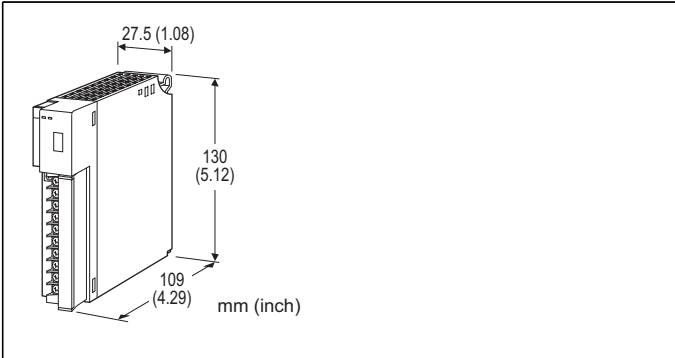


## Remote I/O R3 Series

### 4 - 20 mA INPUT MODULE

(2-wire transmitter exc. supply with switch; 4 points, isolated)



### MODEL: R3-DS4A[1][2]

#### ORDERING INFORMATION

- Code number: R3-DS4A[1][2]
- Specify a code from below for each [1] and [2]. (e.g. R3-DS4AW/Q)
- Specify the specification for option code /Q (e.g. /C01)

#### NO. OF CHANNELS

4A: 4 channels, (with excitation supply switches)

#### [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 input 3 to input 4 to internal bus or internal power

**Excitation supply switches:** DIP switches (front)

**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.

#### SUPPLY OUTPUT

(across the terminals 1 - 2, 3 - 4, 6 - 7 and 8 - 9)

**Output voltage:** 24 - 28 V DC with no load

16 V DC min. at 22 mA

**Current rating:** ≤ 22 mA DC

• Shortcircuit Protection

**Current limited:** Approx. 30 mA

**Protected time duration:** No limit

#### INPUT SPECIFICATIONS

■ DC Current: 4 - 20 mA DC

**Input resistance:** 250 Ω resistor incorporated

#### 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:** 80 / 40 / 20 / 10 msec. selectable

**Data range:** 0 - 10000

**Data allocation:** 4

**Current consumption:** 210 mA

**Temp. coefficient:** ±0.015 %/°C (±0.008 %/°F)

**Response time:** ≤ 0.2 sec. (0 - 90 %)

**Insulation resistance:** ≥ 100 MΩ with 500 V DC

**Dielectric strength:** 1500 V AC @ 1 minute (input 1 to input 2 to input 3 to input 4 to internal bus or internal power)

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

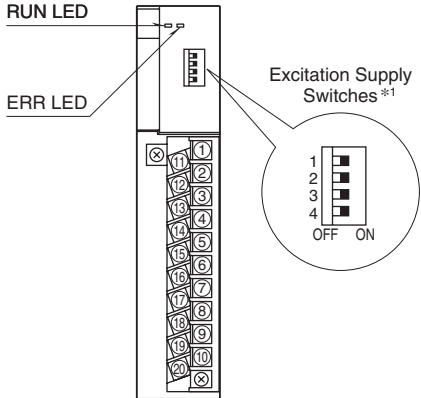
**Conversion accuracy:**

RATE	80 msec.	40 msec.	20 msec.	10 msec.
Accuracy	±0.05%	±0.1%	±0.2%	±0.4%

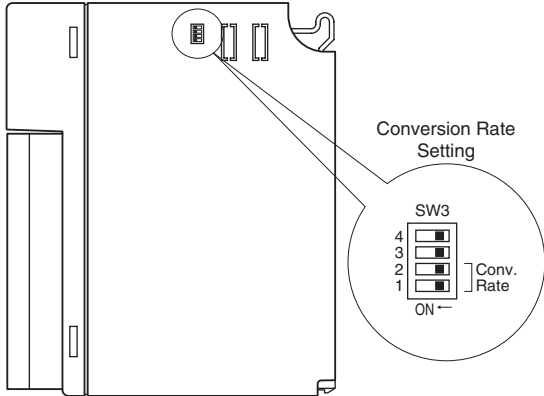


## EXTERNAL VIEW

### FRONT VIEW

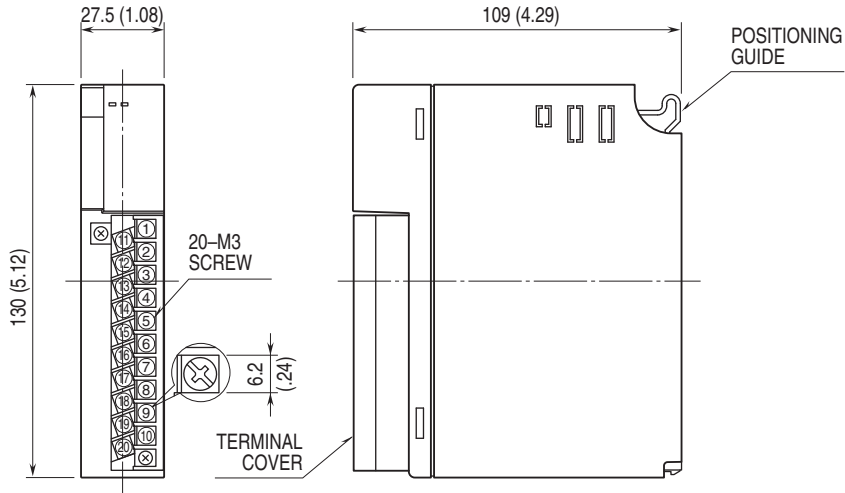


### SIDE VIEW

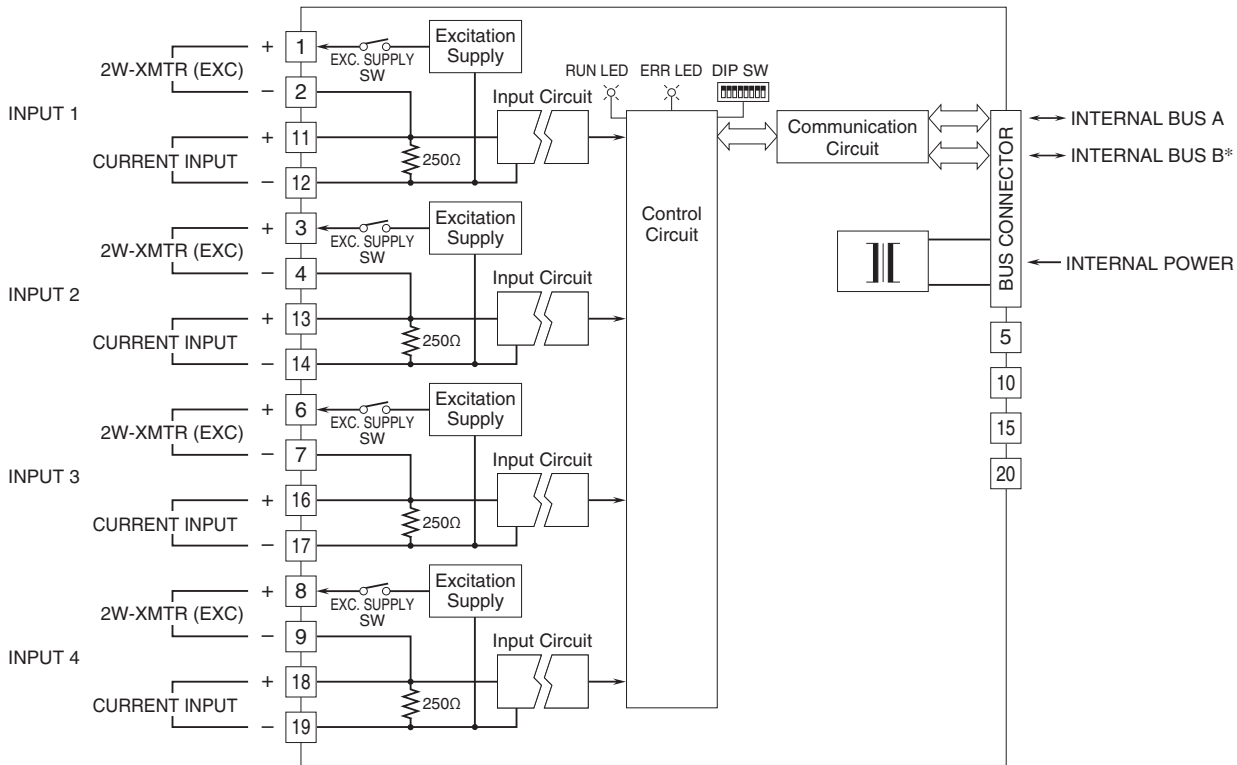


\*1. Excitation supply switches 1 through 4 turn on (ON) or off (OFF) the power supply to the input 1 through 4 respectively. (Factory set to ON)

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



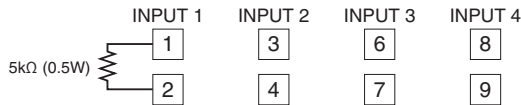
## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



\*For dual redundant communication.

### • Unused Input Channels

Turn on the excitation supply switch for the unused channels and close across the unused input terminals with a resistor (5k  $\Omega$ , 0.5W) as shown below.



Unused channels left open are equal to the input lower than -15%, which sets a data abnormality 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.

