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 [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;
coiled 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 lights turn on when the coils are energized.

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 x 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 1  (3–5)ON  (3–4)ON
Output 2  (6–7)ON  (6–8)ON
Output 3  (11–12)ON  (11–13)ON
Output 4  (14–15)ON  (14–16)ON

*Output Code: 2
Trip Operation in Power Failure:
Terminals 3 – 5, 6 – 8, 11 – 13 and 14 – 16 turn ON.

Output 1  (3–4)ON  (3–5)ON
Output 2  (6–7)ON  (6–8)ON
Output 3  (11–12)ON  (11–13)ON
Output 4  (14–15)ON  (14–16)ON

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: ±0.3 %
Temp. coefficient: ±0.05 %/°C (±0.03 %/°F)
Response time: ≤ 0.5 sec. (0 – 100 % at 90 % setpoint)
Line voltage effect: ±0.1 % over voltage range
Insulation resistance: ≥ 100 MΩ with 500 V DC

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

M5 SCREWS

2–M5

60 (2.36)
60 (2.36)
60 (2.36)

75 (2.95) MIN.

M4 SCREWS

2–M4

60 (2.36)
60 (2.36)
50 (1.97)

75 (2.95) MIN.

EXTERNAL VIEW

SCREWDRIVER ADJUSTMENTS

DIAL ADJUSTMENTS

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)

112 (4.41) [3.3 (.13)]

DIN RAIL
35mm wide

16–M3.5 SCREW

8 (.31)

TERMINAL COVER

2–5.8 (.23) dia. or 2–4.8 (.18) dia.
MTG HOLE
8 (.31) deep

75 (2.95)

112 (4.41)

3 (.12) 1 (.04)

* Dial adj.

* When mounting, no extra space is needed between units.
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

*Input shunt resistor incorporated for current input.

Specifications are subject to change without notice.