

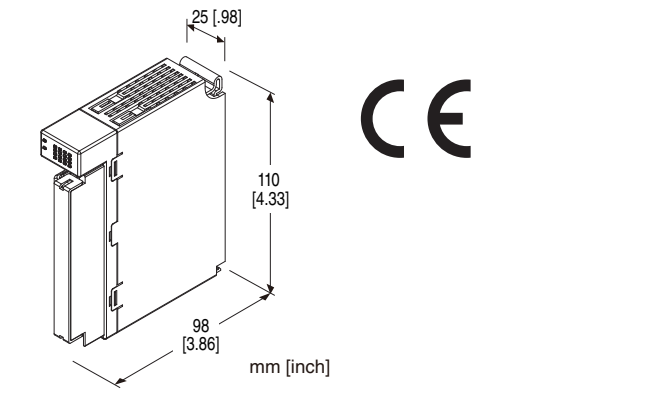
Remote I/O R30 Series

DC CURRENT OUTPUT MODULE

(4 points, isolated)

Functions & Features

- 4 channels for DC current output remote I/O module
- Isolation between output channels



MODEL: R30YS4S[1]

ORDERING INFORMATION

- Code number: R30YS4S[1]
- Specify a code from below for [1].
- (e.g. R30YS4S/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-9006)

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

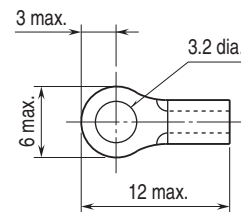
Isolation: Output 1 to output 2 to output 3 to output 4 to internal bus or internal power

Output 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: 4 to 20 mA DC

Load resistance: ≤ 550 Ω

Operational range: -15 to +115 % of output range

INSTALLATION

Current consumption: 120 mA max.

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 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.

■ OUTPUT WIRE BREAKDOWN DETECTION

In the case of wire breakdown, output error is detected. Then, the ERR indicator LED blinks in red and the flag of error is set on the PLC etc.

PC CONFIGURATOR

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

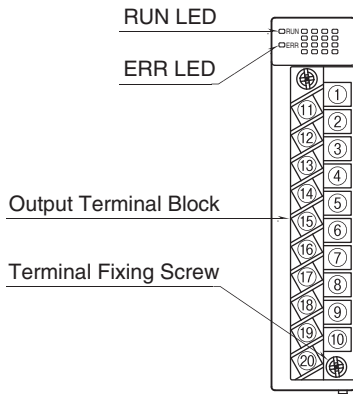
PARAMETER	SETTING RANGE	DEFAULT SETTING
Unused setting	CH enabled	CH enabled
	CH disabled	
Fine zero adjustment	-320.00 - +320.00 (%)	0.00 (%)
Fine gain adjustment	-3.2000 - +3.2000	1.0000
Scaled range zero	-32 000 - +32 000	0
Scaled range span	-32 000 - +32 000	10 000
Output range at communication failure or power up	-15.00 - +115.00 (%)	-15.00 (%)

■ CHANNEL BATCH SETTING

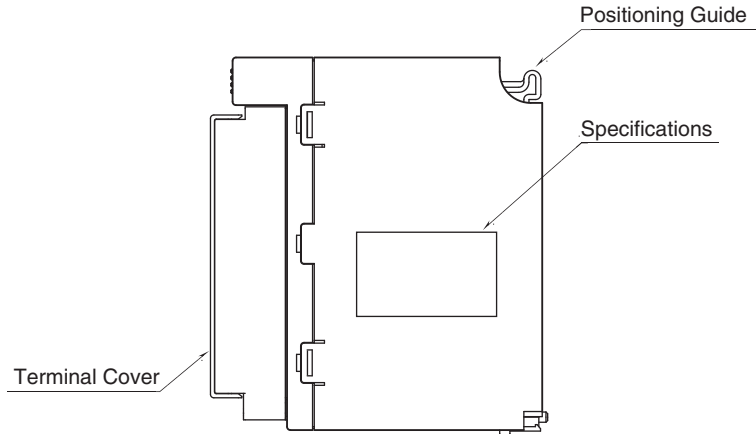
PARAMETER	SETTING RANGE	DEFAULT SETTING
Simulate output	Normal output	Normal output
	Simulation data	
Output at the loss of communication	Hold the output data User set data output	Hold the output data

EXTERNAL VIEW

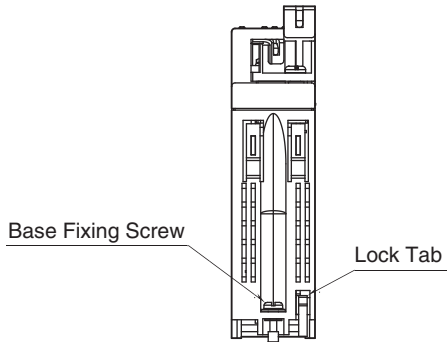
FRONT VIEW



SIDE VIEW



BOTTOM VIEW

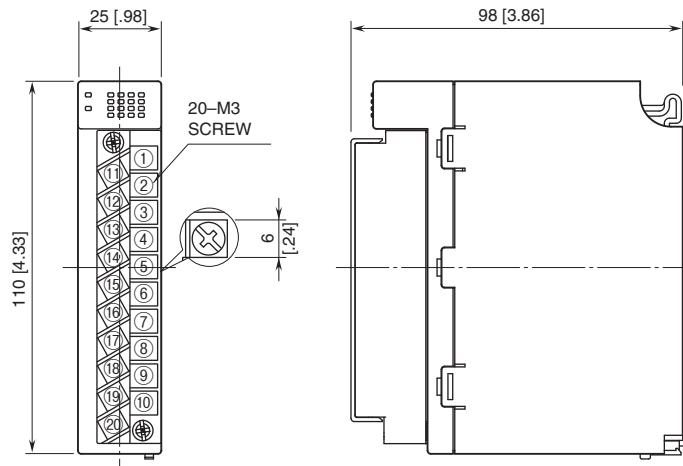


TERMINAL ASSIGNMENTS

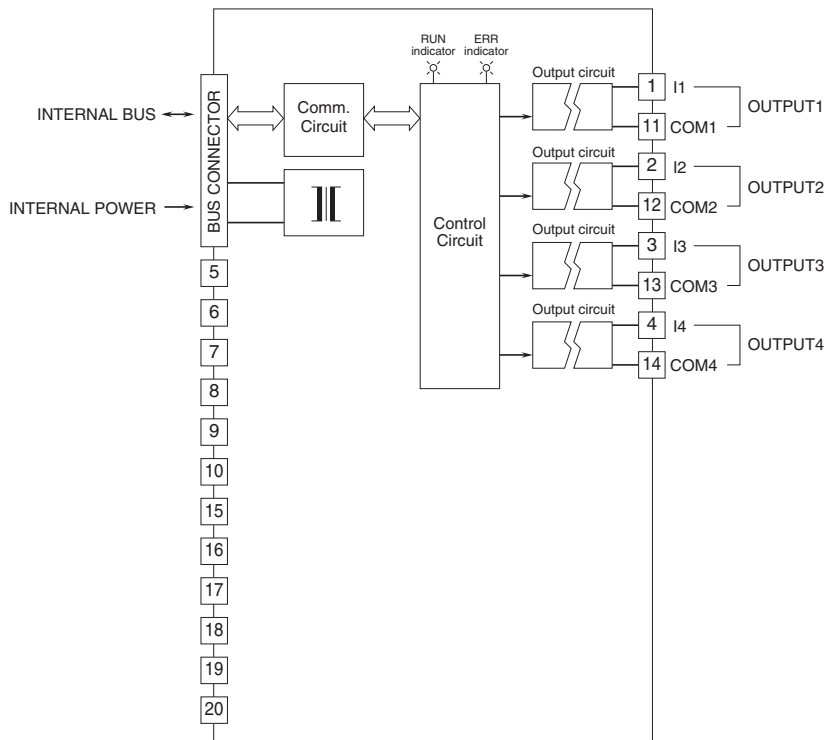
	1
11	I1
COM1	2
	I2
12	COM2
COM2	3
	I3
13	COM3
COM3	4
	I4
14	COM4
COM4	5
	NC
15	6
NC	NC
16	7
NC	NC
17	8
NC	NC
18	9
NC	NC
19	10
NC	NC
20	NC
NC	

NO.	ID	FUNCTION	NO.	ID	FUNCTION
1	I1	Current Output 1	11	COM1	Common 1
2	I2	Current Output 2	12	COM2	Common 2
3	I3	Current Output 3	13	COM3	Common 3
4	I4	Current 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]

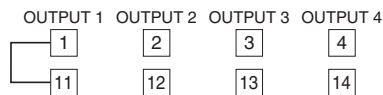


SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



• Unused Output Channels

Close across the unused output terminals as shown below.



Unused channels left open are equal to the wire breakdown, which turns the red ERR LED blink and sets a burnout flag at the PLC or the host device.

Unused channels can be specified and set so on the PC Configurator Software (model: R30CFG) without needing to short at the field terminals.



Specifications are subject to change without notice.