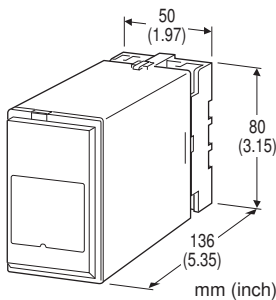


Final Control Elements

VALVE POSITIONER

Functions & Features

- Valve positioner for proportional valve position control in combination with an electric actuator
- High accuracy positioning by employing reverse-phase breaks
- Solid state relay output
- Potentiometer feedback
- Timer preventing frequent ON-OFF operations, protecting the motor from overheating



MODEL: MEX-M1-[1]1-K[2]

ORDERING INFORMATION

- Code number: MEX-M1-[1]1-K[2]
Specify a code from below for each [1] and [2].
(e.g. MEX-M1-61-K/B/Q)
- Specify the specification for option code /Q
(e.g. /C01/S01)

[1] POSITION SETPOINT INPUT

Current

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

Voltage

6: 1 – 5 V DC (Input resistance 200 kΩ min.)

POSITION FEEDBACK INPUT

1: Potentiometer

POWER INPUT

AC Power

K: 85 – 132 V AC

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

[2] OPTIONS (multiple selections)

Brake Function

blank: Without

/B: Reverse phase brake

Other Options

blank: none

/Q: Option other than the above (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

Operation mode: Front-accessed DIP switches; direct or reverse operation; failsafe operation when there is no position input signal (full-open, full-closed or stop)

Connection: M3.5 screw terminals

Screw terminal: Chromated steel (standard) or stainless steel

Housing material: Flame-resistant resin (black)

Deadband adj. (control output): 0.25 – 4 % (front)

Restart limiting timer: Approx. 1.5 seconds

Lock protection timer: Power supply to the motor is stopped when the feedback signal does not enter to deadband for approx. 2 minutes; reset by power off or by repeating 0 % and 100 % setpoint input.

Isolation: Input or xmtr output to output or power

Zero adjustment: 0 – 25 % (front)

Span adjustment: 50 – 100 % (front)

INPUT SPECIFICATIONS

■ Setpoint Input

Input resistor: Attached to input terminals (0.5 W)

■ **Feedback Potentiometer:** 500 Ω – 10 kΩ

Span: 47.5 % min. of total resistance, 95 % max.

Excitation: Approx. 4 V DC

OUTPUT SPECIFICATIONS

• **Re-transmitted Output:** 4 – 20 mA DC

Load resistance: 300 Ω max.

■ **Control Output:** SSR; 85 – 132 V AC; @ 0.03 – 1 A continuous, @ 4 A for 1 minute

Leakage current at OFF: ≤ 10 mA

INSTALLATION

Power consumption

•AC: Approx. 4.5 VA excluding motor consumption

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

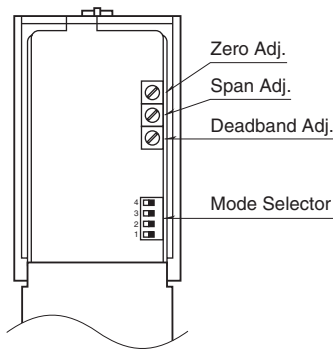
Temp. coefficient: $\pm 0.025\ \%/^{\circ}\text{C}$ ($\pm 0.014\ \%/^{\circ}\text{F}$)

Line voltage effect: $\pm 0.25\ \%$ over voltage range

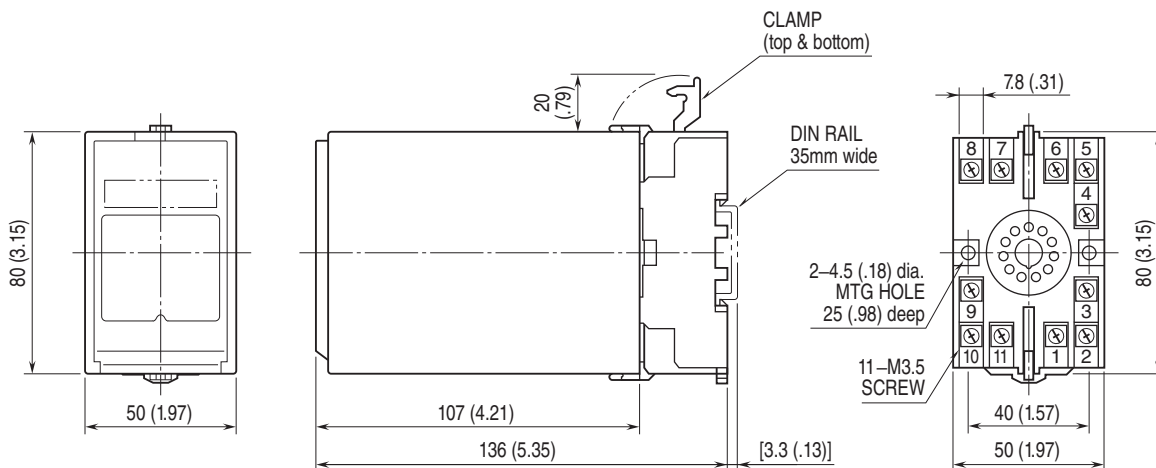
Insulation resistance: $\geq 100\ \text{M}\Omega$ with 500 V DC

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

EXTERNAL VIEW

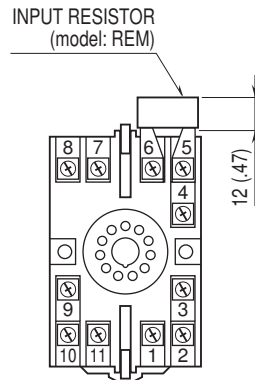


EXTERNAL DIMENSIONS unit: mm (inch)



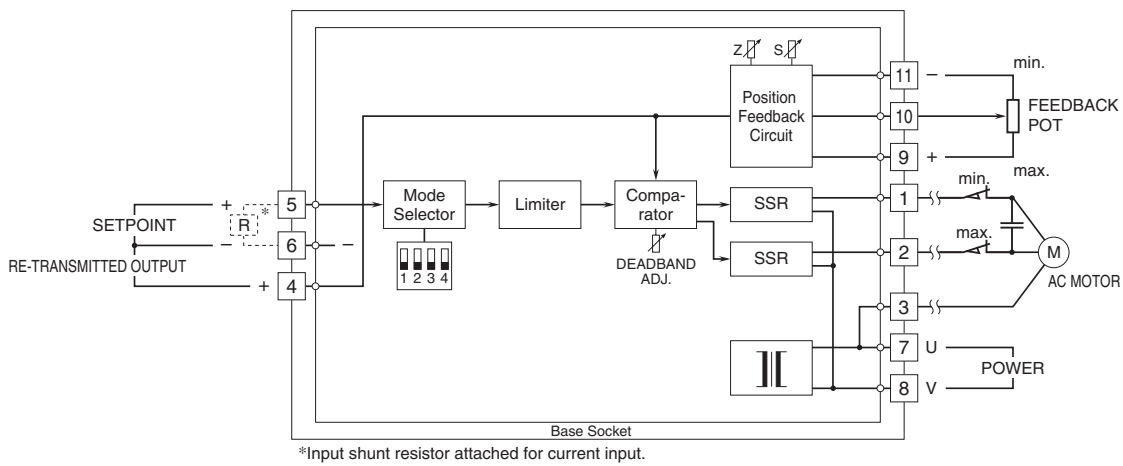
• When mounting, no extra space is needed between units.

TERMINAL ASSIGNMENTS unit: mm (inch)



Input shunt resistor attached for current input.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.