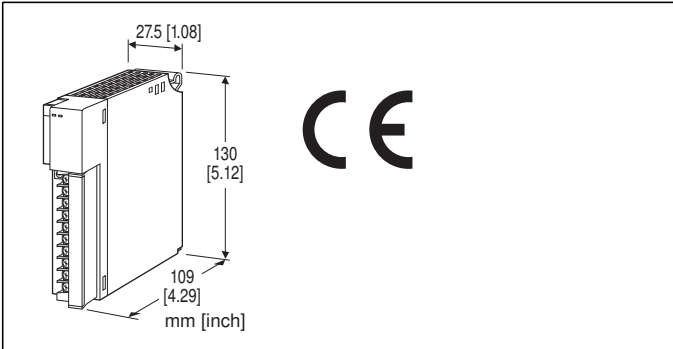


## Remote I/O R3 Series

/SET: Preset according to the Ordering Information Sheet (No. ESU-8369)

### 4 - 20 mA INPUT MODULE

(2-wire transmitter excitation supply; 8 points, non-isolated)



### MODEL: R3-DS8N[1][2]

#### ORDERING INFORMATION

- Code number: R3-DS8N[1][2]
- Specify a code from below for each of [1] and [2]. (e.g. R3-DS8NW/CE/Q)
- Specify the specification for option code /Q (e.g. /C01/SET)

#### NO. OF CHANNELS

8: 8

#### ISOLATION

N: Non-isolated between inputs

#### [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 (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

#### 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  
**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 circuit abnormality (AD converter response failure);  
 Green in normal operating conditions.

#### SUPPLY OUTPUT

**Sensor excitation:** 24 V DC,  $\geq 300$  mA  
 • **Shortcircuit Protection**  
**Current limited:** Approx. 30 mA per channel  
**Protected time duration:** No limit

#### INPUT SPECIFICATIONS

■ **DC Current:** 4 - 20 mA DC  
**Input resistance:** 250  $\Omega$  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:** 200 g (0.44 lb)

## PERFORMANCE

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

**Conversion rate:** 160 / 80 / 40 / 20 msec. selectable  
(factory default: 160 msec.)

**Data range:** 0 - 10000

**Data allocation:** 8

**Current consumption:** 60 mA

**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

(input to internal bus or internal power)

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

### Conversion accuracy

RATE	160 msec.	80 msec.	40 msec.	20 msec.
ACCURACY	$\pm 0.05\%$	$\pm 0.1\%$	$\pm 0.2\%$	$\pm 0.4\%$

## STANDARDS & APPROVALS

**EU conformity:**

EMC Directive

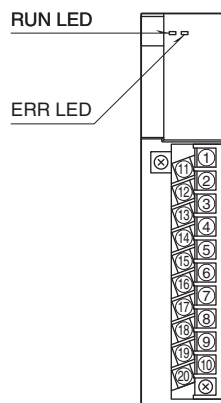
EMI EN 61000-6-4

EMS EN 61000-6-2

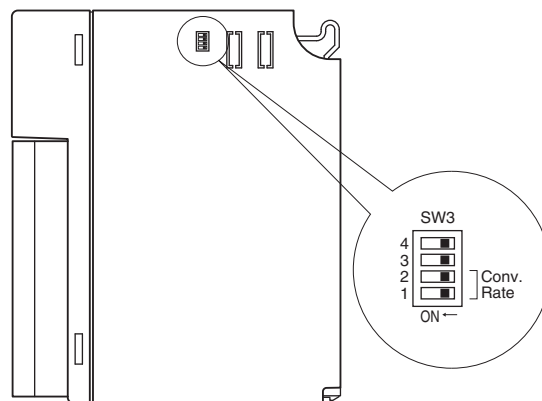
RoHS Directive

## EXTERNAL VIEW

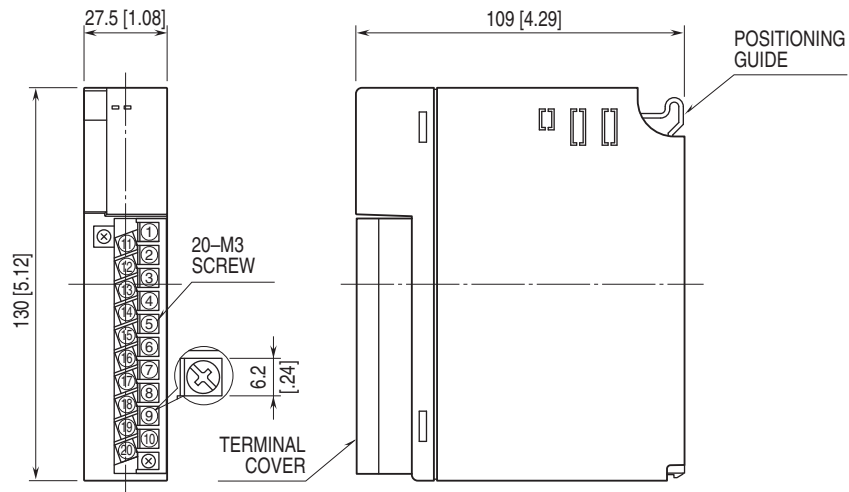
### FRONT VIEW



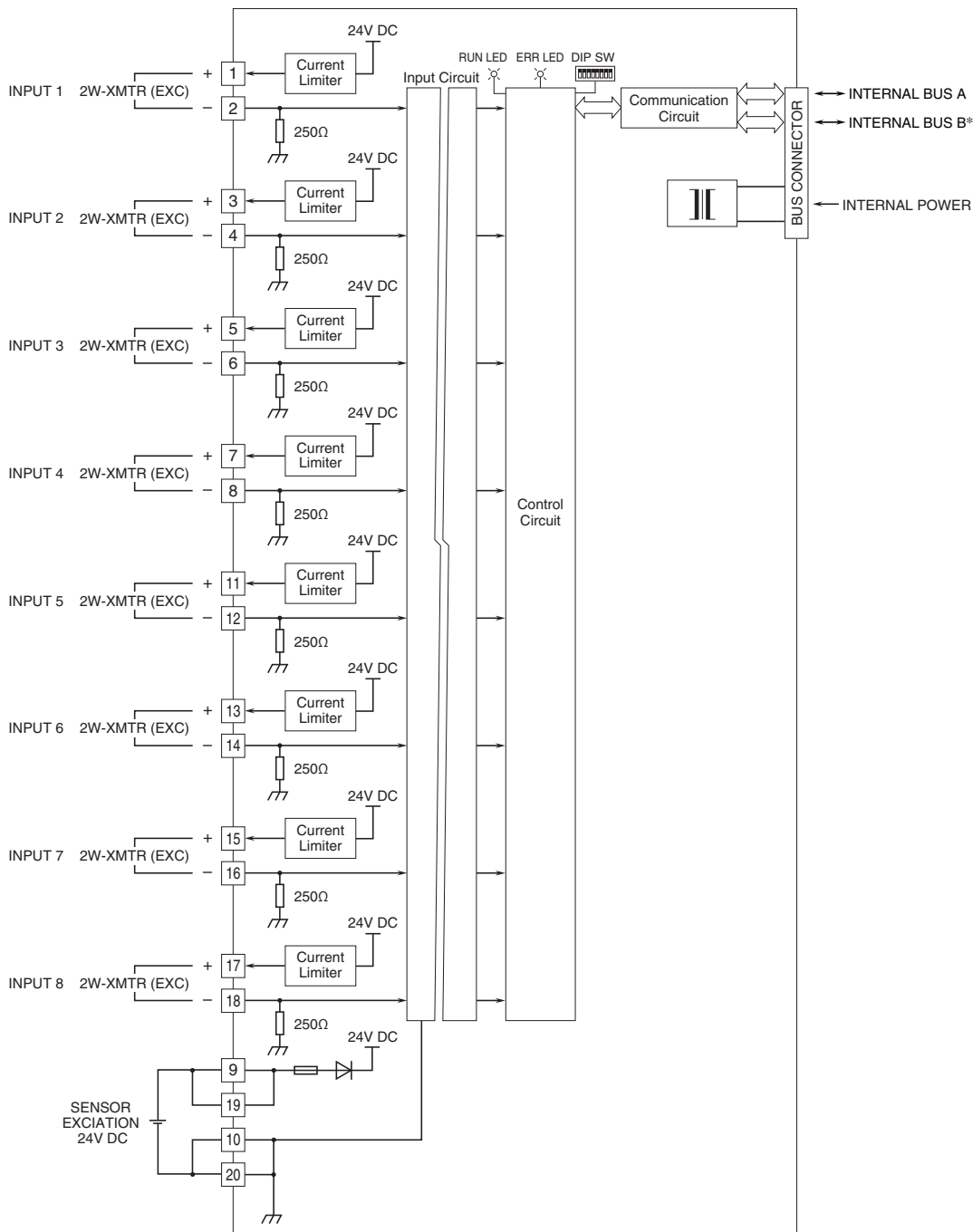
### SIDE VIEW



**EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS** unit: mm [inch]



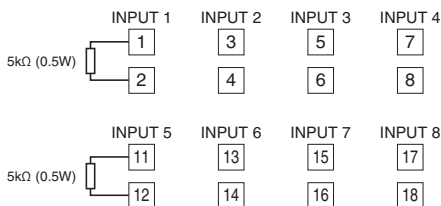
## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



\*For dual redundant communication.

### • Unused Input Channels

Close across the unused input terminals with a resistor (5kΩ, 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.