

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

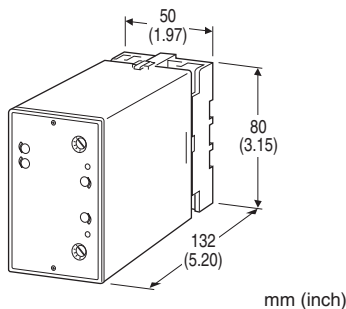
### TACHOGENERATOR ALARM

#### Functions & Features

- Providing SPDT relay outputs at preset AC voltage levels from a tachogenerator
- 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: ATG-[1][2][3]-[4][5]

### ORDERING INFORMATION

- Code number: ATG-[1][2][3]-[4][5]
- Specify a code from below for each of [1] through [5].  
(e.g. ATG-1111-B/Q)
- Special input range (For code U)
- Specify the specification for option code /Q  
(e.g. /C01/S01)

#### [1] INPUT

Voltage

- 1: 0 - 35 V AC (Input resistance 100 kΩ min.)
- 2: 0 - 50 mV AC (Input resistance 100 kΩ min.)
- 3: 0 - 60 mV AC (Input resistance 100 kΩ min.)
- 4: 0 - 100 mV AC (Input resistance 100 kΩ min.)
- 5: 0 - 1 V AC (Input resistance 100 kΩ min.)
- 6: 0 - 10 V AC (Input resistance 100 kΩ min.)
- 7: 0 - 100 V AC (Input resistance 100 kΩ min.)
- 8: 0 - 110 V AC (Input resistance 100 kΩ min.)
- 9: 0 - 150 V AC (Input resistance 100 kΩ min.)

- A: 0 - 200 V AC (Input resistance 100 kΩ min.)
- B: 0 - 250 V AC (Input resistance 100 kΩ min.)
- U: Specify voltage (See INPUT SPECIFICATIONS)  
(0 % input must be 0 V.)

### SETPOINT ADJUSTMENTS

1: Single-turn screws

#### [2] 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)

#### [3] 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)

#### [4] 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

#### [5] OPTIONS

- blank: none
- /Q: With options (specify the specification)

### SPECIFICATIONS OF OPTION: Q (multiple selections)

COATING (For the detail, refer to our web site.)

- /C01: Silicone coating
- /C02: Polyurethane coating
- /C03: Rubber coating

TERMINAL SCREW MATERIAL

- /S01: Stainless steel

## GENERAL SPECIFICATIONS

**Construction:** Plug-in  
**Connection:** M3.5 screw terminals  
**Screw terminal:** Chromated steel (standard) or stainless steel  
**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:** LED turns 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.

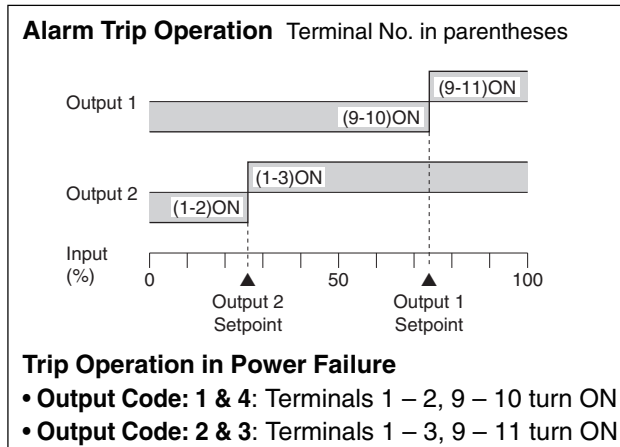
## INPUT SPECIFICATIONS

- **AC Voltage:** 0 - 250 V AC
- Minimum span:** 50 mV
- Frequency:** 15 Hz min., 1 kHz max. with 100 % input
- Input resistance:**  $\geq 100 \text{ k}\Omega$

## 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.



## INSTALLATION

**Power input**

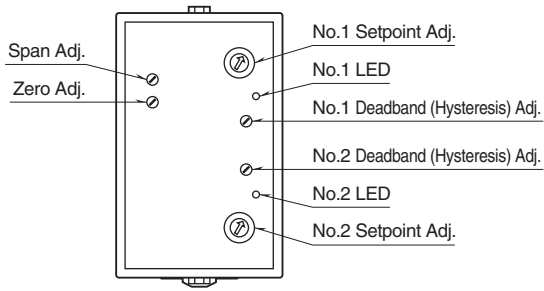
- **AC:** Operational voltage range: rating  $\pm 10 \%$ , 50/60  $\pm 2$  Hz, approx. 2 VA
- **DC:** Operational voltage range: rating  $\pm 10 \%$ , or 85 - 150 V for 110 V rating (ripple 10 % p-p max.) approx. 2 W (80 mA at 24 V)

**Operating temperature:** -5 to +60°C (23 to 140°F)  
**Operating humidity:** 30 to 90 %RH (non-condensing)  
**Mounting:** Surface or DIN rail  
**Weight:** 450 g (0.99 lb)

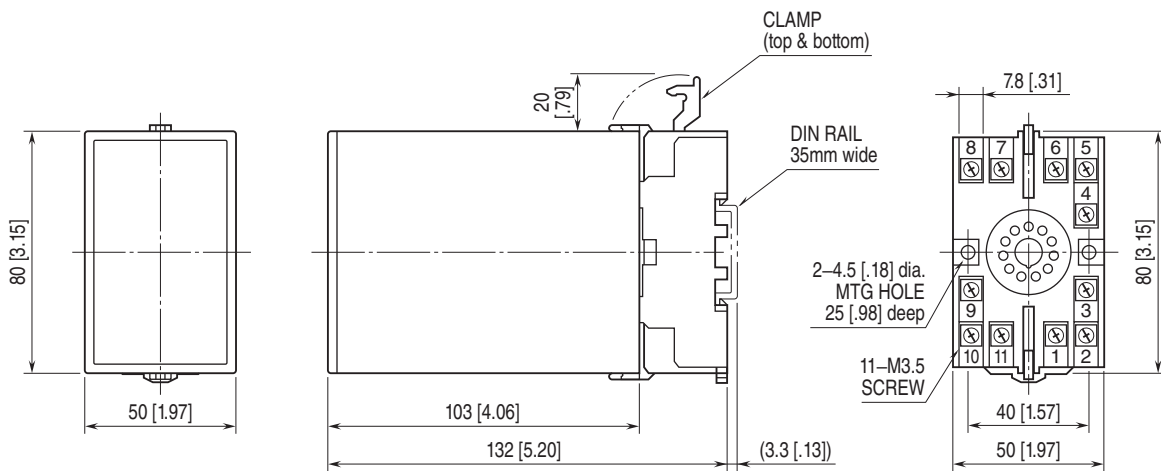
## PERFORMANCE in percentage of span

**Trip point repeatability:**  $\pm 0.5 \%$   
**Temp. coefficient:**  $\pm 0.05 \%/^{\circ}\text{C}$  ( $\pm 0.03 \%/^{\circ}\text{F}$ )  
**Response time:**  $\leq 0.7$  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

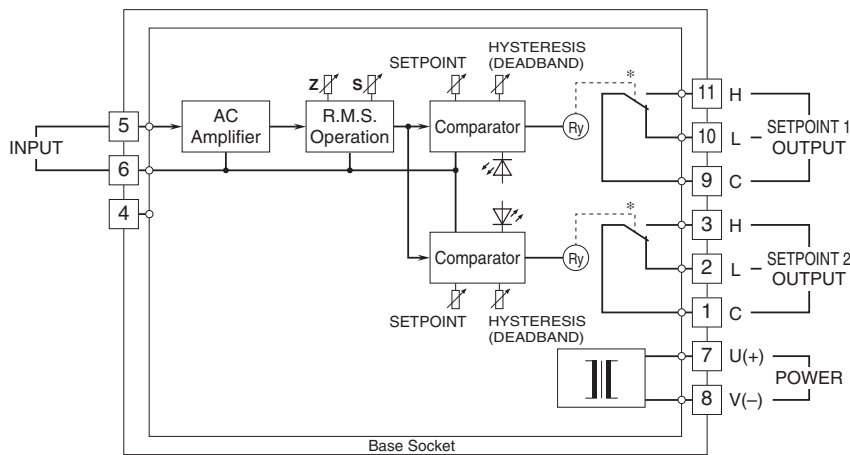


## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



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

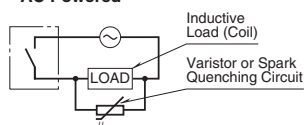
## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



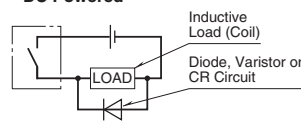
\*Relay status for output codes "1" & "4", at power OFF.

### ■ Relay Protection

#### • AC Powered



#### • DC Powered





Specifications are subject to change without notice.