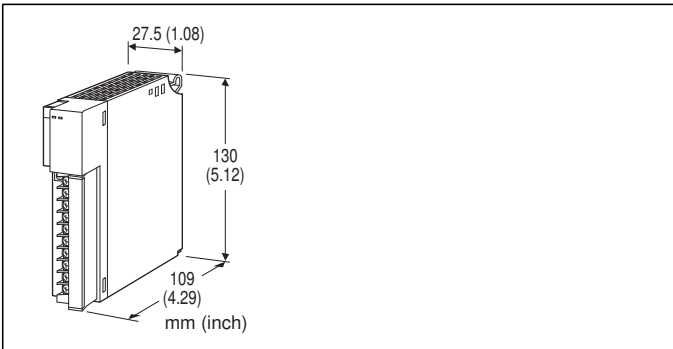


Remote I/O R3 Series

STRAIN GAUGE INPUT MODULE

(2 points, isolated)



MODEL: R3-LC2[1][2]

ORDERING INFORMATION

- Code number: R3-LC2[1][2]
Specify a code from below for each of [1] and [2].
(e.g. R3-LC2W/Q)
- Specify the specification for option code /Q
(e.g. /C01/SET)

NO. OF CHANNELS

2: 2

[1] COMMUNICATION MODE

S: Single

W: Dual

[2] 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

EX-FACTORY SETTING

/SET: Preset according to the Ordering Information Sheet
(No. ESU-8371)

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 contact input 1 to contact input 2 to internal bus or internal power

Input range: Selectable with the side DIP SW

Conversion rate: Selectable with the side DIP SW

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 input abnormality;

Green in normal operating conditions.

INPUT SPECIFICATIONS

■ Strain Gauge Input

• Strain Gauge

Rated output from strain gauge:

0.0 – 1.0 mV/V (-5.0 – +5.0 mV, span 1.0 – 10 mV)

0.0 – 3.0 mV/V (-15.0 – +15.0 mV, span 5.0 – 30 mV)

• Excitation: 5 V

Maximum current: 60 mA

Load resistance: 85 Ω minimum

■ Contact Input

Number of input: 3 points (zero, span, tare adjustments) per input channel, 6 points in total

Isolation: Optical isolator + transformer (internal power supply)

Input resistance: Approx. 5.9 kΩ

Common: Negative commons, every 3 points

Contact detecting: 13 V DC

(max. 24 V DC with no load)

ON current/resistance: ≥ 1.5 mA, ≤ 1.5 kΩ

OFF current/resistance: ≤ 0.75 mA, ≥ 18 kΩ

Detection levels

ON: ≥ 10 V

OFF: ≤ 4 V

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: 250 g (0.55 lb)

PERFORMANCE

Conversion accuracy: Refer to the table at the end of this section.

Conversion rate: 160 / 80 / 40 / 20 msec. selectable

Data range: 0 – 10000 of the input range

Data allocation: 4

Current consumption: 300 mA

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

Excitation supply: 5 V $\pm 250\ \text{mV}$

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

Dielectric strength: 1500 V AC @ 1 minute

(input 1 to input 2 to contact input 1 to contact input 2 to internal bus or internal power)

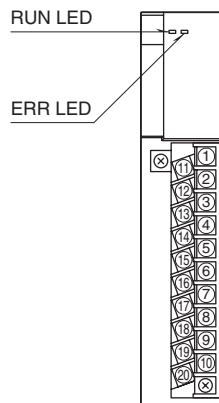
2000 V AC @ 1 minute (power input to FG; isolated on the power supply module)

Conversion accuracy (%) / Resolution (μV)

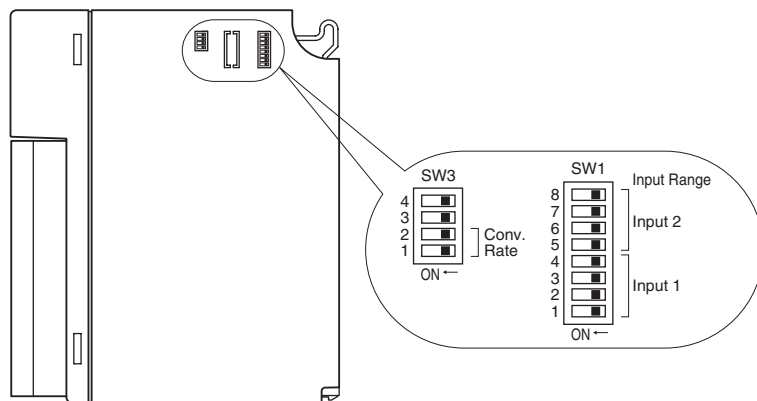
RANGE	RATE	160 msec.	80 msec.	40 msec.	20 msec.
0.0 – 1.0mV/V		$\pm 0.1 / 0.15$	$\pm 0.2 / 0.3$	$\pm 0.4 / 0.6$	$\pm 0.8 / 1.2$
0.0 – 3.0mV/V		$\pm 0.1 / 0.5$	$\pm 0.2 / 1.0$	$\pm 0.4 / 2.0$	$\pm 0.8 / 4.0$

EXTERNAL VIEW

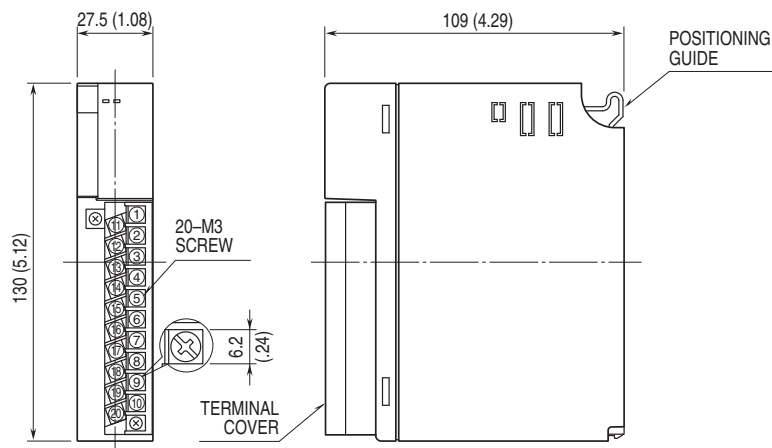
■ FRONT VIEW



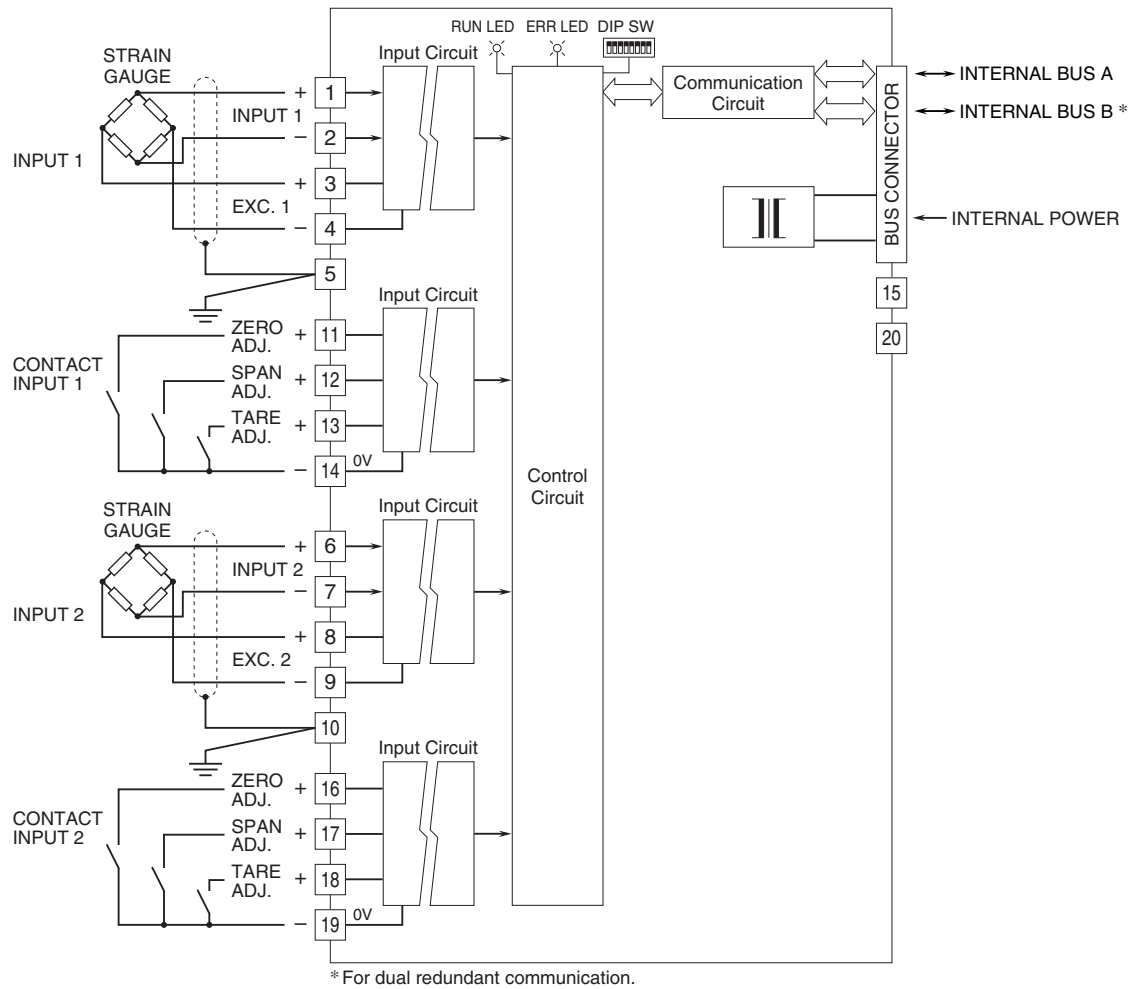
■ SIDE VIEW



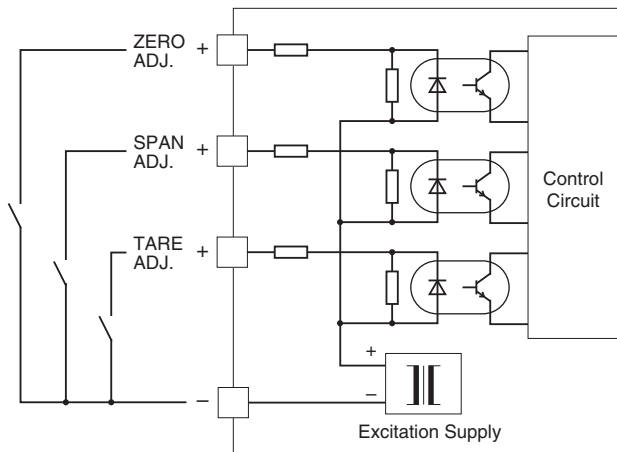
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



■ Contact Input Circuit



Specifications are subject to change without notice.