

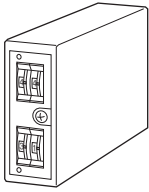
## Dual Output Super-mini Signal Conditioners Pico-M Series

### DC ALARM

(thumbwheel switch adjustment)

#### Functions & Features

- Providing relay outputs at preset DC input levels
- Dual (Hi/Lo) trip
- Thumbwheel switch setpoint adjustments
- Space-saving, easy-to-maintain, multi-channel installation base



### MODEL: M8SED-[1][2][3]-R[4]

#### ORDERING INFORMATION

- Code number: M8SED-[1][2][3]-R[4]  
Specify a code from below for each [1] through [4].  
(e.g. M8SED-A12-R/Q)
- Specify the specification for option code /Q  
(e.g. /C01 )

#### [1] INPUT

##### Current

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

##### Voltage

4: 0 - 10 V DC (Input resistance 1 MΩ min.)

5: 0 - 5 V DC (Input resistance 1 MΩ min.)

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

#### [2] OUTPUT 1

1: Hi trip (ON = tripped; OFF = untripped or no power)

2: Hi trip (OFF = tripped; ON = untripped or no power)

#### [3] OUTPUT2

1: Lo trip (ON = tripped; OFF = untripped or no power)

2: Lo trip (OFF = tripped; ON = untripped or no power)

#### POWER INPUT

##### DC Power

R: 24 V DC

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

#### [4] OPTIONS

blank: none

/Q: With options (specify the specification)

#### SPECIFICATIONS OF OPTION: Q

**COATING (For the detail, refer to M-System's web site.)**

/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating

#### RELATED PRODUCTS

- Installation Base or Single Mount Base Socket (model: M8BSx)

This unit must be mounted on dedicated base or socket except Model M8BS2 base.

#### GENERAL SPECIFICATIONS

**Construction:** Plug-in

**Mounting screw:** M3 screw (torque 0.3 N·m)

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

**Power supply:** Via the Installation Base terminals (model: M8BSx)

**Isolation:** Input to output 1 to output 2 to power

**Setpoint adjustments:** Thumbwheel switches (front);  
0 - 99 % independently; 1 % increments;  
(factory setting: 50 %)

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

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

Green light turns on when the coil for Lo output is energized.

**Power ON timer:** Relays de-energized for approx. 2 seconds after power is turned on.

#### INPUT SPECIFICATIONS

- DC Current: Input resistor incorporated

#### OUTPUT SPECIFICATIONS

- **Relay Contact:** 125 V AC @0.2 A (cos φ = 1) \*  
30 V DC @0.5 A (resistive load) \*

**Maximum switching voltage:** 125 V AC or 60 V DC

**Maximum switching power:** 25 VA or 15 W

**Minimum load:** 100 mV DC @100 μA

**Mechanical life:** 5 × 10<sup>6</sup> cycles

\* When used with a multi-channel installation base (e.g. M8BS-16), the ratings derated as following.

Terminal block type: 125 V AC @0.2 A, 30 V DC @0.25 A

Cable connector type: 24 V AC @50 mA, 24 V DC @50mA



	TRIP ACTION	OUT CODE	POWERED		UNPOWERED
			INP < SET	INP > SET	
OUT 1	Hi	1	OFF	ON	OFF
	Hi	2	ON	OFF	ON
OUT 2	Lo	1	ON	OFF	OFF
	Lo	2	OFF	ON	ON

## INSTALLATION

**Current consumption:** Approx. 60 mA

**Operating temperature:** 0 to 55°C (32 to 131°F)

**Operating humidity:** 30 to 95 %RH (non-condensing)

**Mounting:** Installation Base (model: M8BSx)

**Weight:** 70 g (2.5 oz)

## PERFORMANCE in percentage of span

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

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

**Temp. coefficient:**  $\pm 0.02\%/^{\circ}\text{C}$  ( $\pm 0.01\%/^{\circ}\text{F}$ )

**Response time:**  $\leq 0.7$  sec. (0 - 100 % at 90 % setpoint)

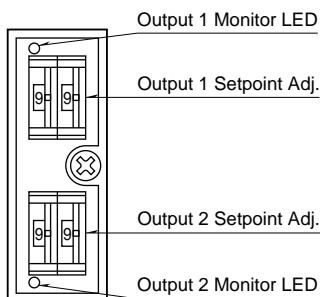
**Line voltage effect:**  $\pm 0.1\%$  over voltage range

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

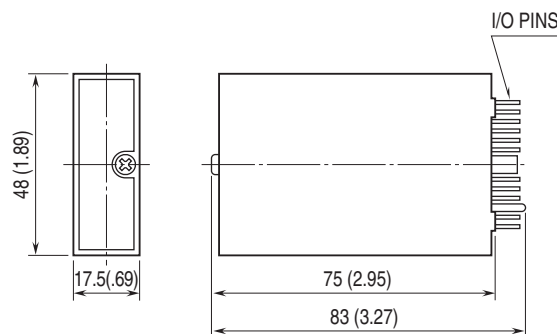
**Dielectric strength:** 1500 V AC @1 minute (input to output 1 to output 2 to power to ground)

**SWC test:** ANSI/IEEE-C37.90.1-1989

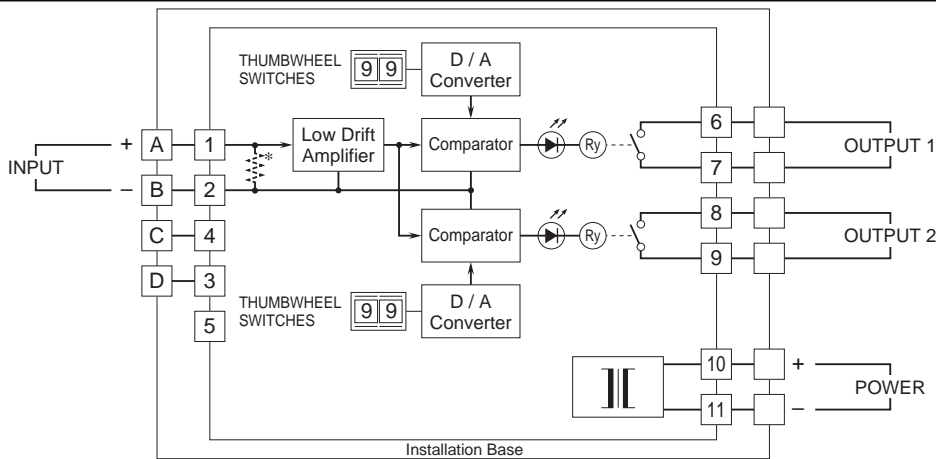
## FRONT VIEW



## DIMENSIONS unit: mm (inch)



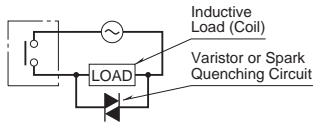
**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



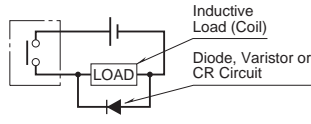
\*Input shunt resistor incorporated for current input.

■ Relay Protection

• AC Powered



• DC Powered



Specifications are subject to change without notice.

