

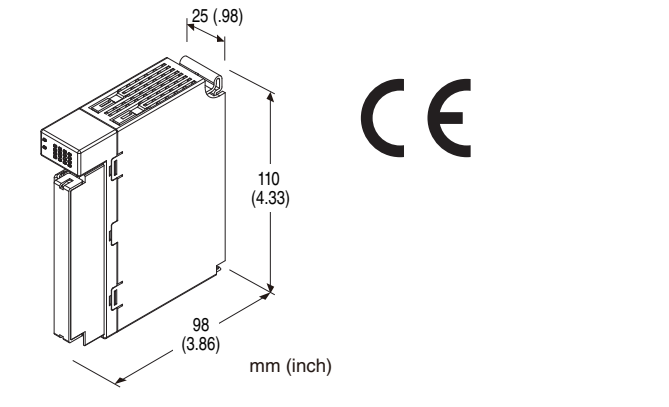
Remote I/O R30 Series

AC CURRENT INPUT MODULE

(4 points, isolated, clamp-on current sensor type CLSE use)

Functions & Features

- 4 channels AC current input remote I/O module
- Isolation between input channels
- Input range of each channel is individually adjustable with PC configurator



MODEL: R30CT4ES[1]

ORDERING INFORMATION

- Code number: R30CT4ES[1]
- Specify a code from below for [1].
- (e.g. R30CT4ES/Q)
- Specify the specification for option code /Q
- (e.g. /C01/SET)

NO. OF CHANNELS

4E: 4 channels, Sensor type CLSE

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-9018)

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)
- Clamp-on current sensor (model: CLSE)
The clamp-on current sensors, not included in this product package, must be ordered separately. Required number depends upon the system configuration.

GENERAL SPECIFICATIONS

Connection

Internal bus: Via the Installation Base (model: R30BS)
Input: 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 mm²

Screw terminal: Nickel-plated steel

Isolation: Input 1 to input 2 to input 3 to input 4 to internal bus or internal power

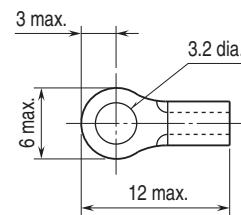
Input range: Selectable with PC configuration software (model: R30CFG)

Conversion rate: Selectable with PC configuration software (model: R30CFG)

Status indicator LED: RUN, ERR
(refer to the instruction manual)

Low-end cutout: Converted as 0 % for the input below setting value (0.5 - 50 %).

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



INPUT SPECIFICATIONS

Module type: Analog input, 4 points

Sensors (Not included in the package)

CLSE-R5: 0 - 5 A

CLSE-05: 0 - 50 A

CLSE-10: 0 - 100 A

CLSE-20: 0 - 200 A

CLSE-40: 0 - 400 A

CLSE-60: 0 - 600 A

Frequency: 50 / 60 Hz common use (45 - 65 Hz)

Operational range: 5 - 115 % of rating

Overload capacity: 120 % of rating (continuous)

Be sure that the input voltage is of 480 V or less.

INSTALLATION

Current consumption: 45 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 rate / conversion accuracy:

10 ms / ±2.0%, 20 ms / ±1.0%, 40 ms / ±0.5%, 80 ms / ±0.5% (*)

(*) Factory setting

(Conversion accuracy is the value within operational input range. The sensor accuracy is not included in the conversion rate)

Input circuit time constant: 300 msec.

Data range: Engineering unit value (A) × 100 (integer)

(For CLSE-R5, engineering unit value (A) × 1000 (integer))

Data allocation: 4

Temp. coefficient: ±0.015 %/°C (±0.008 %/°F)

Insulation resistance: ≥ 100 MΩ with 500 V DC

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

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

STANDARDS & APPROVALS

EU conformity:

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

RoHS Directive

EN 50581

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

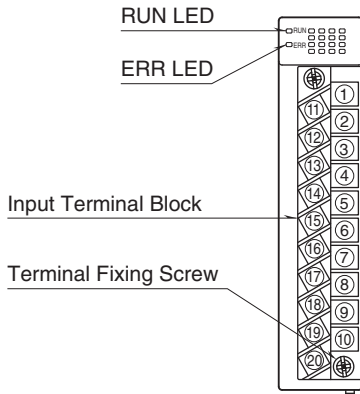
ITEM	USABLE RANGE	DEFAULT SETTING
Unused setting	CH enabled CH disabled	CH enabled
Input range	CLSE-60 CLSE-40 CLSE-20 CLSE-10 CLSE-05 CLSE-R5	CLSE-60
Fine zero adjustment	-320.00 - +320.00 (%)	0.00 (%)
Fine gain adjustment	-3.2000 - +3.2000	1.0000
Scaled range Zero	0 - 64 000	0
Scaled range Span	0 - 64 000	0
Low-end cutout	0.5 - 50.0 (%)	1.0 (%)

■ CHANNEL BATCH SETTING

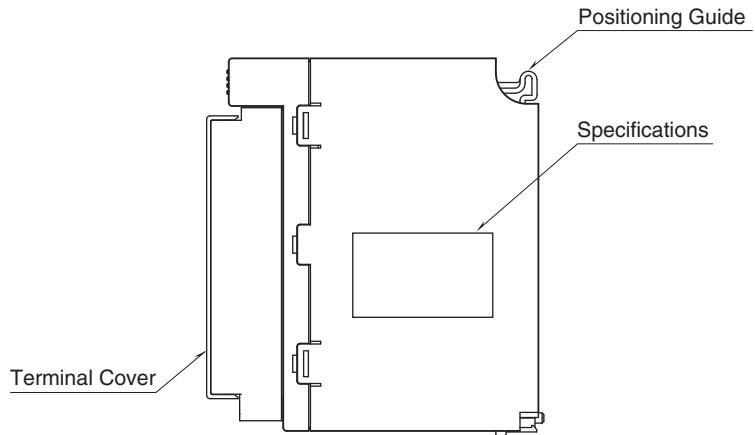
ITEM	USABLE RANGE	DEFAULT SETTING
Conversion rate	80 ms 40 ms 20 ms 10 ms	80 ms
Operational delay at power ON	0.0 - 60.0 sec.	5.0 sec.
Simulate input	Normal input Simulated data	Normal input

EXTERNAL VIEW

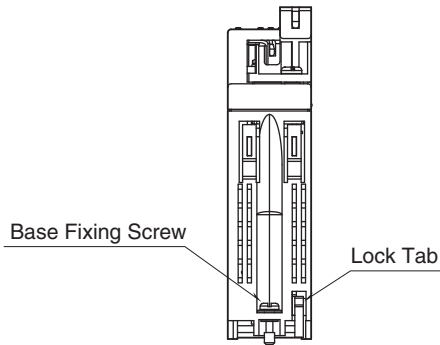
■ FRONT VIEW



■ SIDE VIEW



■ BOTTOM VIEW

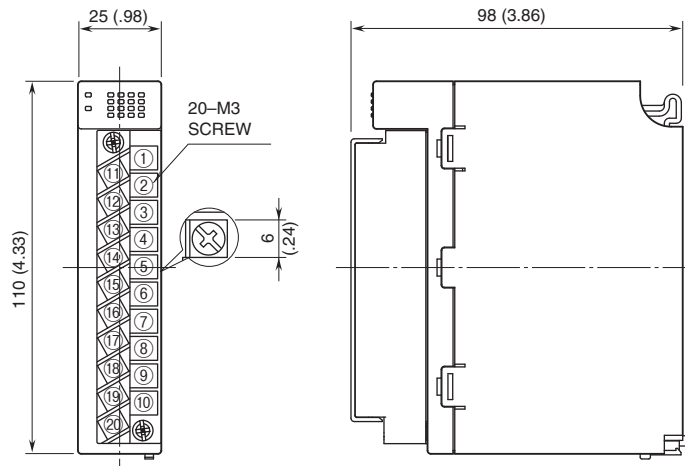


TERMINAL ASSIGNMENTS

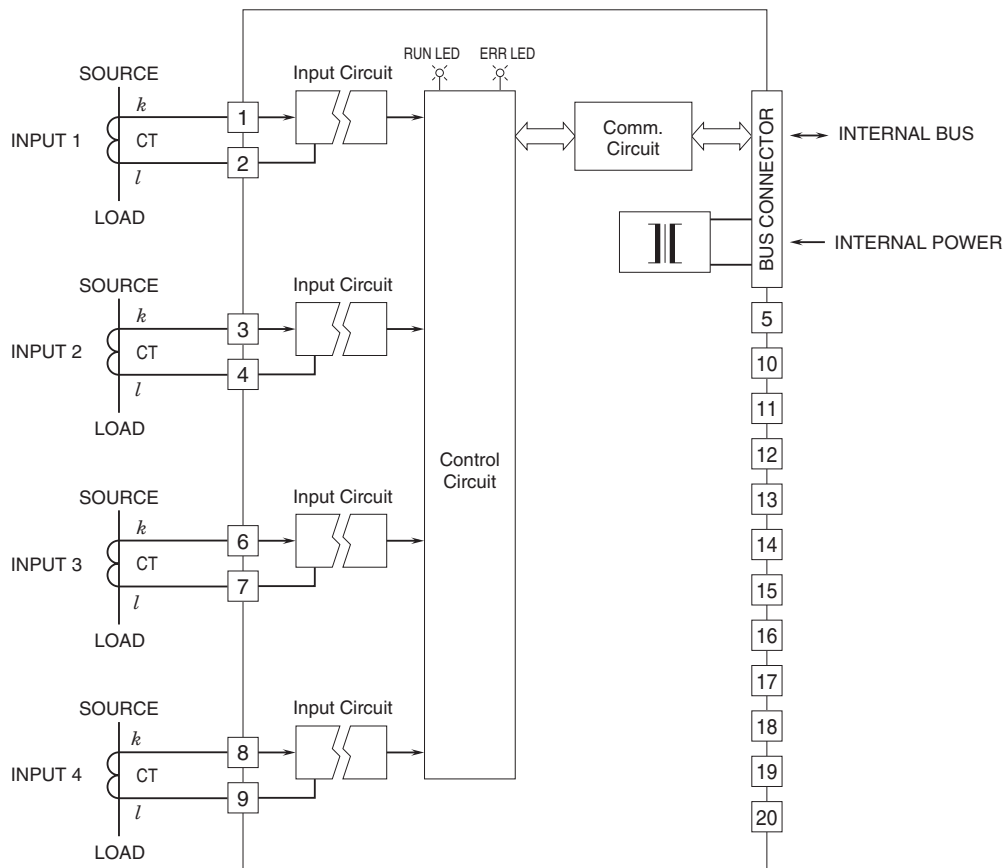
11	1
NC	K1
12	2
NC	L1
13	3
NC	K2
14	4
NC	L2
15	5
NC	NC
16	6
NC	K3
17	7
NC	L3
18	8
NC	K4
19	9
NC	L4
20	10
NC	NC

NO.	ID	FUNCTION	NO.	ID	FUNCTION
1	K1	Input K1	11	NC	No connection
2	L1	Input L1	12	NC	No connection
3	K2	Input K2	13	NC	No connection
4	L2	Input L2	14	NC	No connection
5	NC	No connection	15	NC	No connection
6	K3	Input K3	16	NC	No connection
7	L3	Input L3	17	NC	No connection
8	K4	Input K4	18	NC	No connection
9	L4	Input L4	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.