

## Plug-in Signal Conditioners M-UNIT

### DC ALARM

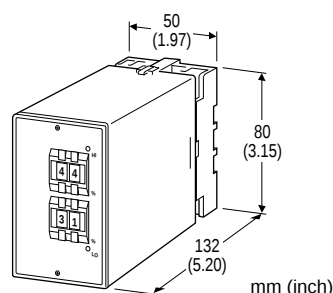
(thumbwheel switch adjustment)

#### Functions & Features

- Providing SPDT relay outputs at preset DC input levels
- Dual (Hi/Lo) trip
- Thumbwheel switch 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: ASD-[1]1-[2][3]

### ORDERING INFORMATION

- Code number: ASD-[1]1-[2][3]

Specify a code from below for each of [1] through [3].

- (e.g. ASD-61-K/Q)
- Specify the specification for option code /Q (e.g. /C01/S01)

### [1] INPUT

#### Current

**A1:** 4 – 20 mA DC (Input resistance 50  $\Omega$ )

**G:** 0 – 1 mA DC (Input resistance 1000  $\Omega$ )

#### Voltage

**4:** 0 – 10 V DC (Input resistance 1 M $\Omega$  min.)

**5:** 0 – 5 V DC (Input resistance 1 M $\Omega$  min.)

**6:** 1 – 5 V DC (Input resistance 1 M $\Omega$  min.)

### OUTPUT

Relay; SPDT or transfer contact

## SETPOINT ADJUSTMENTS

1: Thumbwheel switch

### [2] 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  $\pm$ 10 %, ripple 10 %p-p max.)

**P:** 110 V DC

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

### [3] OPTIONS

/Q: With options (specify the specification)

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

#### COATING (For the detail, refer to M-System's 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 to power

**Setpoint adjustments:** Thumbwheel switches (front); 0 – 99 % independently; 1 % increments

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

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

Green LED turns on when the coil for Lo output 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

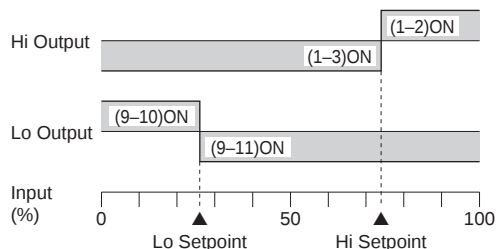
**Maximum switching power:** 120 VA or 30 W

**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



## Trip Operation in Power Failure

: Terminals 1 – 3, 9 – 11 turn ON.

## INSTALLATION

### Power consumption

- AC: Approx. 3 VA
- DC: Approx. 3 W (130 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:** 300 g (0.66 lb)

## PERFORMANCE in percentage of span

**Setpoint accuracy:**  $\pm 0.5$  %

**Trip point repeatability:**  $\pm 0.05$  %

**Temp. coefficient:**  $\pm 0.015$  %/°C ( $\pm 0.008$  %/°F)

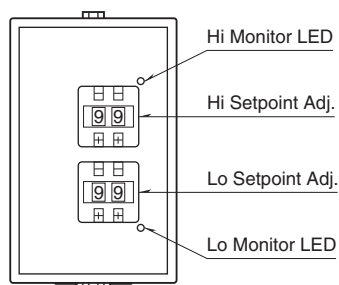
**Response time:**  $\leq 0.5$  sec. (0 – 100 % at 90 % setpoint)

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

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

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

## EXTERNAL VIEW





### SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

