

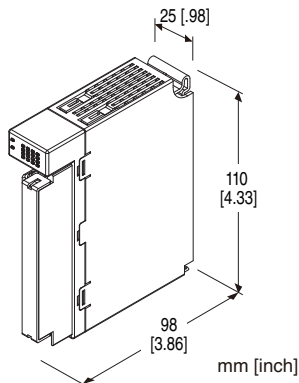
Remote I/O R30 Series

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: 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 mm²

Screw terminal: Nickel-plated steel

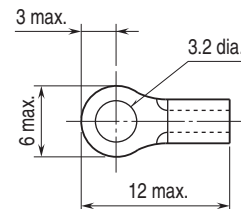
Isolation: Output 1 to output 2 to output 3 to output 4 to internal bus or internal power

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

Output delay time: ≤ 250 msec. (0 - 90 %)

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

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

The following parameters can be set with using PC Configurator Software (model: R30CFG)
Refer to the users manual for the R30CFG for detailed operation of the software program.

CHANNEL INDIVIDUAL SETTING

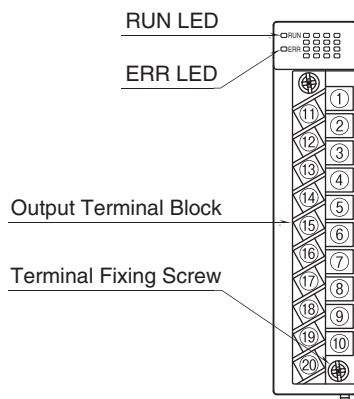
PARAMETER	SETTING RANGE	DEFAULT SETTING
Unused setting	CH enabled CH disabled	CH enabled
Output range	-10 – +10V DC -5 – +5V DC 0 – 10V DC 0 – 5V DC 1 – 5V DC	-10 – +10V DC
Fine zero adjustment	-320.00 – +320.00 (%)	0.00 (%)
Fine gain adjustment	-3.2000 – +3.2000	1.0000
Scaled range zero	-32 000 – +32 000	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

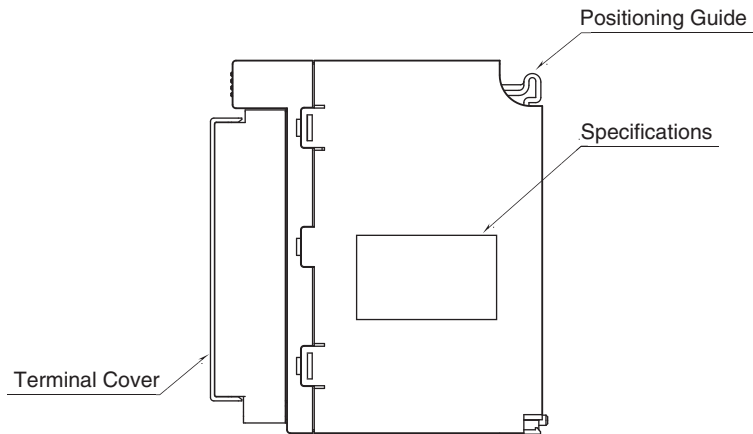
PARAMETER	SETTING RANGE	DEFAULT SETTING
Simulate output	Normal output Simulation data	Normal output
Output at the loss of communication	Hold the output data User set data output	Hold the output data

EXTERNAL VIEW

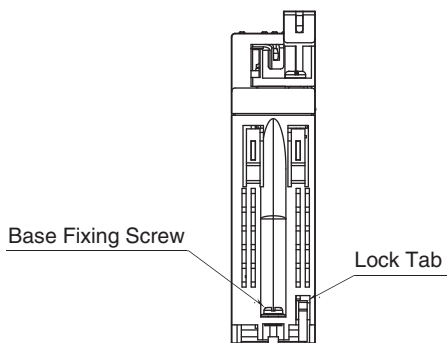
FRONT VIEW



SIDE VIEW



BOTTOM VIEW

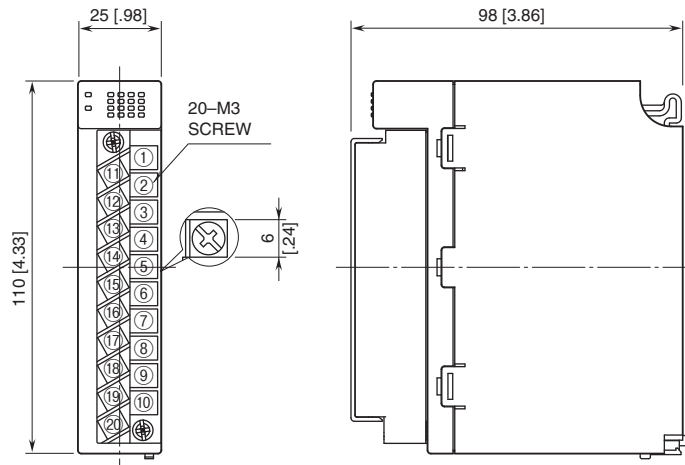


TERMINAL ASSIGNMENTS

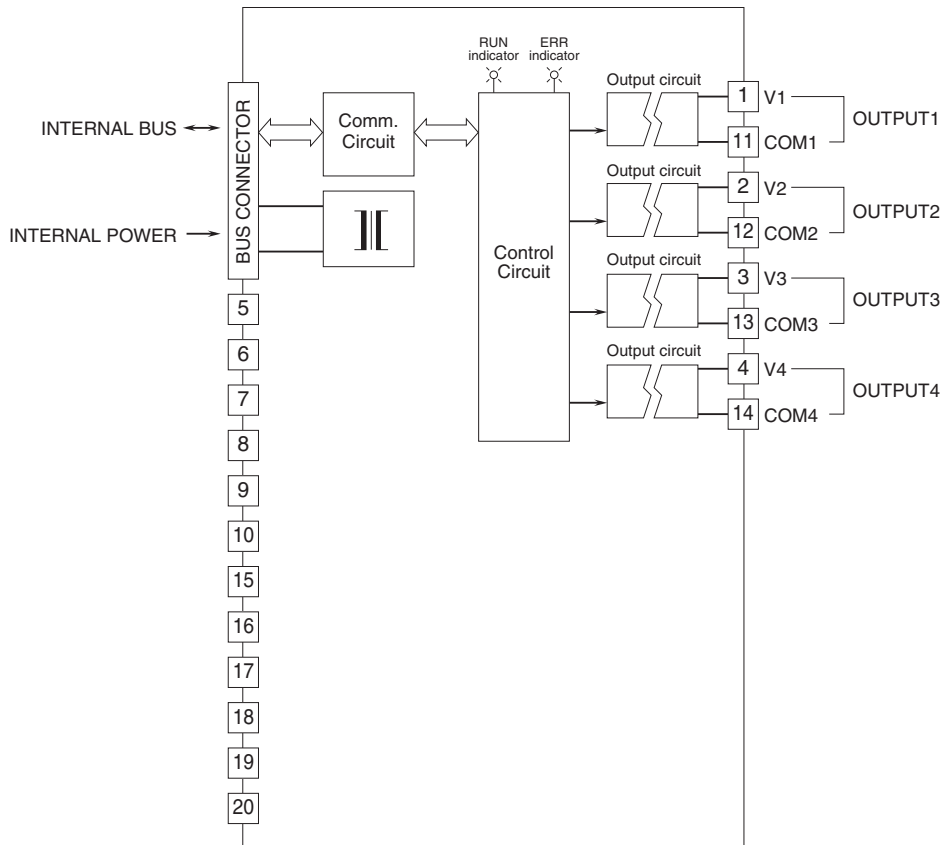
	1
11	V1
COM1	2
12	V2
COM2	3
13	V3
COM3	4
14	V4
COM4	5
15	NC
NC	6
16	NC
NC	7
17	NC
NC	8
18	NC
NC	9
19	NC
NC	10
20	NC
NC	

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.