

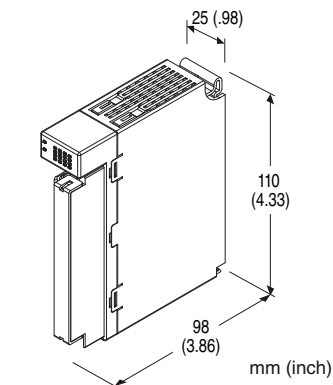
## Remote I/O R30 Series

### DC VOLTAGE OUTPUT MODULE

(4 points, isolated)

#### Functions & Features

- 4 channels for DC voltage output remote I/O module
- Isolation between output channels
- Output range of each channel is individually adjustable with PC configurator



### MODEL: R30YV4S[1]

#### ORDERING INFORMATION

- Code number: R30YV4S[1]  
Specify a code from below for [1].  
(e.g. R30YV4S/Q)
- Specify the specification for option code /Q  
(e.g. /C01/SET)

#### NO. OF CHANNELS

4: 4

#### COMMUNICATION MODE

S: Single

#### [1] OPTIONS

blank: none

/Q: With options (specify the specification)

#### SPECIFICATIONS OF OPTION: Q (multiple selections)

**COATING (For the detail, refer to M-System's web site.)**

/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating

#### EX-FACTORY SETTING

/SET: Preset according to the Ordering Information Sheet  
(No. ESU-9005)

#### RELATED PRODUCTS

- PC configurator software (model: R30CFG)  
Downloadable at M-System's web site.  
For connecting to PC, use commercially available Mini-B type USB cable. (provided by user)

#### GENERAL SPECIFICATIONS

##### Connection

**Internal bus:** Via the Installation Base (model: R30BS)

**Output:** M3 separable screw terminal (torque 0.5 N·m)

**Internal power supply:** Via the Installation Base (model: R30BS)

**Solderless terminal:** Refer to the drawing at the end of the section.

**Recommended manufacturer:** Japan Solderless Terminal MFG. Co., Ltd., Nichifu Co., Ltd.

(Solderless terminals with insulation sleeve do not fit.)

**Applicable wire size:** 0.25 to 0.75 mm<sup>2</sup>

**Screw terminal:** Nickel-plated steel

**Isolation:** Output 1 to output 2 to output 3 to output 4 to internal bus or internal power

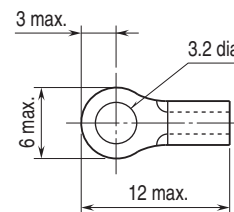
**Output range:** Selectable with PC configurator software (model: R30CFG)

**Output at the loss of communication:** Selectable with PC configurator software (Model: R30CFG, factory default: output hold)

**Status indicator LED:** RUN, ERR

(refer to the instruction manual)

■ **Recommended solderless terminal size - M3 (unit: mm)**



#### OUTPUT SPECIFICATIONS

**Module type:** Analog output, 4 points

**Output range:** -10 - +10V DC (\*), -5 - +5V DC, 0 - 10V DC, 0 - 5V DC, 1 - 5V DC

(\*): Factory default

**Load resistance:** ≥ 100 kΩ

**Operational range:**

Except -10 to +10 V DC: -15 to +115 % of output range

-10 to +10 V DC: Approx. -11.5 to +11.5 V DC

#### INSTALLATION

**Current consumption:** 60 mA

**Operating temperature:** -10 to +55°C (14 to 131°F)

**Storage temperature:** -20 to +65°C (-4 to +149°F)

**Operating humidity:** 10 to 90 %RH (non-condensing)

**Atmosphere:** No corrosive gas or heavy dust

**Mounting:** Installation Base (model: R30BS)

**Weight:** 160 g (0.35 lb)

## PERFORMANCE

**Conversion accuracy:**  $\pm 0.1$  %

**Conversion rate:** 10 msec.

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

**Data allocation:** 4

**Temp. coefficient:**  $\pm 0.015$  %/°C ( $\pm 0.008$  %/°F)

**Output delay time:**  $\leq 250$  ms (0 - 90 %)

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

**Dielectric strength:** 1500 V AC @ 1 minute (output 1 to output 2 to output 3 to output 4 to internal bus or internal power)

1500 V AC @ 1 minute (power input to FE; isolated by the power supply module)

## STANDARDS & APPROVALS

**EU conformity:**

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

RoHS Directive

EN 50581

## FUNCTIONS

### ■ Output at the loss of communication

#### • Output Hold

If the network module is in error, the module holds the signal at error and stands by until the communication recovers.

#### • Output set value

If the network module is in error, the module holds the signal at error or power up and stands by until the communication recovers. The signal at error or power up is selectable with PC configurator software (Model: R30 CFG)

Not depending on output at the loss of communication setting, when power up the module holds the signal at error or power up and stands by until the normal data is received.

## CONFIGURATOR SOFTWARE SETTING

With configurator software, settings shown below are available.  
Refer to the software manual of R30CFG for detailed operation.

### CHANNEL INDIVIDUAL SETTING

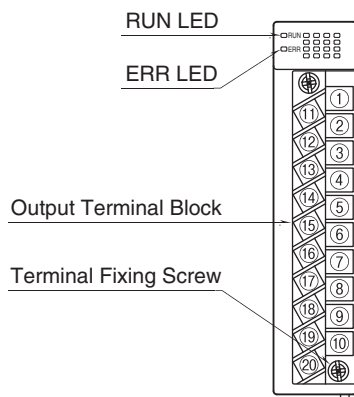
ITEM	USABLE RANGE	DEFAULT SETTING
Unused setting	CH enabled CH disabled	CH enabled
Output range	-10 – +10V DC -5 – +5V DC 0 – 10V DC 0 – 5V DC 1 – 5V DC	-10 – +10V DC
Fine zero adjustment	-320.00 – +320.00 (%)	0.00 (%)
Fine gain adjustment	-3.2000 – +3.2000	1.0000
Scaled range zero	-32 000 – +32 000	0
Scaled range span	-32 000 – +32 000	10 000
Output range at Communication Failure or Power up	-15.00 – +115.00 (%)	-15.00 (%)

### CHANNEL BATCH SETTING

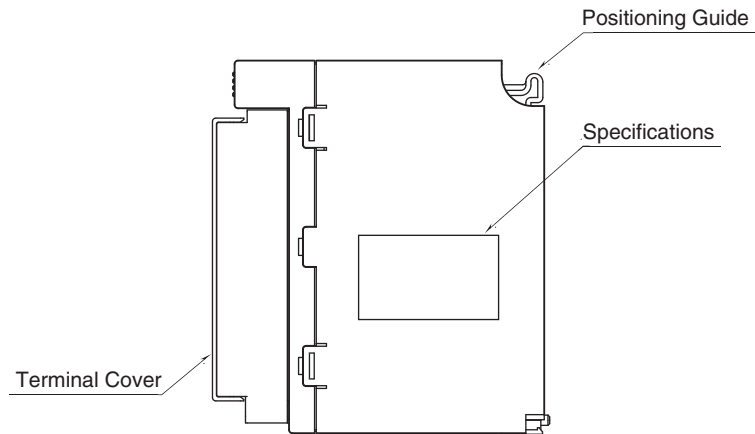
ITEM	USABLE RANGE	DEFAULT SETTING
Simulate Output	Normal output Simulation data	Normal output
Output at the loss of communication	Hold the output data User set data output	Hold the output data

## EXTERNAL VIEW

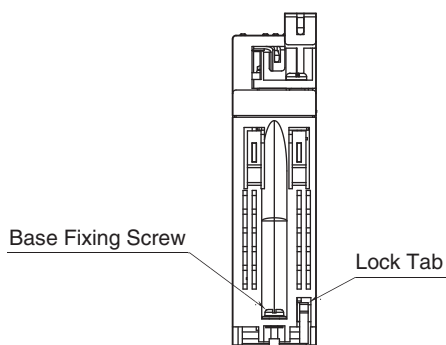
### FRONT VIEW



### SIDE VIEW



### BOTTOM VIEW

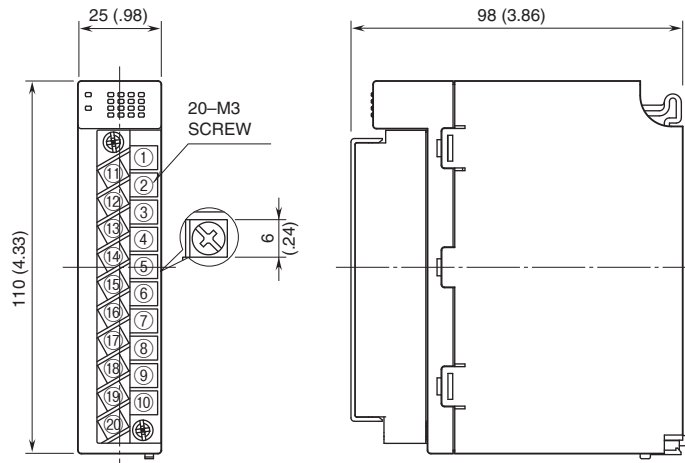


**TERMINAL ASSIGNMENTS**

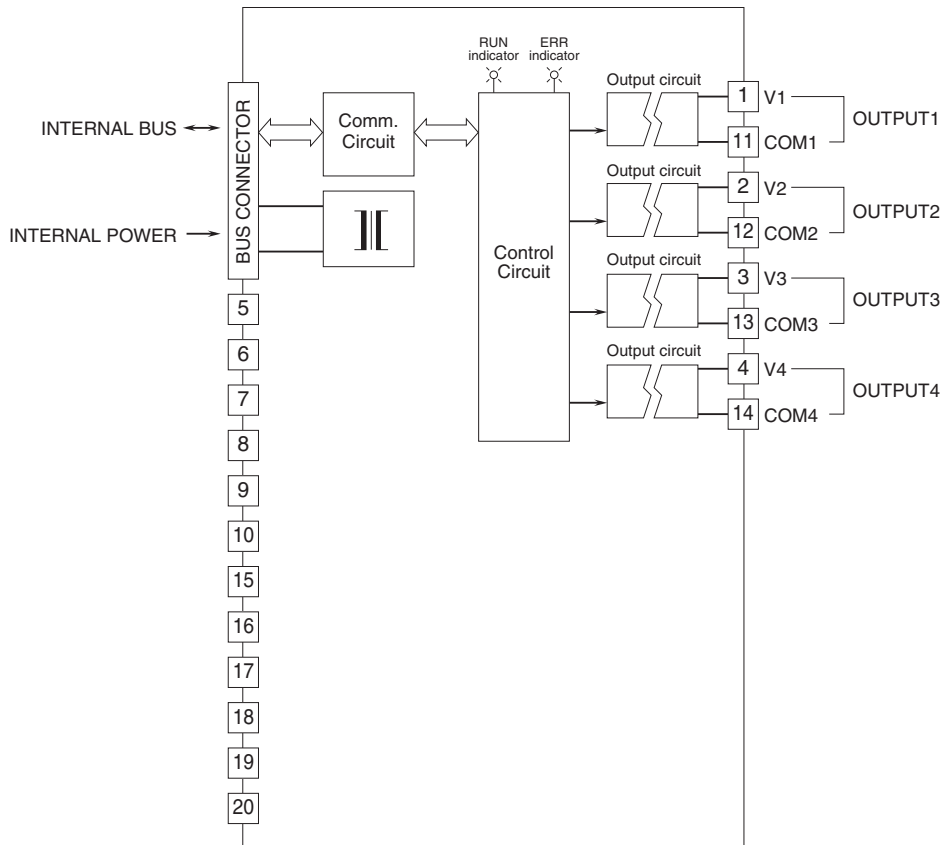
	1
11	V1
COM1	2
12	V2
COM2	3
13	V3
COM3	4
14	V4
COM4	5
15	NC
NC	6
16	NC
NC	7
17	NC
NC	8
18	NC
NC	9
19	NC
NC	10
20	NC
NC	

NO.	ID	FUNCTION	NO.	ID	FUNCTION
1	V1	Voltage Output 1	11	COM1	Common 1
2	V2	Voltage Output 2	12	COM2	Common 2
3	V3	Voltage Output 3	13	COM3	Common 3
4	V4	Voltage Output 4	14	COM4	Common 4
5	NC	No connection	15	NC	No connection
6	NC	No connection	16	NC	No connection
7	NC	No connection	17	NC	No connection
8	NC	No connection	18	NC	No connection
9	NC	No connection	19	NC	No connection
10	NC	No connection	20	NC	No connection

**EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)**



**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



Specifications are subject to change without notice.