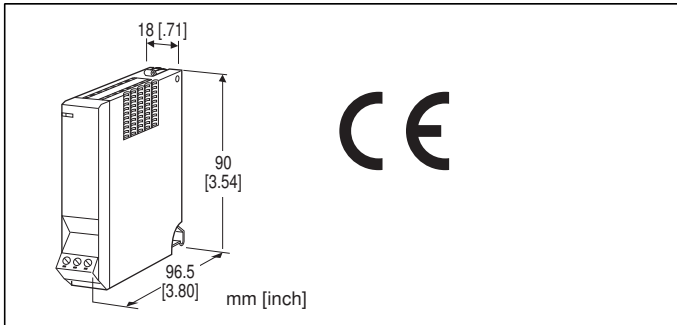


Remote I/O R5 Series

RTD INPUT MODULE



MODEL: R5-RS[1][2][3]

ORDERING INFORMATION

- Code number: R5-RS[1][2][3]
- Specify a code from below for each of [1] through [3].
(e.g. R5-RS2W/Q)
- Specify the specification for option code /Q
(e.g. /C01)

[1] NO. OF CHANNELS

- 1: 1 channel
- 2: 2 channels

[2] COMMUNICATION MODE

- S: Single
- W: Dual

[3] 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
- /C03: Rubber coating

GENERAL SPECIFICATIONS

Connection

- Internal bus:** Via the Installation Base (model: R5-BS)
- Input:** Euro type connector terminal
(Applicable wire size: 0.2 - 2.5 mm² (AWG24 - 12),
stripped length 7 mm)
- Internal power:** Via the base (model: R5-BS)
- Isolation:** Input 1 to input 2 to internal bus or internal power

Sensor type: Selectable with the side DIP SW

Temperature unit: °C, °F or absolute temperature selectable with the side DIP SW

Burnout detection: Upscale or downscale selectable with the side DIP SW

Linearization: Standard

RUN indicator: Bi-color (red/green) LED;
Red when the bus A operates normally;
Green when the bus B operates normally;
Amber when both buses operate normally.

INPUT SPECIFICATIONS

Maximum leadwire resistance: 200 Ω per wire (3-wire)

Sensing current: ≤ 1 mA

Temperature range

RTD	°C	
	USABLE RANGE	CONFORMANCE RANGE
Cu 10 @25°C	-212 to +312	-50 to +250
Cu 50	-100 to +200	-50 to +150
JPt 100 (JIS '89)	-236 to +560	-200 to +510
Pt 100 (JIS '89)	-240 to +900	-200 to +660
Pt 100 (JIS'97,IEC)(*)	-240 to +900	-200 to +850
Pt 1000	-240 to +900	-200 to +850
Pt 50Ω (JIS '81)	-236 to +700	-200 to +649
Ni 100	-100 to +252	-80 to +250
Ni 508.4Ω	-100 to +332	-50 to +200
RTD	°F	
	USABLE RANGE	CONFORMANCE RANGE
Cu 10 @25°C	-350 to +594	-58 to +482
Cu 50	-148 to +392	-58 to +302
JPt 100 (JIS '89)	-393 to +1040	-328 to +950
Pt 100 (JIS '89)	-400 to +1652	-328 to +1220
Pt 100 (JIS'97,IEC)(*)	-400 to +1652	-328 to +1562
Pt 1000	-400 to +1652	-328 to +1562
Pt 50Ω (JIS '81)	-393 to +1292	-328 to +1200
Ni 100	-148 to +486	-112 to +482
Ni 508.4Ω	-148 to +630	-58 to +392

(*) Factory setting.

Max. (upscale) or min. (downscale) value of the usable range when a burnout is detected.

INSTALLATION

- 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:** Installation Base (model: R5-BS)
- Weight:** 100 g (0.22 lb)

PERFORMANCE

Conversion accuracy: $\pm 0.4^{\circ}\text{C}$ ($\pm 1^{\circ}\text{F}$)

($\pm 3.0^{\circ}\text{C}$ [$\pm 5.4^{\circ}\text{F}$] for Cu 10)

Data range

$^{\circ}\text{C}$, absolute temperature: Engineering unit value $\times 10$
(integer)

$^{\circ}\text{F}$: Engineering unit value (integer)

Data allocation: 1 (2 for 2-channel type)

Temp. coefficient: $\pm 0.015\ \%/^{\circ}\text{C}$ ($\pm 0.008\ \%/^{\circ}\text{F}$)

Response time: $\leq 0.2\ \text{sec.}$ (0 - 90 %)

Burnout response time: $\leq 2\ \text{sec.}$

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

Dielectric strength: 1500 V AC @ 1 minute (input 1 to input 2 to internal bus or internal power)

2000 V AC @ 1 minute (power input to FG; isolated on the power supply module)

STANDARDS & APPROVALS

EU conformity:

EMC Directive

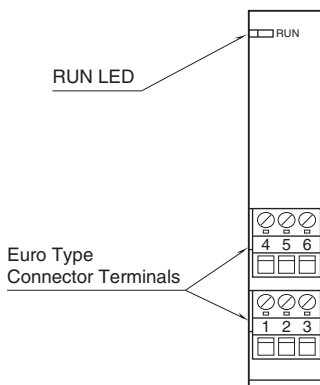
EMI EN 61000-6-4

EMS EN 61000-6-2

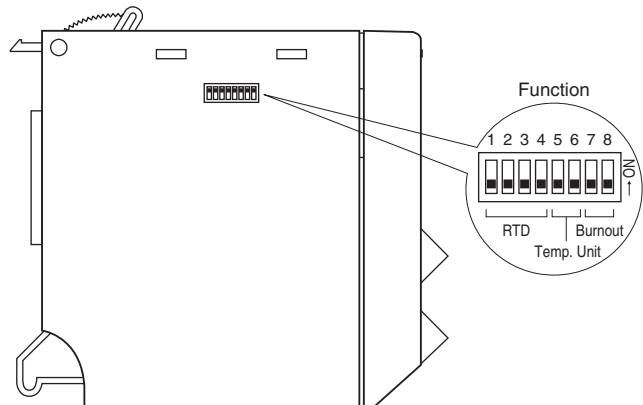
RoHS Directive

EXTERNAL VIEW

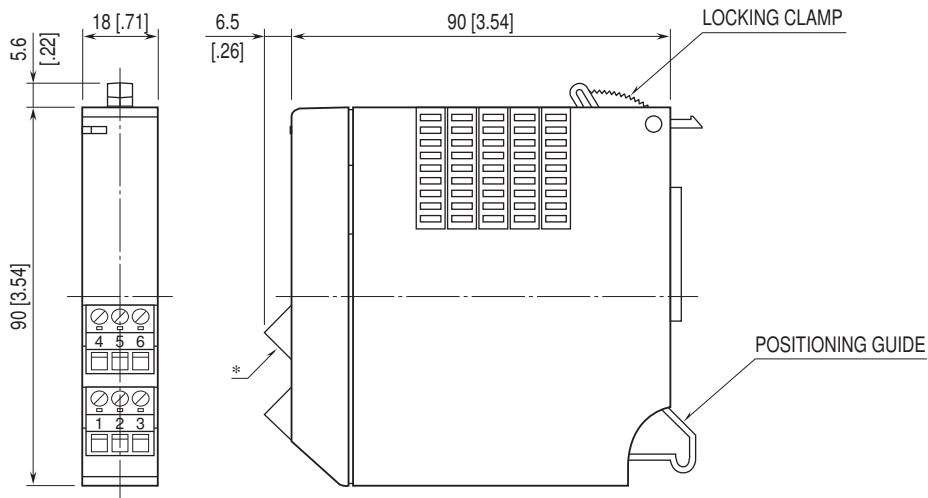
■ FRONT VIEW



■ SIDE VIEW

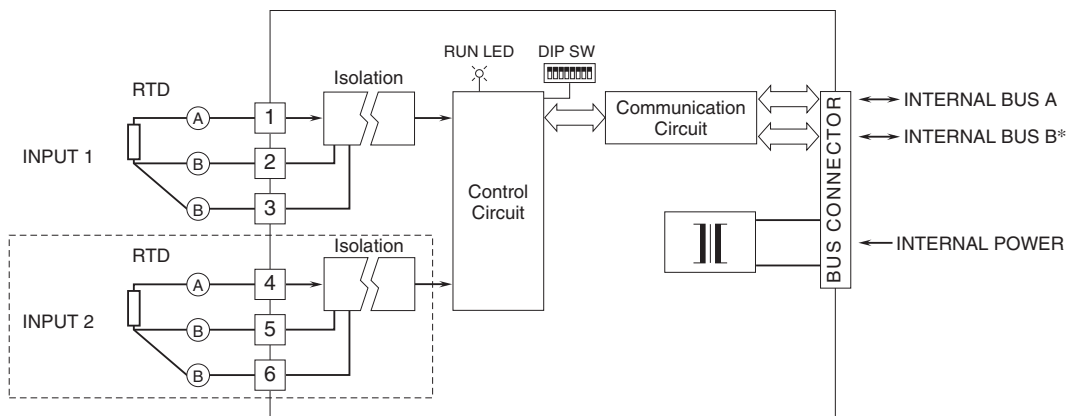


EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



*Euro type connector terminals [4, 5 and 6] provided only with 2-ch. option.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*For dual redundant communication.
Note: The section enclosed by broken line is with 2-ch. option.



Specifications are subject to change without notice.