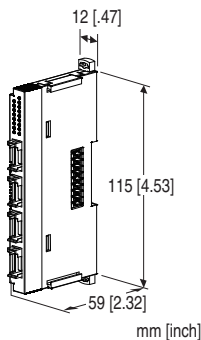# MODEL: R8-YV4N

Remote I/O R8 Series

DC VOLTAGE OUTPUT MODULE
(4 points, non-isolated)

Functions & Features
• 4 channels for DC voltage input, compact size remote I/O module
• Output range adjustment with DIP switch or PC configurator

12 [.47]
115 [4.53]
59 [2.32]
mm [inch]

CE

MODEL: R8–YV4N[1]

ORDERING INFORMATION
• Code number: R8-YV4N[1]
Specify a code from below for [1].
(e.g. R8-YV4N/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 software (model: R8CFG)
Downloadable at our web site.
A dedicated cable is required to connect the module to the PC. Please refer to the internet software download site or the users manual for the PC configurator for applicable cable types.

GENERAL SPECIFICATIONS
Connection
 •**Output**: 4-pin e-CON connector
 Unit side connector XN2D-1474-S002 (Omron)
 Recommended cable side connector XN2A-1470 (Omron)
 Applicable wire size 0.08 - 0.5 mm^2 (AWG28 - 20)
 Outer sheath diameter: max. 1.5 dia
 (The cable connector is not included in the package.
  Refer to the specifications of the product.)
 •**Excitation supply, internal bus**:
  Connected to internal bus connector
 •**Internal power**: Supplied from internal bus connector
Isolation: Output to exc. supply to internal bus or internal power
Output range: Selectable with the side DIP SW
Module address: With rotary 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.

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

INSTALLATION
Max. current consumption: 160 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: 60 g (2.12 oz)

PERFORMANCE
Conversion accuracy (in percentage of output range)
±0.05 % (@ output range -10 - +10 V)
Conversion accuracy is inversely proportional to output span.
 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 utput 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 to exc. supply to internal
bus or internal power to ground)

STANDARDS & APPROVALS

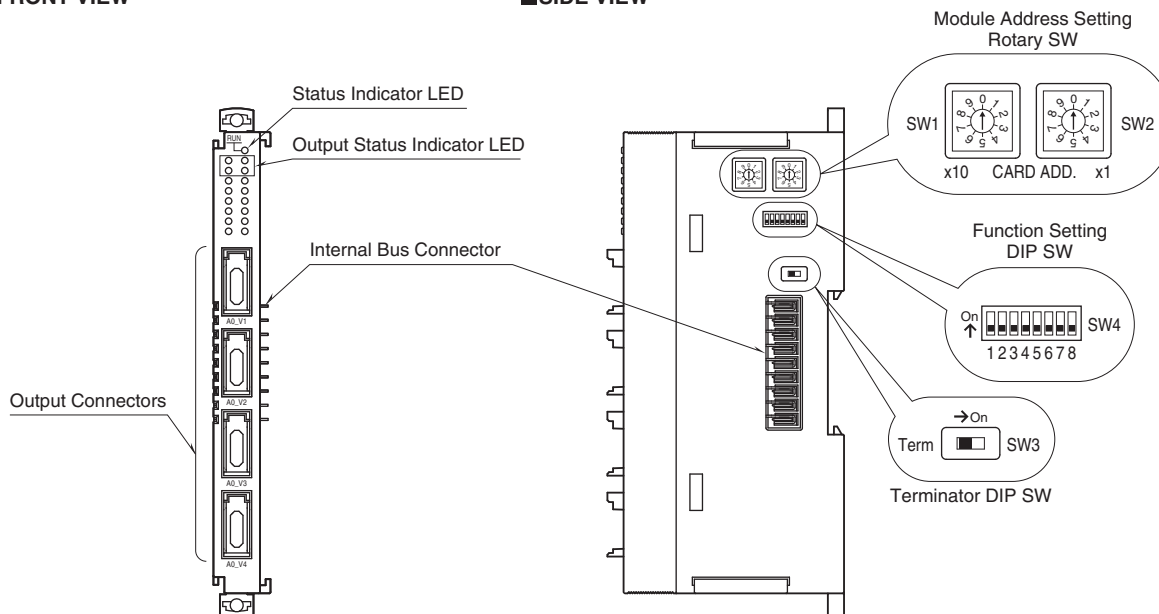**EU conformity**:
EMC Directive
  EMI EN 61000-6-4
  EMS EN 61000-6-2
RoHS Directive

EXTERNAL VIEW

■**FRONT VIEW**　　　　　　　　■**SIDE VIEW**

Status Indicator LED

Output Status Indicator LED

Internal Bus Connector

Output Connectors

Module Address Setting
Rotary SW

SW1　　CARD ADD.　SW2

x10　　CARD ADD.　x1

Function Setting
DIP SW

On ↑　　　　　SW4
1 2 3 4 5 6 7 8

→On

Term ▦ SW3

Terminator DIP SW
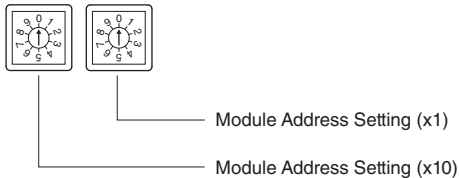
OPERATING MODE SETTING

(*) Factory setting

Caution ! - SW4-3 through 4-6 are unused. Be sure to turn off unused ones.

■ Module Address

The left switch determines the tenth place digit, while the right one does the ones place digit of the module address. Address is selected between 0 to 30.
(Factory setting: 0)

Module Address Setting (x1)

Module Address Setting (x10)

■ Range

Same range for all channels. Use PC Configurator to set independent ranges per channel.

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

■ Output at The Loss of Communication

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

NOTE: For Stop output, output fixed at -5% when configuration mode is DIP switch setting.
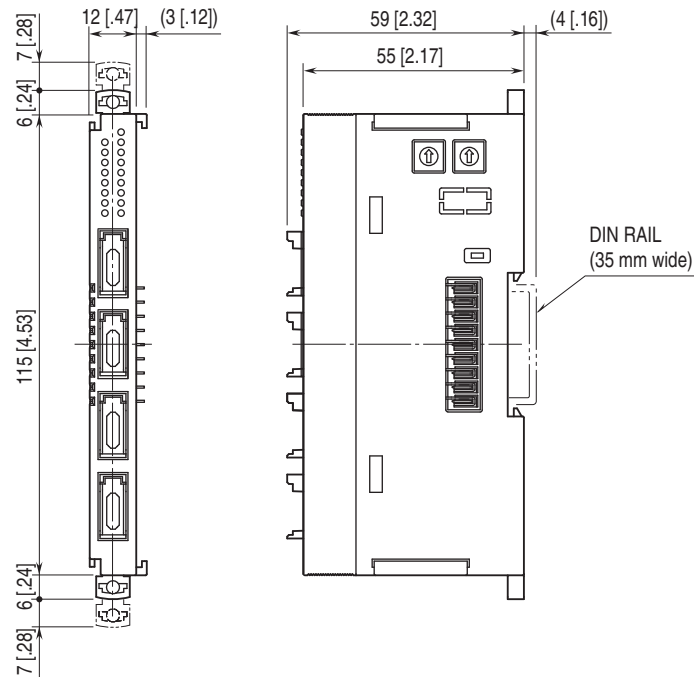Output fixed at scaling value at the loss of communication when configuration mode is PC.

■ Configuration Mode

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

■ Terminator DIP SW

TERMINATOR SW	SW3
Without (*)	OFF
With	ON

EXTERNAL DIMENSIONS   unit: mm [inch]

12 [.47]   (3 [.12])   59 [2.32]   (4 [.16])

7 [.28]   55 [2.17]

6 [.24]

115 [4.53]

DIN RAIL
(35 mm wide)

6 [.24]

7 [.28]

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

+24V

EXC. SUPPLY*1

0V

STATUS IND.   OUTPUT STATUS LED

Isolation

OUTPUT CONNECTOR 1

BUS CONNECTOR

INTERNAL BUS

Comm. Circuit

Control Circuit

1 +

2 NC

3 NC

OUTPUT1

INTERNAL POWER

D/A Conversion

4 −

ROTARY SW
DIP SW

OUTPUT CONNECTOR 4

1 +

2 NC

3 NC

OUTPUT4

4 −

*1. Not used
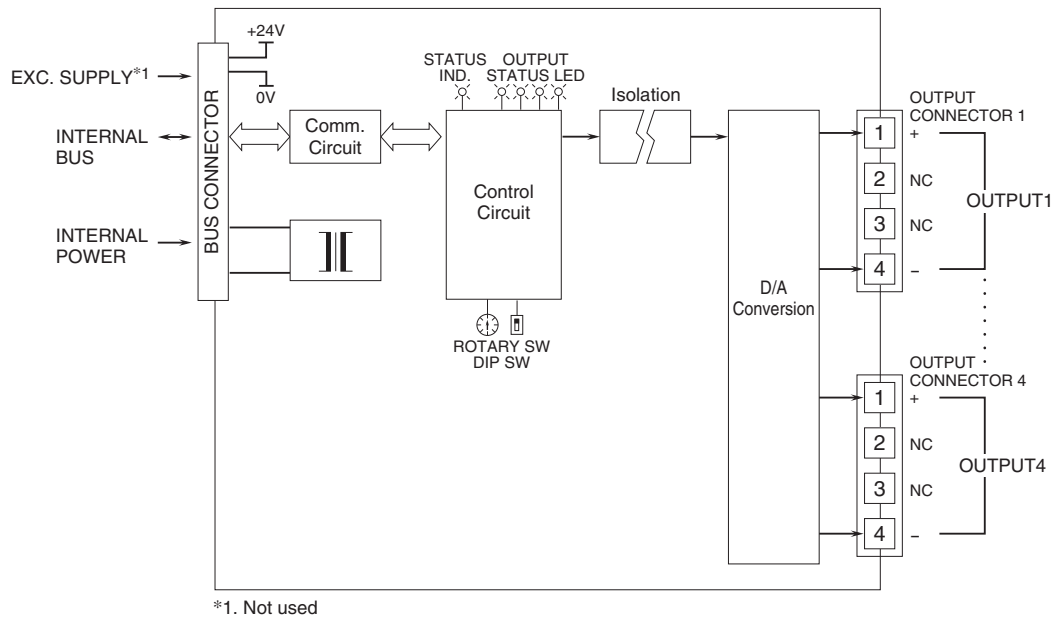
⚠ Specifications are subject to change without notice.

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