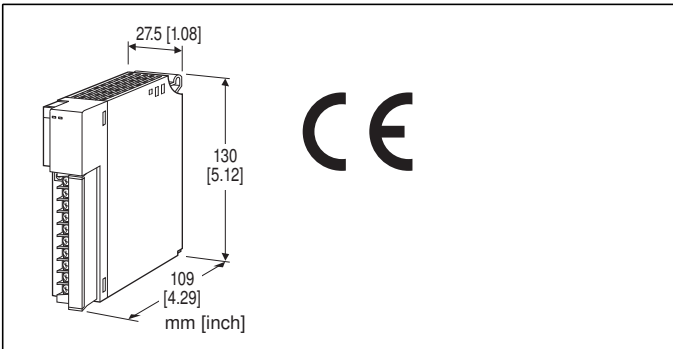


Remote I/O R3 Series

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

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

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, ≥ 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 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: 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: ≤ 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

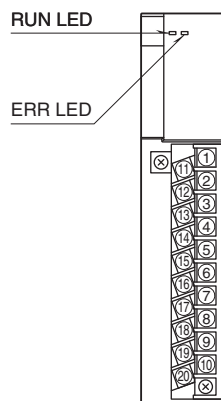
EMI EN 61000-6-4

EMS EN 61000-6-2

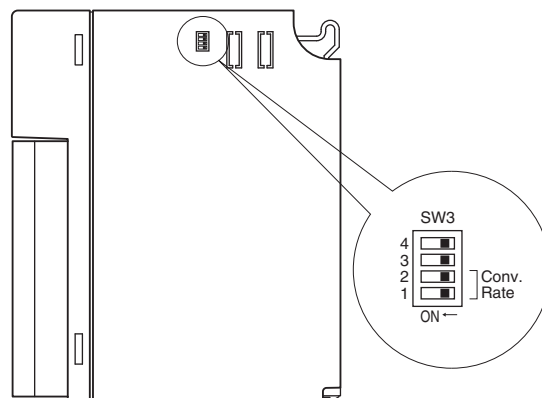
RoHS Directive

EXTERNAL VIEW

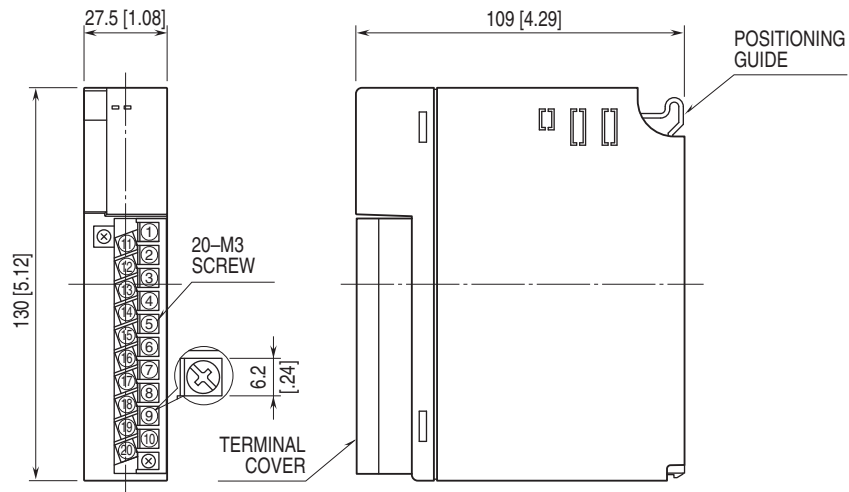
FRONT VIEW



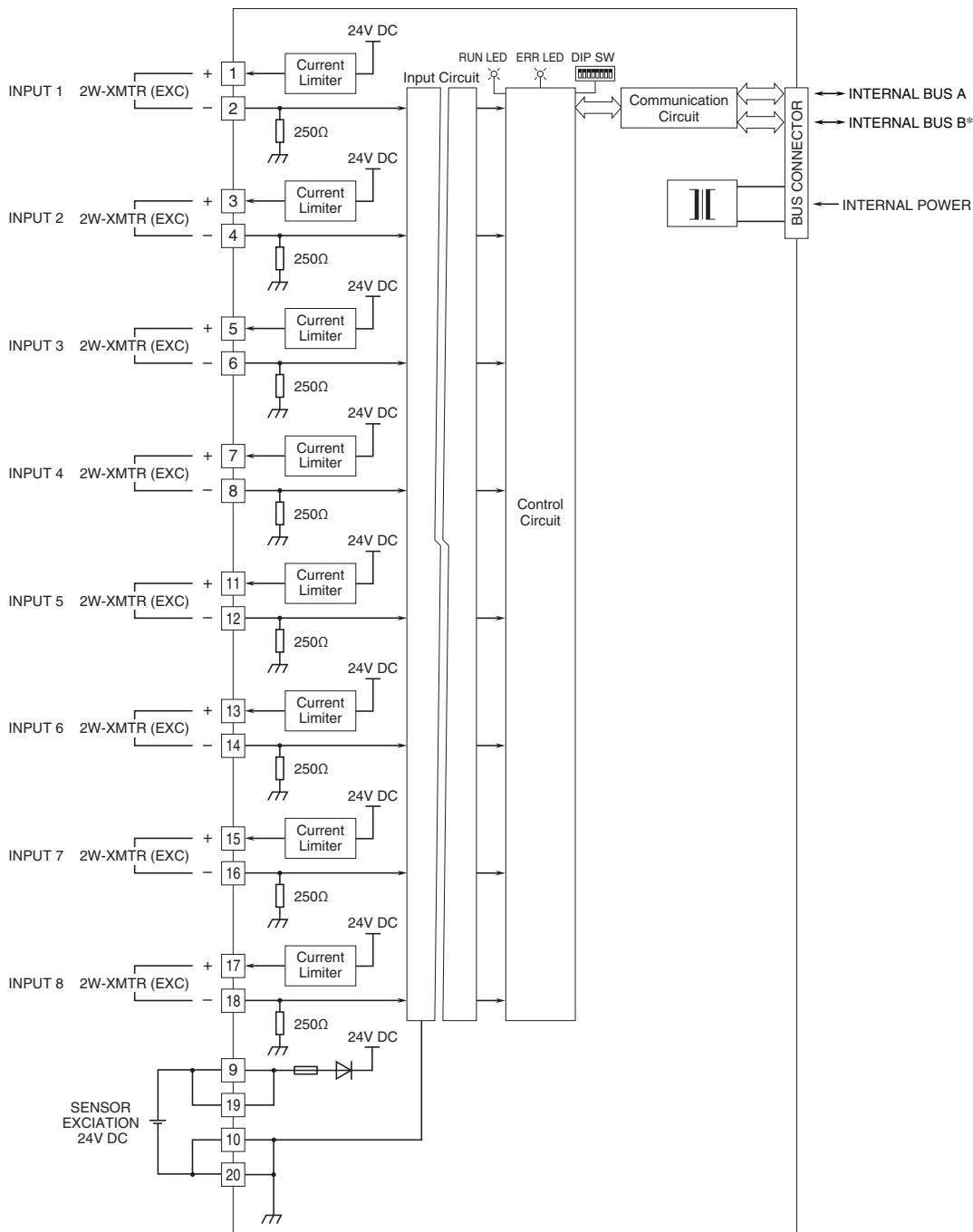
SIDE VIEW



EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



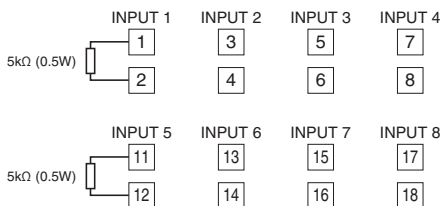
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*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.