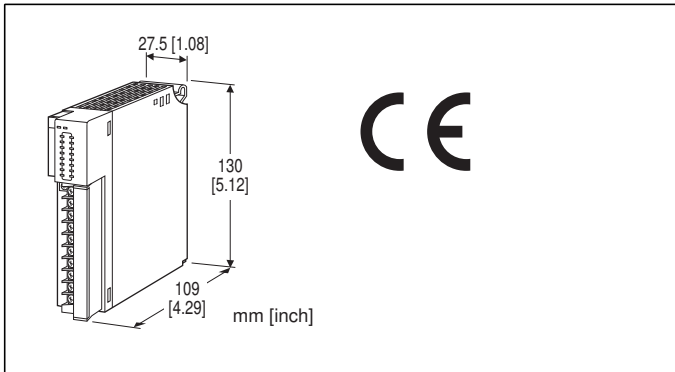


Remote I/O R3 Series

DISCRETE INPUT MODULE

(Di 16 points; with excitation supply)



MODEL: R3-DA16[1][2]

ORDERING INFORMATION

- Code number: R3-DA16[1][2]
- Specify a code from below for each of [1] and [2].
(e.g. R3-DA16W/CE/Q)
- Specify the specification for option code /Q
(e.g. /C01)

NO. OF CHANNELS

16: 16

[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

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 to internal bus or internal power

Excitation monitor: Selectable with side DIP switch; ON/OFF setting available

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 excitation abnormality;

Green in normal operating conditions.

Input status indicator: Red LED; turns on with the input ON.

Read rate: 1 / 5 / 10 / 20 / 50 / 70 / 100 / 200 msec.
selectable with DIP SW

INPUT SPECIFICATIONS

Number of input: 16 points

Isolation: Optical isolator + transformer (internal power supply)

Input resistance: Approx. 5.9 kΩ

Common: Negative commons, all 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: 200 g (0.44 lb)

PERFORMANCE

Data allocation: 1

Current consumption: 100 mA

Insulation resistance: ≥ 100 MΩ with 500 V DC

Dielectric strength: 2000 V AC @ 1 minute

(input 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

FUNCTIONS

■ EXCITATION MONITOR

Enabled/disabled with DIP switch setting.

• **Excitation Monitor ON**

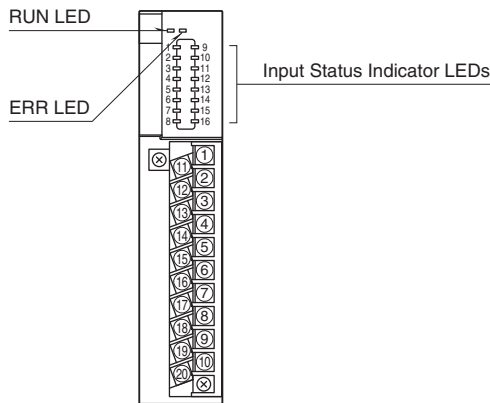
The input is held at the last status when the loss of excitation is detected.

• **Excitation Monitor OFF**

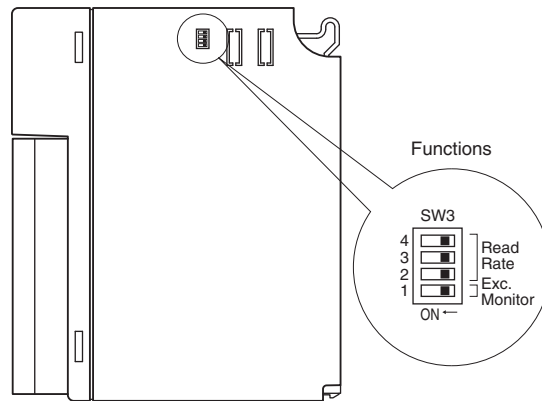
All input signals are turned off when the loss of excitation is detected.

EXTERNAL VIEW

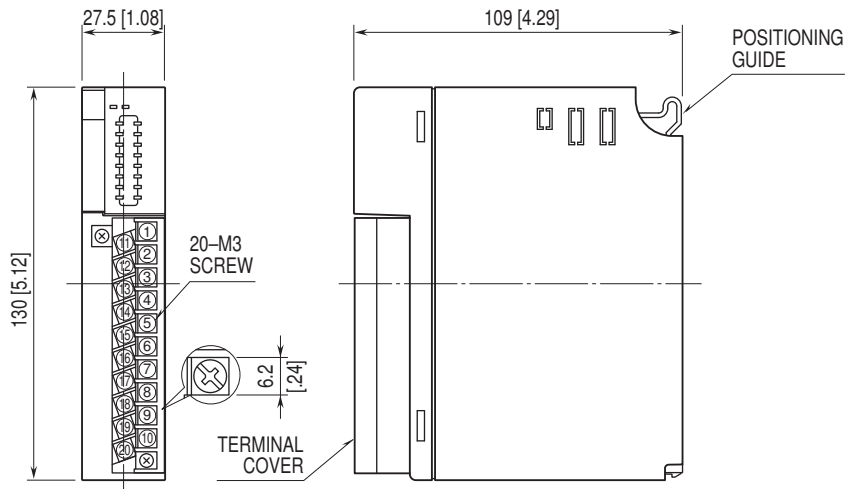
■ FRONT VIEW



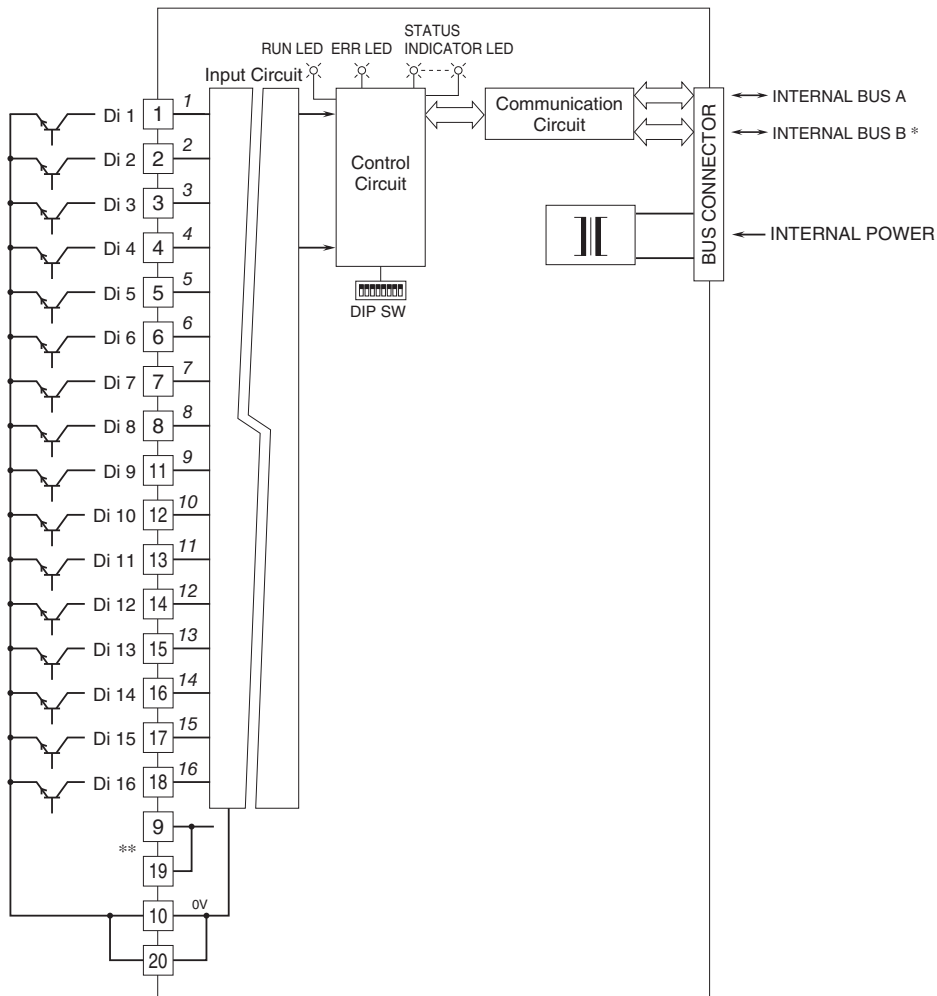
■ SIDE VIEW



EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]

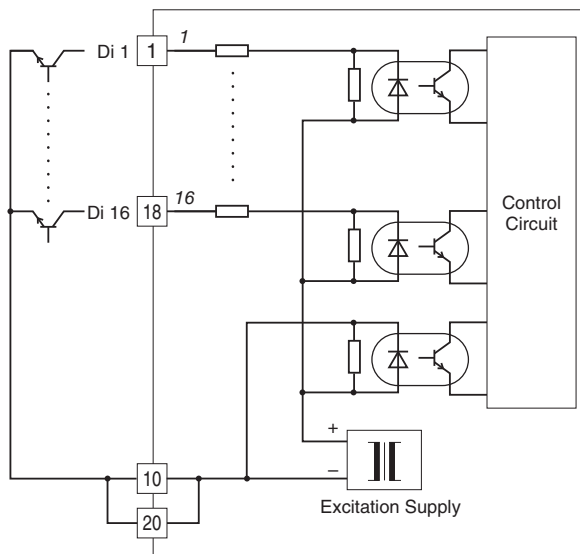


SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Numbers in italic indicate LED No.s assigned to the front panel LEDs.
 * For dual redundant communication.
 ** DO NOT connect to the terminals 9 or 19.

■ Input Circuit





Specifications are subject to change without notice.