

Limit Alarms (rotary switch adj.) AL-UNIT

POTENTIOMETER ALARM

MODEL **ALM**

MODEL & SUFFIX CODE SELECTION

MODEL _____ ALM-□□□

INPUT _____
 Total resistance 100Ω – 10kΩ

SETPOINT 1 OUTPUT _____

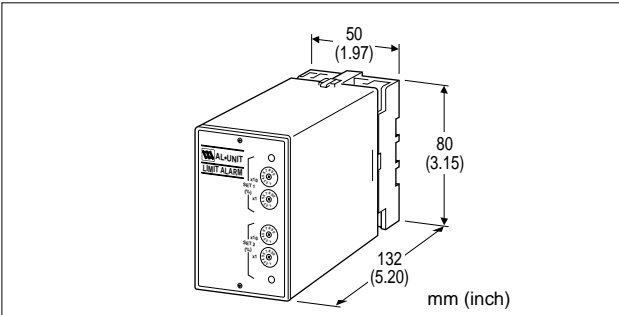
1 : Hi (coil energized at alarm)
 2 : Hi (coil de-energized at alarm)
 3 : Lo (coil energized at alarm)
 4 : Lo (coil de-energized at alarm)

SETPOINT 2 OUTPUT _____

1 : Hi (coil energized at alarm)
 2 : Hi (coil de-energized at alarm)
 3 : Lo (coil energized at alarm)
 4 : Lo (coil de-energized at alarm)

POWER INPUT _____

AC Power		DC Power
B : 100V AC	G : 200V AC	S : 12V DC
C : 110V AC	H : 220V AC	R : 24V DC
D : 115V AC	J : 240V AC	V : 48V DC
F : 120V AC		P : 110V DC



Functions & Features

- Providing SPDT relay outputs at preset potentiometer or slidewire positions
- Dual (Hi/Lo) trip
- Constant voltage excitation allows use with pots with total resistances from 100Ω – 10kΩ without affecting accuracy
- Energized or de-energized coil at a tripped condition selectable
- Rotary switch setpoint adjustments
- Enclosed relays
- Relays can be powered 110V DC
- High-density mounting

Typical Applications

- Annunciator
- Various alarm applications

ORDERING INFORMATION

Specify code number and variables. Specify when you need scaled potentiometer input.

- **Code number** (e.g. ALM-13-B)
- **Input zero/span adjustments** (e.g. 200 – 800Ω / 1kΩ)

GENERAL SPECIFICATIONS

Construction: plug-in

Connection: M3.5 screw terminals

Housing material: flame-resistant resin (black)

Isolation: input to output to power

Setpoint adjustments: 10-position rotary switches (front); 0 – 99% independently; 1% increments

Hysteresis (deadband): 0.7 – 2.5%

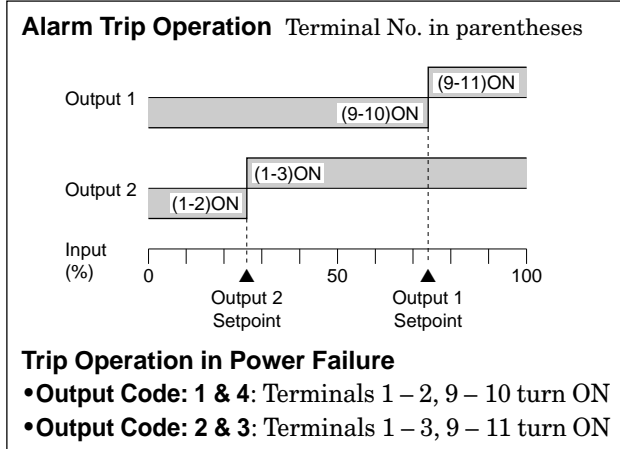
Front LEDs: red lights turn on when coils are energized.

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

INPUT & OUTPUT

■ **INPUT:** potentiometer; 100Ω – 10kΩ
Minimum span: 50% of total resistance
Excitation: 0.5V DC

■ **OUTPUT**



- **Relay Contact:** 120V AC @1A (cosφ=1)
 240V AC @0.5A (cosφ=1)
 30V DC @1A (resistive load)
 electrical life 5 × 10⁵ cycles (rate 30/min.)
 - Maximum switching voltage:** 380V AC or 125V DC
 - Maximum switching power:** 100VA or 30W
 - Minimum load:** 5V DC @10mA
 - Mechanical life:** 5 × 10⁷ cycles
- For maximum relay life with inductive loads, external protection is recommended.

INSTALLATION

Power input

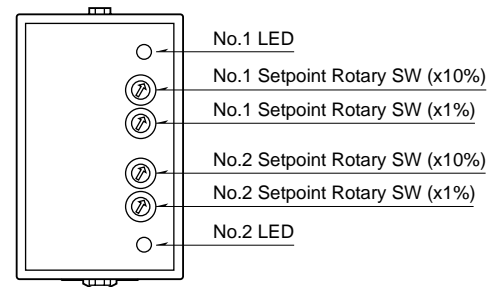
AC: rating ±10%, 50/60 ±2 Hz, approx. 2VA
DC: rating ±10%, or 85 – 150V for 110V rating (ripple 10% p-p max.)
 approx. 2W (80mA at 24V)

Operating temperature: -5 to +60°C (23 to 140°F)
Operating humidity: 30 to 90% RH (non-condensing)
Mounting: surface or DIN rail
Dimensions: W50×H80×D132 mm (1.97"×3.15"×5.20")
 See General Spec. Sheet Figure A.
Weight: 370 g (0.82 lbs)
Terminal assignment: See General Spec. Sheet Figure B-1.

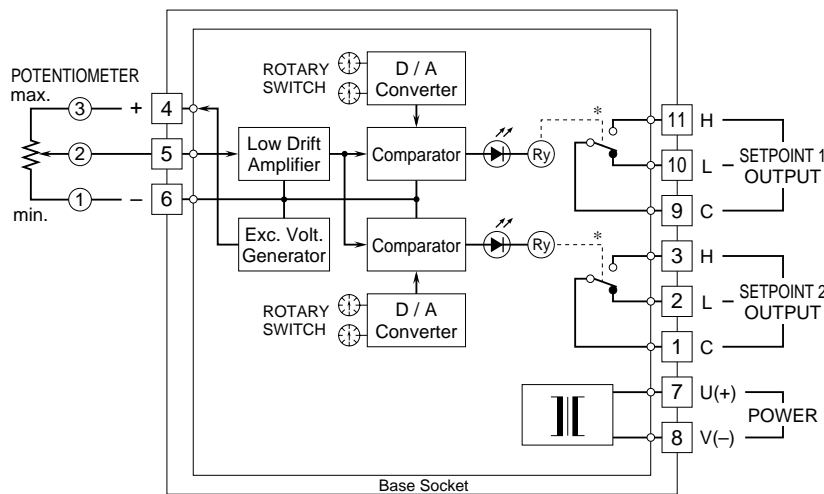
PERFORMANCE in percentage of span

Setpoint accuracy: ±0.5%
Trip point repeatability: ±0.05%
Temp. coefficient: ±0.015%/°C (±0.008%/°F)
Response time: approx. 0.5 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 1 to output 2 to power to ground)

FRONT PANEL CONFIGURATION



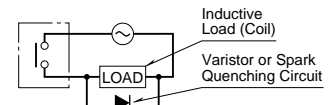
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*Relay status for output codes "1" & "4", at power OFF.

■ **Relay Protection**

• **AC Powered**



• **DC Powered**

