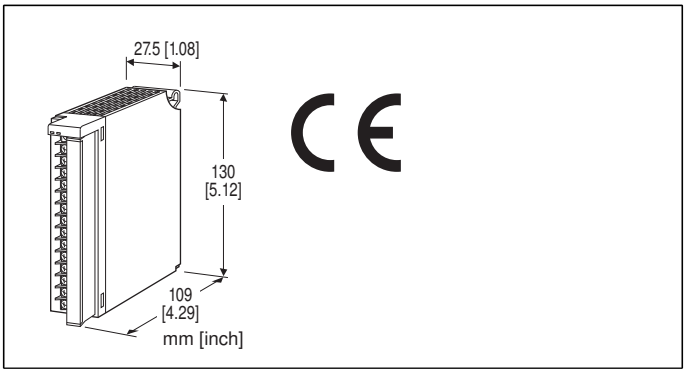
Remote I/O R3 Series

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 M-System's 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 ±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 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: 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: ±0.03 %/°C (±0.02 %/°F)
Insulation resistance: ≥ 100 MΩ 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	±0.05%	±0.1%	±0.2%	±0.4%
0 – 20 mA	±0.1%	±0.2%	±0.4%	±0.8%
4 – 20 mA	±0.1%	±0.2%	±0.4%	±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.

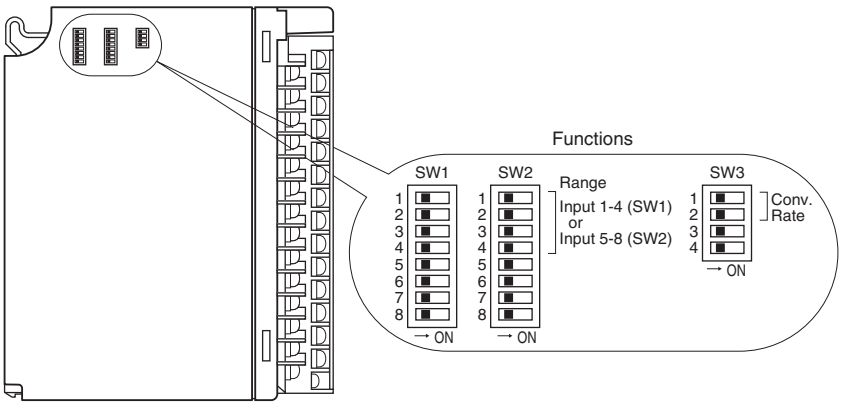
■ALARM ON DELAY TIME
(0.0 to 99.0 seconds; factory set to 1.0)
The alarm output is set when the preset time elapses after the input has entered in the alarm range.
This setting is common to all 8 points.

■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.

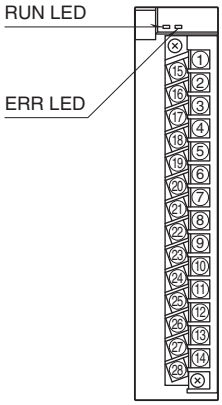
■ALARM HOLD TIME
(0.0 to 99.0 seconds; factory set to 1.0)
The alarm output is held for the preset time even if it is reset in shorter time.
This setting is common to all 8 points.

EXTERNAL VIEW

■ SIDE VIEW

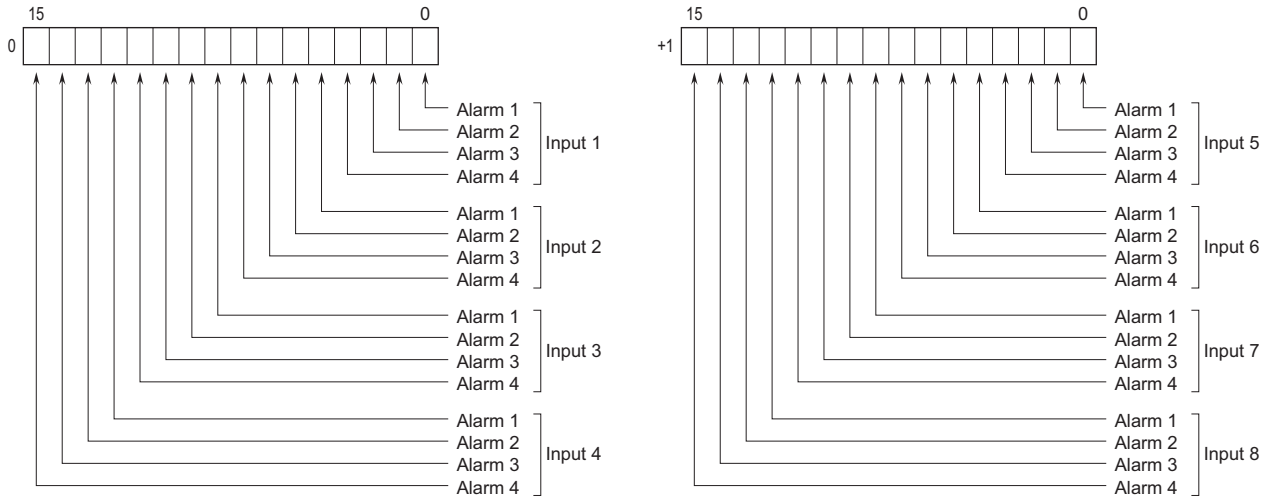


■ FRONT VIEW

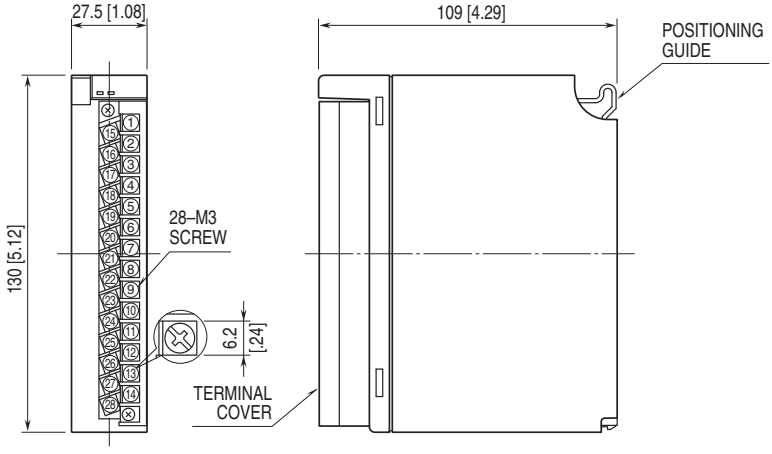


OUTPUT DATA DESCRIPTIONS

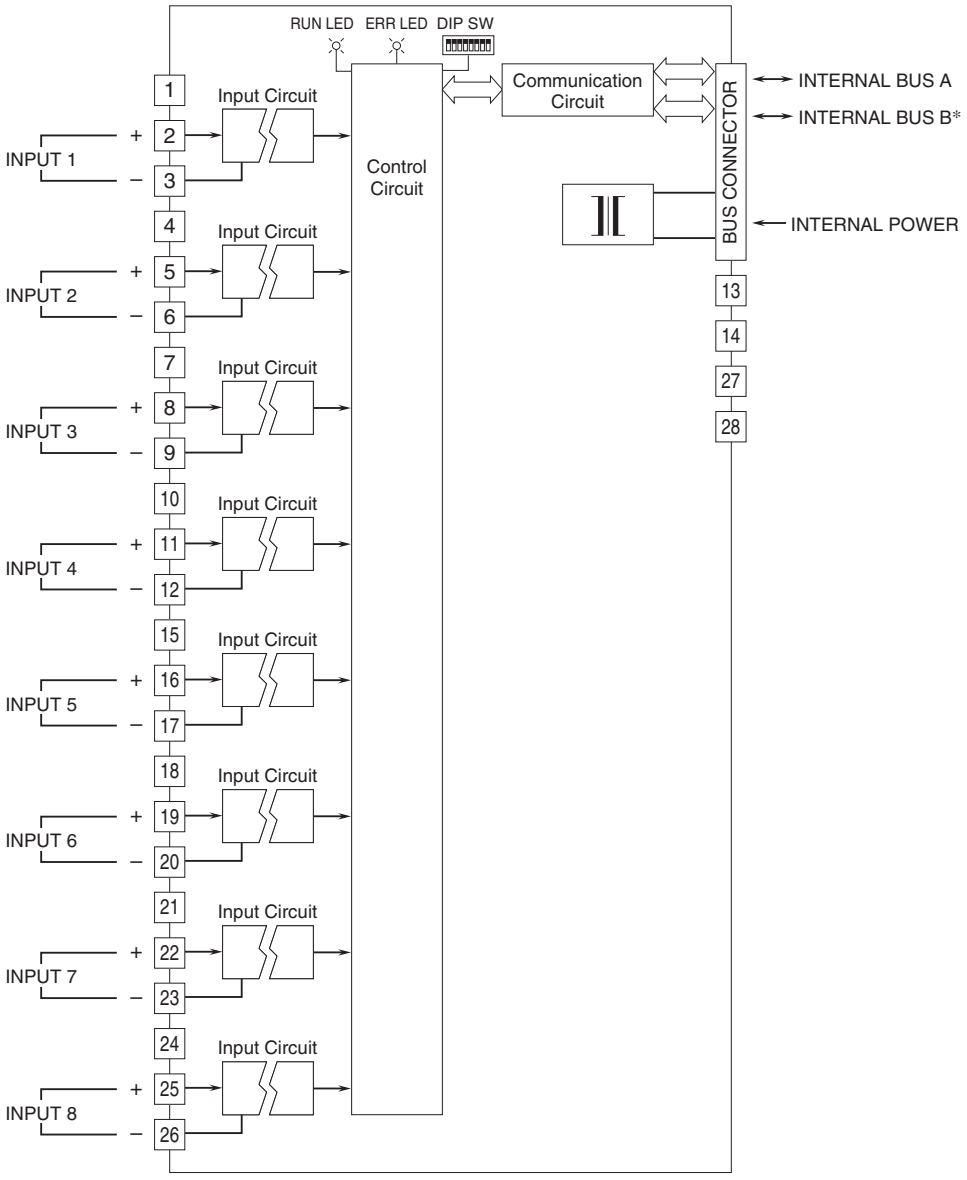
Four alarm setpoints are selectable per each input. Two (2) word (16 bits × 2) data is transmitterd to the PLC or the host device via the R3 network module.



EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*For dual redundant communication.

⚠ Specifications are subject to change without notice.