

VM1500E • VM5000E Actuators



**VM1500E Actuator
on 2 Inch Valve**



**VM5000E Actuator
on 6 Inch Valve**

APPLICATION:

The **VM1500E and VM500E Motor-Actuators** use a 24VAC power supply. The actuators drive a valve's plug into position with respect to the signal from a controller and self-adjust to the valve's travel. The actuators fail in the last position on loss of power. A **VMS-25 Power Pack** is required for fail safe operation.

ACTUATOR SPECIFICATIONS:

Control Signal: 4-20 mA_{dc} (Factory Setting), 0-20 mA_{dc}, 0-10 V_{dc} or 2-10 V_{dc} and Floating, Self-Adjusting, Field-Selectable
 Control Action: See Below
 Power Consumption: **VM1500E:** 12VA
 VM5000E: 25VA
 Timing: **VM1500E:** 102 seconds/inch
 VM5000E: 76 seconds/inch
 Feedback Signal: 0-10 V_{dc} or 2-10 V_{dc} (Modulating Control Only)
 Manual Override: YES
 Construction: Polycarbonate Motor Housing with Steel Linkage and Yoke
 Locations: NEMA Type 2 / IP54 Indoor Only
 Temperature Limits: Ambient: 32°F - 122°F
 Mounting: Vertical Above Centerline of Valve

CONTROL ACTION:

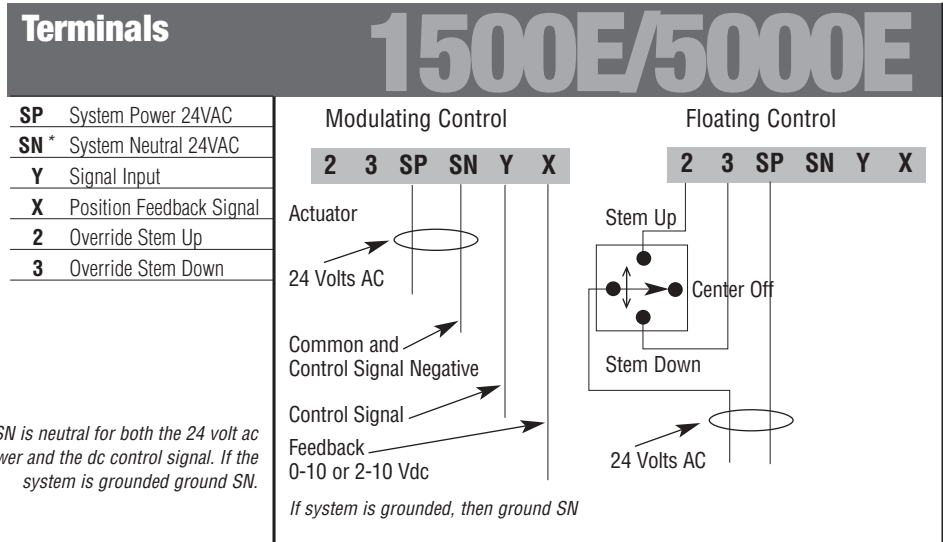
Single and Double-Seated Valves:

Increasing Signal Closes Valve (Factory Setting) Reversible

3-Way Mixing and Diverting Valves:

Increasing Signal Closes Lower Port / Opens Upper Port (Factory Setting) Reversible

ACTUATOR WIRING DIAGRAM:



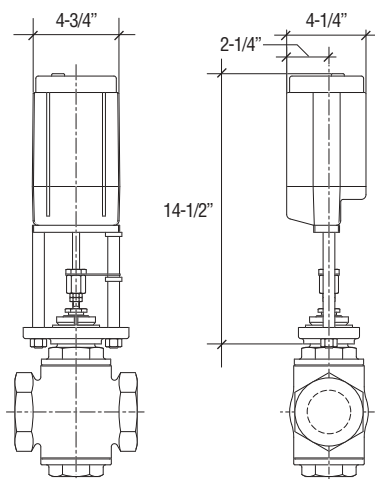
Control Signal Override:

Connect terminal 2 to SN to raise the stem.

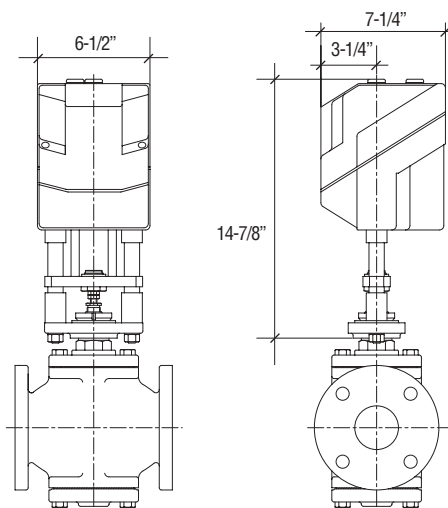
Connect terminal 3 to SN to lower the stem.

The actuator moves to the end position and remains there until the jumper is disconnected.

OVERALL DIMENSIONS:



VM1500E Mounted on Valve
front view side view



VM5000E Mounted on Valve
front view side view

POWER PACK SPECIFICATIONS:

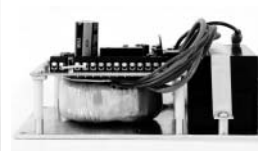
Required for Fail Safe Operation
(One VMS-25 can operate two VM1500 or one VM5000E at a time)

- Fail Direction: Field Selectable
- Power Consumption: 24VAC, 40VA
- Construction: Battery w/Circuit Board & Transformer, Components Only
- Locations: NEMA Type 2 / IP54 Indoor Only
- Mounting: Panel Mount
- Approx LxWxH: 7-1/2 in. x 5 in. x 3 in.

Top



Side



VMS-25 Power Pack

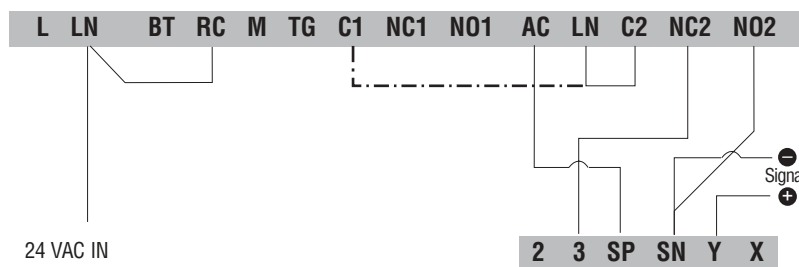
POWER PACK WIRING DIAGRAM:

Terminals

For floating control connect controller with dry contacts and floating mid position between terminal NO2 and 2 and 3.

VMS-25

| | |
|------------|---------------------------------|
| L | System Power 24VAC |
| LN | System Neutral |
| BT | Battery Test |
| RC | Remote Control |
| M | Monitor |
| TG | Test Ground |
| C1 | Relay Common 1st Motor |
| C2 | Relay Common 2nd Motor |
| NC1 | Relay Normally Closed 1st Motor |
| NC2 | Relay Normally Closed 2nd Motor |
| NO1 | Relay Normally Open 1st Motor |
| NO2 | Relay Normally Open 2nd Motor |
| AC | 24 Volt Out |



Modulating Input Signal

Operation:

Proportional Normal: Terminal AC is connected to 24 VAC building power. Terminal NO2 is connected to SN. Actuator responds to modulating input signal.

Power Failure: Terminal AC changes to 24V square wave from inverter. Terminal NO2 breaks connection to SN. Terminal NC2 connects to 2 or 3 to drive actuator to fail safe position.

