

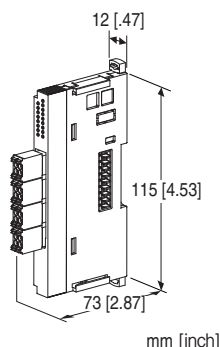
Remote I/O R8 Series

RTD INPUT MODULE

(4 points, non-isolated)

Functions & Features

- Accepts direct input from an RTD
- Compact size remote I/O module
- 100 msec. conversion rate per channel
- Each channel is attachable/detachable independently with separable tension clamp terminal



MODEL: R8-RST4N[1]

ORDERING INFORMATION

- Code number: R8-RST4N[1]
- Specify a code from below for [1].
(e.g. R8-RST4N/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:** Separable tension clamp terminal
- **Excitation supply, internal bus:**

Connected to internal bus connector

- **Internal power:** Via bus connector

Isolation: Input to exc. supply to internal bus or internal power

Zero adjustments: -32000 - 32000 (PC programming)

Span adjustments: -32000 - 32000 (PC programming)

Configurator software can handle 100 - 200°C as numerical value of 0 - 10000

Input sensor setting: DIP switches on the side or with PC

Burnout detection: Selectable with the side DIP SW

Linearization: Standard

Module address: With rotary switch

Converted data range:

- Engineering unit value (°C, K) × 10 (integer)
- Engineering unit value (°F)

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 SPECIFICATIONS

Maximum leadwire resistance: 20 Ω per wire

Sensing current: ≤ 0.33 mA

RTD	°C			
	BURNOUT DISPLAY VALUE		ACCURACY RANGE	CONVERSION ACCURACY*1
	Lower	Upper		
Pt 100 (JIS' 97, IEC)	-240	+950	-200 to +850	±0.20
Pt 1000	-240	+950	-200 to +850	±0.40
Pt 50 Ω (JIS' 81)	-235	+750	-200 to +649	±0.40
JPt 100 (JIS' 89)	-235	+610	-200 to +510	±0.20

RTD	°F			
	BURNOUT DISPLAY VALUE		ACCURACY RANGE	CONVERSION ACCURACY*1
	Lower	Upper		
Pt 100 (JIS' 97, IEC)	-400	+1742	-328 to +1562	±0.36
Pt 1000	-400	+1742	-328 to +1562	±0.72
Pt 50 Ω (JIS' 81)	-391	+1382	-328 to +1200	±0.72
JPt 100 (JIS' 89)	-391	+1130	-328 to +950	±0.36

Specify Pt 100 (JIS '97) for Pt 100 (JIS '89), as it is covered with accuracy range of Pt 100 (JIS '97).

*1. This value is ±0.1% of span whichever is greater.

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: 80 g (2.8 oz)

PERFORMANCE

Conversion rate: 100 msec. per channel

Data allocation: 2

Module addresses in use: 2

Temp. coefficient: $\pm 0.03\ \%/^{\circ}\text{C}$ ($\pm 0.02\ \%/^{\circ}\text{F}$)

Burnout response time: $\leq 1\ \text{sec.}$

Insulation resistance: $\geq 100\ \text{M}\Omega$ with 500 V DC

Dielectric strength: 1000V AC @1 minute

(input to exc. supply to internal bus or internal power to ground)

STANDARDS & APPROVALS

EU conformity:

EMC Directive

EMI EN 61000-6-4

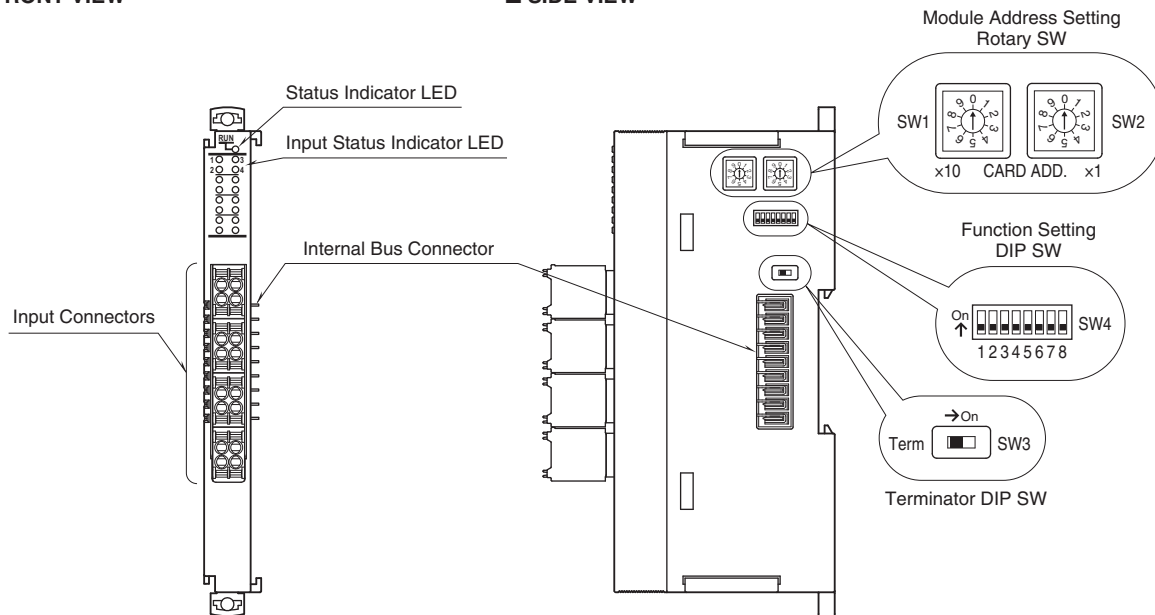
EMS EN 61000-6-2

RoHS Directive

EXTERNAL VIEW

■ FRONT VIEW

■ SIDE VIEW



WIRING**■ SEPARABLE TENSION CLAMP TERMINAL**

Unit side connector: MG's product

Cable side connector: DPMC1,5/2-ST-3,5 (Phoenix Contact)
(included in the package)Applicable wire size: 0.2 - 1.5 mm²

Stripped length: 10 mm

Recommended solderless terminal

- AI0,25-10YE 0.25 mm² (Phoenix Contact)
- AI0,34-10TQ 0.34 mm² (Phoenix Contact)
- AI0,5-10WH 0.5 mm² (Phoenix Contact)
- AI0,75-10GY 0.75 mm² (Phoenix Contact)
- AI1-10 1.0 mm² (Phoenix Contact)
- AI1,5-10 1.5 mm² (Phoenix Contact)

1	2
INA 1	NC
3	4
INB 1	INb 1

5	6
INA 2	NC
7	8
INB 2	INb 2

9	10
INA 3	NC
11	12
INB 3	INb 3

13	14
INA 4	NC
15	16
INB 4	INb 4

PIN No.	ID	FUNCTION
1	INA 1	RTD (A)
2	NC	No connection
3	INB 1	RTD (B)
4	INb 1	RTD (b)
5	INA 2	RTD (A)
6	NC	No connection
7	INB 2	RTD (B)
8	INb 2	RTD (b)
9	INA 3	RTD (A)
10	NC	No connection
11	INB 3	RTD (B)
12	INb 3	RTD (b)
13	INA 4	RTD (A)
14	NC	No connection
15	INB 4	RTD (B)
16	INb 4	RTD (b)

OPERATING MODE SETTING

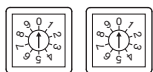
(*) Factory setting

Note: Be sure to set unused SW4-3 through 4-6 to OFF.

■ Module Address

The left switch determines the tenth place digit, while the right one does the ones place digit of the module address. Address is selected between 0 to 30.

(Factory setting: 0)



Module Address Setting (x1)

Module Address Setting (x10)

■ RTD

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

RTD	SW4	
	1	2
Pt 100 (JIS'97, IEC) (*)	OFF	OFF
Pt 1000	OFF	ON
Pt 50 Ω (JIS'81)	ON	OFF
JPt 100 (JIS'89)	ON	ON

■ Burnout

BURNOUT	SW4
	7
Upscale (*)	OFF
Downscale	ON

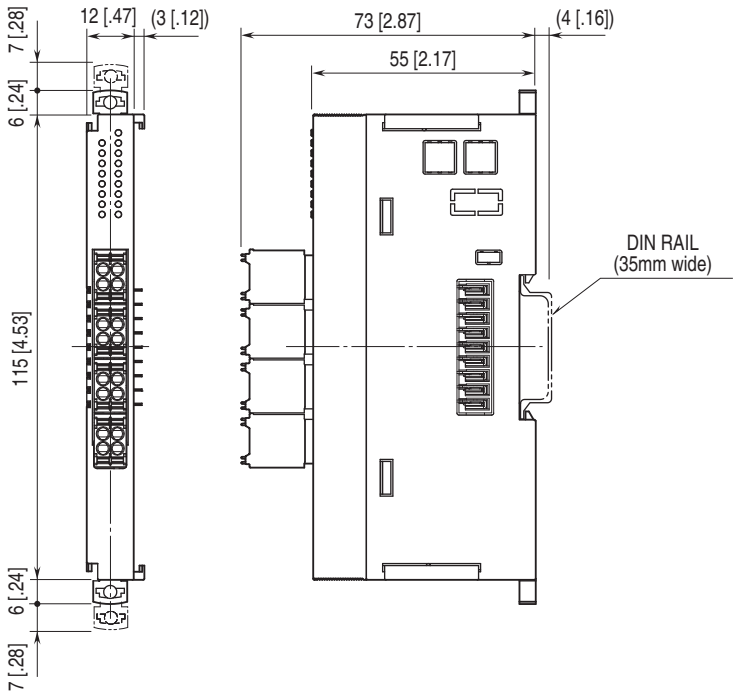
■ Configuration Mode

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

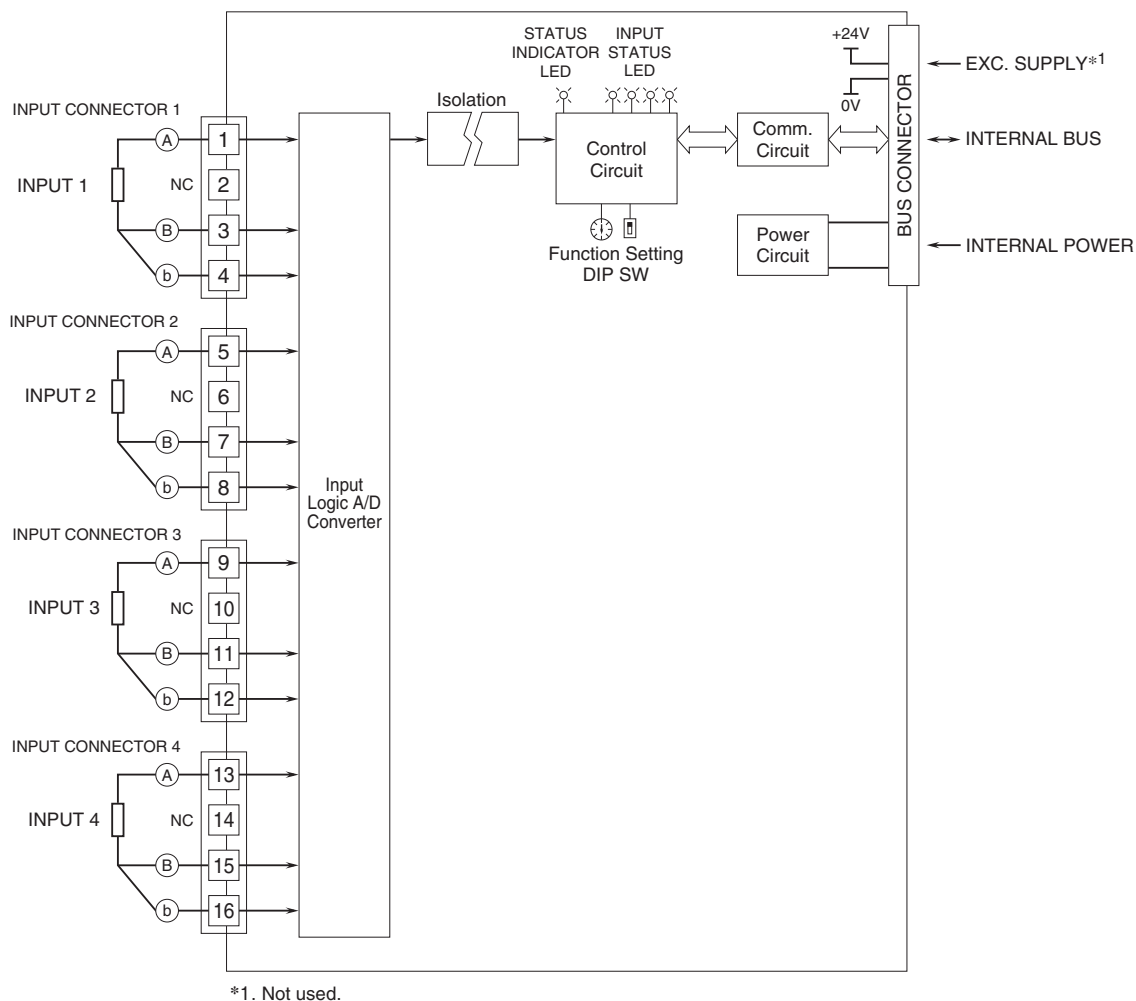
■ Terminator DIP SW

TERMINATOR DIP SW	SW3
Without (*)	OFF
With	ON

EXTERNAL DIMENSIONS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.