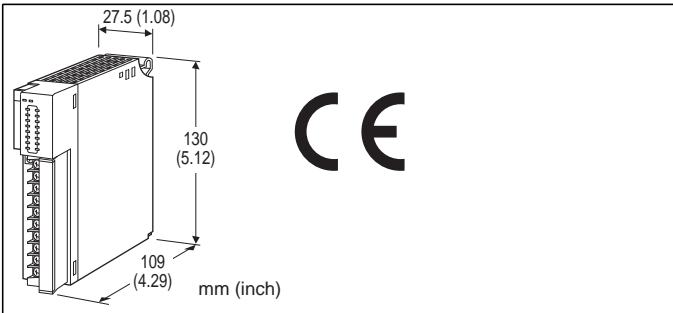


## Remote I/O R3 Series

### TOTALIZED PULSE INPUT MODULE

(Pi 16 points)



### MODEL: R3-PA16[1][2]

#### ORDERING INFORMATION

- Code number: R3-PA16[1][2]  
Specify a code from below for each [1] and [2].  
(e.g. R3-PA16W/A/CE/Q)
- Specify the specification for option code /Q  
(e.g. /C01)

#### NO. OF CHANNELS

16: 16

#### [1] COMMUNICATION MODE

S: Single  
W: Dual

#### [2] OPTIONS (multiple selections)

##### Excitation

Blank: Internal (negative common)  
/A: External (24 V DC, negative common)

##### Standards & Approvals

blank: Without CE  
/CE: CE marking

##### Other Options

blank: none  
/Q: Option other than the above (specify the specification)

#### SPECIFICATIONS OF OPTION: Q

**COATING (For the detail, refer to M-System's web site.)**

/C01: Silicone coating  
/C02: Polyurethane coating  
/C03: Rubber coating

#### RELATED PRODUCTS

- Interface module (model: R3-NC1, -NC3, -NE1, -NM1, -NDx, -NFL1, -NFx)

Count reset by host PC/PLC is able with the above mentioned interface modules of firmware version V2.00 or later, except R3-NFx. Notice that Count reset by host PC/PLC via R3-NFx or interface module of previous versions of firmware is unable.

#### GENERAL SPECIFICATIONS

##### Connection

**Internal bus:** Via the Installation Base (model: R3-BSx)  
**Input:** M3 separable screw terminal (torque 0.5 N·m)  
**Internal power:** Via the Installation Base (model: R3-BSx)  
**Screw terminal:** Nickel-plated steel

**Isolation:** Input to internal bus or internal power

**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 the excitation abnormality;  
Green in normal operating conditions.

**Input status indicator:** Red LED; turns on with the inputs supplied.

**Count reset:** Via DIP switch on the side or one pulse to reset input

#### INPUT SPECIFICATIONS

**Number of input:** 16 points

**Input resistance:** 6 kΩ

**Common:** Negative commons, all points

**Maximum frequency:** 100 Hz (ON/OFF time ≥ 5 msec.)

This unit is designed to be able to accept a frequency up to 100 Hz, however, 'chattering' contact must be avoided for accurate measuring of such high frequency. Use mercury relays or similar ones that do not cause any chattering.

**Totalized pulse range:** 1 - 10000 ('0' at reset)

Max. pulse range selectable from 1 to 65535 using the R3CON PC Configurator Software. Refer to the R3CON Users Manual for detailed information.

**Count at overflow:** Reset and restart at '1.'

##### ■ R3-PA16x (internal excitation)

**Sensing voltage:** 13 V DC (max. 24 V with no load)

**ON current:** ≥ 1.5 mA (≤ 1.5 kΩ)

**OFF current:** ≤ 0.75 mA (≥ 18 kΩ)

##### ■ R3-PA16x/A (external excitation)

**Sensing voltage:** 24 V DC

**ON current:** ≥ 1.5 mA (≤ 12 kΩ)

**OFF current:** ≤ 0.75 mA (≥ 36 kΩ)



## INSTALLATION

**Operating temperature:** -10 to +55°C (14 to 131°F)  
**Operating humidity:** 30 to 90 %RH (non-condensing)  
**Atmosphere:** No corrosive gas or heavy dust  
**Mounting:** Installation Base (model: R3-BSx)  
**Weight:** 200 g (0.44 lb)

## PERFORMANCE

**Data allocation:** 16  
**Current consumption:**  
R3-PA16x: 100 mA  
R3-PA16x/A: 80 mA  
**Insulation resistance:**  $\geq 100 \text{ M}\Omega$  with 500 V DC  
**Dielectric strength:** 2000 V AC @ 1 minute  
(input to internal bus or internal power)  
2000 V AC @ 1 minute (power input to FG; isolated on the power supply module)

## STANDARDS & APPROVALS

**CE conformity:**  
EMC Directive (2004/108/EC)  
EMI EN 61000-6-4: 2007/A1: 2011  
EMS EN 61000-6-2: 2005

## 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 light turns to green. DO NOT remove the power while the red light 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.

### ■ REMOTE COUNT RESET INPUT

With the Count Reset Input SW (DIP SW3-3) turned ON, the Pi 16 pulse input can be used to remotely reset the count values.

SW3-3 = OFF: Pi 16 is used as a pulse input.

SW3-3 = ON: Pi 16 is used to reset the count values for the Pi 1 through Pi 15. One pulse supplied at the Pi 16 will be recognized as a reset signal.

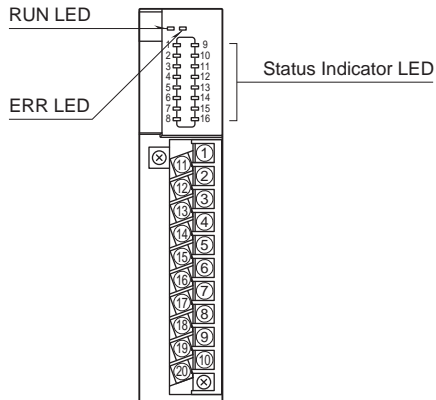
### ■ REMOTE COUNT RESET OPERATION

- 1) ERR LED turns on (red color) when the reset signal is received.
  - 2) In 1 second, the module starts resetting its counter. When the resetting is complete, the LED light turns to green.
  - 3) After 1 second, ERR LED turns back to the state before the reset signal has been received.
- Note: Reset signals received while the module is processing (1) through (3) are ignored.

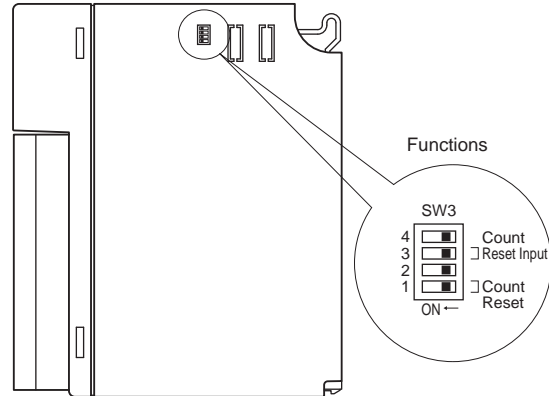


## EXTERNAL VIEW

■ FRONT VIEW

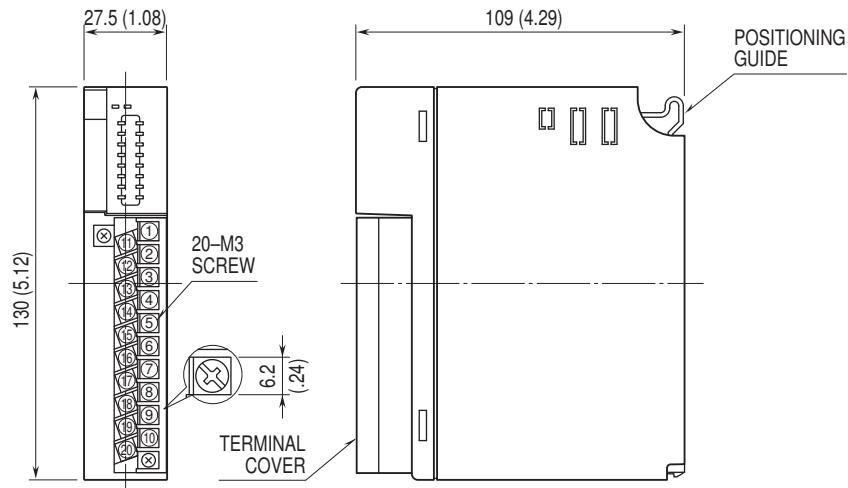


■ SIDE VIEW



Set the Count Reset SW to OFF to start counting.

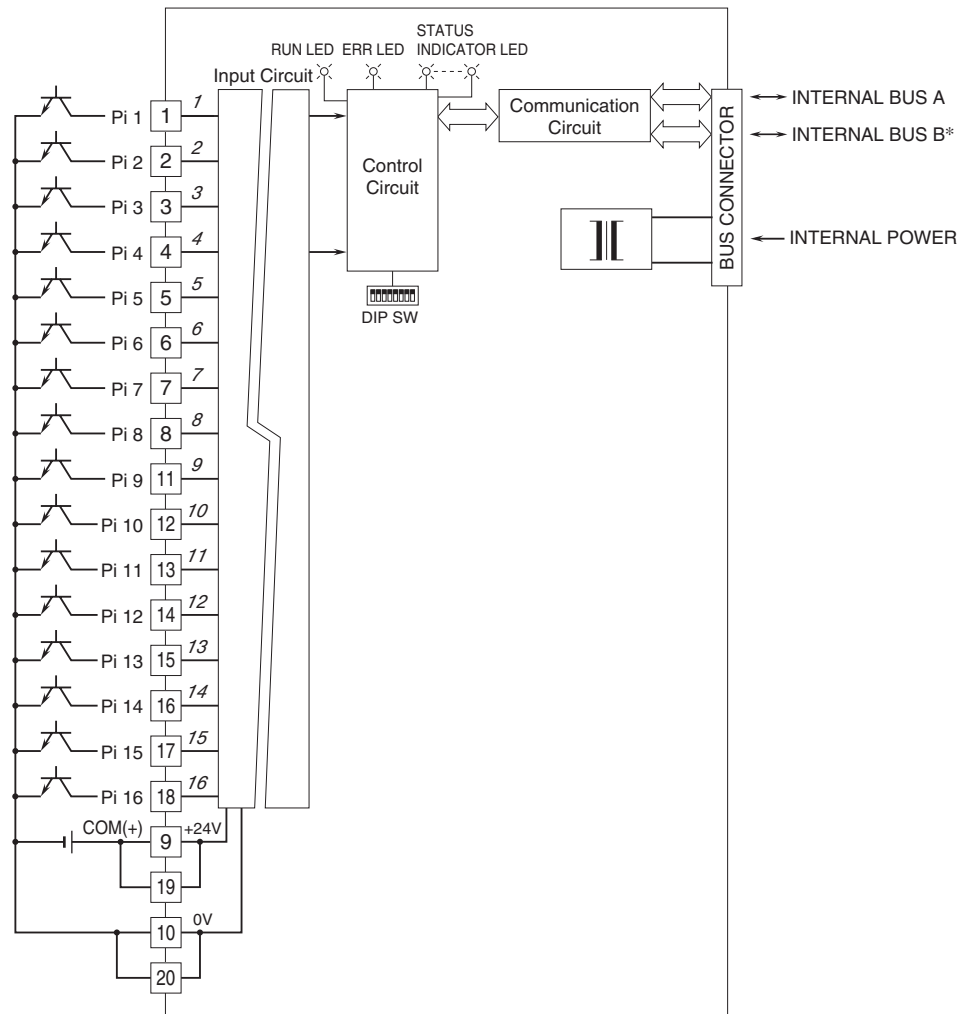
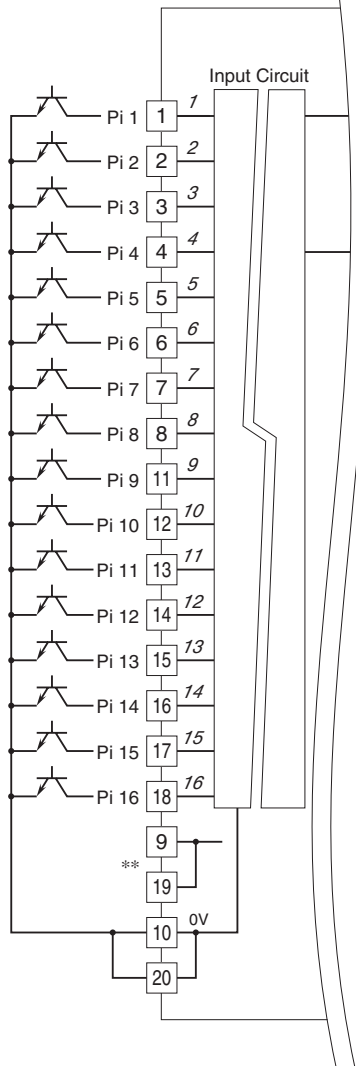
## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

■ OPTION: Blank

■ OPTION: /A



Numbers in italic indicate LED No.s assigned to the front panel LEDs.

\* For dual redundant communication.

\*\*DO NOT use the terminals No. 9 and 19.



Specifications are subject to change without notice.



**幸託有限公司**  
XIN TOP CORPORATION

TEL : (02)2598-1199

FAX : (02)2596-2331

E-mail : info@xintop.com

Website : www.xintop.com