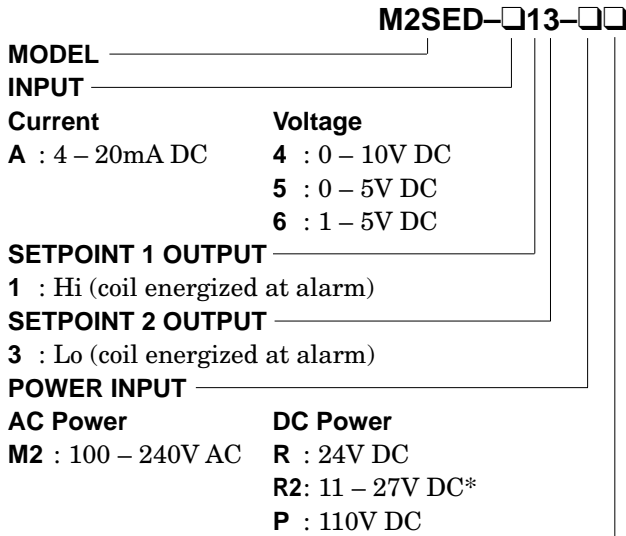


**Super-mini Signal Conditioners *Mini-M Series***

**DC ALARM**  
(thumbwheel switch adjustment)

MODEL **M2SED**

**MODEL & SUFFIX CODE SELECTION**



\*CE or UL not available

**STANDARDS & APPROVALS**

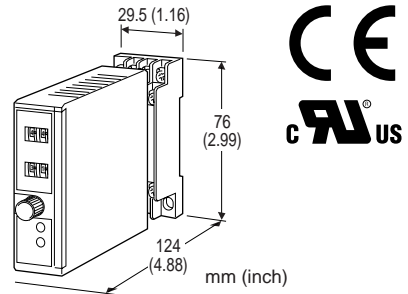
- /N : Without CE or UL
- /CE: CE marking
- /UL: UL approval (CE marking)

**ORDERING INFORMATION**

Specify code number. (e.g. M2SED-613-M2/CE)

**GENERAL SPECIFICATIONS**

- Construction:** plug-in
- Connection:** M3 screw terminals (torque 0.8 N·m)
- Housing material:** flame-resistant resin (black)
- Isolation:** input to output to power
- Setpoint adjustments:** thumbwheel switches (front);  
0 – 99% independently; 1% increments
- Hysteresis (deadband):** 1±0.3%
- Front LEDs:** red light turns on when the coil is energized.



**Functions & Features**

- Providing SPDT relay outputs at preset DC input levels
- Dual (Hi/Lo) trip
- Thumbwheel switch setpoint adjustments
- Enclosed relays
- Relays can be powered 110V DC
- Flexible power input
- High-density mounting
- CE marking
- UL approval

**Typical Applications**

- Annunciator
- Various alarm applications

**INPUT & OUTPUT**

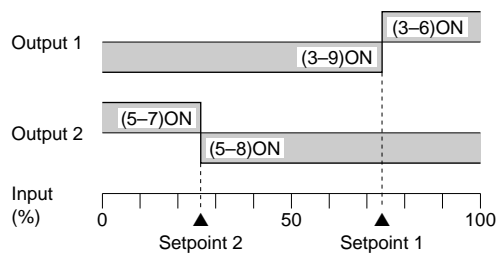
■INPUT

- **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

■OUTPUT

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



**Trip Operation in Power Failure**

: Terminals 3 – 9, 5 – 8 turn ON.

•Relay Contact

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

**Maximum switching voltage:** 250V AC or 125V DC

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

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

**Mechanical life:** 5 × 10<sup>7</sup> cycles

## INSTALLATION

### Power input

**AC:** operational voltage range 85 – 264V  
(90 – 264V for UL); 47 – 66 Hz;  
approx. 3VA at 100V  
approx. 4VA at 200V  
approx. 5VA at 264V

**DC:** operational voltage range for R: 24V  
±10%, R2: 11 – 27V, or P: 85 – 150V  
(110V ±10% for UL);  
ripple 10% p-p max.; approx. 3W

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

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

**Mounting:** surface or DIN rail

**Dimensions:** W29.5×H76×D124 mm (1.16"×2.99"×4.88")

**Weight:** 150 g (0.33 lbs)

## PERFORMANCE in percentage of span

**Setpoint accuracy:** ±0.5%

**Trip point repeatability:** ±0.05%

**Temp. coefficient:** ±0.015%/°C (±0.008%/°F)

**Response time:** 0.5±0.2 sec. (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 to output to power to ground)

## STANDARDS & APPROVALS

**CE conformity:** EMC Directive (89/336/EEC)

EMI EN61000-6-4

EMS EN61000-6-2

Low Voltage Directive (73/23/EEC)

Installation category II

Pollution degree 2

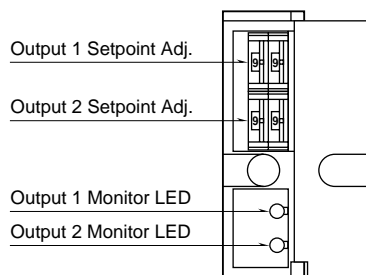
Max. operating voltage 300V

Input or output to power – Reinforced insulation

Input to output – Basic insulation

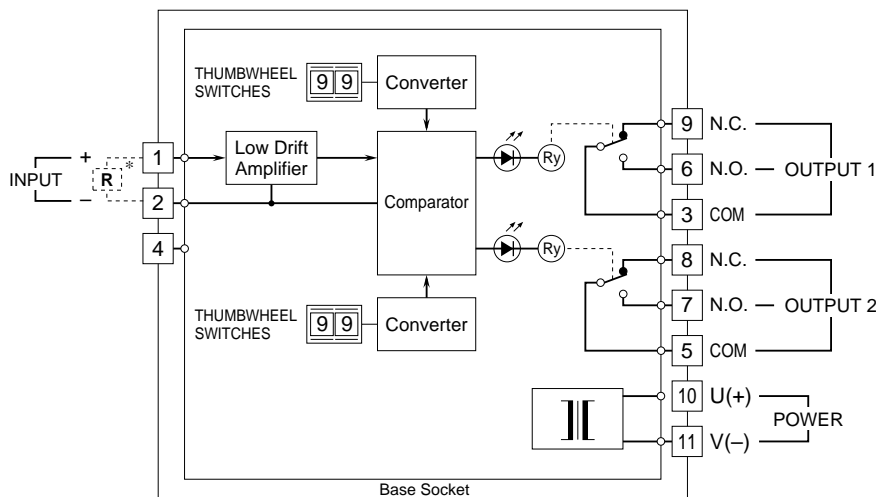
**Approval:** UL/C-UL general safety requirements  
(UL 3111-1, CAN/CSA-C22.2 No.1010-1)

## FRONT PANEL CONFIGURATION



The front cover cannot be turned open by 180 deg. when there is no extra space between units.

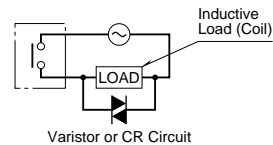
## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



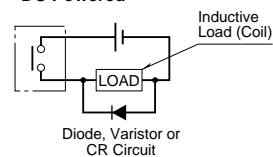
\*Input shunt resistor attached for current input.

### Relay Protection

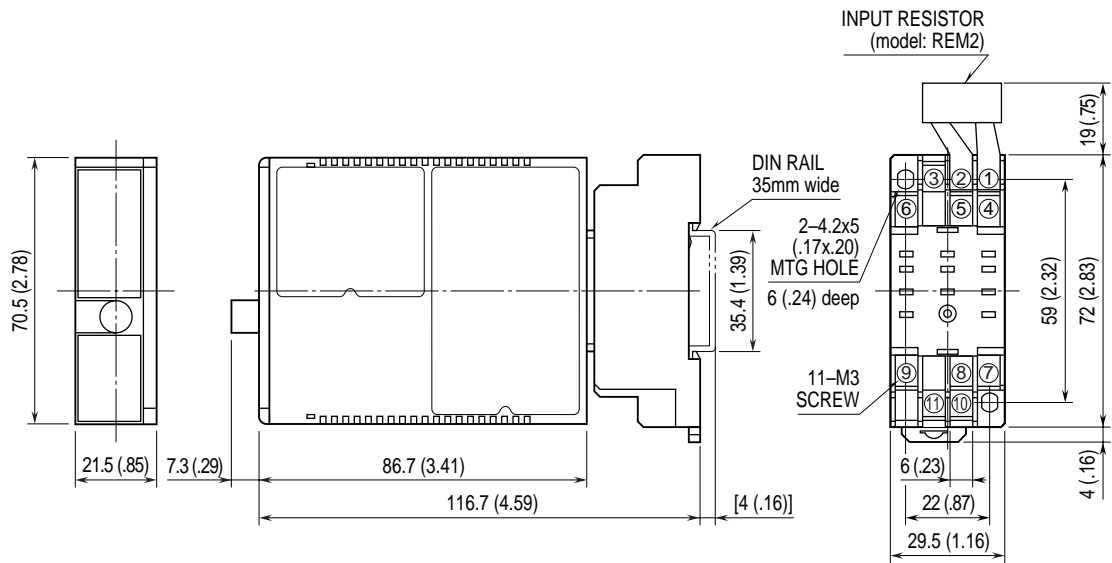
#### AC Powered



#### DC Powered



## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS mm (inch)



- When mounting, no extra space is needed between units.
- Input shunt resistor attached for current input.