

Limit Alarms (rotary switch adj.) AL-UNIT

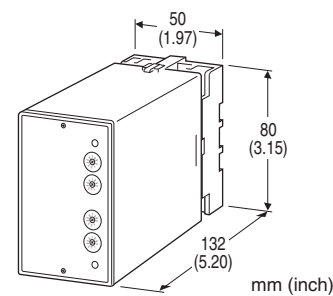
TWO-WIRE TRANSMITTER ALARM

Functions & Features

- Powering a 4 – 20 mA DC current loop
- Providing SPDT relay outputs at preset current levels
- Shortcircuit protection
- Applicable to smart transmitters
- Dual (Hi/Lo) trip
- Energized or de-energized coil at a tripped condition selectable
- Rotary switch setpoint adjustments
- Enclosed relays
- Relays can be powered 110 V DC
- High-density mounting

Typical Applications

- Annunciator
- Various alarm applications



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

ORDERING INFORMATION

- Code number: ALDY-[1][2]-[3]
- Specify a code from below for each [1] through [3]. (e.g. ALDY-11-B)

INPUT

Current

4 – 20 mA DC (Input resistance 250 Ω)

[1] 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)

[2] 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)

[3] POWER INPUT

AC Power

- B: 100 V AC
- C: 110 V AC
- D: 115 V AC
- F: 120 V AC
- G: 200 V AC
- H: 220 V AC
- J: 240 V AC

DC Power

- S: 12 V DC
- R: 24 V DC
- V: 48 V DC
- P: 110 V DC

GENERAL SPECIFICATIONS

- Construction:** Plug-in
- Connection:** M3.5 screw terminals
- Housing material:** Flame-resistant resin (black)
- Isolation:** Input to output 1 to output 2 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 the coils are energized.
- Power ON timer:** Relays de-energized for approx. 2 seconds after power is turned on.

SUPPLY OUTPUT

- Output voltage:** 24 – 28 V DC with no load
- Current rating:** ≤ 22 mA DC
- **Shortcircuit Protection**
- Current limited:** 35 mA max.
- Protected time duration:** No limit

INPUT SPECIFICATIONS

- **DC Current:** Input resistor incorporated

OUTPUT SPECIFICATIONS

- **Relay Contact:** 100 V AC @ 1 A (cos φ = 1)
120 V AC @ 1 A (cos φ = 1)
240 V AC @ 0.5 A (cos φ = 1)
30 V DC @ 1 A (resistive load)
- Maximum switching voltage:** 380 V AC or 125 V DC
- Maximum switching power:** 120 VA or 30 W

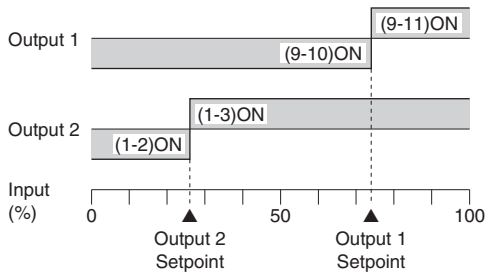


Minimum load: 5 V DC @ 10 mA

Mechanical life: 5×10^7 cycles

For maximum relay life with inductive loads, external protection is recommended.

Alarm Trip Operation Terminal No. in parentheses



Trip Operation in Power Failure

- **Output Code: 1 & 4:** Terminals 1 – 2, 9 – 10 turn ON
- **Output Code: 2 & 3:** Terminals 1 – 3, 9 – 11 turn ON

INSTALLATION

Power input

- **AC:** Operational voltage range: rating $\pm 10\%$, 50/60 ± 2 Hz, approx. 2.5 VA
- **DC:** Operational voltage range: rating $\pm 10\%$, or 85 – 150 V for 110 V rating (ripple 10 % p-p max.)
Approx. 2 W (80 mA at 24 V)

Operating temperature: -5 to +60°C (23 to 140°F)

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

Mounting: Surface or DIN rail

Weight: 380 g (0.84 lbs)

PERFORMANCE in percentage of span

Setpoint accuracy: $\pm 0.5\%$

Trip point repeatability: $\pm 0.05\%$

Temp. coefficient: $\pm 0.015\%/^{\circ}\text{C}$ ($\pm 0.008\%/^{\circ}\text{F}$)

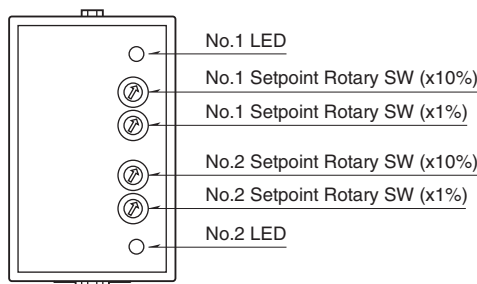
Response time: Approx. 0.7 sec. (0 – 100 % at 90 % setpoint)

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

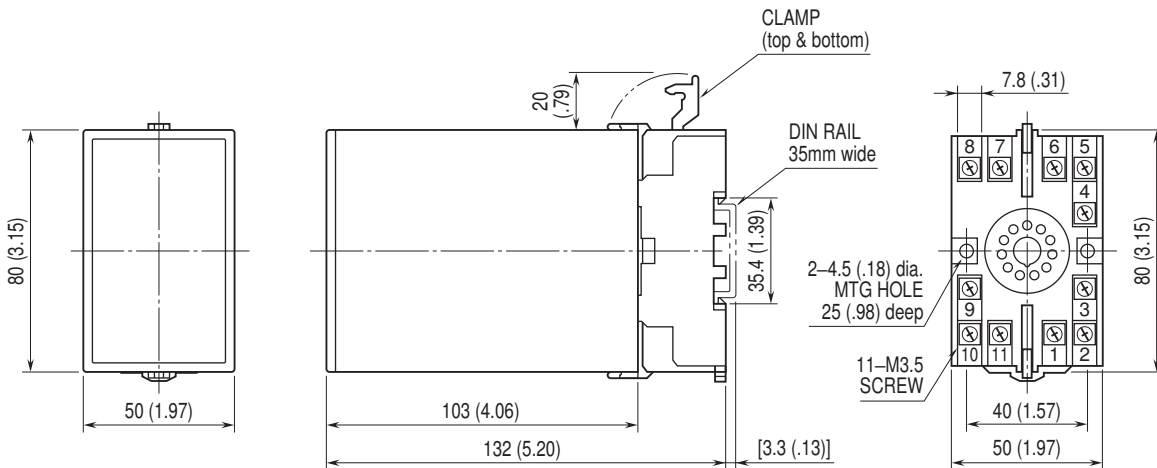
Insulation resistance: $\geq 100\ \text{M}\Omega$ with 500 V DC

Dielectric strength: 2000 V AC @1 minute (input to output 1 to output 2 to power to ground)

EXTERNAL VIEW

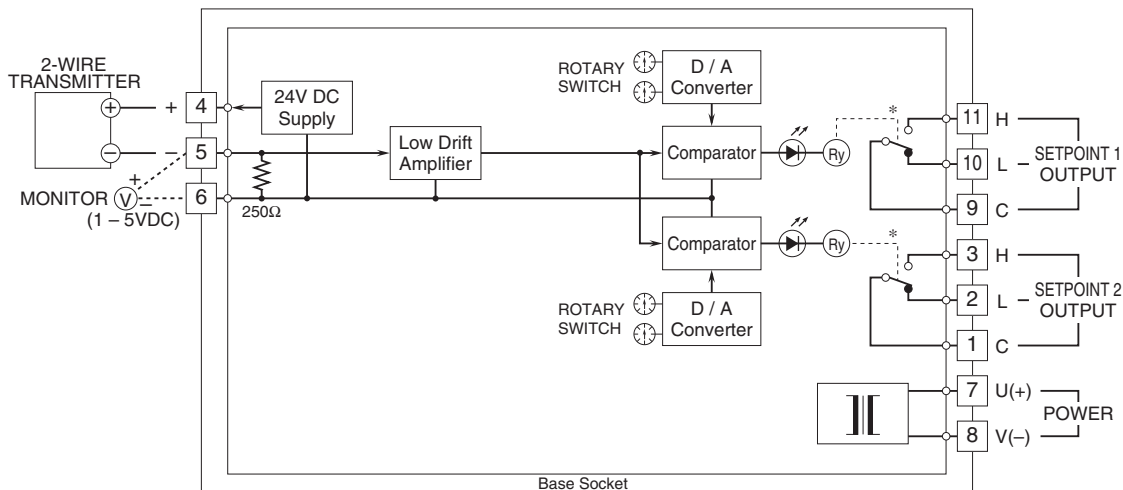


EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



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

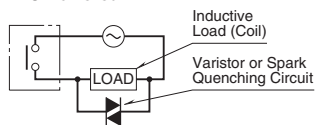
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



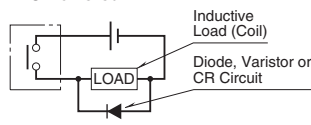
*Relay status for output codes "1" & "4", at power OFF.

■ Relay Protection

•AC Powered



•DC Powered



Specifications are subject to change without notice.