VA-6100 Series Electric Valve Actuators Catalog Page

2019-10-29 LIT-1900066

Description

Figure 1: VA-3100 Series Electric Valve Actuator



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 VDC to 10 VDC or 0 mA 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.

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 VSC to 10 VDC or 0 mA to 20 mA output	—	▪
Stem and valve size:		
N stem (1/2 in.), 4 in. through 6 in. Valves	▪	▪

Johnson Controls

Accessories

Table 1: Accessories

Code number	Description	Ship. Wt., lb[1]
VA-3100-501	Mounting kit for field mounting VA-6100 Series Electric Actuators to 5 in. 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 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 VAC to 28 VAC, 60 Hz; 37 VA minimum
	VA-6100-HGC only	20 VAC to 28 VAC, 60 Hz; 42 VA minimum
Input signal	VA-6100-AGC only	20 VAC to 28 VAC, 60 Hz
	VA-6100-HGC only	0 VDC to 10 VDC or 0 mA to 20 mA; Minimum control signal adjustable 0 VDC to 8 VDC or 0 mA to16 mA; Maximum control signal adjustable 2 VDC to 10 VDC or 4 mA to20 mA [1]
Input impedance	VA-6100-HGC only	10,000 ohms with 0 VDC to 10 VDC input; 500 ohms with 0 mA to 20 mA input
Feedback signal	VA-6100-AGC only	0 to 2,000 ohms
	VA-6100-HGC only	0.35 VDC to 9.65 VDC or 0.7 mA to 19.3 mA
Switch contact rating		5 A, 24 VAC
Maximum stroke		1-21/32 in. (42 mm)
Nominal timing for1-1/2 in. stroke		111 seconds
Ambient operating temperature limits (limited by the actuator)		-4°F to 140°F (-20°C 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.

Product warranty

This product is covered by a limited warranty, details of which can be found at www.johnsoncontrols.com/buildingswarranty.

Single point of contact

APAC	Europe	NA/SA
JOHNSON CONTROLS C/O CONTROLS PRODUCT MANAGEMENT NO. 32 CHANGJIANG RD NEW DISTRICT WUXI JIANGSU PROVINCE 214028 CHINA	JOHNSON CONTROLS VOLTAWEG 20 6101 XK ECHT THE NETHERLANDS	JOHNSON CONTROLS 507 E MICHIGAN ST MILWAUKEE WI 53202 USA

© 2021 Johnson Controls. All rights reserved. All specifications and other information shown were current as of document revision and are subject to change without notice.
www.johnsoncontrols.com

Johnson Controls