

GA(S)-Series – Submittal/Technical Data

10/03/19

The GA(S) Series is a direct mount line of linear motor actuators to be used primarily on PIC and globe valves. The patented drive-valve coupling allows the drive to be connected to the valve automatically as soon as the power is applied to the actuator. An external crank handle enables the desired position to be set manually as well. Microprocessor technology enables the actuator to identify the functions required and to adapt itself automatically to the control valve properties.

These actuators operate on 24V AC or DC, and all input signals- 0-10V or 4-20mA modulating output, or On/Off (2-point) or Floating (3-point) control. The actuator automatically detects the control signal applied via a 2 LED display.

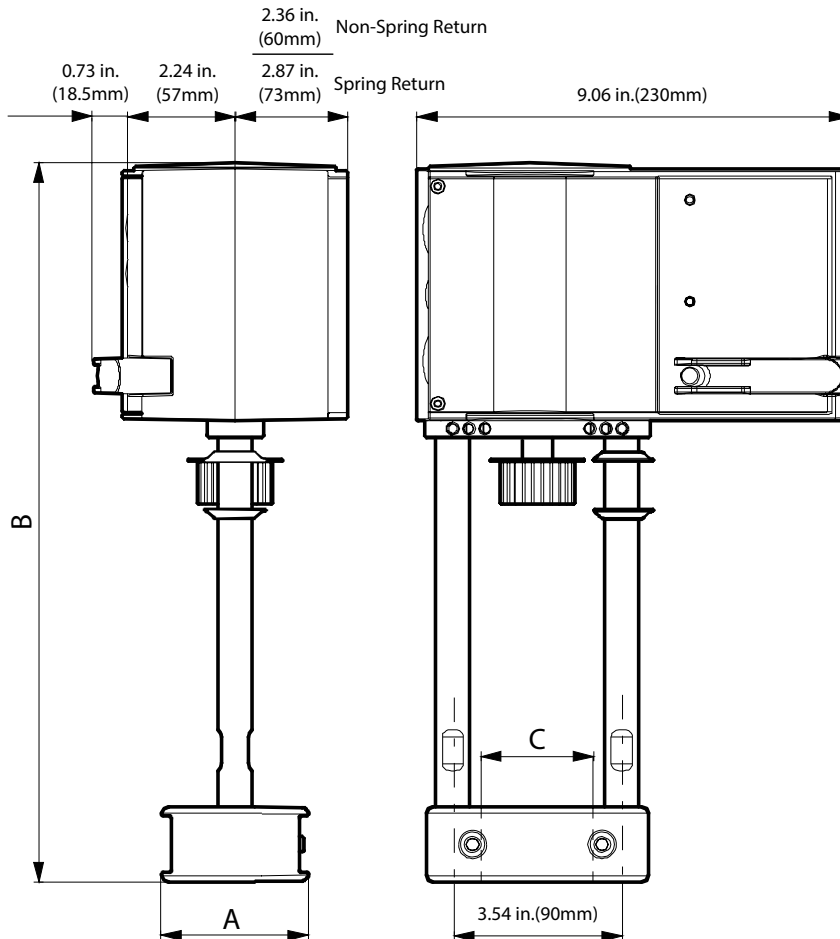
These actuators operate both 2 and 3-way valves and are available in non-spring return and spring return versions. The GA(S) series is bi-directional, selectable via screw terminals.



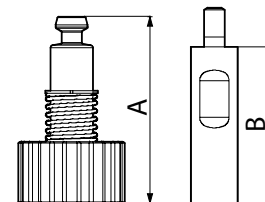
GA(S) Series Linear Valve Actuators

- Non-Spring Return - GA24-562
- Spring Return - GASRE24-450
- Spring Return - GASEX24-450

GA(S) Series - Dimensions



Adaptor for media temperatures between
266°F (130°C) and 464°F (240°C)



Description	A	B	C
GA(S) Series	2.52 in. (64mm)	11.38 in. (289mm)	1.73 in. (44mm)

Part Number	A	B
0372336 240	4.31 in. (109.4mm)	3.94 in. (100mm)

GA(S) Series - Actuator Specifications



Technical Specifications		
Non-Spring Return	GA24-562	On/Off, Floating and Modulating
Spring Return	GASRE24-450	On/Off, Floating and Modulating, Shaft Normally Retracted
	GASEX24-450	On/Off, Floating and Modulating, Shaft Normally Extended
Power Requirements	On/Off, Floating and Modulating	24 VAC ($\pm 20\%$) at 50/60 Hz or 24 VDC ($\pm 15\%$)
Positioner ¹	Control Signal 1	0 to 10 V, $R_i > 100 \text{ k}\Omega$
	Control Signal 2	4 to 20 mA, $R_i = 50 \Omega$
	Position Feedback Signal	0 to 10 V, Load $> 2.5 \text{ k}\Omega$
Action		Direct or Reverse Acting
Switching Range		300 mv
Power Consumption ²	Non-Spring Return	10W, 18VA
	Spring Return	7.5W, 20VA
Force	Non-Spring Return	562 lbs. (2,500 N)
	Spring Return	450 lbs. (2,000 N) Power stroke and spring stroke
Stroke		0" to 1.93" (0-49mm)
Max. Temperature of Medium ³		266°F (130°C)
Ambient Conditions	Temperature	14°F to 131°F (-10° to 55°C)
	Humidity	0 to 95% RH without condensation
Level of Protection		IP 66. Not intended for outdoor use without additional protection.
Enclosure		Self-extinguishing plastic
Gear Materials	Gears & Gearbox	Steel
	Mounting Column	Stainless Steel
	Mounting Bracket	Cast Light Alloy
Electrical Connection		13 AWG (2.5 mm ²) with screw terminals. Three knock-out cable entries for M20×1.5 (2×) and M16×1.5
Motor Run Time sec. per in. (mm)		51 (2), 102 (4), 153 (6), Dip Switch Adjustable
Spring Run Time ⁴		15... 30 seconds
Number of Spring Returns		> 40,000
Response Time - 3-Point		200 ms
Weight	Spring Return	12.3 lbs. (5.6 kg)
	Non-Spring Return	9.1 lbs. (4.1 kg)
UL Listed		Temperature-Indicating and Regulating Equipment, XAPX, XAPX7. File E366456

¹ Also for On/Off (2-point) or Floating (3 point) depending on the connection for 24V~

² Design the transformers for this value, otherwise functional faults may occur.

³ An intermediate piece is required for medium temperatures between 266°F (130°C) and 464°F (240°C)

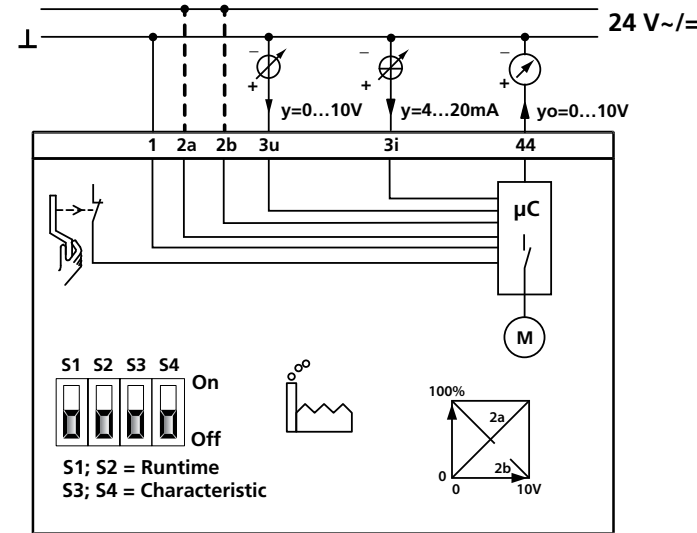
⁴ The return time corresponds to a stroke of 0.55 in. (14 mm) to 1.58 in. (40 mm) and does not depend on the set run time.

Disclaimer - The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Bray office. Bray, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.

GA(S) Series - Wiring

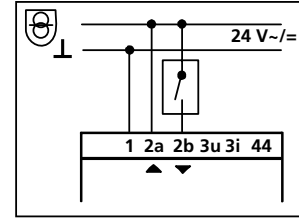
Non-Spring Return

Modulating

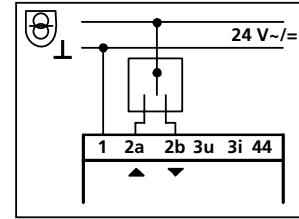


- Y = modulating signal
 1= Neutral/Common for power and signal
 2a/2b- These terminals determine forward acting/reverse acting. One should be powered with 24V.
 2a = Extends. 0 volts = 0% extended. 10V = 100% extended
 2b = Retracts. 0 volts = 100% extended. 10V = 0% extended
 3u = 0 .. 10 V, in case of control by voltage
 3i = 4 .. 20 mA, in case of control by current
 44 = 0 .. 10 V Feedback, independent from the use of 3u or 3i

On/Off (2 Point)



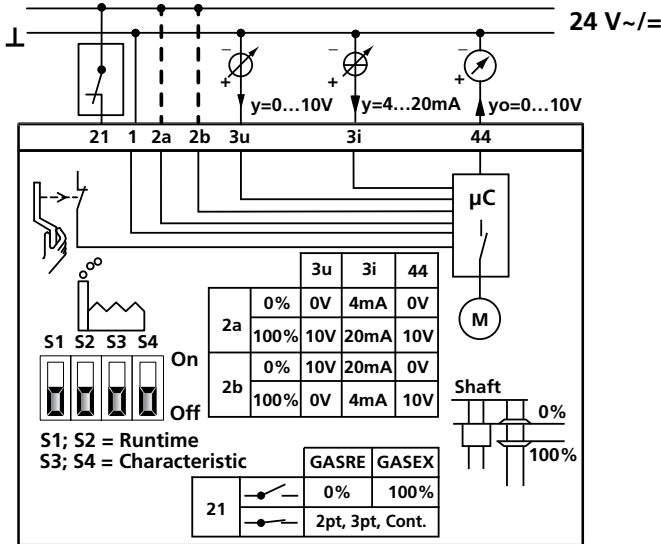
Floating (3 Point)



= Extra Low Voltage

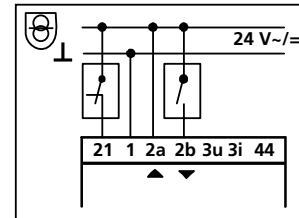
Spring Return

Modulating

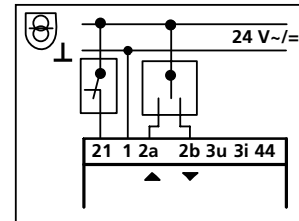


- Y = modulating signal
 21= Latch voltage for the spring. Lose of power here causes the spring to drive to the fail position.
 1= Neutral/Common for power and signal
 2a/2b- These terminals determine forward acting/reverse acting. One should be powered with 24V.
 2a = Extends. 0 volts = 0% extended. 10V = 100% extended
 2b = Retracts. 0 volts = 100% extended. 10V = 0% extended
 3u = 0 .. 10 V, in case of control by voltage
 3i = 4 .. 20 mA, in case of control by current
 44 = 0 .. 10 V Feedback, independent from the use of 3u or 3i

On/Off (2 Point)



Floating (3 Point)



= Extra Low Voltage

Options

0372333 001
 0372333 002
 (Auxillary Switches)

