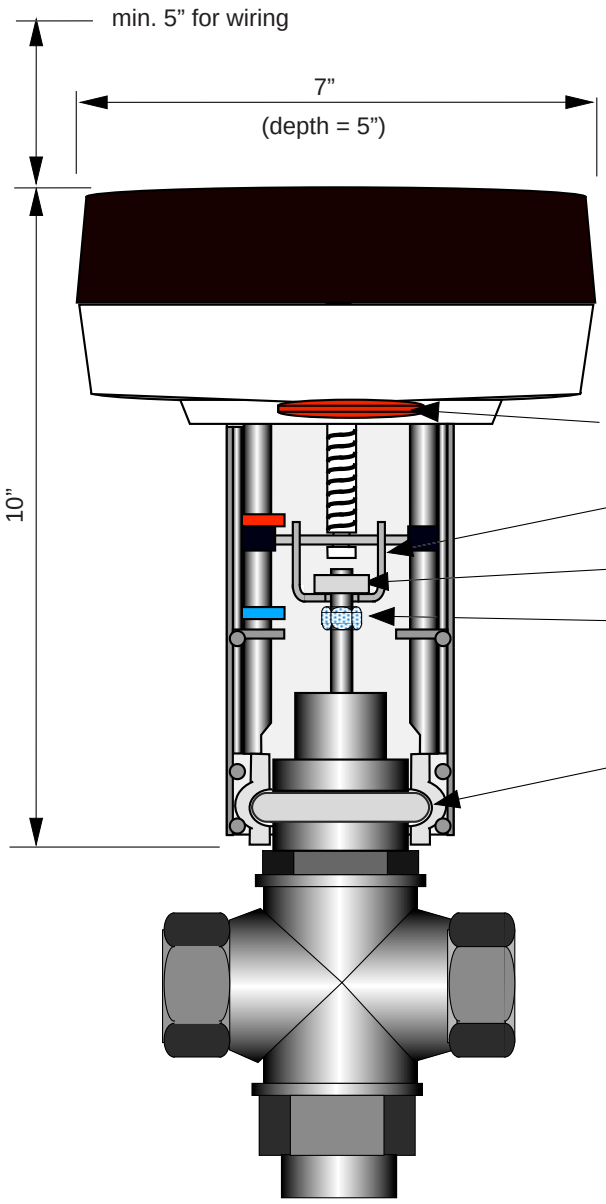
VM400, VM800, VM1500, Installation Instructions



Valves 1/2” - 2”

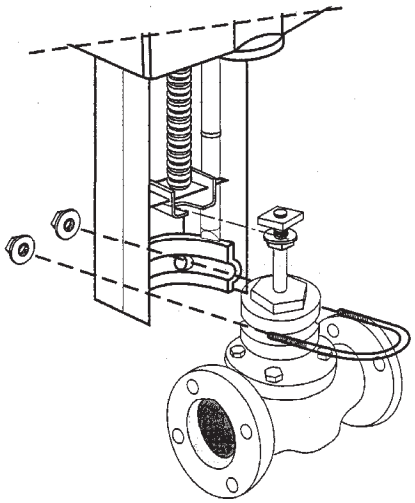
To operate the valve manually, flip the red lever down and turn. Flip it back up to restore automatic operation.

Stem connector (part of actuator)

Square nut M8 thread
(comes with actuator)

Stem lock nut

Bonnet U-bolt
(comes with actuator)



Drawing shows the actuator mounted on the VB series bronze valves.

When used on the V43 series stainless steel valves, the square nut is replaced by a stem connector that comes with the valve.

All three actuator models have the same dimensions.

Thread the locknut and square nut onto the valve stem. If a stem adapter is used thread it onto the stem as far as it will go.

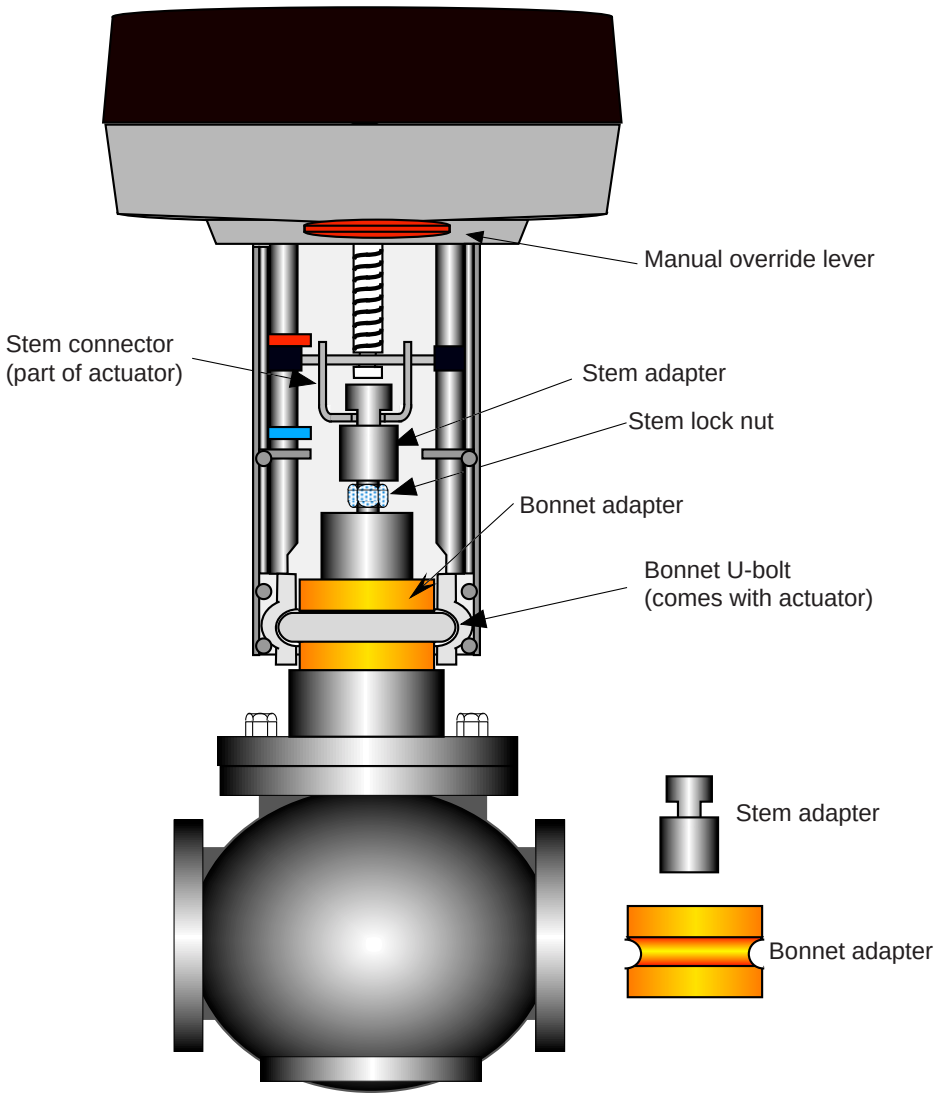
Position the valve stem or the actuator linkage so that the stem connector can slide under the square nut or through the slot of the stem adapter when the actuator is pushed over the valve bonnet.

Put the U-bolt through the grooves in the linkage and bonnet. Add and tighten the U-bolt nuts. Tighten the stem lock nut against the bottom of the stem connector.

To remove the actuator from the valve, remove the nuts from the U-bolt and loosen the stem locknut.

Valves with a threaded bonnet require a separate bonnet adapter.

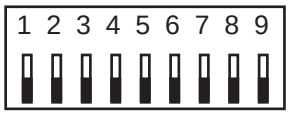
Actuator mounted on valves 2 1/2” and up.



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.

ON



Factory default: All switches OFF

Dip Switch Settings

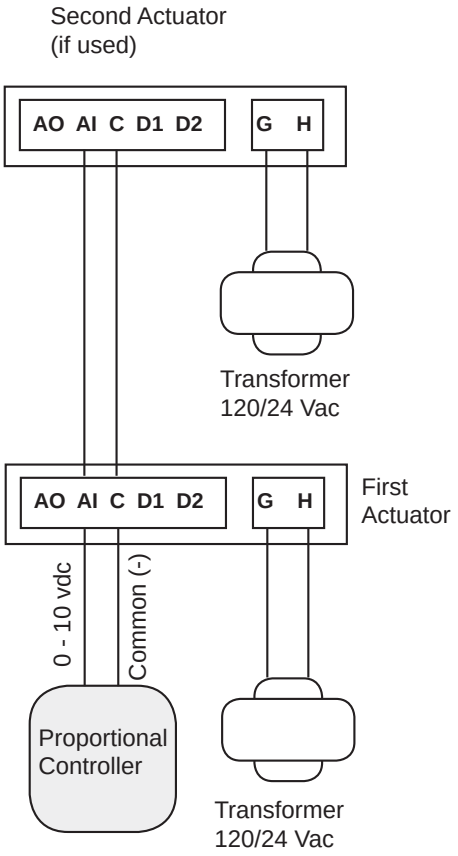
Switch	OFF	ON
1	Actuator stem retracts on start-up	Stem extends on start-up
2	Modulating 2 - 10 Vdc or 0 - 10 Vdc Signal	3 point floating (see also switch 5)
3	Full range control signal	Split range control signal
4	0 - 10 volt control signal (0 - 20 mA)	2 - 10 volt control signal (4 - 20 mA)
5	0- 5 (2-6) 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 percentagevalves to linear and linear valves to quick opening.
9	Normal operation	Valve stroke adjustment. With switch 9 ON momentarily, the actuator self-adjusts to the stroke of the valve.

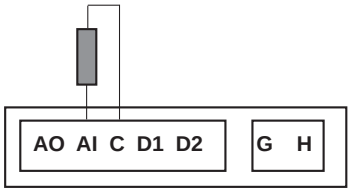
Wiring Terminal Markings

New (Label)	Old (On circuit board)		
AO	Y	Feedback signal	2 - 10 Vdc
AI	X1	Input signal	0 -10 or 2 - 10 Vdc
C	MX	Input neutral	0 Vdc
D1	VH	Floating input signal stem up	24 Vac
D2	VC	Floating input signal stem down	24 Vac
*	G1	Power output for tac devices	16 Vdc
H	G	Power in	24 Vac
G	GO	Power & signal neutral	24 Vac

***/** This terminal is blank on the new label

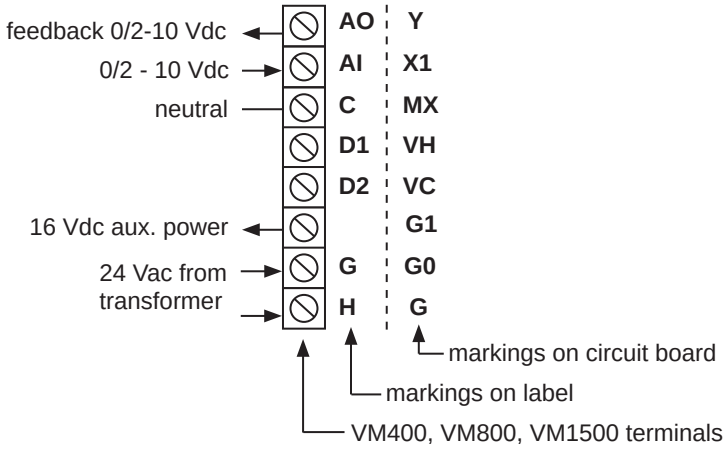
Proportional Control



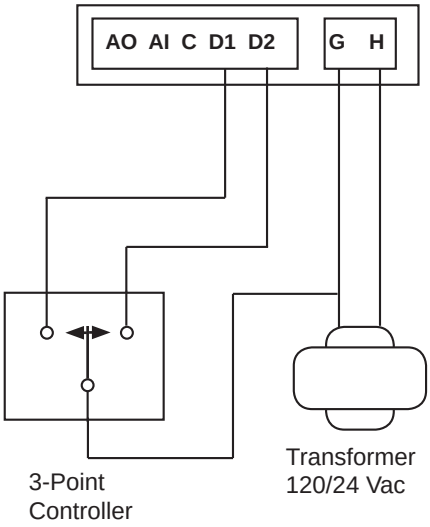


Add a 500 ohm resistor (included) when using a mA control signal.

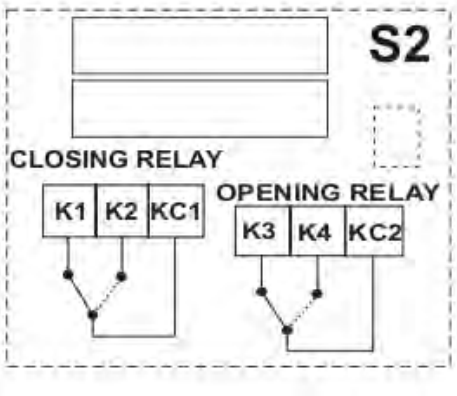
Terminal markings



3-point floating Control



Auxiliary Switches



Switches are only available in the -2S models