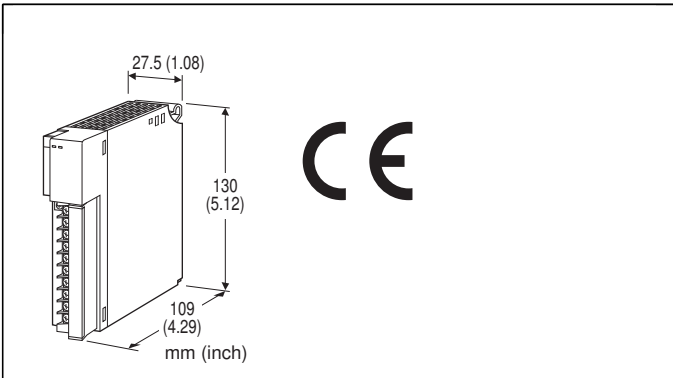


## Remote I/O R3 Series

### DC CURRENT OUTPUT MODULE

(4 points, isolated)



### MODEL: R3-YS4[1][2]

#### ORDERING INFORMATION

- Code number: R3-YS4[1][2]  
Specify a code from below for each of [1] and [2].  
(e.g. R3-YS4W/H/CE/Q)
- Specify the specification for option code /Q  
(e.g. /C01/SET)

#### NO. OF CHANNELS

4: 4

#### [1] COMMUNICATION MODE

S: Single

W: Dual

#### [2] OPTIONS (multiple selections)

##### Load Resistance

blank:  $\leq 300 \Omega$

/H:  $\leq 600 \Omega$

##### 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 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-8370)

#### GENERAL SPECIFICATIONS

##### Connection

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

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

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

**Screw terminal:** Nickel-plated steel

**Isolation:** Output 1 to output 2 to output 3 to output 4 to internal bus or internal power

**Output hold function:** Setting for communication error with 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 output abnormality;

Green in normal operating conditions.

#### OUTPUT SPECIFICATIONS

**Output range:** 4 – 20 mA DC

**Load resistance:** 300  $\Omega$  max. (600  $\Omega$  max. with Option /H)

#### 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

**Conversion accuracy:**  $\pm 0.05 \%$

**Data range:** 0 – 10000 of the output range

**Data allocation:** 4

**Current consumption:** 180 mA (260 mA with Option /H)

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

**Response time:**  $\leq 0.2$  sec. (0 – 90 %)

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

**Dielectric strength:** 1500 V AC @ 1 minute (output 1 to output 2 to output 3 to output 4 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  
EN 50581

## FUNCTIONS

### ■ OUTPUT HOLD or OUTPUT OFF

In normal conditions, the module outputs the signal from the preferred bus A.

When an error is detected, the output is switched to the data from the bus B.

#### • Output Hold

If both are in error, the module holds the signal and stands by until one of the communications recovers.

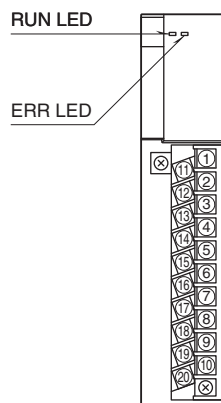
#### • Output OFF

If both are in error, the module outputs -15 % and stands by until one of the communications recovers.

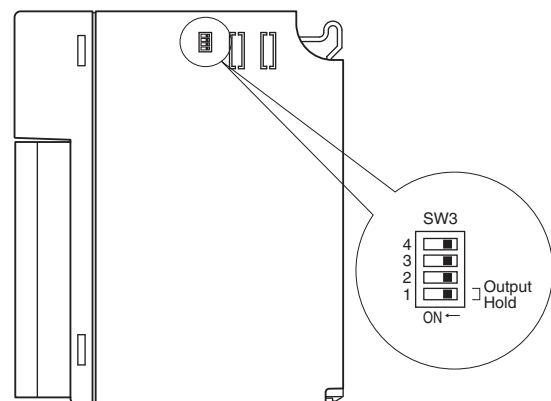
At the startup, it outputs -15 % until the communication is established and normal data is received.

## EXTERNAL VIEW

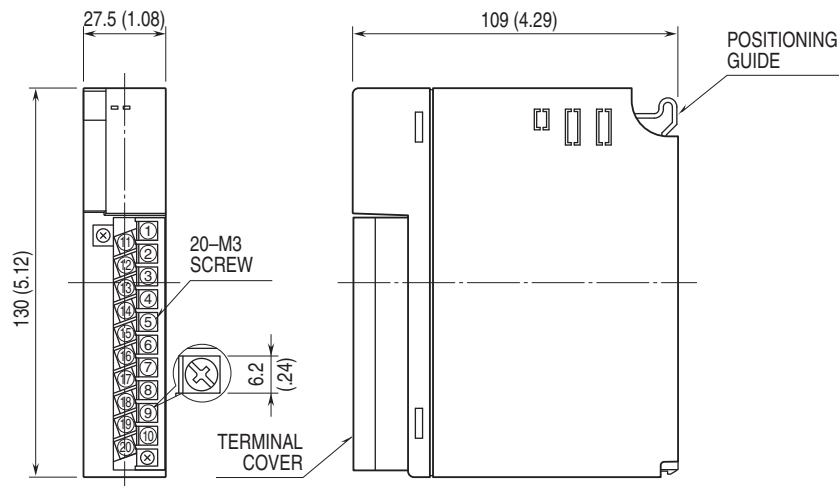
### ■ FRONT VIEW



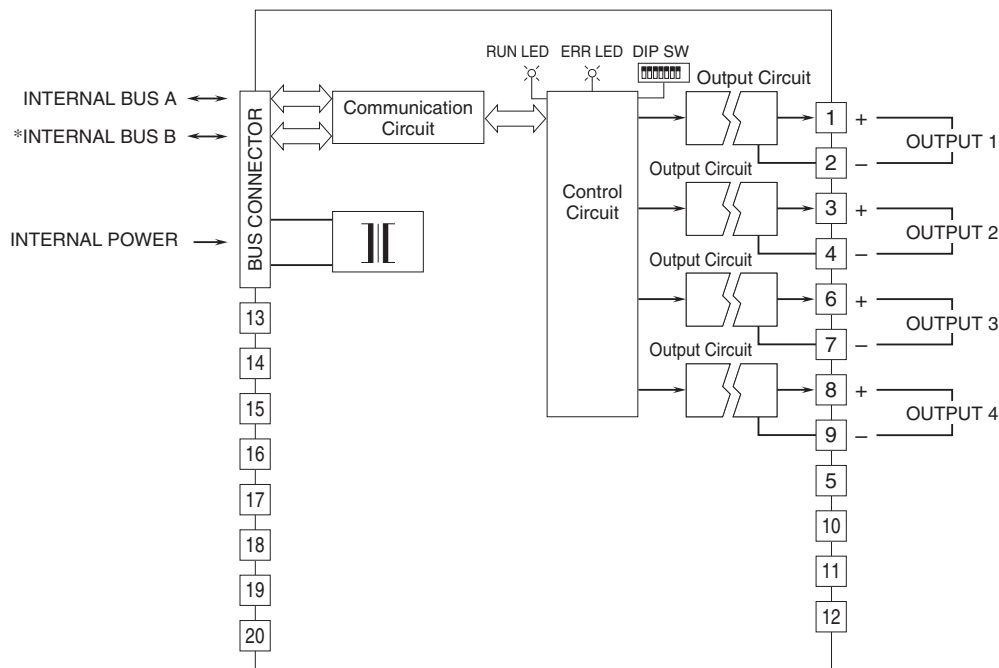
### ■ SIDE VIEW



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



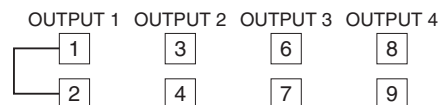
## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



\*For dual redundant communication.

### • Unused Output Channels

Close across the unused output terminals as shown below.



Unused channels left open are equal to the wire break-down, 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 short at the field terminals.



Specifications are subject to change without notice.