INSTRUCTION MANUAL

LOW SPEED TOTALIZED PULSE INPUT MODULE
(4 points, isolated)

MODEL **R3-PA4B**

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:

Totalized pulse 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.

■ 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).

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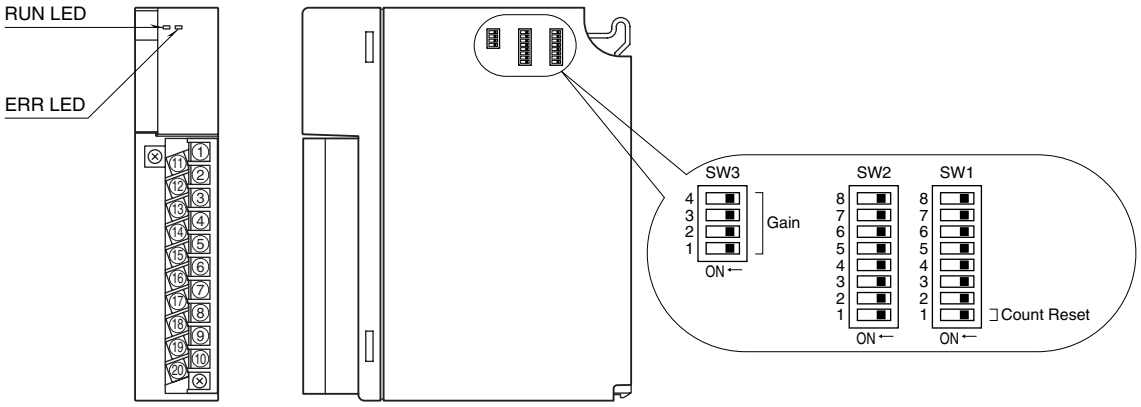
COMPONENT IDENTIFICATION

■FRONT VIEW

■SIDE VIEW



Set the Count Reset SW to OFF to start counting.

■ 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 abnormality;
Green in normal operating conditions.

■ SIDE DIP SW

• Gain: SW3-1 through 3-4

SW	GAIN		INPUT
	1 (*)	2	
SW3-1	OFF	ON	Input 1
SW3-2	OFF	ON	Input 2
SW3-3	OFF	ON	Input 3
SW3-4	OFF	ON	Input 4

(*) Factory setting

Note: Be sure to set unused SW1-2 through 1-8 and SW2-1 through 2-8 to OFF.

PC CONFIGURATOR

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

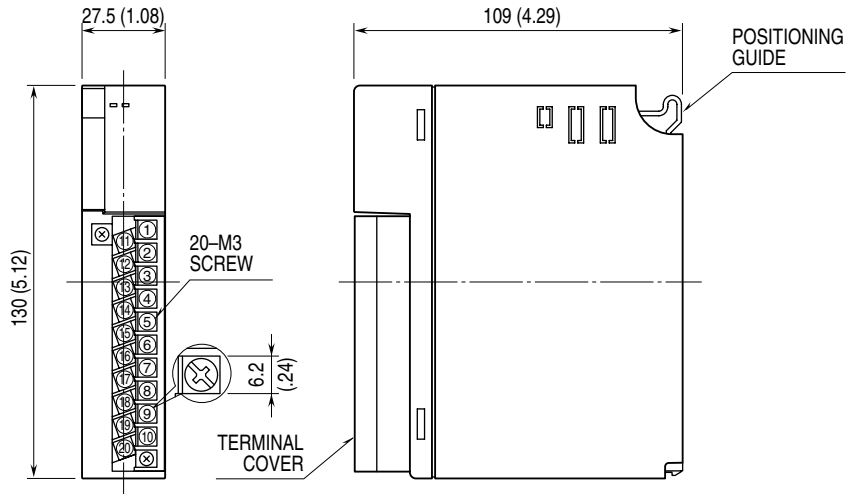
■ CHANNEL INDIVIDUAL SETTING

PARAMETER	AVAILABLE RANGE	DEFAULT SETTING
Max.	1,000 to 800,000,000	100,000,000
Min.	0, 1	1
Dividing Ratio	1 to 50,000	1
Edge	0: Up or Rise 1: Down or Sink	0: Up or Rise
Th. Adjust	15.00 to 100.00 (%)	50.00 (%)

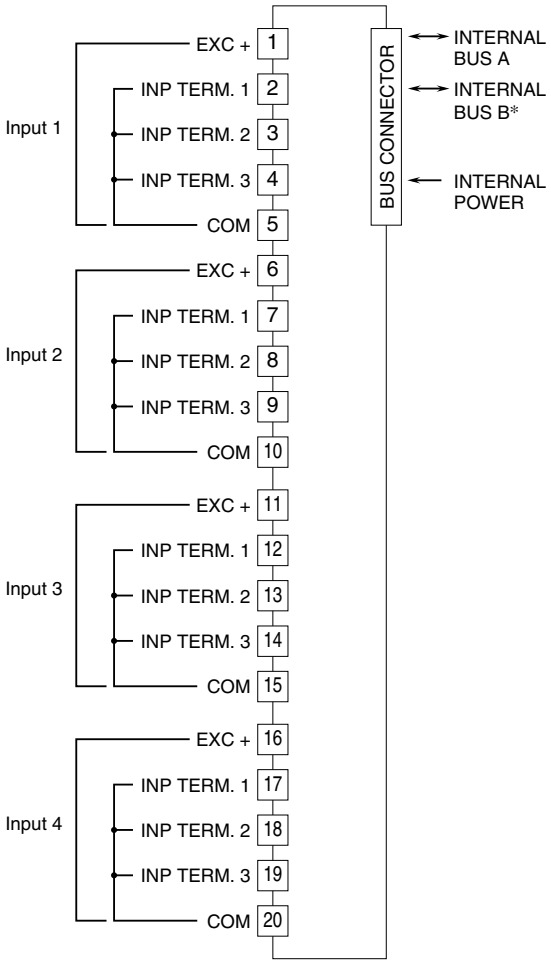
TERMINAL CONNECTIONS

Connect the unit as in the diagram below.

■ EXTERNAL DIMENSIONS unit: mm (inch)



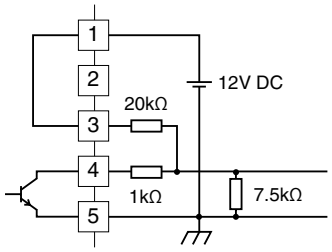
■ CONNECTION DIAGRAM



*For dual redundant communication.

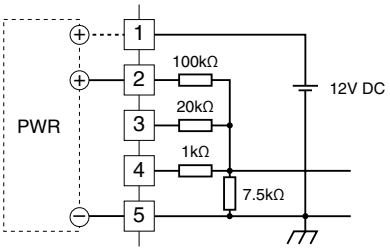
Input Connection Example (Input 1)

■ Open Collector

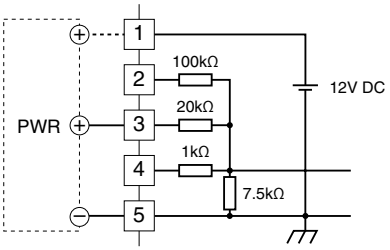


■ Voltage Pulse input

• Operational voltage across the terminals: 0 – 50V, 0 – 25V



• Operational voltage across the terminals: 0 – 12V, 0 – 6V



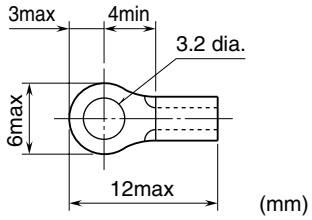
WIRING INSTRUCTIONS

■ 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 mm^2
Recommended manufacturer: Japan Solderless Terminal MFG. Co., Ltd., Nichifu Co., Ltd.



FUNCTIONS

■ MANUAL COUNT RESET

1) Remove Network Module or its cables and interrupt communication with other devices.
2) Turn ON the Count Reset SW.
3) Return the module to the base and turn the power supply on.
4) ERR LED turns on and the module starts resetting its counter. When the resetting is complete, the LED turns to green. DO NOT remove the power while the red LED is on. The RUN LED starts blinking at the same time.
5) After the green LED is confirmed, turn the power supply off.
6) Turn OFF the Count Reset SW.
7) Return the Network module onto the base and turn the power supply on.

Note: Count Reset SW must be turned OFF after this procedure because the module does not start counting with ON state.