

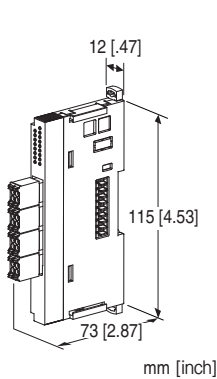
Remote I/O R8 Series

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
- Each channel is attachable/detachable independently with separable tension clamp terminal.



MODEL: R8-YVT4N[1]

ORDERING INFORMATION

- Code number: R8-YVT4N[1]
Specify a code from below for [1].
(e.g. R8-YVT4N/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 M-System's web site.)

/C01: Silicone coating

/C02: Polyurethane coating

RELATED PRODUCTS

- PC configurator software (model: R8CFG)
Downloadable at M-System's 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:** Tension clamp
- **Excitation supply, internal bus:**
Connected to internal bus connector
- **Internal power:** Via 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: $\geq 5 \text{ k}\Omega$

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: 70 g (2.5 oz)

PERFORMANCE

Conversion accuracy (in percentage of output range)

$\pm 0.1 \%$ (@ 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) \div output span (4 V) \times
 $0.1(\%) = 0.5 (\%)$.

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: $\leq 5 \text{ msec.}$ (0 \rightarrow 90 %)

Data range: 0 - 10000 of the output range

Data allocation: 2

Module addresses in use: 2

Temp. coefficient: $\pm 0.015 \%/^{\circ}\text{C}$ ($\pm 0.008 \%/^{\circ}\text{F}$)

Insulation resistance: $\geq 100 \text{ M}\Omega$ 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

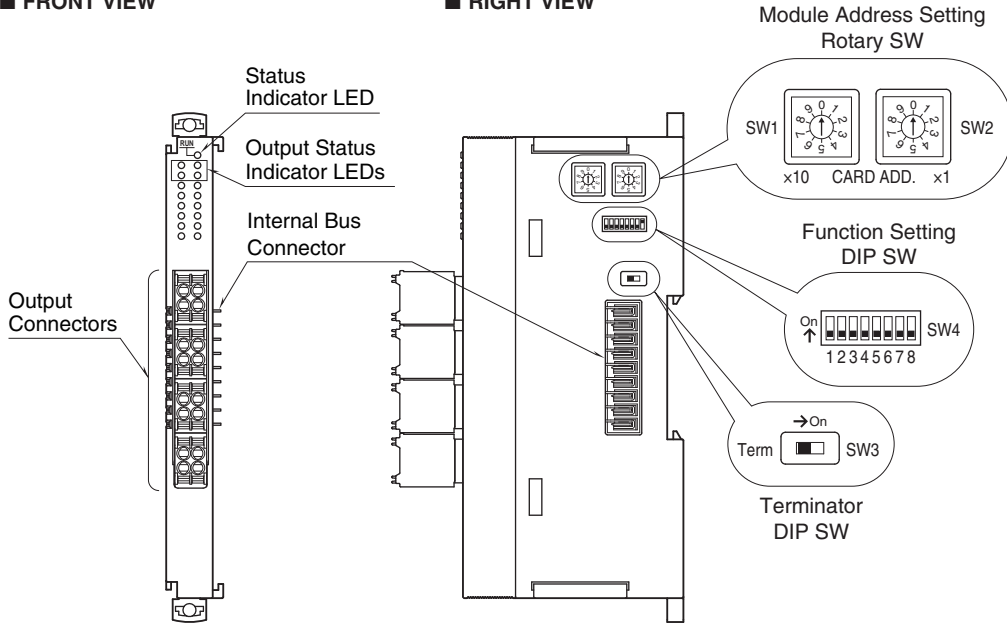
EMS EN 61000-6-2

RoHS Directive

EXTERNAL VIEW

■ FRONT VIEW

■ RIGHT VIEW



WIRING

• TENSION CLAMP

Unit side connector: M-System's product

Cable side connector: DFMC1,5/2-ST-3,5 (Phoenix Contact)

(included in the package)

Applicable wire size: 0.2 - 1.5 mm²

Stripped length: 10 mm

Recommended solderless terminal

- AI0,25-10YE 0.25 mm² (Phoenix Contact)
- AI0,34-10TQ 0.34 mm² (Phoenix Contact)
- AI0,5-10WH 0.5 mm² (Phoenix Contact)
- AI0,75-10GY 0.75 mm² (Phoenix Contact)
- A1-10 1.0 mm² (Phoenix Contact)
- A1,5-10 1.5 mm² (Phoenix Contact)

1 Ao 1	2 AG
3 NC	4 NC

5 Ao 2	6 AG
7 NC	8 NC

9 Ao 3	10 AG
11 NC	12 NC

13 Ao 4	14 AG
15 NC	16 NC

PIN NO.	ID	FUNCTION
1	Ao 1	Output 1 (+)
2	AG	Output 1 (-)
3	NC	Unused
4	NC	Unused
5	Ao 2	Output 2 (+)
6	AG	Output 2 (-)
7	NC	Unused
8	NC	Unused
9	Ao 3	Output 3 (+)
10	AG	Output 3 (-)
11	NC	Unused
12	NC	Unused
13	Ao 4	Output 4 (+)
14	AG	Output 4 (-)
15	NC	Unused
16	NC	Unused

OPERATING MODE SETTING

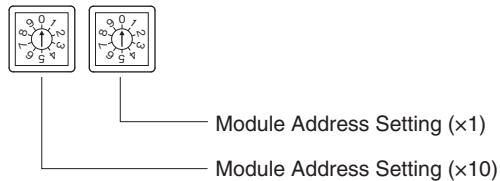
(*) Factory setting

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

· MODULE ADDRESS (SW1, 2)

The left switch determines the tenth place digit, while the right switch does the ones place digit of the address.

Address is selected between 0 to 30. (Factory setting: 0)



· RANGE

Same range 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

· OUTPUT AT THE LOSS OF COMMUNICATION (SW4)

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

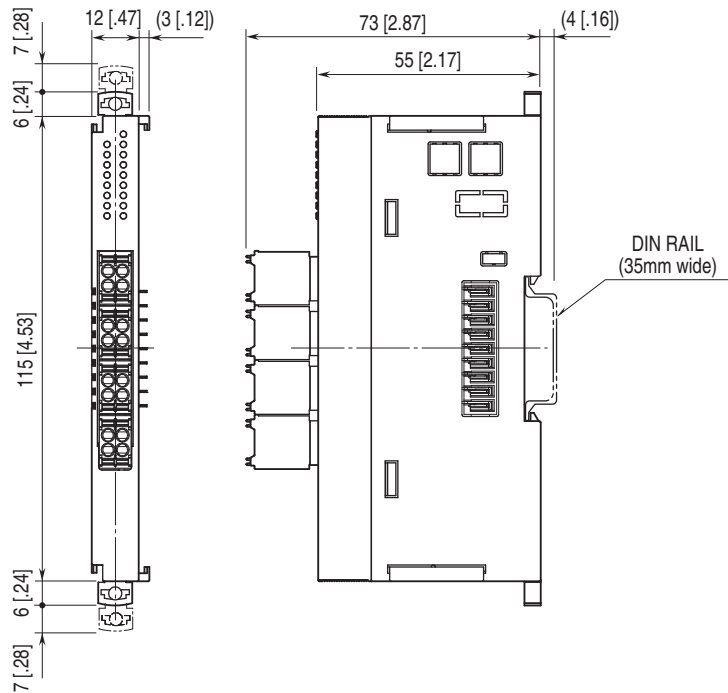
· CONFIGURATION MODE (SW4)

CONFIGURATION MODE	SW4-8
DIP SW setting (*)	OFF
PC configurator and communication	ON

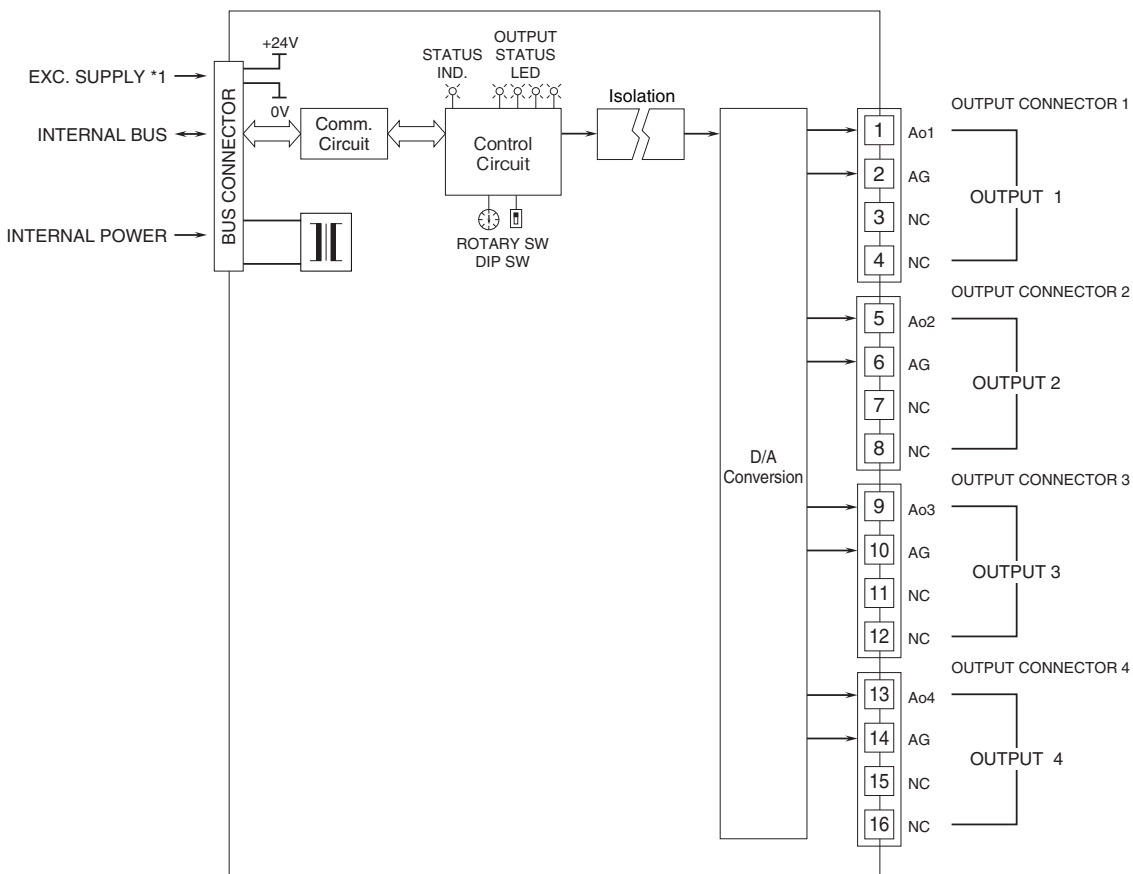
· TERMINATOR DIP SW (SW3)

TERMINATOR SW	SW3
Without (*)	OFF
With	ON

EXTERNAL DIMENSIONS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*1. Not used



Specifications are subject to change without notice.