

## Plug-in Signal Conditioners M-UNIT

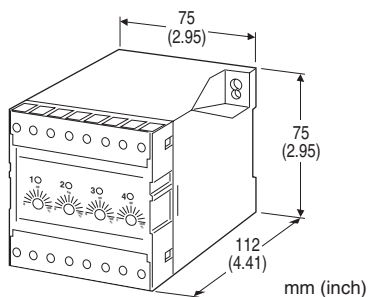
### QUAD DC ALARM

#### Functions & Features

- Providing relay contact closures at preset DC input levels
- 4 setpoints: Hi/Hi, Hi, Lo, Lo/Lo
- Single turn screwdriver or dial setpoint adjustments
- Enclosed relays
- Relays can be powered 110 V DC
- Isolation up to 2000 V AC
- High-density mounting

#### Typical Applications

- Annunciator
- Various alarm applications



### MODEL: L4AS-[1][2][3]-[4]

#### ORDERING INFORMATION

- Code number: L4AS-[1][2][3]-[4]
- Specify a code from below for each of [1] through [4].  
(e.g. L4AS-1A1-R)

#### [1] SETPOINT ADJUSTMENTS

- 1: Single-turn screws
- 2: Dials

#### [2] INPUT

##### Current

A: 4 - 20 mA DC (Input resistance 250 Ω)

##### Voltage

6: 1 - 5 V DC (Input resistance 1 MΩ min.)

#### [3] OUTPUT

- 1: 4 points; coil energized with input > setpoint
- 2: 2 points; coil energized with input < setpoint 2 points; coil energized with input > setpoint

#### [4] POWER INPUT

##### AC Power

K: 85 - 132 V AC

(Operational voltage range 85 - 132 V, 47 - 66 Hz)

L: 170 - 264 V AC

(Operational voltage range 170 - 264 V, 47 - 66 Hz)

##### DC Power

R: 24 V DC

(Operational voltage range 24 V ±10 %, ripple 10 %p-p max.)

P: 110 V DC

(Operational voltage range 85 - 150 V, ripple 10 %p-p max.)

#### GENERAL SPECIFICATIONS

**Construction:** Stand-alone; terminal access at the front

**Connection:** M3.5 screw terminals (torque 0.8 N·m)

**Housing material:** Flame-resistant resin (black)

**Isolation:** Input to output to power

**Setpoint adjustments:** Single-turn screwdriver adjustments or dials (front); -15 - +115 % independently

**Hysteresis (deadband):** Approx. 1 %

**Front LEDs:** Red LED turns on when the coil is energized.

#### 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

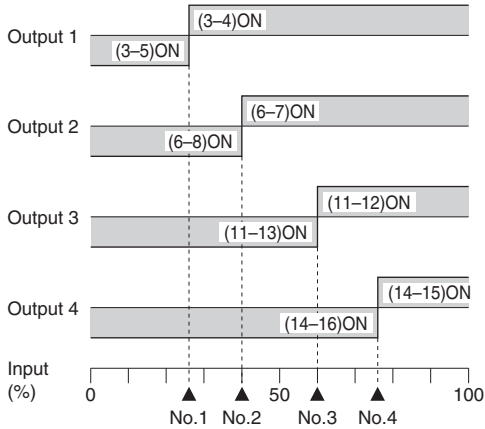
For maximum relay life with inductive loads, external protection is recommended.

## Alarm Trip Operation Terminal No. in parentheses

### • Output Code : 1

#### Trip Operation in Power Failure:

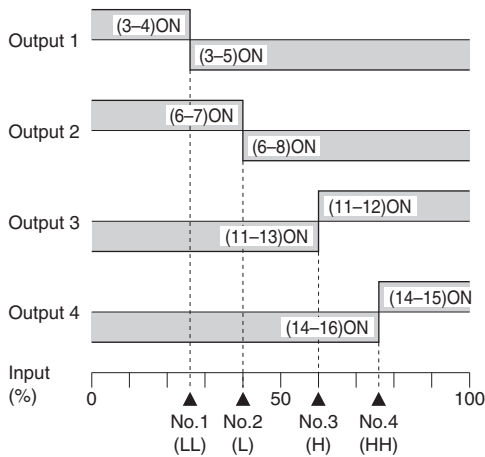
Terminals 3 – 5, 6 – 8, 11 – 13 and 14 – 16 turn ON.



### • Output Code : 2

#### Trip Operation in Power Failure:

Terminals 3 – 5, 6 – 8, 11 – 13 and 14 – 16 turn ON.



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

## INSTALLATION

### Power consumption

- AC: Approx. 4.5 VA
- DC: Approx. 2 W (80 mA at 24 V)

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

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

Mounting: Surface or DIN rail

Weight: 350 g (0.77 lb)

## PERFORMANCE in percentage of span

Setpoint accuracy:  $\pm 0.3\%$

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

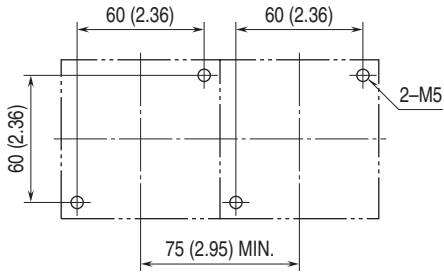
Response time:  $\leq 0.5$  sec. (0 - 100 % at 90 % setpoint)

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

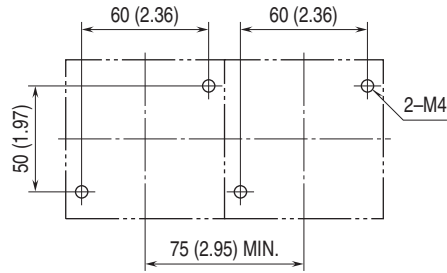
Insulation resistance:  $\geq 100\ \text{M}\Omega$  with 500 V DC

## MOUNTING REQUIREMENTS

### ■ M5 SCREWS

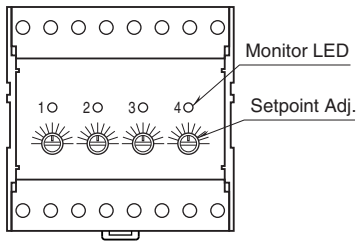


### ■ M4 SCREWS

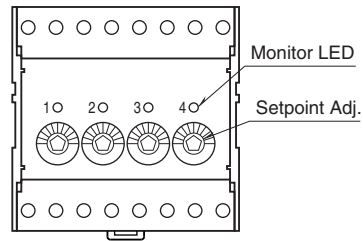


## EXTERNAL VIEW

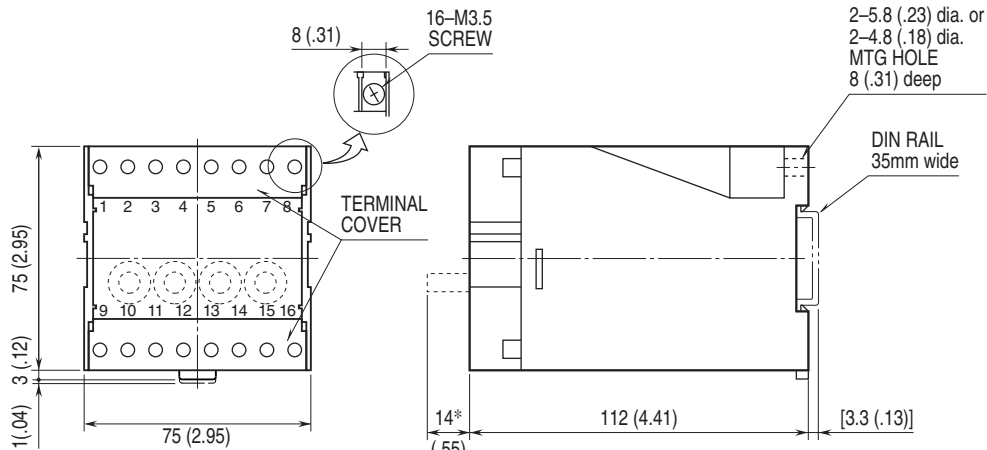
### ■ SCREWDRIVER ADJUSTMENTS



### ■ DIAL ADJUSTMENTS



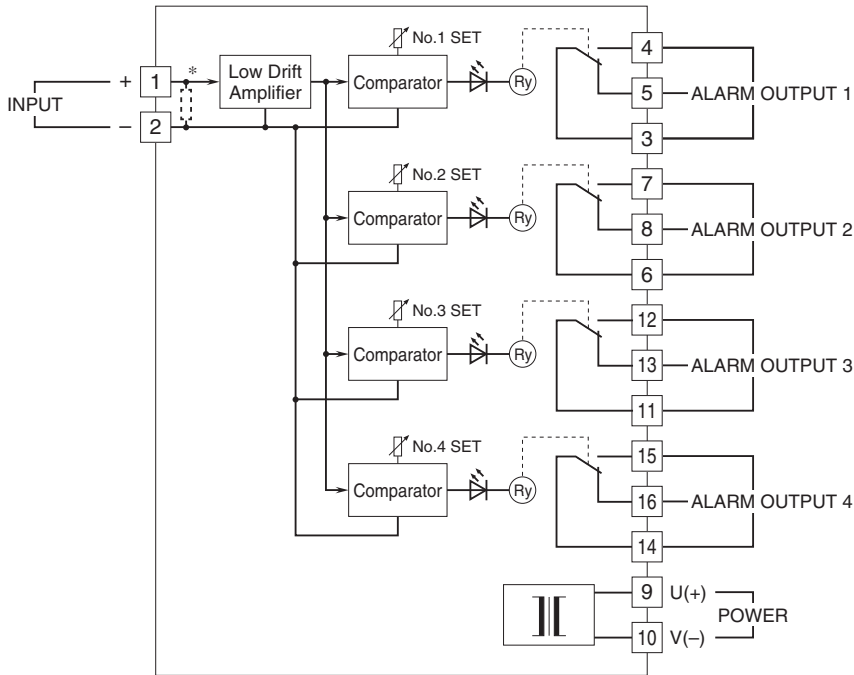
## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



\*Dial adj.

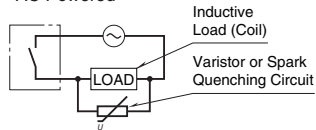
• When mounting, no extra space is needed between units.

## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

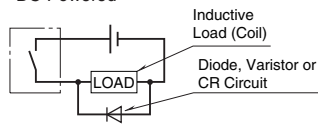


\*Input shunt resistor incorporated for current input.

- Relay Protection
- AC Powered



- DC Powered



Specifications are subject to change without notice.