

**Plug-in Signal Conditioners K-UNIT**

**DC ALARM**  
(thumbwheel switch adjustment)

MODEL **KSED**

**MODEL & SUFFIX CODE SELECTION**

KSED-□1-□□

MODEL \_\_\_\_\_

INPUT \_\_\_\_\_

<b>Current</b>	<b>Voltage</b>
A : 4 – 20mA DC	4 : 0 – 10V DC
	5 : 0 – 5V DC
	6 : 1 – 5V DC

OUTPUT \_\_\_\_\_  
Relay; SPDT or transfer contact

SETPOINT ADJUSTMENTS \_\_\_\_\_

1 : Rotary switch

POWER INPUT \_\_\_\_\_

K3 : 100 – 120V AC

L3 : 200 – 240V AC\*      \*Option /UL not selectable

OPTIONS \_\_\_\_\_

/UL : UL approval

**ORDERING INFORMATION**

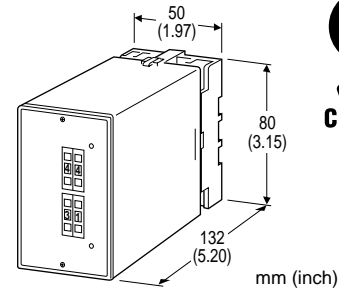
Specify code number. (e.g. KSED-61-K3/UL)

**GENERAL SPECIFICATIONS**

- Construction:** plug-in
- Connection:** M3.5 screw terminals
- Housing material:** flame-resistant resin (black)
- Isolation:** input to output to power
- Setpoint adjustments:** thumbwheel switches (front); 0 – 99% independently; 1% increments
- Deadband:** approx. 1%
- Front LEDs:** red light turns on when the coil for Hi output is energized.  
green light 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 & OUTPUT**

- INPUT
- DC Current: 4 – 20mA DC; shunt resistor attached to input terminals (0.5W)
- Input resistance: 250Ω
- DC Voltage: 0 – 10V DC, 0 – 5V DC or 1 – 5V DC
- Input resistance: 1MΩ minimum



**Functions & Features**

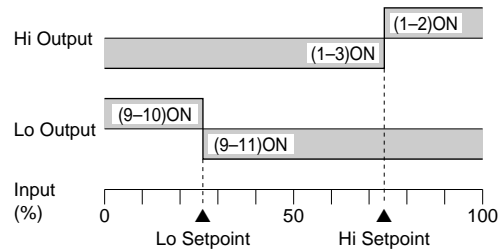
- Providing SPDT relay outputs at preset DC input levels
- Dual (Hi/Lo) trip
- Thumbwheel switch setpoint adjustments
- Enclosed relays
- Isolation up to 2000V AC
- High-density mounting

**Typical Applications**

- Annunciator
- Various alarm applications

■OUTPUT

**Alarm Trip Operation** Terminal No. in parentheses



**Trip Operation in Power Failure**

: Terminals 1 – 3, 9 – 11 turn ON.

- Relay Contact: 120V AC @5A (cosφ=1)
- 240V AC @2.5A (cosφ=1)
- 30V DC @5A (resistive load)
- electrical life 5 × 10<sup>4</sup> cycles (rate 30/min.)

**Maximum switching voltage:** 250V AC or 30V DC

**Maximum switching power:** 600VA or 150W

**Minimum load:** 5V DC @10mA

**Mechanical life:** 10<sup>7</sup> cycles

### INSTALLATION

**Power input:** operational voltage range for K3: 90 – 132V AC, L3: 180 – 264V AC, 47 – 66 Hz, approx. 2VA

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

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

**Mounting:** surface or DIN rail

**Dimensions:** W50×H80×D132 mm (1.97"×3.15"×5.20")  
See General Spec. Sheet Figure C.

**Weight:** 300 g (0.66 lbs)

**Terminal assignment:** See General Spec. Sheet Figure D-2.

### STANDARDS & APPROVALS

**CE conformity:** EMC Directive (89/336/EEC)  
EMI EN50081-2  
EMS EN50082-2 (EN61000-6-2)  
Low Voltage Directive (73/23/EEC)  
Installation category II  
Pollution degree 2  
Max. operating voltage 300V  
Input to output to power – Basic insulation

**Approval:** UL/C-UL general safety requirements (UL 3111-1, CAN/CSA-C22.2 No.1010-1)

### PERFORMANCE in percentage of span

**Setpoint accuracy:** ±0.5%

**Trip point repeatability:** ±0.05%

**Temp. coefficient:** ±0.02%/°C (±0.01%/°F)

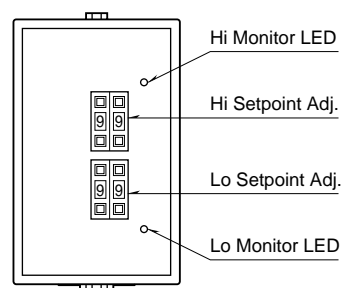
**Response time:** ≤0.7 seconds (0 – 100% at 90% setpoint)

**Line voltage effect:** ±0.1% over voltage range

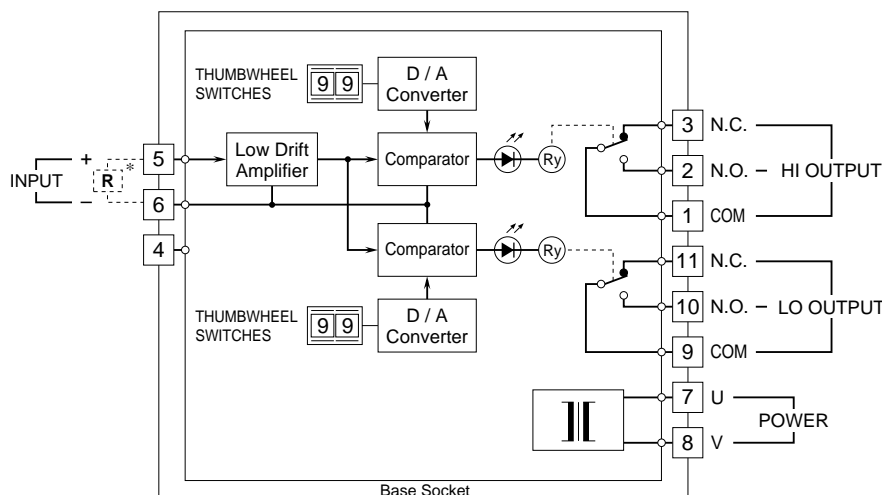
**Insulation resistance:** ≥100MΩ with 500V DC

**Dielectric strength:** 2000V AC @1 minute  
(input or output to power to ground)  
1500V AC @1 minute (input to output)

### FRONT PANEL CONFIGURATION



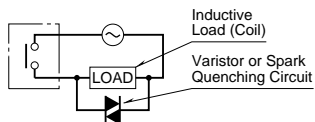
### SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



\*Input shunt resistor attached for current input.

#### Relay Protection

##### AC Powered



##### DC Powered

