

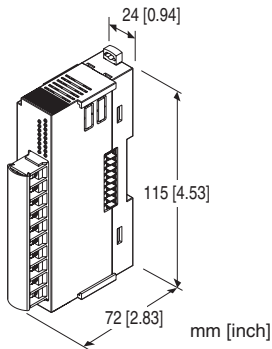
Remote I/O R8 Series

DC VOLTAGE INPUT MODULE

(4 points, isolated, screw terminal block)

Functions & Features

- 4 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-SVN4[1]

ORDERING INFORMATION

- Code number: R8-SVN4[1]
- Specify a code from below for [1].
(e.g. R8-SVN4/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 our web site.)

/C01: Silicone coating

/C02: Polyurethane coating

RELATED PRODUCTS

- PC Configurator cable (model: MCN-CON or COP-US)
 - PC configurator software (model: R8CFG)
- Downloadable at our web site.

GENERAL SPECIFICATIONS

Connection

- **Input:** M3 screw terminals (torque: 0.6 N·m)

- **Excitation supply, internal bus:**

Connected to internal bus connector

- **Internal power:** Supplied from internal bus connector

Solderless terminal: Refer to the drawing at the end of the section.

Recommended manufacturer: Japan Solderless Terminal MFG. Co., Ltd., Nichifu Co., Ltd.

Applicable wire size: 0.25 to 1.65 mm² (AWG 22 to 16)

Screw terminal: Nickel-plated steel

Isolation: Input 1 to input 2 to input 3 to input 4 to exc. supply to internal bus or internal power

Input range: Selectable with the side DIP SW

Module address: With DIP switch

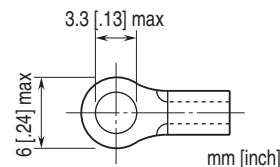
Terminating resistor: Built-in (DIP Switch, default: disable)

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.

■ Recommended solderless terminal size - M3



INPUT SPECIFICATIONS

Input range: -10 - +10 V DC configurable

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

Input resistance: ≥ 1 MΩ

INSTALLATION

Max. current consumption: 170 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: 120 g (0.26 lb)

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.

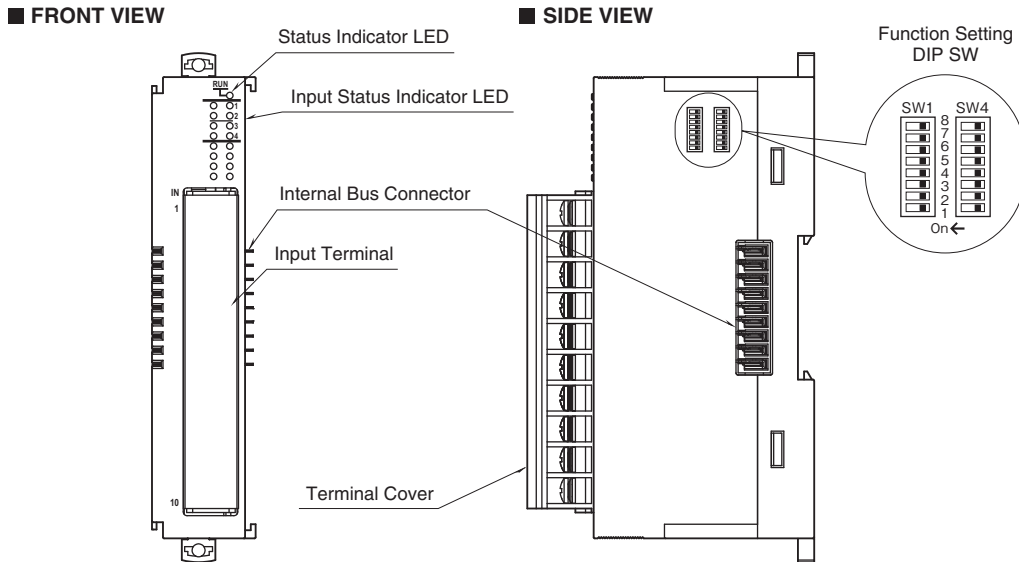
Conversion rate: 4 msec.
Input circuit time constant: Approx. 1 msec.
Data range: 0 - 10000 of the input range
Data allocation: 2
Module addresses in use: 2
Temp. coefficient: $\pm 0.015\% / ^\circ\text{C}$ ($\pm 0.008\% / ^\circ\text{F}$)
Insulation resistance: $\geq 100\text{ M}\Omega$ with 500 V DC
Dielectric strength: 1500 V AC @ 1 minute
 (input 1 to input 2 to input 3 to input 4 to 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

EXTERNAL VIEW



CONNECTION DIAGRAMS



PIN No.	ID	FUNCTION
1	In1	Input 1 (+)
2		Input 1 (-)
3	In2	Input 2 (+)
4		Input 2 (-)
5	NC	No connection
6	In3	Input 3 (+)
7		Input 3 (-)
8	In4	Input 4 (+)
9		Input 4 (-)
10	NC	No connection

OPERATING MODE SETTING

(*) Factory default setting

Note: Be sure to set unused SW4-3 through 4-5 and 4-7 to OFF.

■ MODULE ADDRESS (SW1)

SW1-1 through 1-4 determine the tenth place digit, while SW1-5 through 1-8 do the ones place digit of the module address.

Address is selected between 0 to 30.

(Factory setting: 0)

MODULE ADDRESS	SW1							
	×10	1	2	3	4			
	×1	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			

■ INPUT RANGE (SW4)

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

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

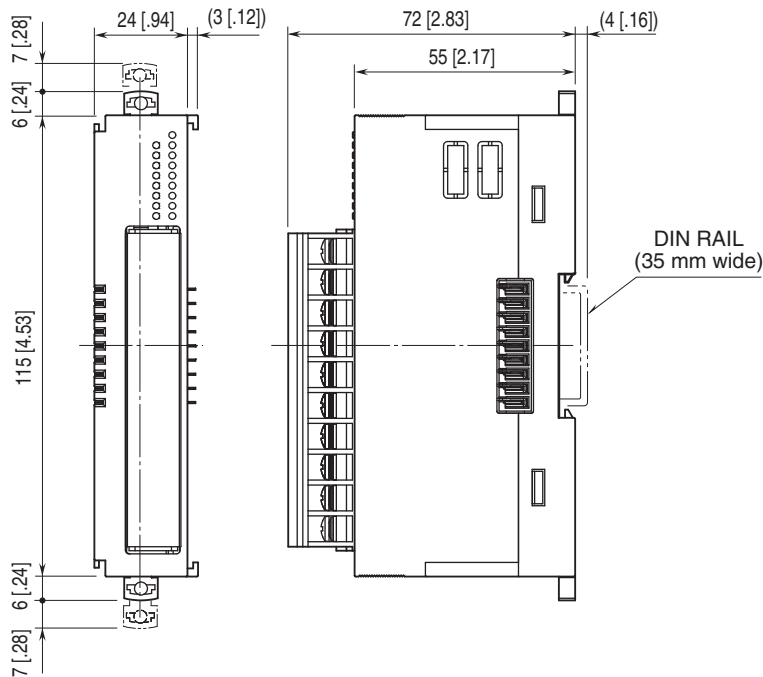
■ TERMINATOR (SW4)

TERMINATOR	SW4-6
Without (*)	OFF
With	ON

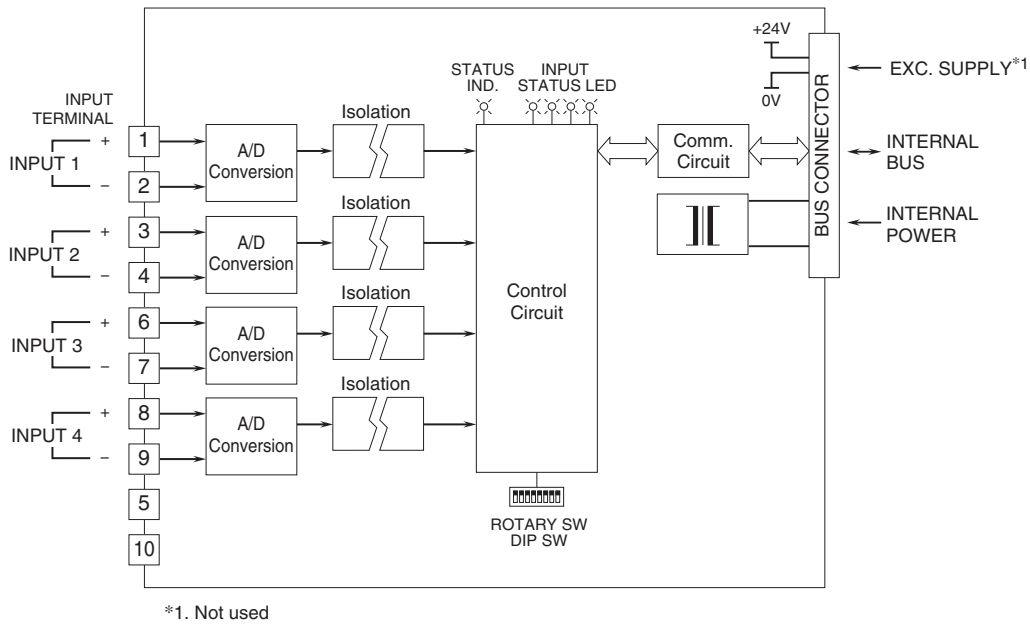
■ CONFIGURATION MODE (SW4)

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

EXTERNAL DIMENSIONS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.