VA-9070 Series Electric Rotary Actuators for Two-Position and Modulating Service Catalog Page

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Description

Figure 1: VA-9070 Series Electric Rotary Actuators



The VA-9070 Series Electric Rotary Actuators for Two-Position and Modulating Service are designed for direct mounting on VF Series Butterfly Valves. The VA-9070 is available in eight different sizes, for two-position and modulating service on VF Series Standard-Pressure, Standard-Temperature Butterfly Valves and VF Series High-Pressure, High-Temperature Butterfly Valves.

Refer to the *VA-9070 Series Electric Rotary Actuators for Two-Position and Modulating Service Product Bulletin (LIT-977319)* for important product application information.

Features

- Low profile and lightweight design
- Built-in motor overload protection
- Pre-wired actuator switches to terminal block; field-configurable power and input signals
- Patented travel limit switch cam design
- External manual handwheel override
- Rugged, die-cast aluminum National Electrical Manufacturers' Association (NEMA) 4, 4X, IP65 Type enclosure and captive housing screws
- Valve status display
- Heater/thermostat

Repair information

If the VA-9070 Series Electric Rotary Actuators for Two-Position and Modulating Service fails to operate within its specifications, refer to the *VA-9070 Series Electric Rotary Actuators for Two-Position and Modulating Service Product Bulletin (LIT-977319)* for a list of repair parts available.

Selection charts

Table 1: Code numbers and cross-reference data

Johnson Controls® actuator only code number	Johnson Controls® VF Series Butterfly Valve Assembly Actuator sub-code	Bray® series number
Electric two-position models		
VA-9072-02	-722	S70-006 on-off
VA-9075-02	-725	S70-020 on-off
VA-9076-02	-726	S70-030 on-off
VA-9077-02	-727	S70-050 on-off
VA-9078-02	-728	S70-065 on-off
VA-9072-12	-722D4	S70-006 on-off, AC 24V
VA-9075-12	-725D4	S70-020 on-off, AC 24V
VA-9077-12	-727D4	S70-050 on-off, AC 24V
VA-907A-02	-927	S70-130 on-off
VA-907B-02	-928	S-180 on-off
Electric modulating models		
VA-9072-01	-702	S70-006 modulating

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Table 1: Code numbers and cross-reference data

Johnson Controls® actuator only code number	Johnson Controls® VF Series Butterfly Valve Assembly Actuator sub-code	Bray® series number
VA-9075-01	-705	S70-020 modulating
VA-9076-01	-706	S70-030 modulating
VA-9077-01	-707	S70-050 modulating
VA-9078-01	-708	S70-065 modulating
VA-9072-11	-702N4	S70-006 modulating, AC 24V
VA-9075-11	-705N4	S70-020 modulating, AC 24V
VA-9077-11	-707N4	S70-050 modulating, AC 24V
VA-907A-01	-907	S70-130 modulating
VA-907B-01	-908	S70-180 modulating

Accessories

Table 2: Accessories

Description		Code number
Servo kit	For 120V models of VA-9070 Series Modulating Electric Actuators	VA-907x-630
	For 24V models of VA-9070 Series Modulating Electric Actuators	VA-907x-634
Thermostat/heater kit	For all models of VA-9070 Series Two-Position and Modulating Electric Actuators	VA-907x-609
Mounting and Adaptor Kits for Standard- Pressure, Standard- Temperature Two-Way VF Series Butterfly Valves	Mounts VA-9072 Series Two-Position and Modulating Electric Actuators on 2 through 3 in. valves	VA-9072-300
	Mounts VA-9072 Series Two-Position and Modulating Electric Actuators on 4 in. valves	VA-9072-400
	Mounts VA-9072 Series Two-Position and Modulating Electric Actuators on 5 and 6 in. valves	VA-9072-600
	Mounts VA-9075 Series Two-Position and Modulating Electric Actuators on 4 in. valves	VA-9075-400
	Mounts VA-9075 Series Two-Position and Modulating Electric Actuators on 5 and 6 in. valves	VA-9075-600
	Mounts VA-9075 Series Two-Position and Modulating Electric Actuators on 8 in. valves	VA-9075-800
	Mounts VA-9075 Series Two-Position and Modulating Electric Actuators on 10 and 12 in. valves	VA-9075-1200
	Mounts VA-9076, VA-9077, and VA-9078 Series Two-Position and Modulating Electric Actuators on 8 in. valves	VA-9078-800
	Mounts VA-9076, VA-9077, and VA-9078 Series Two-Position and Modulating Electric Actuators on 10 and 12 in. valves	VA-9078-1200
	Mounts VA-9076, VA-9077, and VA-9078 Series Two-Position and Modulating Electric Actuators on 14 and 16 in. valves Mounts VA-907A Series Two-Position and Modulating Electric Actuators on 16 in. valves	VA-9078-1600
	Mounts VA-9076, VA-9077, and VA-9078 Series Two-Position and Modulating Electric Actuators on 18 and 20 in. valves Mounts VA-907A Series Two-Position and Modulating Electric Actuators on 18 in. valves Mounts VA-907B Series Two-Position and Modulating Electric Actuators on 20 in. valves	VA-9078-2000
	Mounts VA-9072 Series Two-Position and Modulating Electric Actuators on 2 through 3 in. valves	VA-9072-300
	Mounts VA-9072 Series Two-Position and Modulating Electric Actuators on 4 in. valves	VA-9072-400
	Mounts VA-9072 Series Two-Position and Modulating Electric Actuators on 5 and 6 in. valves	VA-9072-600
Mounting and adaptor kits for Class 150 High-Pressure, High- Temperature Two-Way VF Series Butterfly Valves	Mounts VA-9072 Series Electric Actuators on 2-1/2 through 4 in. valves	VA-9072-410
	Mounts VA-9075 Series Electric Actuators on 5 in. and on 6 in. valves	VA-9075-610
	Mounts VA-9076 Series Electric Actuators on 8 in. valves	VA-9078-810
	Mounts VA-9077 Series Electric Actuators on 10 in. and VA-9078 Series Electric Actuators on 12 in. valves	VA-9078-1210
	Mounts VA-907A Series Electric Actuators on 14 in. valves	VA-9078-1600
	Mounts VA-907A Series Electric Actuators on 16 in. valves	VA-9078-2000

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Table 2: Accessories

Description		Code number
Mounting and adaptor kits for Class 300 High-Pressure, High- Temperature Two-Way VF Series Butterfly Valves	Mounts VA-9075 Series Electric Actuators on 2-1/2 through 4 in. valves	VA-9075-430
	Mounts VA-9075 Series Electric Actuators on 5 in. valves	VA-9075-530
	Mounts VA-9076 Series Electric Actuators on 6 in. valves	VA-9075-630
	Mounts VA-9077 Series Electric Actuators on 8 in. valves	VA-9075-830
	Mounts VA-907A Series Electric Actuators on 12 in. valves	VA-9078-1600
	Mounts VA-907B Series Electric Actuators on 14 in. valves	VA-9078-2000
Local control station	For all models of VA-9070 Series Modulating Electric Actuators; kit includes local and remote control switch, open-stop-close switch, and two LEDs for position indication (green for open and red for closed)	VA-907X-620
Auxiliary switch kits	Single auxiliary switch for VA-9074 and VA-9075 Series Modulating Electric Actuators	VA-907X-601
	Single auxiliary switch for VA-9076, VA-9077, and VA-9078 Series Modulating Electric Actuators	VA-907X-602
	Single auxiliary switch for VA-9074 and VA-9075 Series Two-Position Electric Actuators	VA-907X-603
	Single auxiliary switch for VA-9076, VA-9077, and VA-9078 Series Two-Position Electric Actuators	VA-907X-604
	Two auxiliary switches for VA-9074 and VA-9075 Series Two-Position Electric Actuators	VA-907X-605
	Two auxiliary switches for VA-9076, VA-9077, and VA-9078 Series Two-Position Electric Actuators	VA-907X-606
Feedback potentiometer kits	Feedback potentiometer kit, 5,000 Ohm, gear driven for VA-907x Series Proportional Non-Spring Return Electric Actuators	VA-907X-615

Table 3: VA-9070 Series Electric Rotary Actuators Motor Ratings and Operating Speeds

Actuator series: Johnson Controls code number (Bray series number)	50/60 Hz single phase motors: current rating in amperes at all speeds		Two-position and modulating speeds for 90° operation in seconds[1]
	VAC	Amperes	(Total gear ratio)
VA-9072 (S70-006)	120	1.0	30 seconds (11,151:1)
	24	1.8 at 60 Seconds	60 seconds
VA-9075 (S70-020)	120	1.0	30 seconds (3,340:1)
	24	2.0	60 seconds
VA-9076 (S70-030)	120	1.2	
VA-9077 (S70-050)	120	1.6	
	24	3.0	60 seconds
VA-9078 (S70-065)	120	2.3	
VA-907A (S70-130)	120	2.3	110 seconds (10,000:1)
VA-907B (S70-180)	120	2.5	

1 The duty cycle for two-position and modulating operation is 100% at a maximum ambient temperature of 104°F (40°C).

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Table 4: VA-9070 Series Electric Rotary Actuators Output Torque Values, Rim Pull, and Mounting Data

Actuator series: Johnson Controls code number (Bray series number)	Output torque lb·in (N·m)	Rim pull lb (kg)	Net weight lb (kg)
VA-9072 (S70-006)	600 (68)	22.8 (10.3)	12.0 (5.4)
VA-9075 (S70-020)	2,000 (226)	33.0 (15.0)	28.0 (12.7)
VA-9076 (S70-030)	3,000 (339)	33.0 (15.0)	48.0 (21.8)
VA-9077 (S70-050)	5,000 (565)	55.0 (25.0)	
VA-9078 (S70-065)	6,500 (734)	72.0 (32.7)	
VA-907A (S70-130)	13,000 (1,470)	80.0 (36.2)	118.0 (53.5)
VA-907B (S70-180)	18,000 (2,030)		

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Technical specifications

Table 5: VA-9070 Series Electric Rotary Actuators

Specification	Description
Supply voltage	120 VAC, 50/60 Hz or24 VAC 50/60 Hz
Limit switches	Two SPDT (Single-Pole, Double-Throw) switches rated for 10 amperes (75 to 80% power factor), 1/3 hp 120 VAC and1/2 hp 220 VAC
Control signal, proportional models	4 to 20 mA, 0 to 5 VDC, 0 to 10 VDC, or 2 to 10 VDC, field-selectable
Ambient temperature limits	-20°F to 150°F (-29°C to 66°C); heater/thermostat kit required below 32°F (0°C)
Agency listings	**Models for 120 VAC Voltage (VA-907x-0x):** UL File number E200414; CSA reference LR 78858; CE compliant. All VA-9070 actuators are CSA approved under Class 3211 07 Industrial Control Equipment - miscellaneous apparatus. The CSA certificate number is LR78858-4 issued July 1996 to Bray Controls for the Series 70 actuators, NEMA 4, and NEMA 4X.

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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