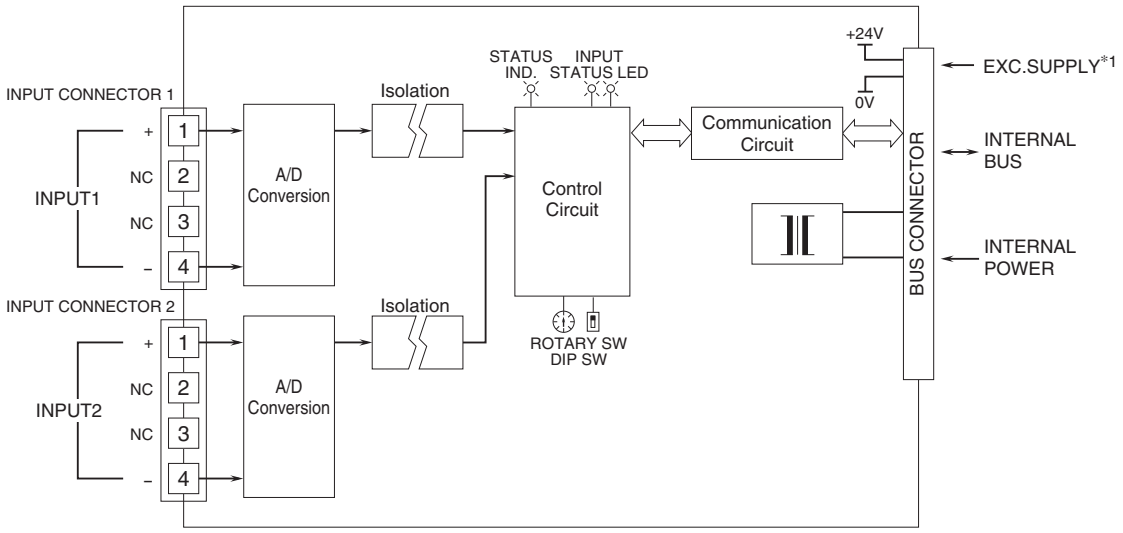
■ Terminator DIP SW

TERMINATOR SW	SW3
Without (*)	OFF
With	ON

DIMENSIONS unit: mm (inch)



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*1. Not used

⚠ Specifications are subject to change without notice.