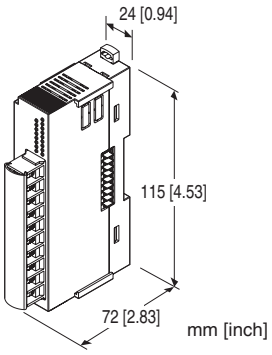
Remote I/O R8 Series

DC CURRENT INPUT MODULE

(4 points, isolated, screw terminal block)

Functions & Features

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



MODEL: R8-SSN4[1]

ORDERING INFORMATION

- Code number: R8-SSN4[1]

Specify a code from below for [1].
(e.g. R8-SSN4/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.

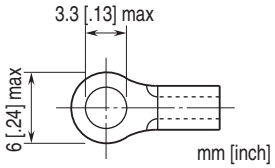
GENERAL SPECIFICATIONS

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 mm^2 (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: -20 – +20 mA DC configurable
Operational range: -5 - +105 % (in percentage of input range)
Input resistance: 100 Ω

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)
±0.1 % (@ 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.

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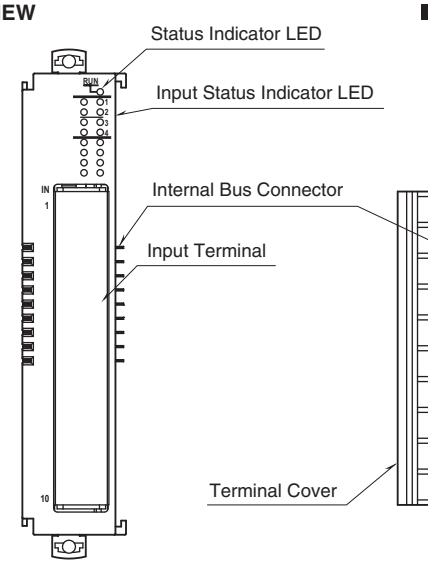
Conversion rate: 4 msec.
Input circuit time constant: Approx. 1 msec.
Data range: 0 – 10000 of the input range
Data allocation: 2
Module addresses in use: 2
Temp. coefficient: ±0.015 %/°C (±0.008 %/°F)
Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength: 1500 V AC @ 1 minute
(input 1 to input 2 to input 3 to input 4 to exc. supply to internal bus or internal power to ground)

STANDARDS & APPROVALS

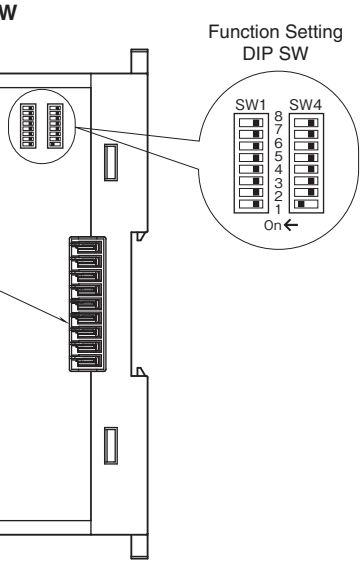
EU conformity:
EMC Directive
EMI EN 61000-6-4
EMS EN 61000-6-2
RoHS Directive

EXTERNAL VIEW

■ **FRONT VIEW**



■ **SIDE 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

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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
0 – 20 mA DC	OFF	OFF
4 – 20 mA DC (*)	ON	OFF

■ 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

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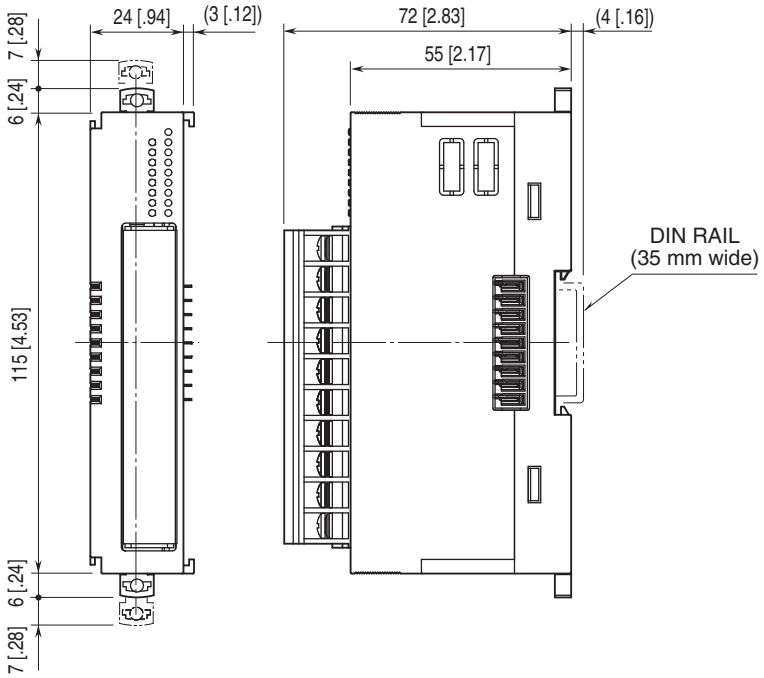
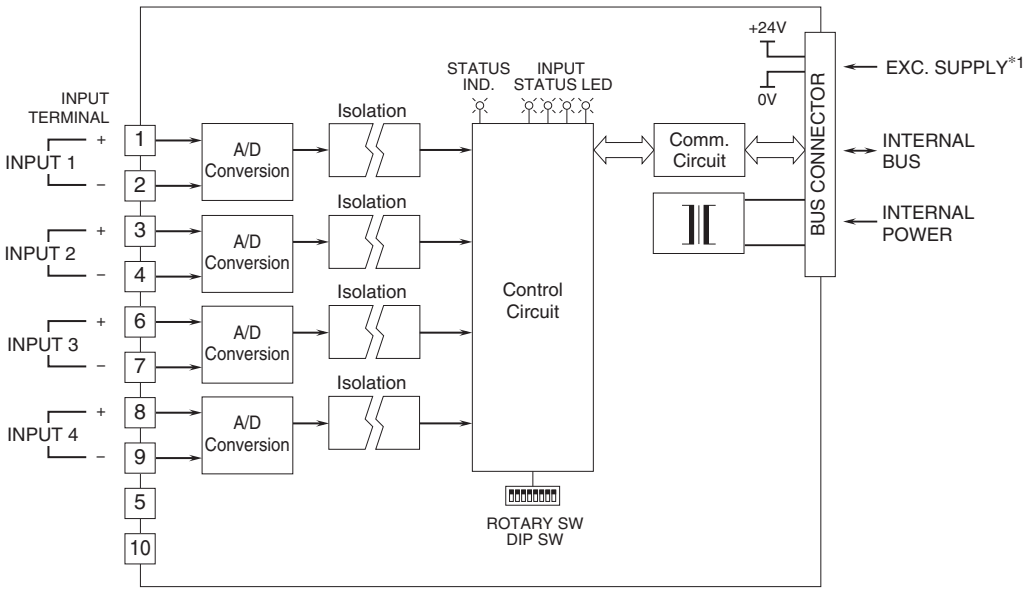
EXTERNAL DIMENSIONS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*1. Not used

⚠ Specifications are subject to change without notice.

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