

Plug-in Signal Conditioners K-UNIT

DC ALARM

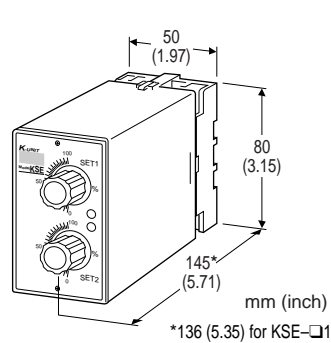
(dial adjustment)

Functions & Features

- Providing SPDT relay outputs at preset DC input levels
- Single or Dual (Hi/Lo) trip
- Large dial setpoint adjustments

Typical Applications

- Various alarm applications



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

ORDERING INFORMATION

- Code number: KSE-[1][2]-[3][4]
- Specify a code from below for each [1] through [4]. (e.g. KSE-A2-K3/Q)
- Specify the specification for option code /Q (e.g. /C01/S01)

[1] INPUT

Current

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

Voltage

6: 1 - 5 V DC (Input resistance 500 kΩ min.)

[2] OUTPUT

- 1: Single trip (Hi)
- 2: Dual trip (Hi/Lo)

[3] 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)

[4] OPTIONS

Other 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
- Setpoint adjustments:** Dials (front), -15 - +120 % independently; Scales at the front are for approximate aim only. Simulate input signals, confirm relay operation and set.
- Hysteresis (deadband):** Approx. 1 %
- Front LEDs:** Red light turns on when the coil is energized.

INPUT SPECIFICATIONS

- **DC Current:**
Shunt resistor attached to the input terminals (0.5 W)

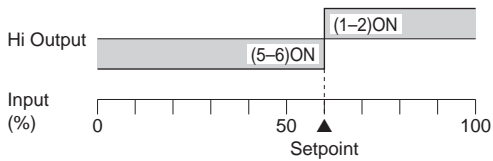
OUTPUT SPECIFICATIONS

- **Relay Contact:** 120 V AC @1 A (cos φ = 1)
(Limited within 0.5 A for CE)
- 240 V AC @0.5 A (cos φ = 1)
(Limited within 0.5 A for CE)
- 30 V DC @1 A (resistive load)
(Limited within 0.5 A for CE)
- Maximum switching voltage: 380 V AC or 125 V DC
- Maximum switching power: 100 VA or 30 W
- Minimum load: 5 V DC @10 mA
- Mechanical life: 5 × 10⁷ cycles

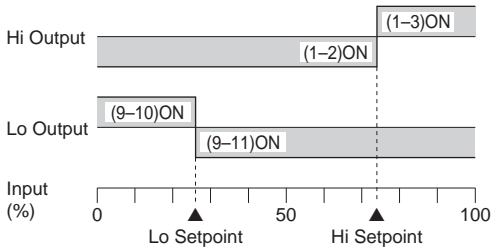


Alarm Trip Operation Terminal No. in parentheses

•Output Code : 1



•Output Code : 2



Trip Operation in Power Failure

- Output Code 1 : Terminals 5 – 6 turn ON
- Output Code 2 : Terminals 1 – 2, 9 – 11 turn ON

INSTALLATION

Power consumption

- AC: Approx. 3 VA

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

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

Mounting: Surface or DIN rail

Weight: 250 g (0.55 lb)

PERFORMANCE in percentage of span

Trip point repeatability: $\pm 0.3\%$

Temp. coefficient: $\pm 0.05\%/^{\circ}\text{C}$ ($\pm 0.03\%/^{\circ}\text{F}$)

Response time: ≤ 0.5 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 to output to power)

2000 V AC @1 minute

(input or output or power to ground)

STANDARDS & APPROVALS

CE conformity:

EMC Directive (2004/108/EC)

EMI EN 61000-6-4: 2007/A1: 2011

EMS EN 61000-6-2: 2005

Low Voltage Directive (2006/95/EC)

EN 61010-1: 2010

Installation Category II

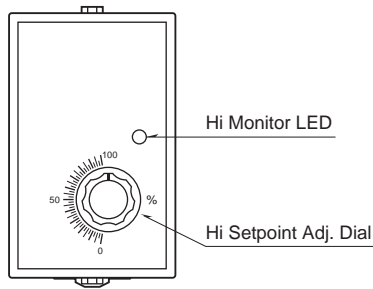
Pollution Degree 2

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

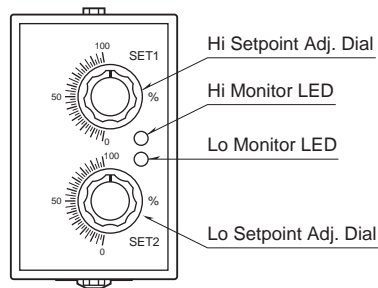


EXTERNAL VIEW

■ KSE-x1

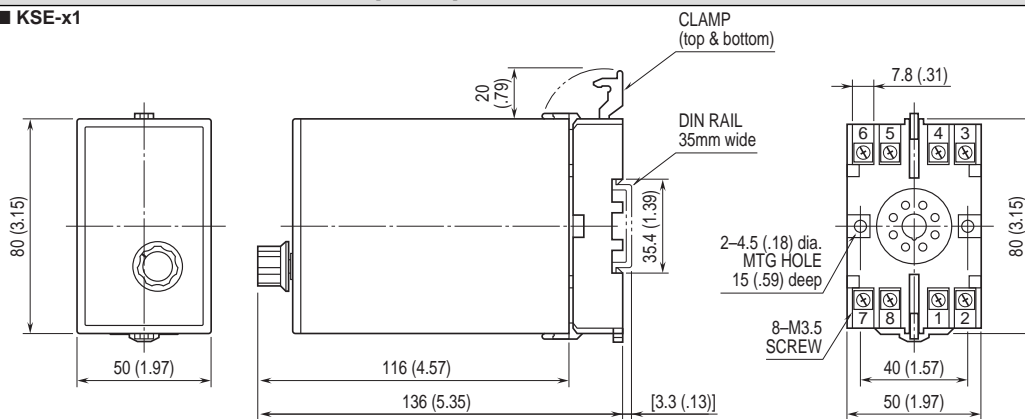


■ KSE-x2



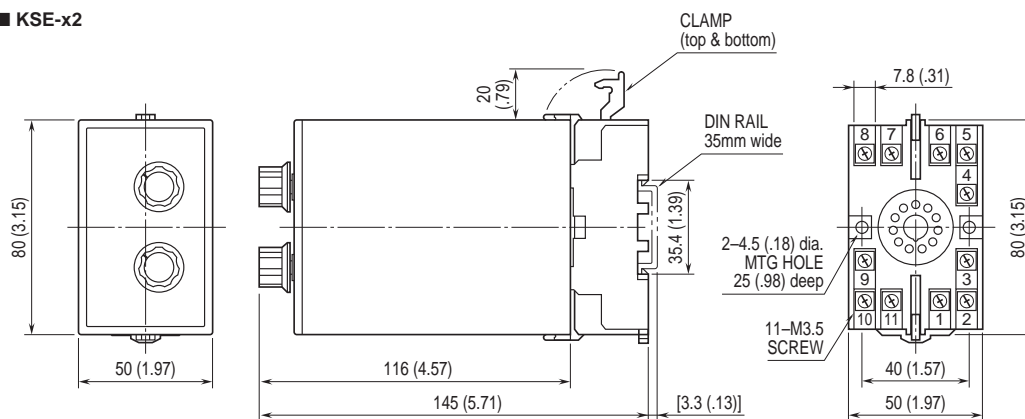
DIMENSIONS unit: mm (inch)

■ KSE-x1



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

■ KSE-x2

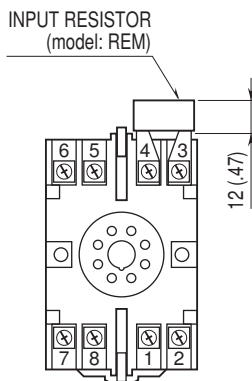


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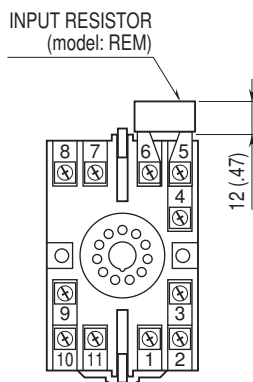
TERMINAL ASSIGNMENTS unit: mm (inch)

■KSE-x1



Input shunt resistor attached for current input.

■KSE-x2

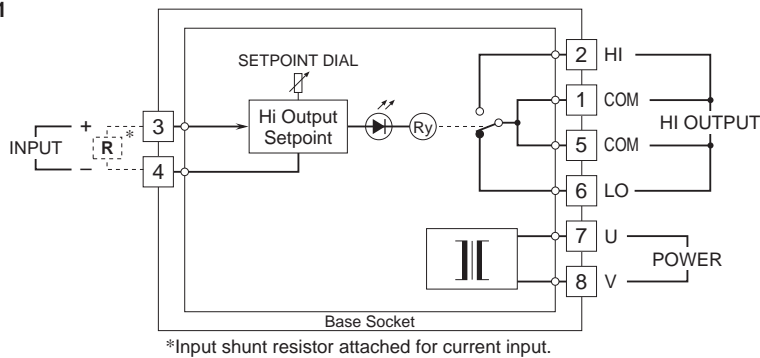


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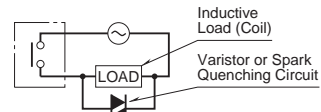


SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

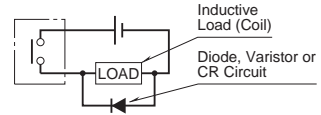
■KSE-x1



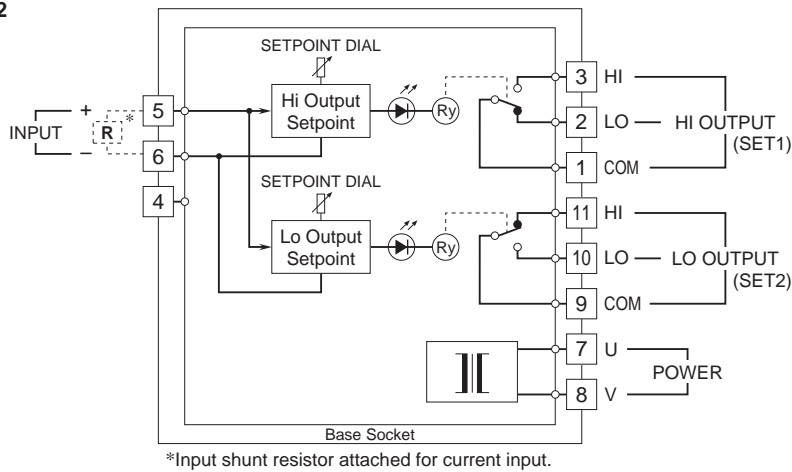
■Relay Protection •AC Powered



•DC Powered



■KSE-x2



Specifications are subject to change without notice.