

DATA SHEET



VM900 series are electric actuators for use on Paxton valves and similar globe valves from other manufacturers.

They feature direct coupling of the actuator to the valve and self-adjusting stroke. Upon loss of power, the actuators will spring return. VM900-SU retracts upon power failure, VM900-SD extends upon power failure.

In modulating mode a pair of actuators may be sequenced by setting one to operate over the lower half of the control signal and the other to operate over the upper half. Two actuators can also be connected in parallel.

The full modulating signal applies to the actual stroke of the valve which the actuator determines with automatic stroke adjustment.

All models can be manually operated with an override via the hex key slot on top.

See separate documentation for the TVS43R Domestic Tempering Valve package.

Technical Data

Power	24 Vac / Vdc
Transformer sizing	50 VA
Modulating input	0(2)-10 VDC 4-20mA
Output	2-10 VDC
Floating input	24V at 5mA 20 millisecond pulse
Force	VM900 - 202 lb / 900N
Stroke	3/8" to 2" self adjusting
Run time floating	60 seconds or 300 seconds
Run time modulating	20 seconds for 3/4" stroke
Temperature limits	14°F to 120°F

Materials

Housing	Aluminum, unpainted
Cover	Aluminum, unpainted

Operation

The operating mode of the actuator is set by a row of switches on the circuit board. The operating mode can be changed by turning the power off and resetting the switches. By moving the green tab down, the actuator may be driven by hand in manual mode.

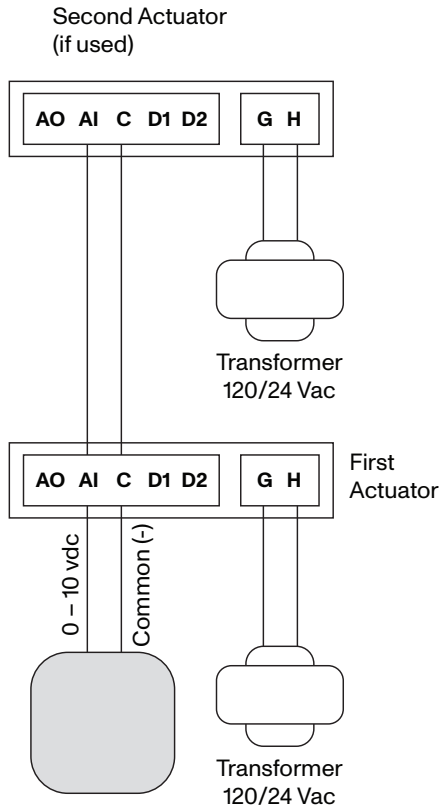
DIP Switch Settings:

ON

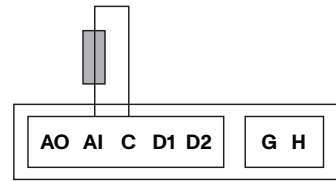


Factory default: All switches OFF

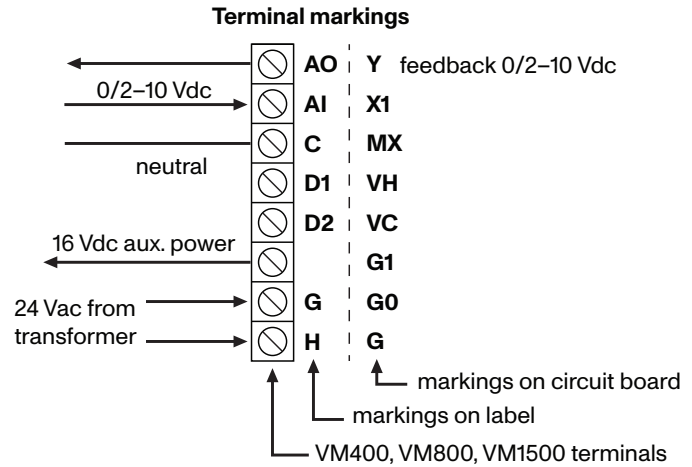
Switch	OFF	ON
1	Actuator stem retracts on start-up	Stem extends on start-up
2	Modulating 2–10 Vdc or 0–10 Vdc signal	3 point floating (see also switch 5)
3	Full range control signal	Split range control signal
4	0–10 volt control signal (0–20 mA)	2–10 volt control signal (4–20 mA)
5	0–5 (2–6) volt split range control signal	5–10 (6 – 10) volt split range control signal
6	60 seconds full travel time in floating mode (switch #2 on; otherwise no effect)	300 seconds travel time in floating mode (switch #2 on; otherwise no effect)
7	Travel direction; stem down on increasing signal (modulating mode only)	Stem up on increasing signal
8	Linear motion proportional to signal	Changes valve characteristic: converts equal percentage valves to linear and linear valves to quick opening.
9	Normal operation	Stroke calibration



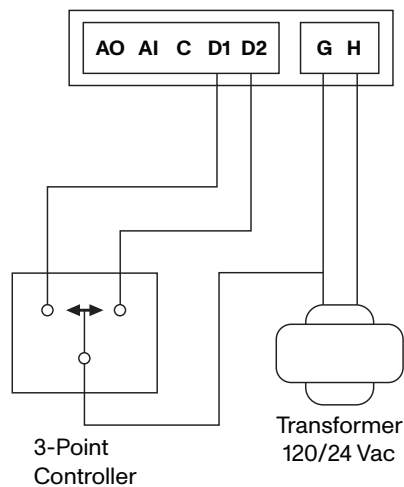
Proportional Control



Add a 500 ohm resistor (included) when using a mA control signal.



3-Point Floating Control

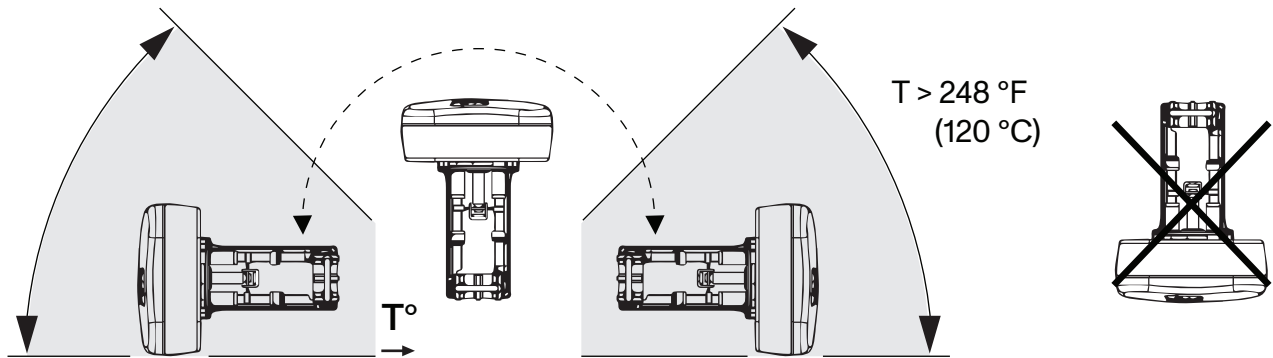


Mounting

The actuator may be mounted in any position from horizontal to vertical. Do not install with the actuator lower than the valve.

If the fluid temperature exceeds 248° F (15 psi steam) the actuator must be mounted at least 45° from vertical. This is shown in the shaded area below.

Please note that to maintain NEMA 2 (IP54) rating the actuator must be mounted vertical.



Dimensions

