VA-7700 Series Electric Non-Spring Return Actuators Catalog Page

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Description

Figure 1: VA-7700 Series Electric Non-Spring Return Actuator



The VA-7700 Series Electric Non-Spring Return Actuators are synchronous motor-driven actuators for valves in HVAC applications. These compact actuators are available for floating or proportional control. The VA-7700 Series Electric Actuators provide a stroke capability of 3/8 in. (8 mm) to a maximum 3/4 in. (20 mm). They have a 90 lb (400 N) force minimum and respond to a variety of input signals.

The VA-7700 Series Electric Actuators can be combined with Johnson Controls® VG7000 and VB Series Valves in accordance with the maximum close-off pressure ratings specified.

Refer to the *VA-7700 Series ElectricNon-Spring Return Actuators Product Bulletin (LIT-12012122)* for important product application information.

Features

- Self-adjusting proportional electric actuators allow for easy, quick, and precise commissioning and servicing
- Column of five LEDs allows easy visualization of the electric actuator stroke position and status
- IP54 protection class allows for installation in a wide range of environments
- Unique c-shaped yoke design allows for lateral mounting of the electric actuator, reducing the vertical space required over the valve for installation
- Positioner with selectable zero and span adjustment and direct and reverse action modes enables sequence control
- Magnetic clutch provides constant output force for closeoff of valves, and protects the motor in stall conditions
- Signal failure position preset indicates a control signal failure in the electric actuator

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Applications

The VA-7700 Series Electric Actuators are available for use with floating and proportional controllers.

Each electric actuator is installed directly on VG7000 Series threaded valves using a jam nut (included with the electric actuator).

Selection charts

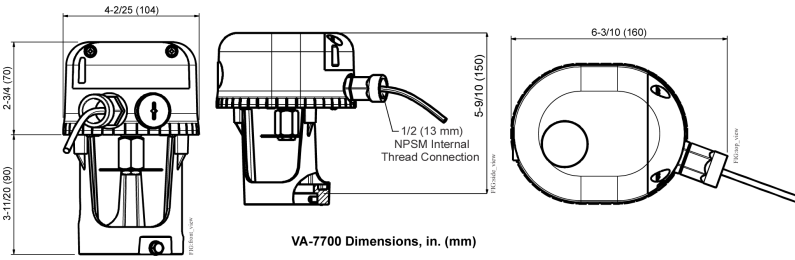
Table 1: VA-7700 Series Electric Non-Spring Return Actuators

Code number	Power supply	Control type	Manual override	Valve combination
VA-7700-AGA-2	24 VAC	Floating	No	VG7000 and VB Series
VA-7700-GGA-2	24 VAC	Proportional (0 to 10 VDC/0(4) to 20 mA)	Electrical	VG7000 and VB Series

Repair information

If the VA-7700 Series Electric Non-Spring Return Actuator fails to operate within its specifications, replace the unit. For a replacement electric actuator, contact the nearest Johnson Controls® representative.

Figure 2: VA-7700 Dimensions, in. (mm)



Technical specifications

Table 2: Technical specifications

VA-7700 Series Electric Non-Spring Return Actuators		
Product	VA-7700-AGA-2 Floating model	VA-7700-GGA-2 Proportional model
Power requirement	24 VAC (20.4 VAC to 27.6 VAC) at 50/60 Hz: Class 2 (North America) or SELV (Europe), 3.2 VA running	24 VAC (20.4 VAC to 27.6 VAC) at 50/60 Hz: Class 2 (North America) or SELV (Europe), 4.3 VA running
Input signal/adjustments	N/A	0 VDC to 10 VDC 0(4) mA to 20 mA Adjustable zero and span
Control input impedance	N/A	0 VDC to 10 VDC: 100k ohms
feedback signal	N/A	0 VDC to 10 VDC
Motor	Impedance protected motor	
Force minimum	90 lb (400 N)	
Stroke range	4/5 in. (20 mm) maximum	
Movement type	Linear	
Stroke time normal	3/8 in. (8 mm) at 50 Hz: 84 seconds at 60 Hz: 70 seconds 1/2 in. (13 mm) at 50 Hz: 137 seconds at 60 Hz: 114 seconds 3/4 in. (19 mm) at 50 Hz: 200 seconds at 60 Hz: 167 seconds	
Cycles	250,000 full-stroke cycles	
Audible noise rating	Less than 30 dBA at 39-13/32 in. (1 m)	
Electrical connections	120 in. (3.05 m) UL 444 Type CMP plenum-rated cable with 19 AWG (0.75 mm²) conductors and1/4 in. (6 mm) ferrule ends	
Conduit connections	1/2 in. (13 mm) NPSM threaded conduit connectors	
Valve compatibility	Johnson Controls VB Series Brass Flare Valves and VG7000 Series Bronze Control Valves	
Enclosure	IP54/NEMA 2	
Operating ambient conditions	23°F to 131°F (-5°C to 55°C); 90% RH maximum, noncondensing	

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Table 2: Technical specifications

VA-7700 Series Electric Non-Spring Return Actuators		
Storage ambient conditions	-4°F to 149°F (-20°C to 65°C); 90% RH maximum, noncondensing	
Dimensions	5-9/10 in. x 5-1/5 in. x 6-2/5 in. (150 mm x 131 mm x 162 mm)	
Compliance	United States	UL Listed, CCN XAPX, File E194024; to UL60730-1 Automatic Electric Controls for Household and Similar Use, Part 1: General Requirements. Fourth Edition, dated November 13, 2013; and UL 60730-2-14 Automatic Electrical Controls for Household and Similar Use; Part 2: Particular Requirements for Electric Actuators, Second Edition, Dated February 27, 2013. Plenum-Rated (UL 2043). Suitable for use in other environmental air space (plenums) in accordance with Section 300.22 (C) of the National Electric Code.
c UL LISTED	Canada	UL Listed, CCN XAPX7, File E194024; to CAN/CSA-E60730-1:02, Standard for Automatic Electrical Controls for Household and Similar Use, Part 1: General Requirements, Third Edition, dated July 2002; and Amendment, February 1, 2007.
CE	Europe	CE Mark - Johnson Controls declares that this product is in compliance with the essential requirements and other relevant provisions of the EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC.
Shipping weight	2.85 lb (1.25 kg)	

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

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