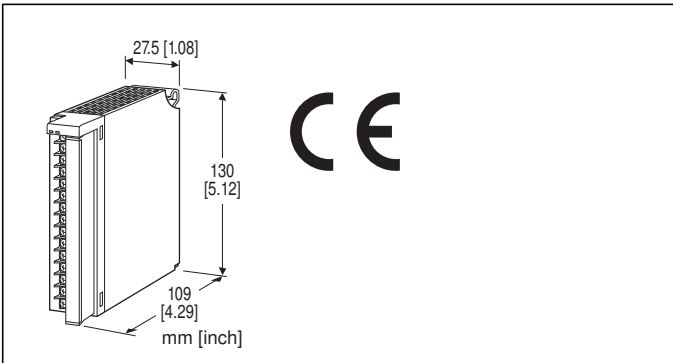


## Remote I/O R3 Series

### DC CURRENT INPUT ALARM MODULE

(8 points, isolated)



### MODEL: R3-AS8[1][2]

#### ORDERING INFORMATION

- Code number: R3-AS8[1][2]
- Specify a code from below for each of [1] and [2].  
(e.g. R3-AS8W/CE/Q)
- Specify the specification for option code /Q  
(e.g. /C01)

#### NO. OF CHANNELS

8: 8

#### [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 our web site.)  
**/C01:** Silicone coating  
**/C02:** Polyurethane coating  
**/C03:** Rubber coating

#### CAUTION

##### ■ UNUSED INPUT CHANNELS

Set the unused channels to -20 - +20 mA or 0 - 20 mA range. Otherwise, set them as "Unused" with PC Configurator software: R3CON. Unused channels left open with 4 - 20 mA setting are equal to the input lower than -15 %, which sets a data abnormality at the PLC or the host device.

Open circuit with the input range set to  $\pm 20$  mA means 50 % of the full-scale. An alarm setpoint must be set to a value that does not trip an unwanted alarm.

#### 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 1 to input 2 to input 3 to input 4 to input 5 to input 6 to input 7 to input 8 to internal bus or internal power  
**Input range:** Selectable with the side DIP SW (per 4 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 input circuit abnormality (AD converter response failure);  
 Green in normal operating conditions.

#### INPUT SPECIFICATIONS

■ DC Current: -20 - +20 mA, 0 - 20 mA, 4 - 20 mA DC  
**Input resistance:** 66.5  $\Omega$  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:** 250 g (0.55 lb)

## PERFORMANCE

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

**Conversion rate:** 160 / 80 / 40 / 20 msec. selectable

**Data range:** 0 - 10000 of the input range

**Data allocation:** 4

**Current consumption:** 100 mA

**Temp. coefficient:**  $\pm 0.03\% / ^\circ\text{C}$  ( $\pm 0.02\% / ^\circ\text{F}$ )

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

**Dielectric strength:** 1000 V AC @ 1 minute (input 1 to input 2 to input 3 to input 4 to input 5 to input 6 to input 7 to input 8 to internal bus or internal power)

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

RANGE	RATE			
	160 msec.	80 msec.	40 msec.	20 msec.
-20 - +20 mA	$\pm 0.05\%$	$\pm 0.1\%$	$\pm 0.2\%$	$\pm 0.4\%$
0 - 20 mA	$\pm 0.1\%$	$\pm 0.2\%$	$\pm 0.4\%$	$\pm 0.8\%$
4 - 20 mA	$\pm 0.1\%$	$\pm 0.2\%$	$\pm 0.4\%$	$\pm 0.8\%$

## STANDARDS & APPROVALS

**EU conformity:**

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

RoHS Directive

## ALARM SETTING

The following parameters are programmable using the PC Configurator Software (model: R3CON).

■ **ALARM TRIP POINT** (-15.00 to +115.00 %;

factory set to A1: 80.00, A2: 60.00, A3: 40.00, A4: 20.00)

Four alarm setpoints are selectable per each input.

■ **ALARM TYPE**

(High or Low; factory set to A1: High, A2: High, A3: Low, A4: Low)

High or Low alarm is selectable for each alarm trip point.

**High alarm:** An alarm is set when the input signal goes above the setpoint.

**Low alarm:** An alarm is set when the input signal goes below the setpoint.

■ **DEADBAND (HYSTERESIS)**

(0.00 to 100.00 %; factory set to 5.00)

Deadband (deviation between the points where the alarm is set and reset) is selectable for each alarm trip point.

■ **ALARM ON DELAY TIME**

(0.0 to 99.0 seconds; factory set to 1.0)

The alarm output is set when the preset time elapses after

the input has entered in the alarm range.

This setting is common to all 8 points.

■ **POWER ON DELAY TIME**

(0.0 to 99.0 seconds; factory set to 5.0)

The alarm output start functioning in the preset time after the power has been turned on.

This setting is common to all 8 points.

■ **ALARM HOLD TIME**

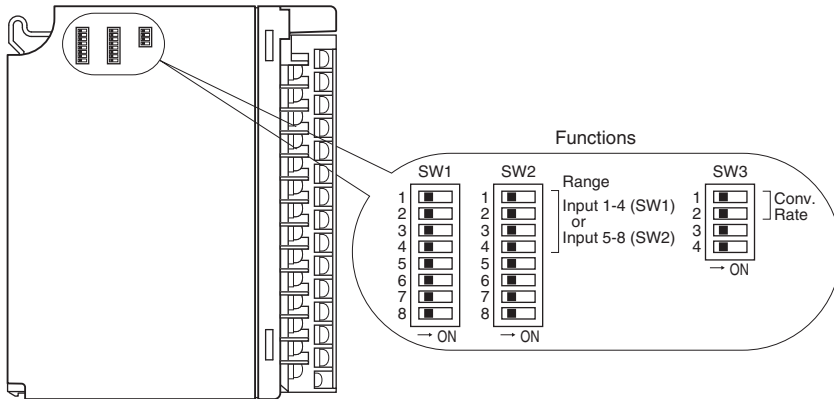
(0.0 to 99.0 seconds; factory set to 1.0)

The alarm output is held for the preset time even if it is reset in shorter time.

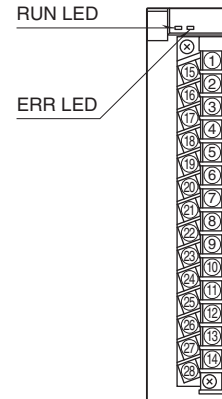
This setting is common to all 8 points.

## EXTERNAL VIEW

### ■ SIDE VIEW

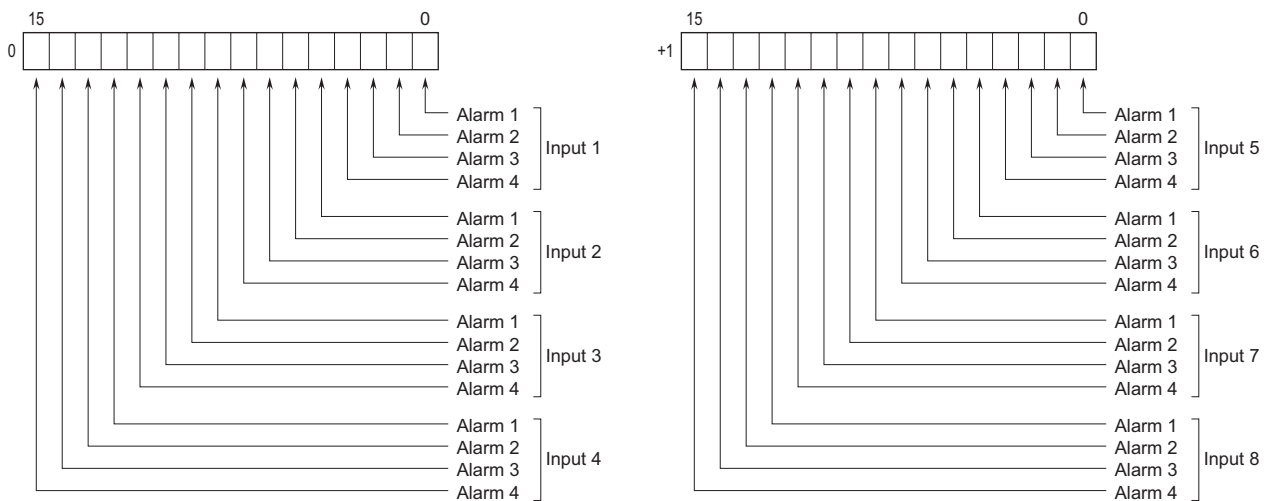


### ■ FRONT VIEW

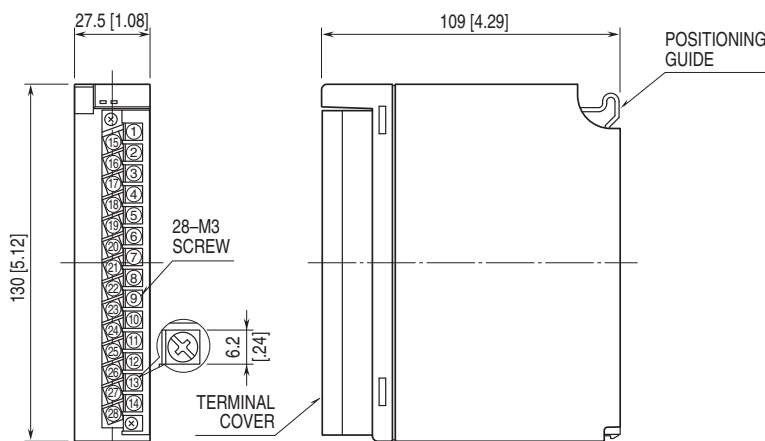


## OUTPUT DATA DESCRIPTIONS

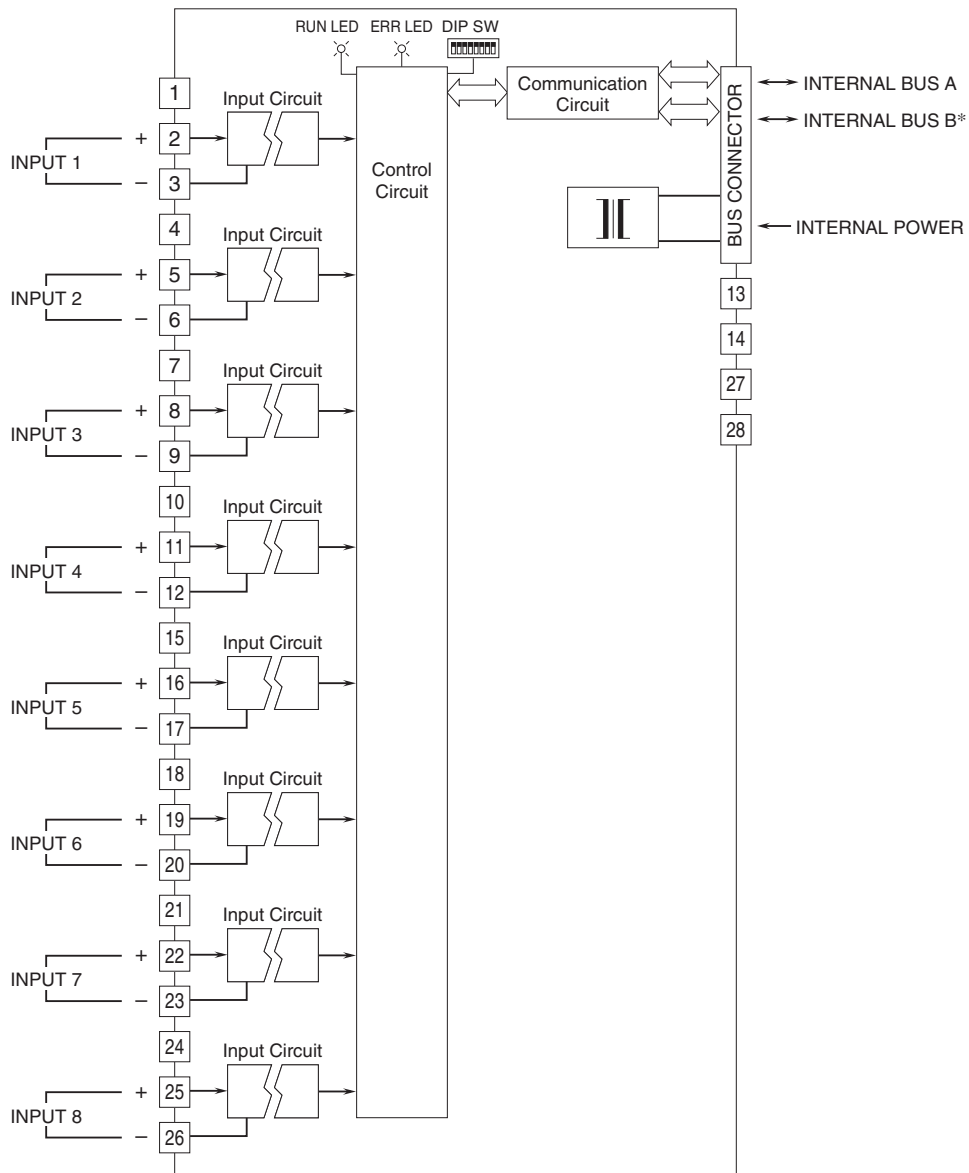
Four alarm setpoints are selectable per each input. Two (2) word (16 bits × 2) data is transmitted to the PLC or the host device via the R3 network module.



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



**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



\*For dual redundant communication.



Specifications are subject to change without notice.