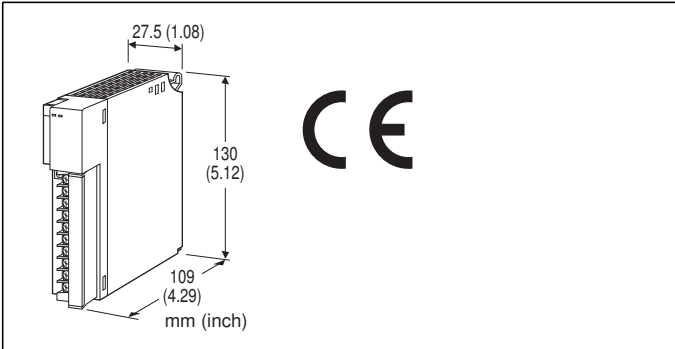


Remote I/O R3 Series

DC VOLTAGE INPUT MODULE

(16 points, non-isolated)



MODEL: R3-SV16N[1][2]

ORDERING INFORMATION

- Code number: R3-SV16N[1][2]
Specify a code from below for each [1] and [2].
(e.g. R3-SV16NW/CE/Q)
- Specify the specification for option code /Q
(e.g. /C01)

NO. OF CHANNELS

16: 16

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

COATING (For the detail, refer to M-System's web site.)

/C01: Silicone coating
/C02: Polyurethane coating
/C03: Rubber coating

CAUTION

■ UNUSED INPUT CHANNELS

Set the unused channels to -10 - +10 V range. Otherwise, set them as "Unused" with PC Configurator software: R3CON. Unused channels left open with other settings may be equal to the input lower than -15 %, which sets a data abnormality at the PLC or the host device.

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

Input range: Selectable with the side DIP SW (per 8 channels)

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

INPUT SPECIFICATIONS

Input: -10 - +10 V, -5 - +5 V, 0 - 10 V, 0 - 5 V, 1 - 5 V DC
Input resistance: 1 MΩ min.

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: 100 / 50 / 20 / 10 msec. selectable

Data range: 0 - 10000 of the input range

Data allocation: 16

Current consumption: 100 mA

Temp. coefficient: ±0.015 % /°C (±0.008 % /°F)
(±0.03 % /°C [±0.02 % /°F] with 0 - 5 V or 1 - 5 V range)

Insulation resistance: ≥ 100 MΩ 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

RANGE \ RATE	100 msec.	50 msec.	20 msec.	10 msec.
-10 – +10V	±0.1%	±0.1%	±0.1%	±0.1%
-5 – +5V	±0.1%	±0.1%	±0.1%	±0.1%
0 – 10V	±0.1%	±0.1%	±0.1%	±0.1%
0 – 5V	±0.2%	±0.2%	±0.2%	±0.2%
1 – 5V	±0.2%	±0.2%	±0.2%	±0.2%

STANDARDS & APPROVALS

CE conformity:

EMC Directive (2004/108/EC)

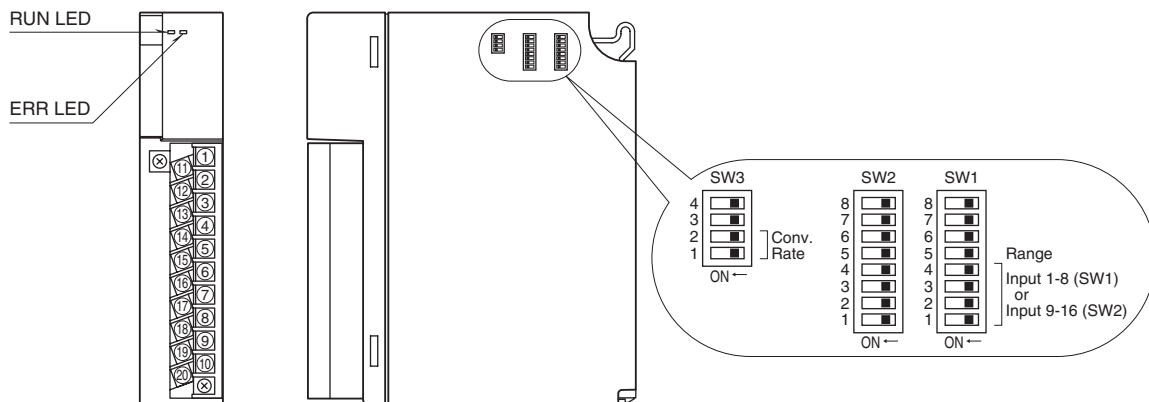
EMI EN 61000-6-4: 2007/A1: 2011

EMS EN 61000-6-2: 2005

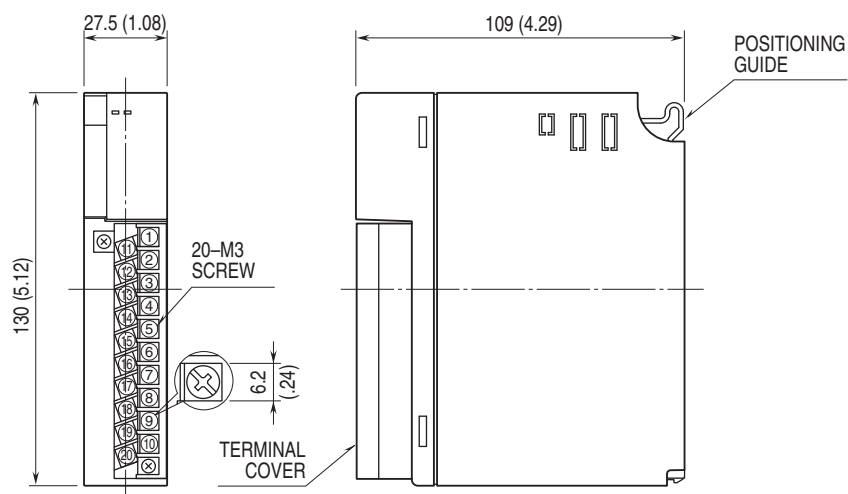
EXTERNAL VIEW

■ FRONT VIEW

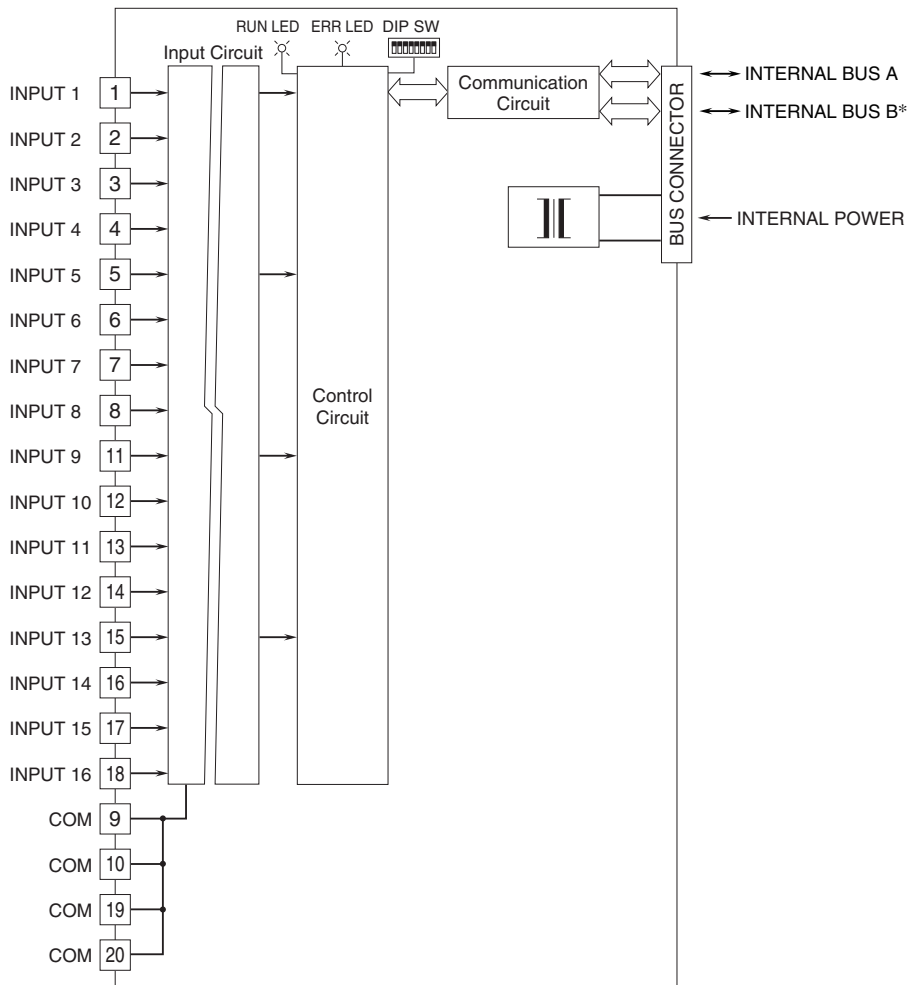
■ SIDE VIEW



EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*For dual redundant communication.



Specifications are subject to change without notice.

