

**Limit Alarms (potentiometer adj.) A-UNIT**

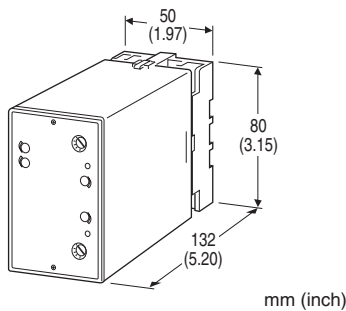
**TWO-WIRE TRANSMITTER ALARM**

**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
- Hysteresis (deadband) adjustable
- Enclosed relays
- Relays can be powered 110 V DC
- High-density mounting

**Typical Applications**

- Annunciator
- Various alarm applications



**MODEL: ADY-1[1][2]-[3]**

**ORDERING INFORMATION**

- Code number: ADY-1[1][2]-[3]
- Specify a code from below for each [1] through [3].  
(e.g. ADY-111-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
- Zero adjustment:** -5 to +5 % (front)
- Span adjustment:** 95 to 105 % (front)
- Setpoint adjustments:** 270°-turn screwdriver adjustments (front); 0 – 100 % independently
- Hysteresis (deadband) adjustments:** 1 – 100 % (front)
- Front LEDs:** Lights turn on at a tripped condition; red for output 1, green for output 2
- 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 ( $\cos \phi = 1$ )

120 V AC @ 1 A ( $\cos \phi = 1$ )

240 V AC @ 0.5 A ( $\cos \phi = 1$ )

30 V DC @ 1 A (resistive load)

**Maximum switching voltage:** 380 V AC or 125 V DC

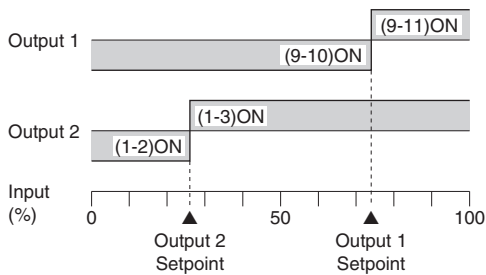
**Maximum switching power:** 120 VA or 30 W

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

**Mechanical life:**  $5 \times 10^7$  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  $\pm 2$  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

**Trip point repeatability:**  $\pm 0.5\%$

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

**Response time:**  $\leq 1$  sec. (0 – 100 % at 90 % setpoint)

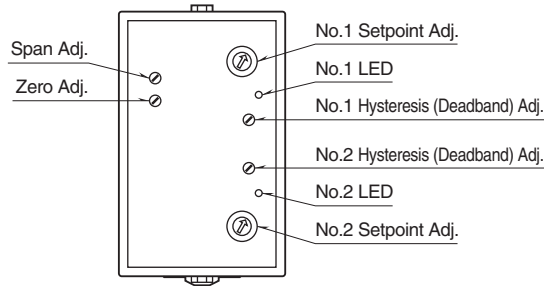
**Line voltage effect:**  $\pm 0.1\%$  over voltage range

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

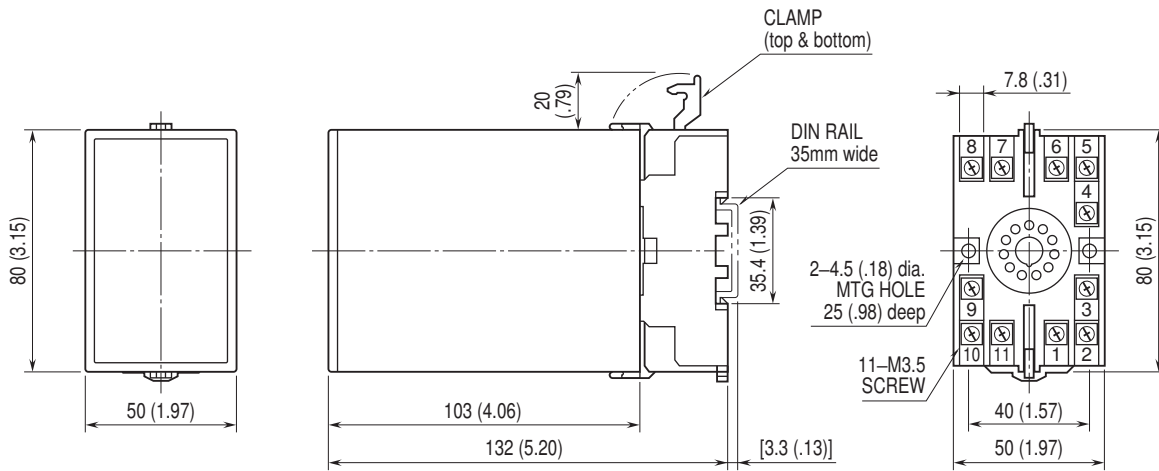
**Dielectric strength:** 2000 V AC @1 minute (input to output 1 to output 2 to power to ground)



## EXTERNAL VIEW

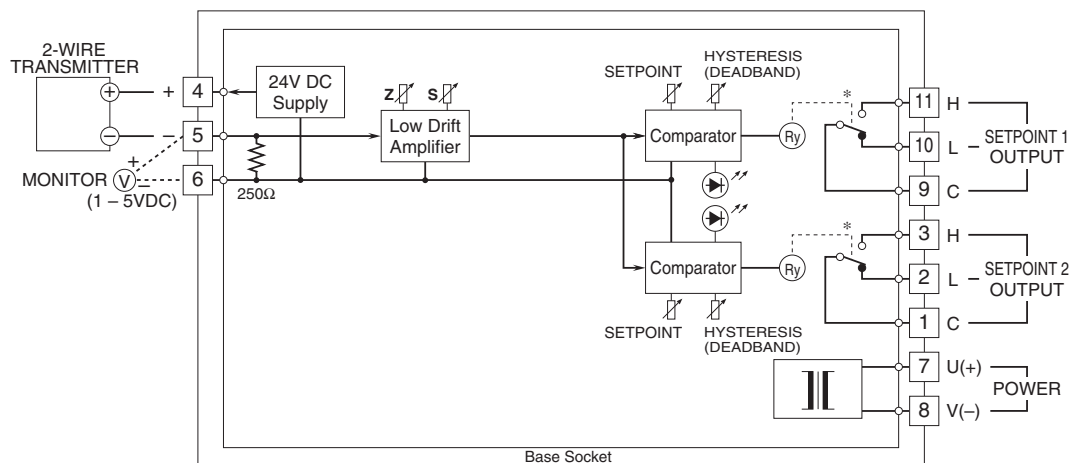


## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



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

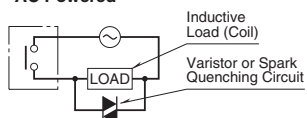
## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



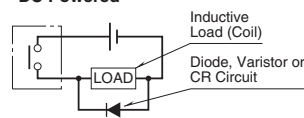
\* Relay status for output codes "1" & "4", at power OFF.

### ■ Relay Protection

#### •AC Powered



#### •DC Powered





Specifications are subject to change without notice.



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