

Plug-in Signal Conditioners K-UNIT

DC ALARM

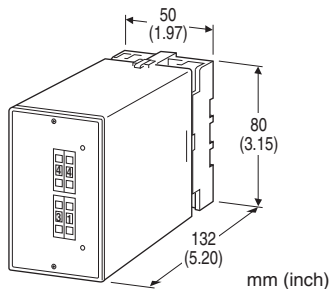
(thumbwheel switch adjustment)

Functions & Features

- Providing SPDT relay outputs at preset DC input levels
- Dual (Hi/Lo) trip
- Thumbwheel switch setpoint adjustments
- Enclosed relays
- High-density mounting

Typical Applications

- Annunciator
- Various alarm applications



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

ORDERING INFORMATION

- Code number: KSED-[1]1-[2][3]
- Specify a code from below for each of [1] through [3]. (e.g. KSED-61-K3/Q)
- Specify the specification for option code /Q (e.g. /C01)

[1] INPUT

Current

A: 4 - 20 mA DC (Input resistance 250 Ω)

Voltage

4: 0 - 10 V DC (Input resistance 1 MΩ min.)

5: 0 - 5 V DC (Input resistance 1 MΩ min.)

6: 1 - 5 V DC (Input resistance 1 MΩ min.)

OUTPUT

Relay; SPDT or transfer contact

SETPOINT ADJUSTMENTS

1: Thumbwheel switch

[2] POWER INPUT

AC Power

K3: 100 - 120 V AC

(Operational voltage range 90 - 132 V, 47 - 66 Hz)

L3: 200 - 240 V AC

(Operational voltage range 180 - 264 V, 47 - 66 Hz)

[3] OPTIONS

blank: none

/Q: Options other than the above (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

Setpoint adjustments: Thumbwheel switches (front); 0 - 99 % independently; 1 % increments

Hysteresis (deadband): Approx. 1 %

Front LEDs: Red LED turns on when the coil for Hi output is energized.

Green LED turns on when the coil for Lo output is energized.

Power ON timer: Relays de-energized for approx. 2 seconds after power is turned on.

INPUT SPECIFICATIONS

■ DC Current:

Shunt resistor attached to the input terminals (0.5 W)

OUTPUT SPECIFICATIONS

■ Relay Contact:

100 V AC @5 A (cos ϕ = 1)

120 V AC @5 A (cos ϕ = 1)

240 V AC @2.5 A (cos ϕ = 1)

30 V DC @5 A (resistive load)

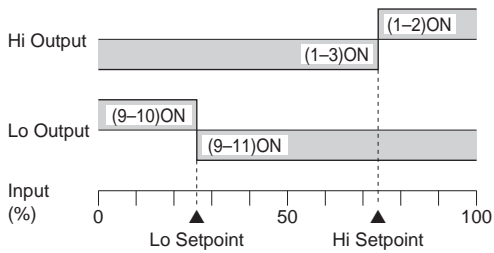
Maximum switching voltage: 250 V AC or 30 V DC

Maximum switching power: 600 VA or 150 W

Minimum load: 5 V DC @10 mA

Mechanical life: 1×10^7 cycles

Alarm Trip Operation Terminal No. in parentheses



Trip Operation in Power Failure

: Terminals 1 – 3, 9 – 11 turn ON.

INSTALLATION

Power Consumption

•AC: Approx. 2 VA

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

Operating humidity: 30 to 85 %RH (non-condensing)

Mounting: Surface or DIN rail

Weight: 300 g (0.66 lb)

PERFORMANCE in percentage of span

Setpoint accuracy: $\pm 0.5\%$

Trip point repeatability: $\pm 0.05\%$

Temp. coefficient: $\pm 0.02\%/^{\circ}\text{C}$ ($\pm 0.01\%/^{\circ}\text{F}$)

Response time: ≤ 0.7 sec. (0 - 100 % at 90 % setpoint)

Line voltage effect: $\pm 0.1\%$ over voltage range

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

Dielectric strength: 2000 V AC @1 minute

(input or output to power to ground)

1500 V AC @1 minute (input to output)

STANDARDS & APPROVALS

EU conformity:

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

Low Voltage Directive

EN 61010-1

Measurement Category II (output)

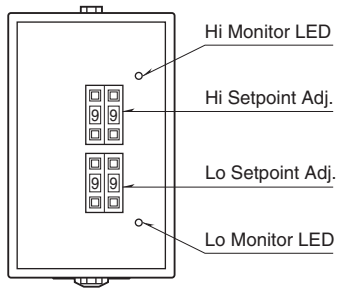
Installation Category II (power)

Pollution Degree 2

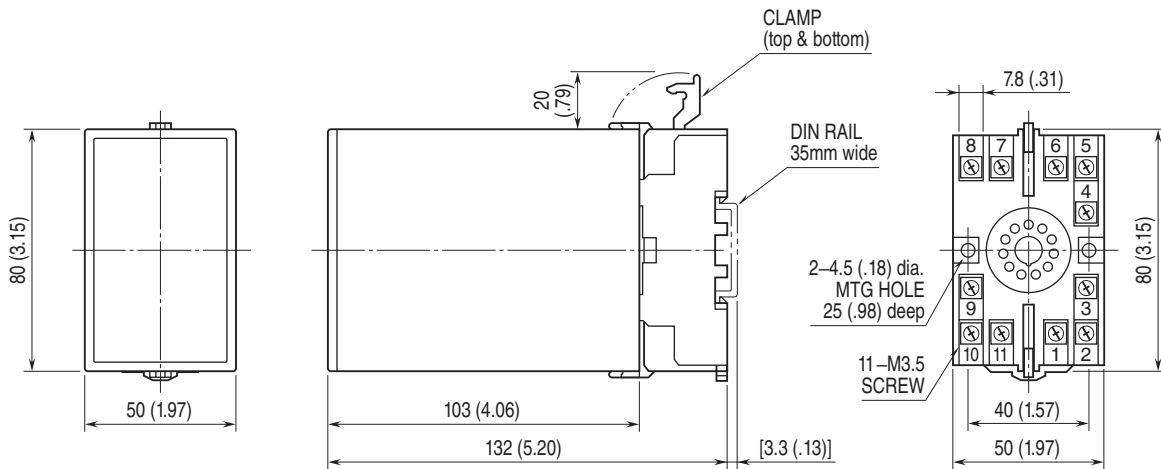
Input to output to power: Basic insulation (300 V)

RoHS Directive

EXTERNAL VIEW

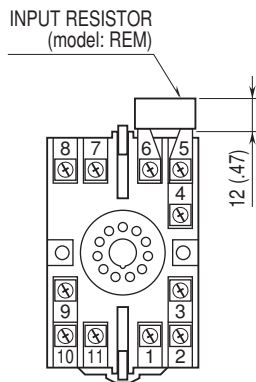


EXTERNAL DIMENSIONS unit: mm (inch)



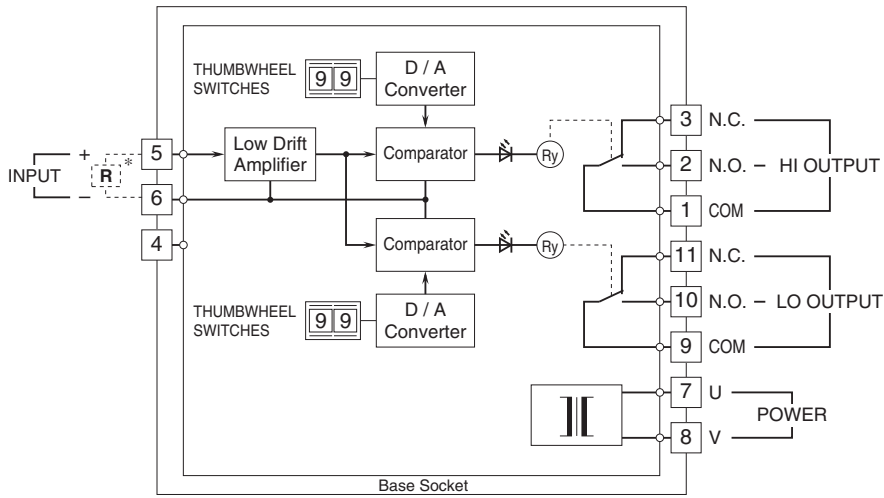
• When mounting, no extra space is needed between units.

TERMINAL ASSIGNMENTS unit: mm (inch)



Input shunt resistor attached for current input.

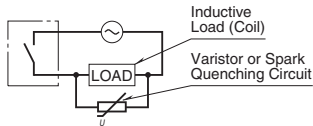
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



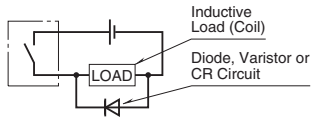
*Input shunt resistor attached for current input.

■ Relay Protection

•AC Powered



•DC Powered



Specifications are subject to change without notice.