

VA-6100 Series Electric Valve Actuators

Description

VA-6100 Series Electric Valve Actuators use a synchronous motor to accurately position Johnson Controls® VG2000 Series Cast Iron Flanged Globe Valves in HVAC and industrial applications. These non-spring-return electric actuators have a 1,350 lb (6,000 N) force output for on/off (floating) or proportional control. Integral auxiliary switches are available to indicate end-stop position or to perform switching functions. Position feedback is also available through an isolated 2,000 ohm potentiometer at a fixed stroke of 1-21/32 in. (42.07 mm). All models feature a manual hand wheel for manual positioning of the valve, independent of a power supply.

Refer to the *VA-6100 Series Electric Valve Actuators Product Bulletin (LIT-977284)* for important product application information.

Features

- synchronous motor with pressure switches provides a constant running speed and establishes fixed closeoff forces
- two-bolt coupler clamp provides quick and easy coupling of the actuator to the valve stem

- on/off (floating) or proportional control allows optimal choice of control signal
- adjustable starting point, span, and action (proportional control model only) provides application flexibility and allows for easy sequencing from only one output signal
- 0 to 10 VDC or 0 to 20 mA position feedback signal (proportional control model only) provides accurate valve position indication in response to an input signal up to 10 VDC or 20 mA
- auxiliary switches and feedback potentiometer available on select models provides independent verification of actuator position
- manual hand wheel allows for manual positioning of the valve, independent of a power supply

Repair Information

If the VA-6100 Series Electric Actuator fails to operate within its specifications, replace the unit. For a replacement actuator, contact the nearest Johnson Controls representative.



VA-6100 Series Electric Valve Actuator

Selection Chart

Description	Actuator Model	
	VA-6100-AGC	VA-6100-HGC
On/Off (Floating) Control	■	—
Proportional Control	—	■
Feedback:		
2,000 Ohm Potentiometer	■	—
Two Auxiliary Switches	■	■
0 to 10 VDC or 0 to 20 mA Output	—	■
Stem and Valve Size:		
N Stem (1/2 in.), 4 through 6 in. Valves	■	■

Accessories

Code Number	Description	Ship. Wt., lb ¹
VA-3100-501	Mounting Kit for Field Mounting VA-6100 Series Electric Actuators to 5 and 6 in. VG2000 Series Cast Iron Flanged Globe Valves with 1/2 in. N Stem (Kit Includes One Stem Jam Nut, One Yoke Adaptor, One Packing Nut, and One Stem Adaptor)	3.5

1. 1 lb x 0.454 = kg.

Technical Specifications

VA-6100 Series Electric Valve Actuators		
Force Output		1,350 lb (6,000 N)
Power Requirements	VA-6100-AGC Only	20 to 28 VAC, 60 Hz; 37 VA Minimum
	VA-6100-HGC Only	20 to 28 VAC, 60 Hz; 42 VA Minimum
Input Signal	VA-6100-AGC Only	20 to 28 VAC, 60 Hz
	VA-6100-HGC Only	0 to 10 VDC or 0 to 20 mA; Minimum Control Signal Adjustable 0 to 8 VDC or 0 to 16 mA; Maximum Control Signal Adjustable 2 to 10 VDC or 4 to 20 mA ¹
Input Impedance	VA-6100-HGC Only	10,000 Ohms with 0 to 10 VDC Input; 500 Ohms with 0 to 20 mA Input
Feedback Signal	VA-6100-AGC Only	0 to 2,000 Ohms
	VA-6100-HGC Only	0.35 to 9.65 VDC or 0.7 to 19.3 mA
Switch Contact Rating		5 A, 24 VAC
Maximum Stroke		1-21/32 in. (42 mm)
Nominal Timing for 1-1/2 in. Stroke		111 Seconds
Ambient Operating Temperature Limits (Limited by the Actuator)		-4 to 140°F (-20 to 60°C)
Agency Compliance		UL 873 Listed, File E27734, CCN XAPX; cUL C22.2 No. 24-93 Listed, File E27734, CCN XAPX7
Enclosure Rating		NEMA 4, IP 65
Shipping Weight		16.5 lb (7.5 kg)

1. The maximum control signal must always exceed the minimum control signal by at least 2 VDC or 4 mA.