

Plug-in Signal Conditioners M-UNIT

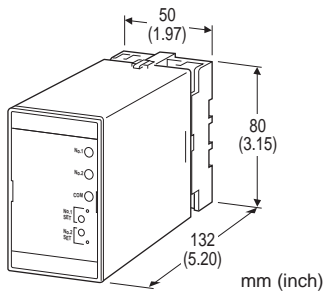
DEVIATION ALARM

Functions & Features

- Providing relay contact closures at preset deviations of two DC input levels
- Dual (Hi/Lo) trip
- Energized or de-energized coil at tripped conditions selectable
- Multi-turn screwdriver setpoint adjustments
- Monitor jacks provided for 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: AYDV-6[1][2][3]-[4][5]

ORDERING INFORMATION

- Code number: AYDV-6[1][2][3]-[4][5]
Specify a code from below for each [1] through [5].
(e.g. AYDV-6622-B/Q)
- Specify the specification for option code /Q
(e.g. /C01/S01)

INPUT 2 (reference)

Voltage

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

[1] INPUT 1 (measured signal)

Current

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

H: 10 - 50 mA DC (Input resistance 100 Ω)

Voltage

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

[2] OUTPUT 1

1: Relay;

SPDT or transfer contact coil energized with deviation > setpoint

2: Relay;

SPDT or transfer contact coil de-energized with deviation > setpoint

[3] OUTPUT 2

1: Relay;

SPDT or transfer contact coil energized with deviation > setpoint

2: Relay;

SPDT or transfer contact coil de-energized with deviation > setpoint

[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 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: Multi-turn screwdriver adjustments (front); -50 - +50 % independently; deviation = input 1 (meas.) - input 2 (ref.)

Monitor jacks: Output -5 - +5 V for -50 - +50 % setpoints

Monitor jack diameter: 2 mm (.08")
Hysteresis (deadband): 0.2 ± 0.1 %
Front LEDs: Red lights turn on when the coils are energized.

Temp. coefficient: ±0.015 %/°C (±0.008 %/°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)

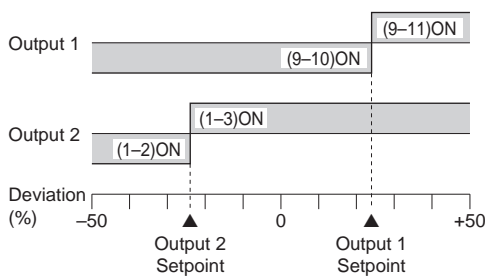
INPUT SPECIFICATIONS

- **Input 1** (measured signal)
 - **DC Current:** shunt resistor attached to input terminals (0.5 W)

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 10⁷ 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 1:** (9 - 10) turn ON with code 1
 (9 - 11) turn ON with code 2
- **Output 2:** (1 - 2) turn ON with code 1
 (1 - 3) turn ON with code 2

INSTALLATION

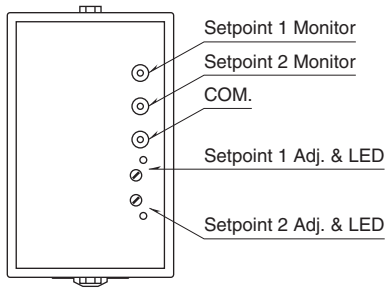
Power input

- **AC:** Operational voltage range: rating ±10 %, 50/60 ±2 Hz, approx. 2 VA
 - **DC:** Operational voltage range: rating ±10 %, or 85 - 150 V for 110 V rating (ripple 10 % p-p max.) approx. 1.3 W (50 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: 400 g (0.88 lb)

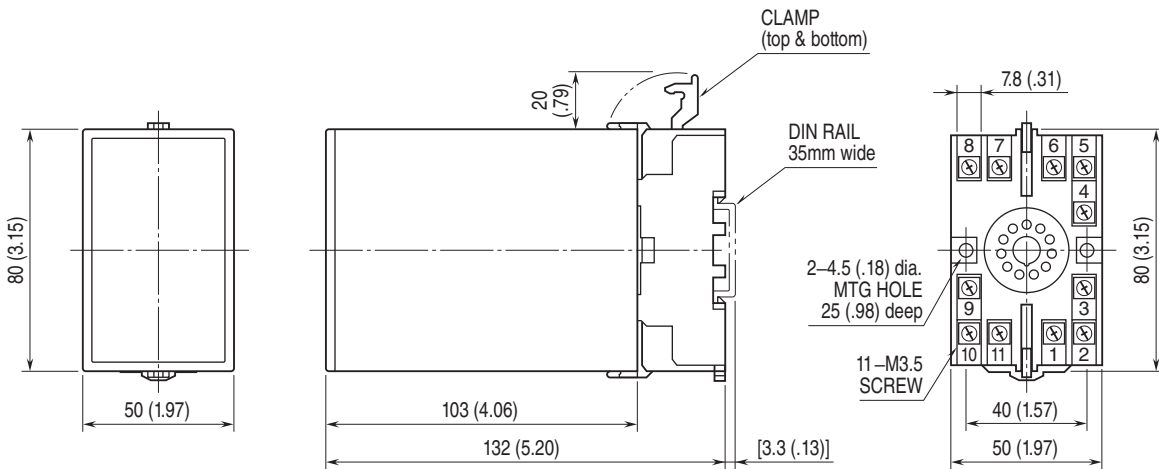
PERFORMANCE in percentage of span

- Setpoint monitor accuracy:** ± 0.5 %
- Trip point repeatability:** ±0.05 %

EXTERNAL VIEW

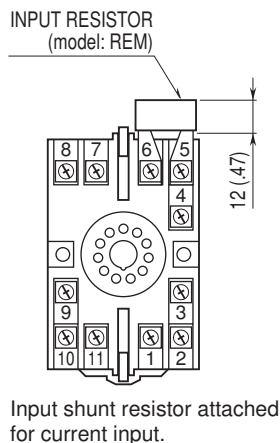


EXTERNAL DIMENSIONS unit: mm (inch)

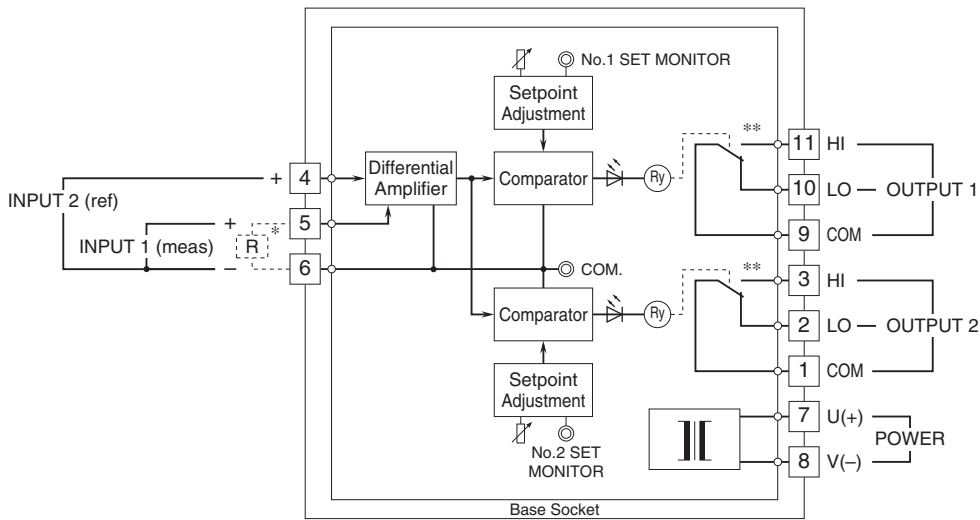


• When mounting, no extra space is needed between units.

TERMINAL ASSIGNMENTS unit: mm (inch)



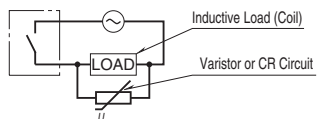
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



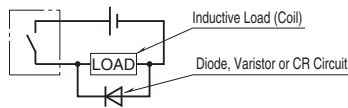
- * Input shunt resistor attached for current input.
- ** Relay status for output code "1", at power OFF.

■ Relay Protection

• AC Powered



• DC Powered



Specifications are subject to change without notice.