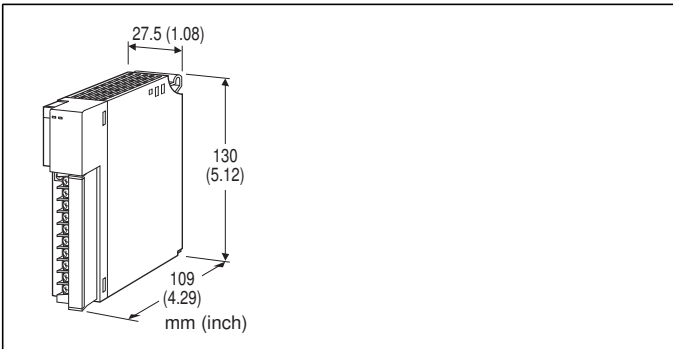


## Remote I/O R3 Series

### 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 [1] and [2].  
(e.g. R3-LC2W/Q)
- Specify the specification for option code /Q  
(e.g. /C01)

#### 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

#### 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 the 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:** ±0.015 %/°C (±0.008 %/°F) of max. span

**Excitation supply:** 5 V ±250 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)

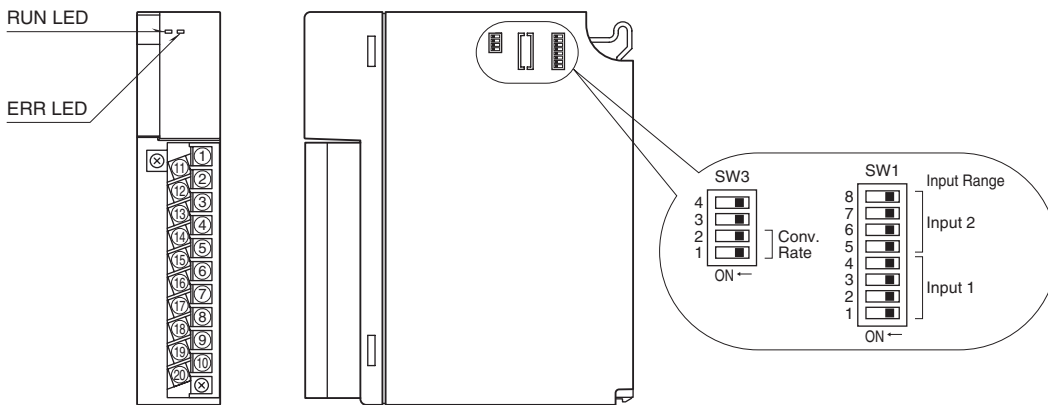
**Conversion accuracy (%) / Resolution ( $\mu\text{V}$ )**

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		$\pm 0.1 / 0.5$	$\pm 0.2 / 1.0$	$\pm 0.4 / 2.0$	$\pm 0.8 / 4.0$

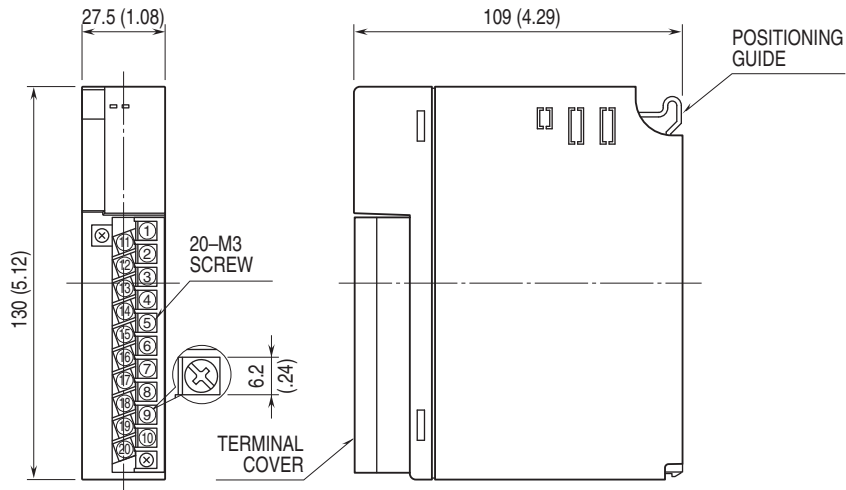
## EXTERNAL VIEW

■ FRONT VIEW

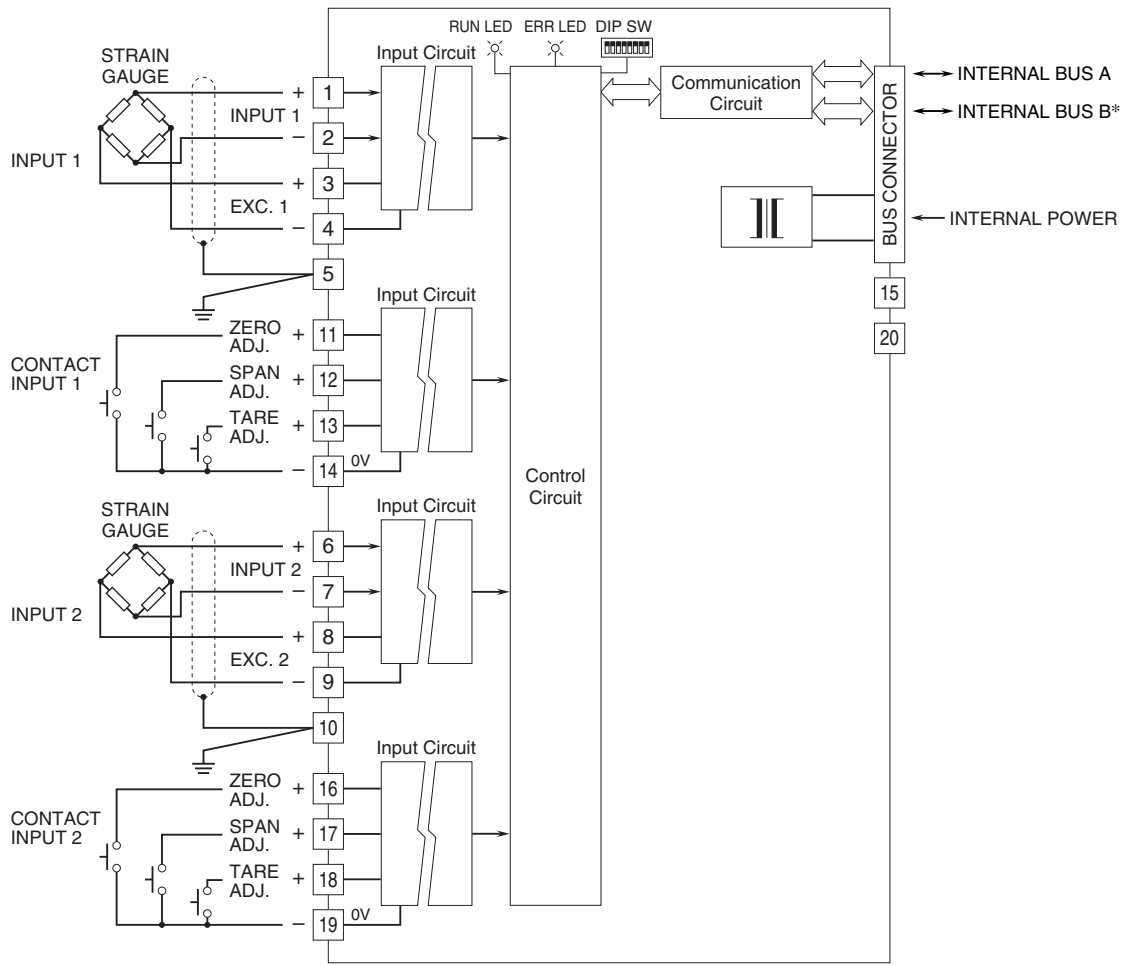
■ SIDE VIEW



## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)

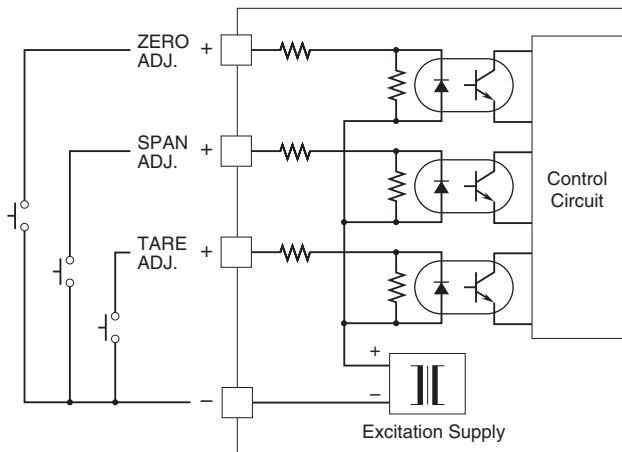


**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



\*For dual redundant communication.

■ Contact Input Circuit



Specifications are subject to change without notice.

