



For 3-Wire Floating or Proportional Control of 15 to 50 mm Globe Valves

General

The MVB Series valve actuators are designed for 3-wire floating / on-off, proportional voltage / current control for 2-way and 3-way globe valves from 15 to 65 mm. All units are equipped with a manual override device.

The MVB Series actuator features a reversible synchronous motor with an integral magnetic clutch to eliminate the need for position switches and enhance the overall reliability of the actuator. Position feedback for MVB46 from a 0 - 1000 Ω potentiometer is available as an option (ordered separately) while position feedback signal of 0 - 10 VDC or 0 - 200 μ A is available on MVB56 as a standard feature. An auxiliary switch is also available as an accessory (ordered separately).

Installation

For ease of installation, the MVB Series actuator mounts directly onto the a VSB Series or VSBF Series valve in minutes, without the need for linkages or field calibration of its travel or span.

The MVB Series actuator is furnished with a "time out" feature to extend the life of the drive motor. When an open or close signal has been sustained for more than 130 seconds, the circuit board turns off the motor until the control signal changes.



Field Selection

For best control results, the MVB actuator can be controlled by virtually any proportional voltage or current input. The circuit board allows the user to select one of seven different operating ranges, as well as the direction of stroke.

Note

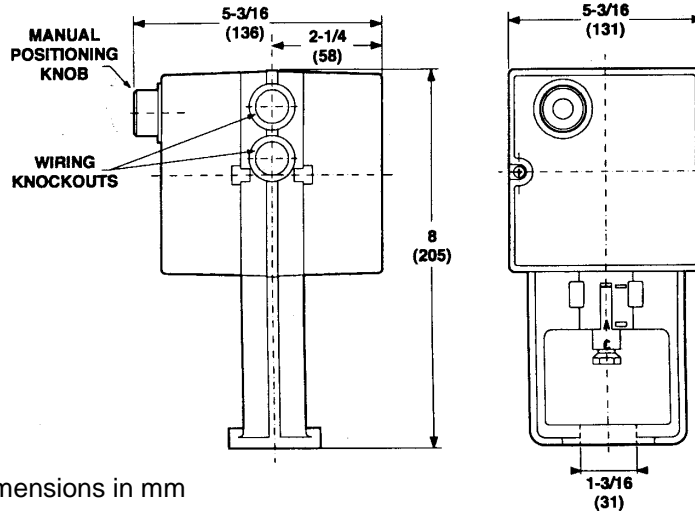
To change the control action to reverse, reposition jumper SW2 to "A" position. The control operating range can also be changed by repositioning jumper SW1 to the desired operating range.

SW2 Settings:

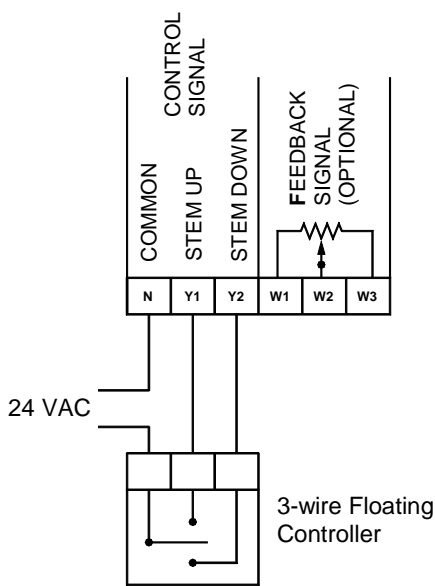
- C Stem goes down upon increase in signal
- A Stem goes up upon increase in signal

The specification above are normal and conform to generally acceptable industry standard. Cyrus is not responsible for damages resulting from misapplication or misuse of its products.

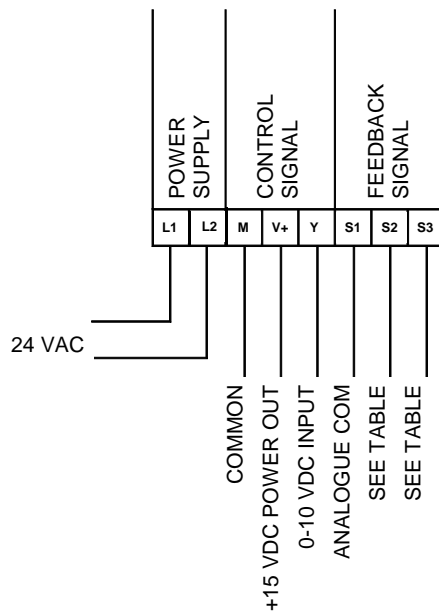
VALVE ACTUATOR MVB



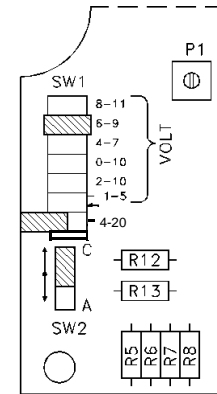
Dimensions in mm



MVB46 Wiring Diagram



MVB56 Wiring Diagram



MVB56 Circuit Board Detail

Feedback	Voltage output		Current output		
	Terminals	S2&M	S3&M	S2&S1	S3&S1
Stem up	10 V	0 V	200 μ A	0 μ A	
Stem down	0 V	10 V	0 μ A	200 μ A	

(L2 and M are internally con-

Specifications

Model Numbers	MVB46	MVB56
Control Signal	3-Wire Floating (Incremental) or on/off	(6-9,0-10,1-5,2-10,4-7,8-11) VDC or 4-20 mA
Input Impedance	N/A	100 k Ω
Feedback Signal	0 –1000 Ω potentiometer	0-10 VDC or 0-20 μ A
Power Supply	24 VAC (+15%, -10%), 50/60 Hz	
Power consumption	5 VA	
Stroke Time	65 sec (50 Hz) or 54 sec (60 Hz)	
Maximum Stroke	21 mm	
Close-off Force	450 N (100 lbf)	
Ambient Operating Limits	-15...50 $^{\circ}$ C RH80%	
Agency Approval	CE Mark Compliant	
Shipping Weight	1.05 kg (2.3 lbs)	