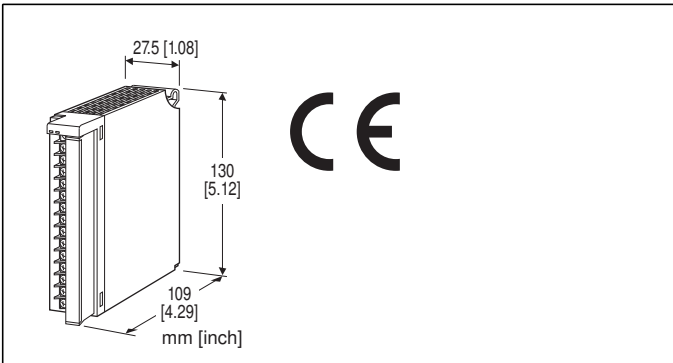


Remote I/O R3 Series

/SET: Preset according to the Ordering Information Sheet (No. ESU-8273)

THERMISTOR INPUT MODULE

(8 points, isolated)



MODEL: R3-RT8A[1][2]

ORDERING INFORMATION

- Code number: R3-RT8A[1][2]
- Specify a code from below for each of [1] and [2]. (e.g. R3-RT8AS/CE/Q)
- Specify the specification for option code /Q (e.g. /C01/SET)

NO. OF CHANNELS

8: 8

THERMISTOR

A: PB7-43 (Shibaura Electronics)

[1] COMMUNICATION MODE

S: Single
W: Dual

[2] OPTIONS (multiple selections)

Standards & Approvals

blank: Without CE

/CE: CE marking

Other Options

blank: none

/Q: Option other than the above (specify the specification)

SPECIFICATIONS OF OPTION: Q (multiple selections)

COATING (For the detail, refer to our web site.)

/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating

EX-FACTORY SETTING

GENERAL SPECIFICATIONS

Connection

Internal bus: Via the Installation Base (model: R3-BSx)

Input: M3 separable screw terminal (torque 0.5 N·m)

Internal power: Via the Installation Base (model: R3-BSx)

Screw terminal: Nickel-plated steel

Isolation: Input 1 to input 2 to input 3 to input 4 to input 5 to input 6 to input 7 to input 8 to internal bus or internal power

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

Conversion rate: 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.

ERR indicator: Bi-color (red/green) LED;

Red with burnout; Green in normal operating conditions.

INPUT SPECIFICATIONS

Thermistor: PB7-43 (Shibaura Electronics)

Standard voltage: approx. 4.5 V DC (standard resistance 15.8 kΩ)

Measurement range: -20 - +160 °C

Conformance range: -10 - +150 °C

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: R3-BSx)

Weight: 220 g (0.49 lb)

PERFORMANCE

Conversion accuracy: ±0.5°C (±0.9°F) (except leadwire resistance)

Conversion rate: 250 msec. or 1 sec. selectable

Data range

°C: Engineering unit value × 100 (integer)

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

Data allocation: 8

Current consumption: 60 mA

Temp. coefficient: $\pm 0.15\% / ^\circ\text{C}$ ($\pm 0.08\% / ^\circ\text{F}$)

Burnout response time: ≤ 2 sec.

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

Dielectric strength: 1000 V AC @ 1 minute (input 1 to input 2 to input 3 to input 4 to input 5 to input 6 to input 7 to input 8 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

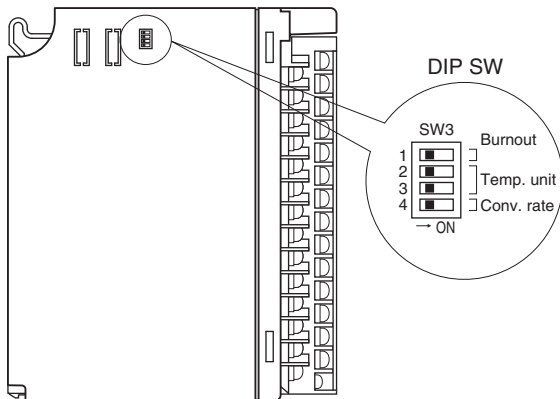
EMI EN 61000-6-4

EMS EN 61000-6-2

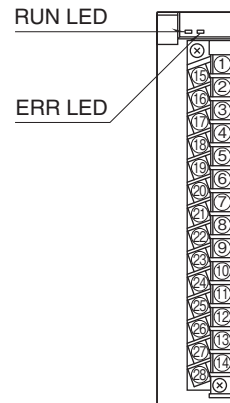
RoHS Directive

EXTERNAL VIEW

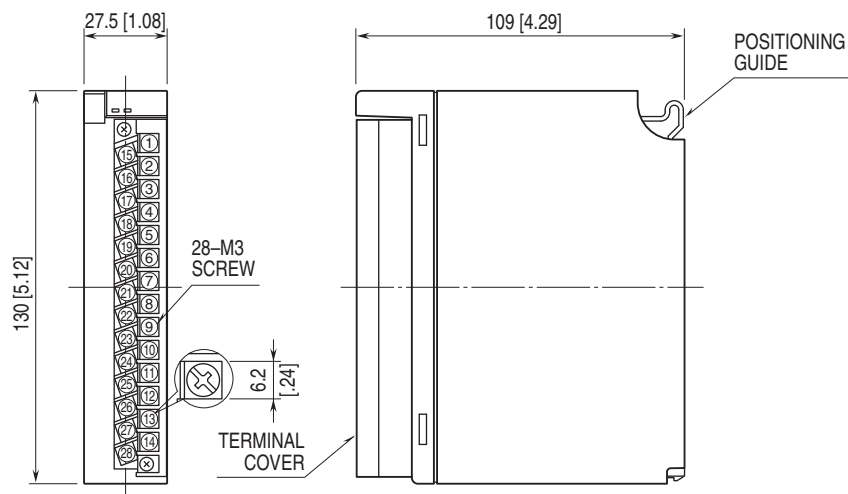
■ SIDE VIEW



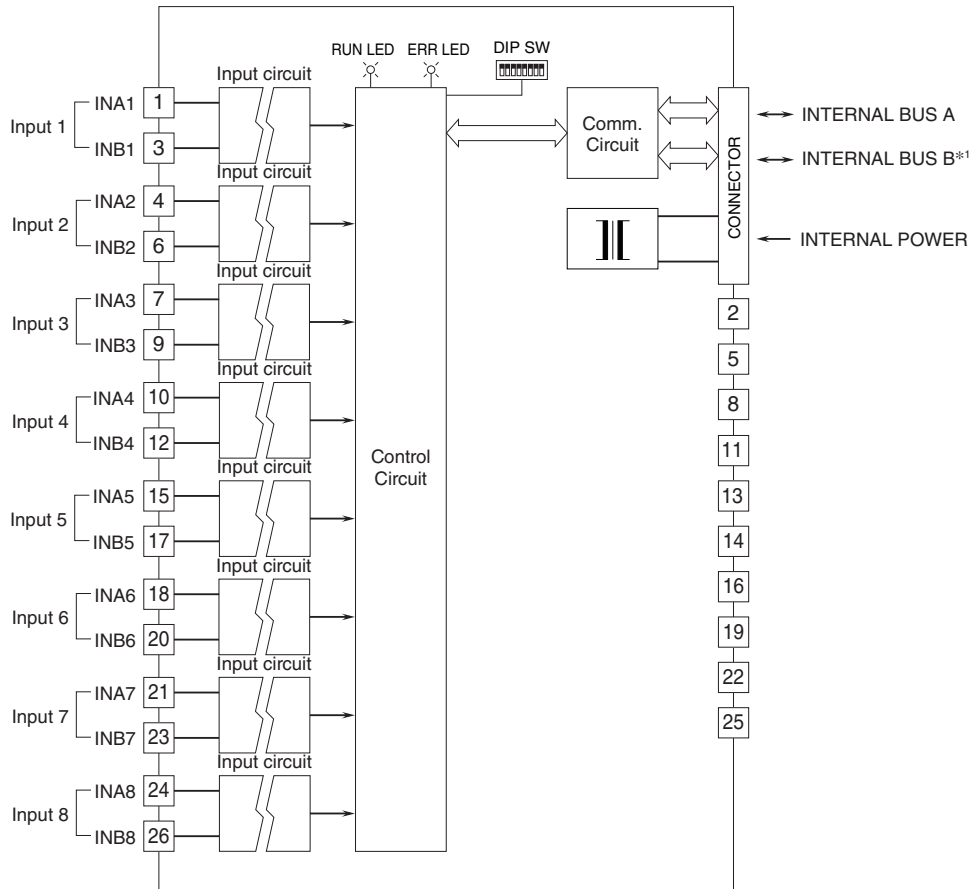
■ FRONT VIEW



EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



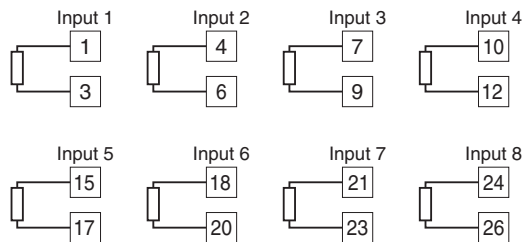
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*1. For dual redundant communication.

■ UNUSED INPUT CHANNELS

Close across the unused input terminals with a resistor (30 kΩ) as shown below



Unused channels left open are equal to the burnout, which turns the red ERR LED on and sets a burnout flag at the PLC or the host device.

Unused channels can be specified and set so on the PC Configurator Software (model: R3CON) without needing to connect resistors at the field terminals.



Specifications are subject to change without notice.