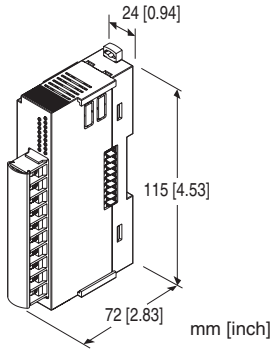
Remote I/O R8 Series

DC VOLTAGE OUTPUT MODULE

(4 points, isolated, screw terminal block)

Functions & Features

• 4 channels for DC voltage output, compact size remote I/O module
• Isolation between channels
• Output range adjustment with DIP switch or PC configurator



MODEL: R8–YVN4[1]

ORDERING INFORMATION

• Code number: R8-YVN4[1]
Specify a code from below for [1].
(e.g. R8-YVN4/Q)
• Specify the specification for option code /Q
(e.g. /C01)

[1] OPTIONS

blank: none
/Q: With options (specify the specification)

SPECIFICATIONS OF OPTION: Q

COATING (For the detail, refer to our web site.)
/C01: Silicone coating
/C02: Polyurethane coating

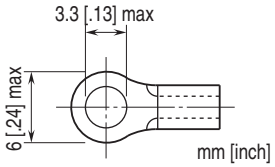
RELATED PRODUCTS

• PC Configurator cable (model: MCN-CON or COP-US)
• PC configurator software (model: R8CFG)
Downloadable at our web site.

GENERAL SPECIFICATIONS

Connection
• **Output**: M3 screw terminals (torque: 0.6 N·m)
• **Excitation supply, internal bus**:
Connected to internal bus connector
• **Internal power**: Supplied from internal bus connector
Solderless terminal: Refer to the drawing at the end of the section.
Recommended manufacturer: Japan Solderless Terminal MFG. Co., Ltd., Nichifu Co., Ltd.
Applicable wire size: 0.25 to 1.65 mm^2 (AWG 22 to 16)
Screw terminal: Nickel-plated steel
Isolation: Output 1 to output 2 to output 3 to output 4 to exc. supply to internal bus or internal power
Output range: Selectable with the side DIP SW
Module address: With DIP switch
Output at the loss of communication: Selectable with the side DIP SW
Terminating resistor: Built-in (DIP Switch, default: disable)
Configuration mode: With DIP switches on the side panel
Status indicator: Bi-color (red/green) LED; Refer to the instruction manual.
Output status indicators: Red LED; Refer to the instruction manual.

■Recommended solderless terminal size - M3



OUTPUT SPECIFICATIONS

Output range: Selectable between -10 – +10 V DC
Operational range: -5 – +105 % (in percentage of output range)
Load resistance: ≥ 20 kΩ

INSTALLATION

Max. current consumption: 110 mA
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: DIN rail
Weight: 120 g (0.26 lb)

PERFORMANCE

Conversion accuracy (in percentage of output range)
±0.05 % (@ output range -10 - +10 V)
Conversion accuracy is inversely proportional to output span.

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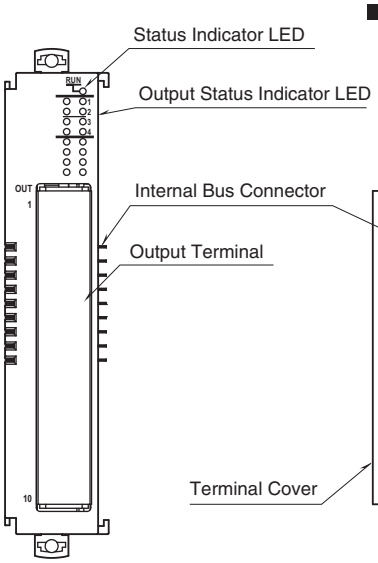
Conversion accuracy computation example:
When output range is 1 - 5 V: conversion accuracy = output span standard value (20 V) ÷ output span (4 V) × 0.05 (%) = 0.25 (%).
output span standard value is the same as the span at output range -10 - +10 V DC.
Conversion rate: 4 msec.
Output circuit time constant: ≤ 5 msec. (0 → 90 %)
Data range: 0 – 10000 of the output range
Data allocation: 2
Module addresses in use: 2
Temp. coefficient: ±0.015 %/°C (±0.008 %/°F)
Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength: 1500 V AC @ 1 minute
(output 1 to output 2 to output 3 to output 4 to exc. supply to internal bus or internal power to ground)

STANDARDS & APPROVALS

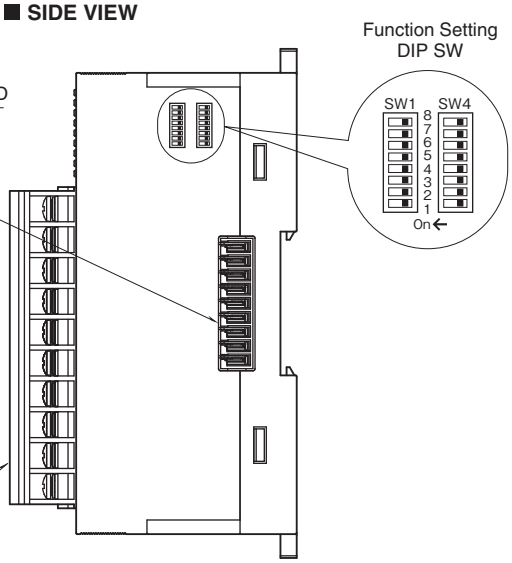
EU conformity:
EMC Directive
EMI EN 61000-6-4
EMS EN 61000-6-2
RoHS Directive

EXTERNAL VIEW

■ **FRONT VIEW**



■ **SIDE VIEW**



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CONNECTION DIAGRAMS

PIN No.	ID	FUNCTION
1	Ao1	Output 1 (+)
2	AG1	Output 1 (–)
3	Ao2	Output 2 (+)
4	AG2	Output 2 (–)
5	NC	No connection
6	Ao3	Output 3 (+)
7	AG3	Output 3 (–)
8	Ao4	Output 4 (+)
9	AG4	Output 4 (–)
10	NC	No connection

OPERATING MODE SETTING

(*) Factory default setting

Note: Be sure to set unused SW4-3 through 4-5 to OFF.

■ MODULE ADDRESS (SW1)

SW1-1 through 1-4 determine the tenth place digit, while SW1-5 through 1-8 do the ones place digit of the module address.

Address is selected between 0 to 30.

(Factory setting: 0)

MODULE ADDRESS	SW1				
	×10	1	2	3	4
	×1	5	6	7	8
0		OFF	OFF	OFF	OFF
1		OFF	OFF	OFF	ON
2		OFF	OFF	ON	OFF
3		OFF	OFF	ON	ON
4		OFF	ON	OFF	OFF
5		OFF	ON	OFF	ON
6		OFF	ON	ON	OFF
7		OFF	ON	ON	ON
8		ON	OFF	OFF	OFF
9		ON	OFF	OFF	ON

■ OUTPUT RANGE (SW4)

Same setting for all channels. Use PC Congurator to set independent ranges per channel.

OUTPUT RANGE	SW4-1	SW4-2
-10 – +10V DC (*)	OFF	OFF
0 –10V DC	ON	OFF
0 – 5V DC	OFF	ON
1 – 5V DC	ON	ON

■ TERMINATOR (SW4)

TERMINATOR	SW4-6
Without (*)	OFF
With	ON

■ OUTPUT AT THE LOSS OF COMMUNICATION (SW4)

Same output for all channels.

OUTPUT AT THE LOSS OF COMMUNICATION	SW4-7
Output Hold (*) (last data correctly received is hold)	OFF
Stop output	ON

Note: For Stop output, output fixed at -5% when configuration mode is DIP switch setting.

Output fixed at scaling value at the loss of communication when configuration mode is PC.

■ CONFIGURATION MODE (SW4)

CONFIGURATION MODE	SW4-8
DIP switch setting (*)	OFF
PC Configurator and communication	ON

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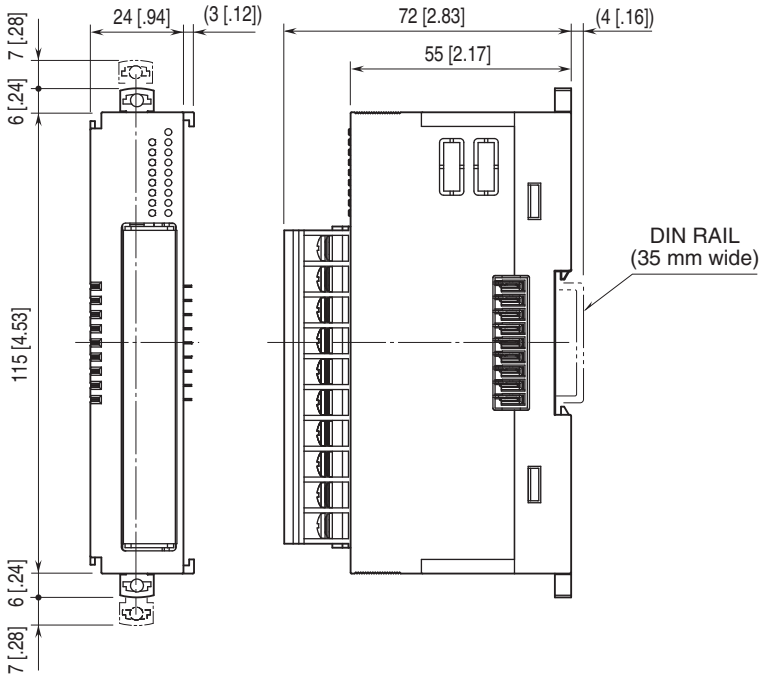
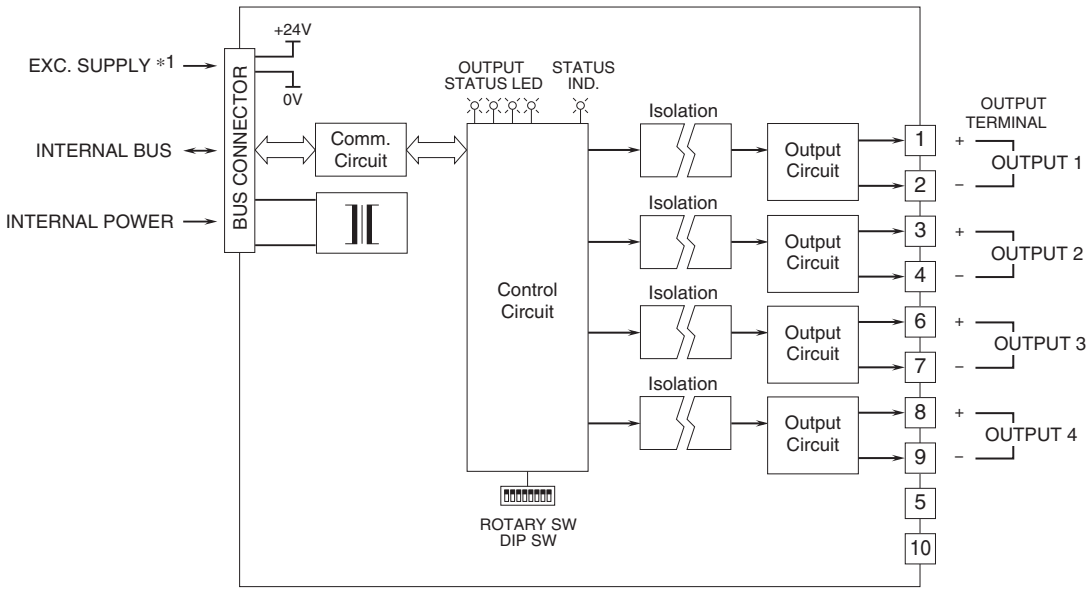
EXTERNAL DIMENSIONS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*1. Not used

⚠ Specifications are subject to change without notice.

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