

BEFORE USE

Thank you for choosing M-System. Before use, please check contents of the package you received as outlined below.

If you have any problems or questions with the product, please contact M-System's Sales Office or representatives.

■ PACKAGE INCLUDES:

4 – 20mA input module.....(1)

■ MODEL NO.

Confirm Model No. marking on the product to be exactly what you ordered.

■ INSTRUCTION MANUAL

This manual describes necessary points of caution when you use this product, including installation, connection and basic maintenance procedures.

POINTS OF CAUTION**■ HOT SWAPPABLE MODULES**

- Replacing the module does not affect other modules on the same base. Thus, the module can be replaced while the power is ON. However, replacing multiple modules at once may greatly change live voltage levels. We highly recommend to replace them one by one.

■ GENERAL PRECAUTIONS

- DO NOT set the switches on the module while the power is supplied. The switches are used only for maintenance without the power.

■ ENVIRONMENT

- Indoor use.
- When heavy dust or metal particles are present in the air, install the unit inside proper housing with sufficient ventilation.
- Do not install the unit where it is subjected to continuous vibration. Do not subject the unit to physical impact.
- Environmental temperature must be within -10 to +55°C (14 to 131°F) with relative humidity within 30 to 90% RH in order to ensure adequate life span and operation.

■ WIRING

- Do not install cables close to noise sources (relay drive cable, high frequency line, etc.).
- Do not bind these cables together with those in which noises are present. Do not install them in the same duct.

■ UNUSED INPUT CHANNELS

- Set the unused channels to "Unused" with PC Configurator software: R3CON. Unused channels left open may be equal to the input lower than -15%, which sets a data abnormality at the PLC or the host device.

■ AND

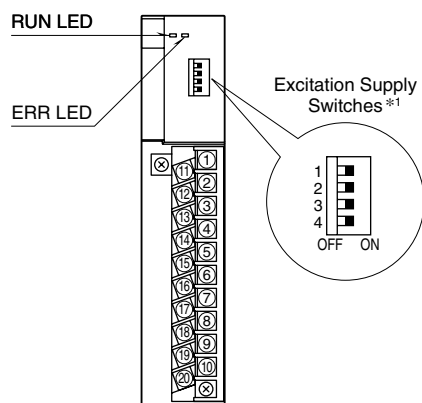
- The unit is designed to function as soon as power is supplied, however, a warm up for 10 minutes is required for satisfying complete performance described in the data sheet.

INSTALLATION

Use the Installation Base (model: R3-BSx).

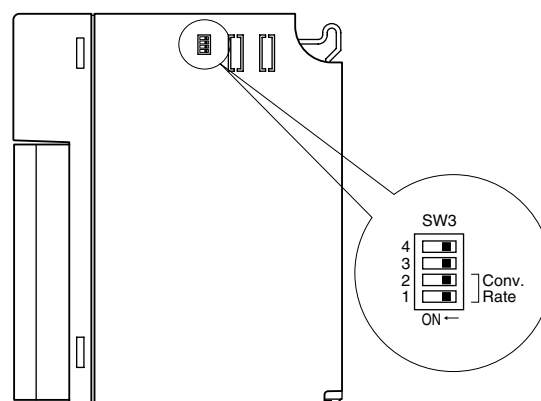
COMPONENT IDENTIFICATION

FRONT VIEW



*1. Excitation supply switches 1 through 4 turn on (ON) or off (OFF) the power supply to the input 1 through 4 respectively. (Factory set to ON)

SIDE VIEW



STATUS INDICATOR LED

RUN indicator: Bi-color (red/green) LED;

Red when the bus A operates normally;
Green when the bus B operates normally;
Amber when both buses operate normally.

ERR indicator: Bi-color (red/green) LED;

Red with input circuit abnormality (AD converter response failure);
Green in normal operating conditions.

SIDE DIP SW

• Conversion Rate: SW3-1, 3-2

| SW | CONVERSION RATE | | | |
|-------|-----------------|-------|-------|-------|
| | 80 ms (*) | 40 ms | 20 ms | 10 ms |
| SW3-1 | OFF | ON | OFF | ON |
| SW3-2 | OFF | OFF | ON | ON |

(*) Factory setting

Note: Be sure to set unused SW3-3 and 3-4 to OFF.

PC CONFIGURATOR

With configurator software, settings shown below are available. Refer to the software manual of R3CON for detailed operation.

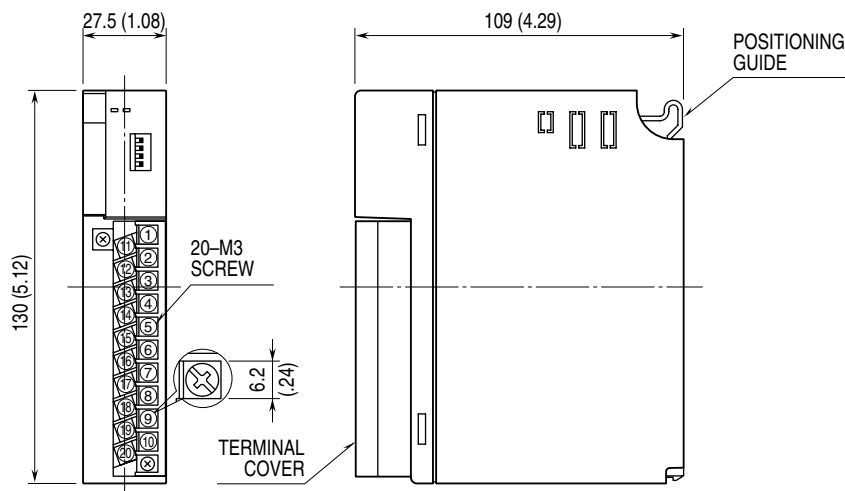
CHANNEL INDIVIDUAL SETTING

| PARAMETER | AVAILABLE RANGE | DEFAULT SETTING |
|-------------|-------------------------|-----------------|
| Zero Scale | -32000 to +32000 | 0 |
| Full Scale | -32000 to +32000 | 10000 |
| Zero Adjust | -320.00 to +320.00 | 0.00 |
| Full Adjust | -32000 to +32000 | 1.0000 |
| Unused | 0: Enable 1: Disable | 0: Enable |

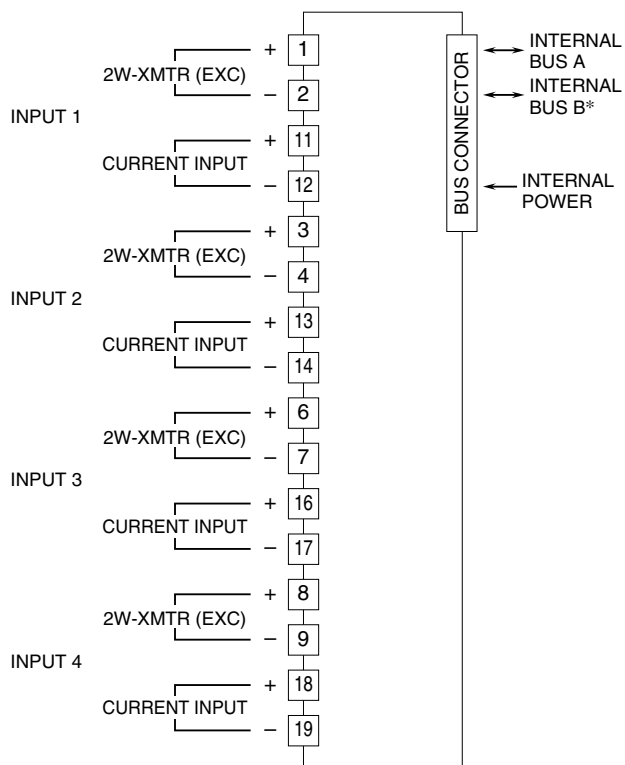
TERMINAL CONNECTIONS

Connect the unit as in the diagram below.

EXTERNAL DIMENSIONS unit: mm (inch)



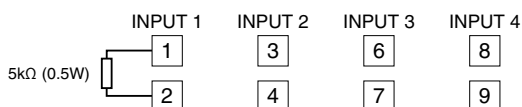
CONNECTION DIAGRAM



*For dual redundant communication.

Unused Input Channels

Turn on the excitation supply switch for the unused channels and close across the unused input terminals with a resistor (5 kΩ, 0.5W) as shown below.



Unused channels left open are equal to the input lower than -15%, which sets a data abnormality at the PLC or the host device. Unused channels can be specified and set so on the PC Configurator Software (model: R3CON) without needing to connect resistors at the field terminals.

WIRING INSTRUCTIONS

SCREW TERMINAL

Torque: 0.5 N·m

SOLDERLESS TERMINAL

Refer to the drawing below for recommended ring tongue terminal size. Spade tongue type is also applicable. Solderless terminals with insulation sleeve do not fit.

Applicable wire size: 0.3 – 0.75 mm²

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

