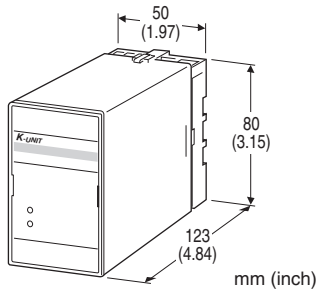


Plug-in Signal Conditioners K-UNIT

CONTACT ISOLATOR

Functions & Features

- Accepting one contact signal and providing two outputs
- Input circuit containing a constant current source allows large leadwire resistance up to 3 k Ω
- Relay contact or open collector outputs
- High-density mounting



MODEL: KMT-[1]-[2][3]

ORDERING INFORMATION

- Code number: KMT-[1]-[2][3]
- Specify a code from below for each of [1] through [3].
(e.g. KMT-1-B/Q)
- Specify the specification for option code /Q
(e.g. /C01/S01)

INPUT

Dry contact

[1] OUTPUT

- 1: Relay contact
- 2: Open collector

[2] POWER INPUT

AC Power

- B: 100 V AC
- C: 110 V AC
- D: 115 V AC
- F: 120 V AC
- G: 200 V AC
- H: 220 V AC
- J: 240 V AC

DC Power

- S: 12 V DC
- R: 24 V DC

[3] 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 1 to output 2 to power

Front LEDs: Red light turns on with the output ON.

Green light turns on with the output OFF.

INPUT SPECIFICATIONS

■ Dry contact

Sensing: Approx. 28 V DC @5 mA

ON/OFF level: $\leq 3 \text{ k}\Omega$ for ON; $\geq 30 \text{ k}\Omega$ for OFF

OUTPUT SPECIFICATIONS

■ Open Collector: 24 V DC @100 mA

Maximum frequency: 40 Hz

Saturation voltage: 1.8 V DC

■ Relay Contact:

100 V AC @5 A ($\cos \theta = 1$)

24 V DC @5 A (resistive load)

Electrical life: 10^5 cycles (rate 30 cycles/min.)

Maximum switching voltage: 380 V AC or 125 V DC

Maximum switching power: 500 VA or 120 W

Minimum load: 5 V DC @10 mA

Mechanical life: 5×10^7 cycles

Maximum frequency: 1 Hz

INSTALLATION

Power input

- AC: Operational voltage range: rating $\pm 10 \%$, 50/60 ± 2 Hz, approx. 2 VA

- DC: Operational voltage range: rating $\pm 10 \%$ ripple 10 %p-p max., approx. 1.5 W (60 mA at 24 V)

Operating temperature: -5 to +55°C (23 to 131°F)

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

Mounting: Surface or DIN rail

Weight: 400 g (0.88 lb)

PERFORMANCE

Response time

Relay contact: ≤ 10 msec.

Open collector: ≤ 10 msec.

Insulation resistance: ≥ 100 MΩ with 500 V DC

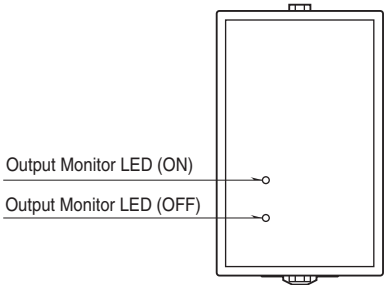
Dielectric strength: 1000 V AC @1 minute

(input to output 1 to output 2 to power)

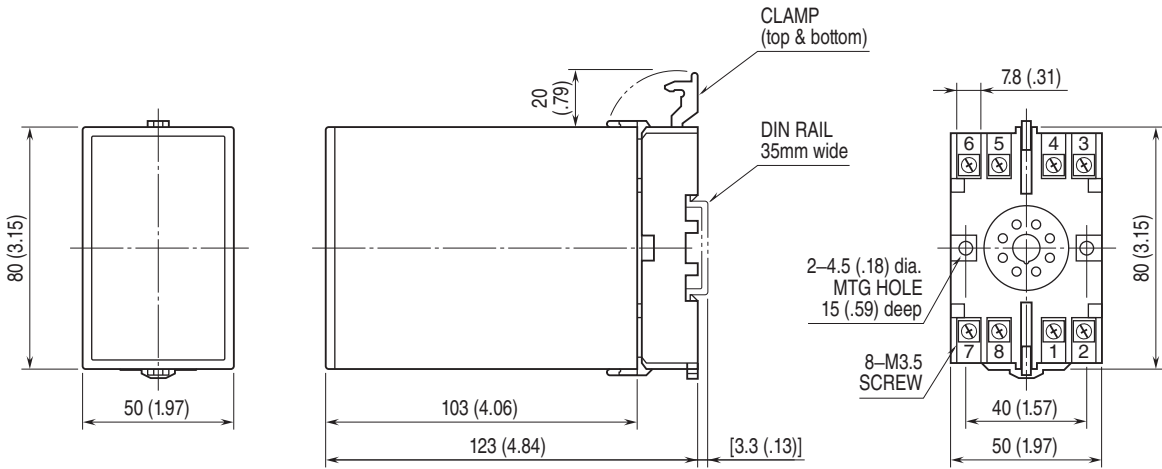
2000 V AC @1 minute

(input or output 1 or output 2 or power to ground)

EXTERNAL VIEW



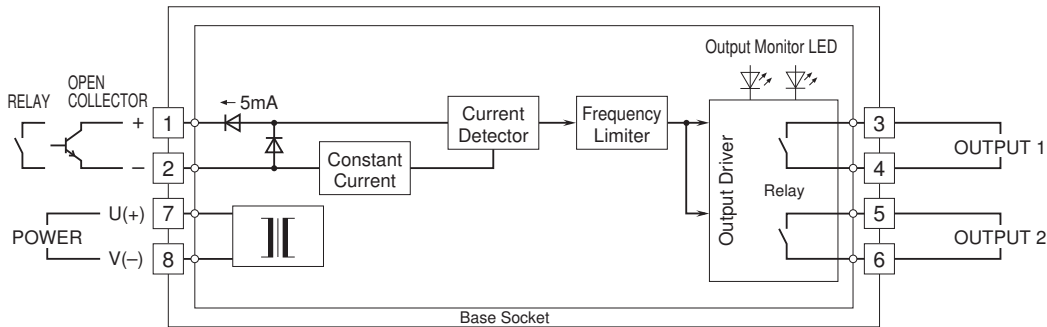
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



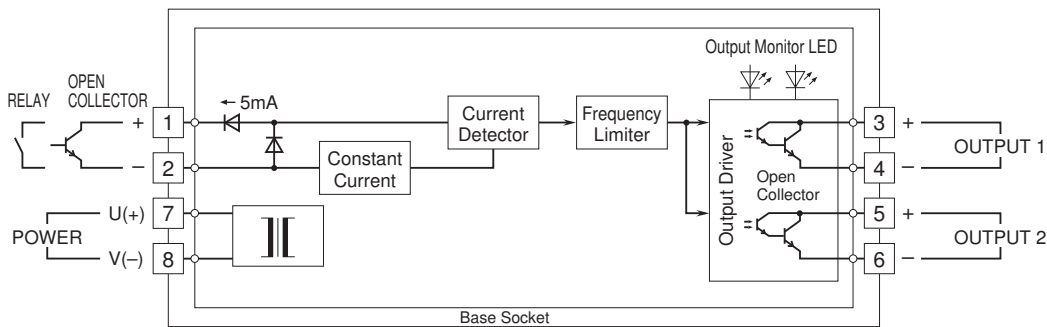
• When mounting, no extra space is needed between units.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

■ KMT-1 (relay contact)

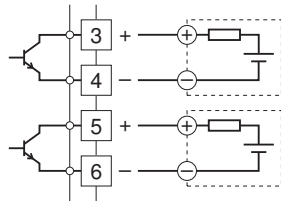


■ KMT-2 (open collector)



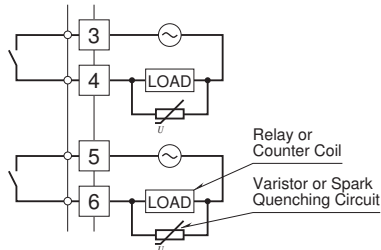
Output Connection Examples

■ Open Collector

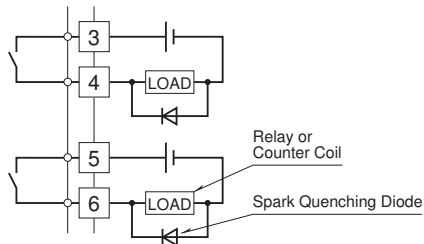


■ Relay Contact

•AC Powered



•DC Powered



Specifications are subject to change without notice.