

Plug-in Signal Conditioners M-UNIT

PULSE ISOLATOR

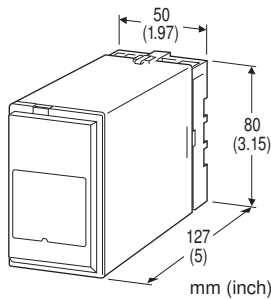
(built-in excitation)

Functions & Features

- Galvanically isolating pulse rate signals
- Input frequency = output frequency
- Various outputs (relay, open collector and voltage pulses)
- High-density mounting

Typical Applications

- Isolating field pulse signals in order to reduce noises
- Changing e.g. dry contact signal to e.g. 5 V signals



MODEL: PP-[1][2]-[3][4]

ORDERING INFORMATION

- Code number: PP-[1][2]-[3][4]
- Specify a code from below for each [1] through [4].
(e.g. PP-33-K/Q)
- Frequency range (e.g. 0 - 1000 Hz)
 - Specify the specification for option code /Q
(e.g. /C01/S01)

[1] INPUT

- 1: Mechanical contact (max. 30 Hz)
- 2: Open collector (max. 10 kHz)
- 3: Voltage pulse (max. 10 kHz)

[2] OUTPUT

- 1: Low frequency open collector (max. 30 Hz)
- 2: High frequency open collector (max. 10 kHz)
- 3: 5 V pulse (max. 10 kHz)
- 4: 12 V pulse (max. 10 kHz)
- 5: 24 V pulse (max. 10 kHz)
- 6: Mercury relay contact (max. 30 Hz)

[3] POWER INPUT

AC Power

K: 85 - 132 V AC

(Operational voltage range 85 - 132 V, 47 - 66 Hz)

DC Power

S: 12 V DC

(Operational voltage range 12 V \pm 10 %, ripple 10 %p-p max.)

R: 24 V DC

(Operational voltage range 24 V \pm 10 %, ripple 10 %p-p max.)

[4] 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

TERMINAL SCREW MATERIAL

/S01: Stainless steel

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection: M3.5 screw terminals

Screw terminal: Chromated steel (standard) or stainless steel

Housing material: Flame-resistant resin (black)

Isolation: Input to output to power

Frequency range: Input and output are the same.

Chattering protection: Filter provided for mechanical contact input

INPUT SPECIFICATIONS

Excitation: 12V DC \pm 2 V @ 30 mA; shortcircuit protection

■ Open Collector

Maximum frequency: 10 kHz

Pulse width time requirement: 10 μ sec. min. for ON and OFF

Sensing: Approx. 12 V DC @3 mA

ON/OFF level: \leq 200 Ω / 0.6 V for ON, \geq 100 k Ω / 6 V for OFF

■ Mechanical Contact

Maximum frequency: 30 Hz

Pulse width time requirement: 10 msec. min. for ON and OFF

Sensing: Approx. 12 V DC @3 mA

ON/OFF level: ON: \leq 200 Ω / 0.6 V

OFF: \geq 100 k Ω / 6 V

■ Voltage Pulse

Maximum frequency: 10 kHz

Pulse width time requirement: 10 μ sec. min. for high and



low levels

(input or output or power to ground)

Waveforms: Square or sine

Hi/Lo level: 2 - 50 V for high level; ≤ 1 V for low level

Input impedance: 10 k Ω min.

OUTPUT SPECIFICATIONS

■ Low Frequency Open Collector:

50 V DC @ 100 mA (resistive load)

Maximum frequency: 30 Hz

Timer: Limits ON time within 75 \pm 25 msec.

for wider than 75 msec. pulses

Saturation voltage: 0.5 V DC

■ High Frequency Open Collector:

50 V DC @ 100 mA (resistive load)

Maximum frequency: 10 kHz

Saturation voltage: 0.5 V DC

■ Voltage Pulse

Maximum frequency: 10 kHz

High level: Rating (5, 12 or 24 V) ± 10 %

Low level: ≤ 0.5 V

Load resistance:

$\geq 250 \Omega$ for 5 V

$\geq 600 \Omega$ for 12 V

$\geq 1200 \Omega$ for 24 V

■ Mercury Relay Contact: 132 V AC @ 200 mA ($\cos \phi = 1$)

264 V AC @ 100 mA ($\cos \phi = 1$)

30 V DC @ 200 mA (resistive load)

100 V DC @ 60 mA (resistive load)

Maximum frequency: 30 Hz

Timer: Limits ON time within 75 \pm 25 msec.

for wider than 75 msec. pulses

Maximum switching voltage: 150 V AC or 150 V DC

Maximum switching power: 10 VA or 10 W

Minimum load: 1 mA

Relay life: $\geq 5 \times 10^8$ cycles (mechanical)

$\geq 5 \times 10^7$ cycles (electrical)

INSTALLATION

Power Consumption

•AC: Approx. 2 VA

•DC: Approx. 2 W (80 mA at 24 V)

Operating temperature: -5 to +60°C (23 to 140°F)

Operating humidity: 30 to 90 %RH (non-condensing)

Mounting: Surface or DIN rail

Weight: 320 g (0.71 lb)

PERFORMANCE

Insulation resistance: $\geq 100 \text{ M}\Omega$ with 500 V DC

Dielectric strength: 500 V AC @ 1 minute

(input to output to power)

2000 V AC @ 1 minute



幸託有限公司

XIN TOP CORPORATION













TEL : (02)2598-1199

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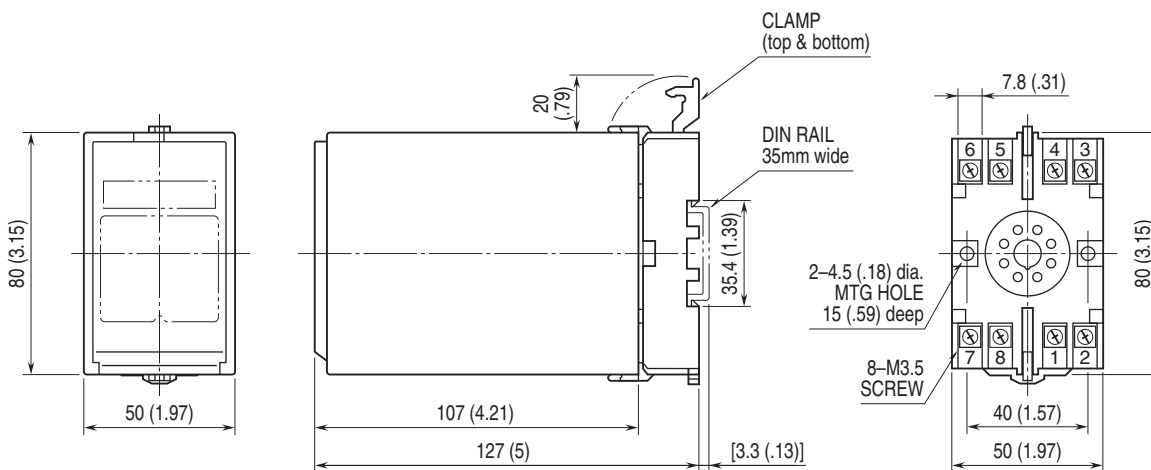
E-mail : info@xintop.com

Website : www.xintop.com

OUTPUT LOGIC

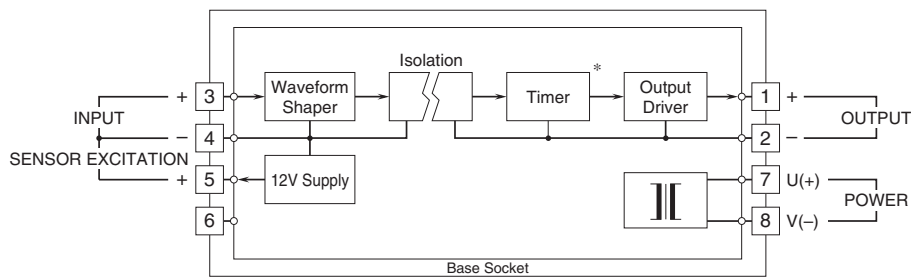
INPUT TYPE	INPUT	VOLTAGE PULSE OUTPUT	OPEN COLLECTOR or RELAY OUTPUT
Voltage Pulse	H 	H 	OFF 
	L 	L 	ON 
Mechanical Contact Open Collector	OFF 	H 	OFF 
	ON 	L 	ON 

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



• When mounting, no extra space is needed between units.

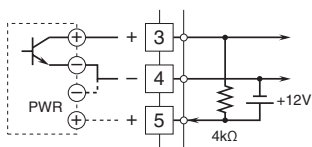
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



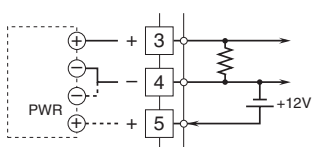
*Low freq. open collector and mercury relay output only.

Input Connection Examples

■ Mechanical Contact or Open Collector

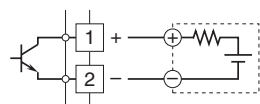


■ Voltage Pulse

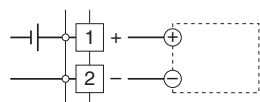


Output Connection Examples

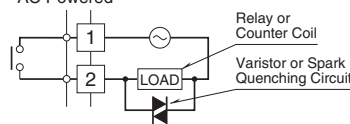
■ Open Collector



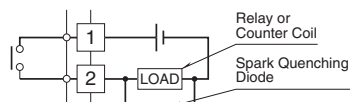
■ Voltage Pulse



■ Relay
•AC Powered



•DC Powered





Specifications are subject to change without notice.



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