

CLARK SOLUTIONS

ES62A, ES75A & ES142A Spring Return Electric Actuators

Two Position Control, 62, 76 & 142 in-lb

The ES75A and ES142 (24 VAC or 115 VAC) and the ES62A (24 VAC/VDC or 115 VAC) direct coupled two-position spring return electronic actuators are for control of building HVAC dampers or valves.

These actuators are used for the control of valves or dampers requiring up to 62 in-lb (7 N-m), 75 in-lb (8.5 N-m) or 142 in-lb (16 N-m) of torque. They are designed for applications that require the valve or damper to return to its fail-safe position

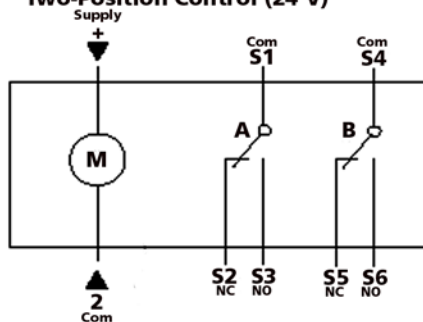
FEATURES

- Brushless DC motor technology with stall protection
- Bi-directional fail-safe spring return
- Unique self-centering shaft coupling
- Access to all functions from either side of the actuator
- All metal housing
- Manual override
- 5 ° pre-load as shipped from factory
- Models with independently adjustable dual auxiliary switches available
- UL, CSA approved; CE rating for ES62

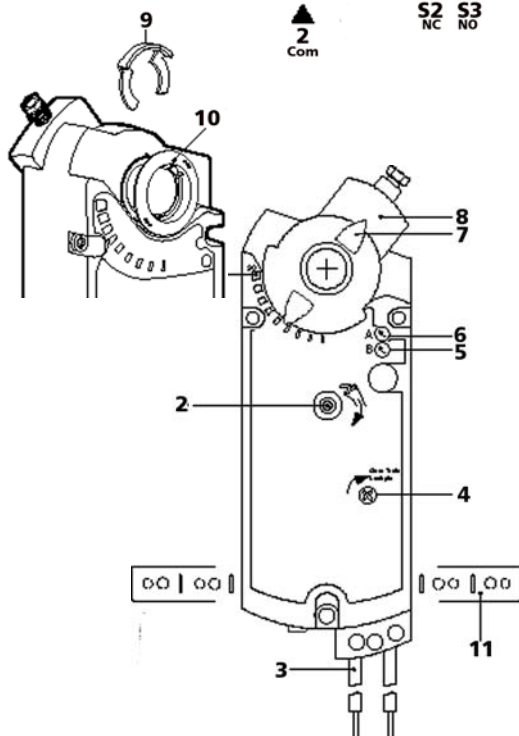
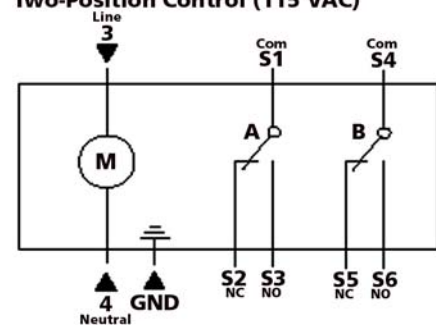


WIRING & COMPONENTS

Two-Position Control (24 V)



Two-Position Control (115 VAC)



1. Positioning scale for angle of rotation
2. Manual override wrench opening and direction of rotation arrow
3. Connection cables
4. Gear train lock pin
5. Auxiliary switch B (-S option)
6. Auxiliary switch A (-S option)
7. Position indicator
8. Standard or self-centering shaft adapter*
9. Shaft adapter locking clip
10. Position indicator adapter
11. Mounting bracket* Self-centering shaft adaptor shown

*Self-centering shaft adapter shown

OPERATION

Two Position: When power is applied, the actuator coupling moves toward the "90 °" position. In the event of a power failure, or when operating voltage is turned off, the actuator returns to the "0" position..

Actuator Model Number Table						
Torque	Input Signal	Cabling	24 VAC Operating Voltage		115 VAC Operating Voltage	
			Standard	Dual Auxiliary Switches	Standard	Dual Auxiliary Switches
62 in-lb min. (7 N-m)	Two-Position	Std. or Plenum	ES62A2	ES62A2-S	ES62A1	ES62A1-S
75 in-lb min. (8.5 N-m)	Two-Position	Std. or Plenum	ES75A2	ES75A2-S	ES75A1	ES75A1-S
142 in-lb min. (16 N-m)	Two-Position	Std. or Plenum	ES142A2	ES142A2-S	ES142A1	ES142A1-S

Specifications	ES62A2(S)	ES62A1(S)	ES75A2(S)	ES142A2(S)	ES75A1(S)	ES142A1(S)
Power supply	24 VAC ±20% 24VDC ±15% 50/60Hz	120 VAC ±10% 50/60Hz	24 VAC ±20%, -15% 50/60Hz		115 VAC ±15% 50/60Hz	
Transformer sizing	(class 2 power source required for UL)					
Power consumption	5 VA running	7 VA running	8 VA running		9 VA running	
Electrical connection	3', 18 AWG, BX conn. Plenum Cable	3', 18 AWG, BX conn.	3', 18 AWG, BX conn. Plenum Cable		3', 18 AWG, BX conn. Standard Cable	
Overload protection	electronic throughout 0° to 95° rotation					
Manual override	3mm hex crank, Shipped with actuator					
Angle of rotation (max.)	95°					
Minimum torque	62 in-lb	62 in-lb	75 in-lb	142 in-lb	75 in-lb	142 in-lb
Direction of rotation	Direction & Direction spring return, selectable when ordering (CW=clockwise Direction with power, counterclockwise by spring; CCW=reverse of CW)					
Position indication	Visual Indicator, -5° to 90° (-5° is spring return position)					
Shaft size	1/4" to 3/4" dia. 1/4" to 1/2" sq	3/8" to 1" dia. 1/4" to 3/4" sq				
Minimum shaft length	3/4" (20 mm)					
- Auxiliary switches (-S option)	24 to 250 VAC, 6 A res 12 to 30 VDC, 2A		Plenum 4A resistive, 24 VAC Plenum 2A inductive, 24 VAC		24 to 250 VAC, 6 A resistive 24 to 250 VAC, 2 A inductive	
Switch range (-S option)	0° to 90° with 5° intervals					
- Switch A	0° to 45°					
- Rec. range usage	5°					
- Factory setting	2°					
- Switching hysteresis	2°					
Switch range (-S option)	0° to 90° with 5° intervals					
- Switch B	45° to 90°					
- Rec. range usage	85°					
- Factory setting	2°					
- Switching hysteresis	2°					
Running time (nominal)	90 secs running spring return- 15 secs typ., (<60 secs. max. at -25°F)	150 seconds constant, independent of load, spring return: 25 sec. typ. (30 sec. max)	90 seconds constant, independent of load, spring return: 15 sec. typ. (30 sec. max)	150 seconds constant, independent of load, spring return: 25 sec. typ. (30 sec. max)	90 seconds constant, independent of load, spring return: 15 sec. typ. (30 sec. max)	90 seconds constant, independent of load, spring return: 15 sec. typ. (30 sec. max)
Humidity	5 to 95% RH noncondensing					
Housing type	NEMA type 1/IP40 according to EN60529; NEMA 4/4X housings available on request					
Housing material	Diecast aluminum alloy					
Ambient temperature	-25°F to 130°F (-32°C to 55°C)					
Storage temperature	-25°F to 158°F (-32°C to 70°C)			-40°F to 158°F (-40°C to 70°C)		
Noise level	40 dBA		max. 45 dBA			
Servicing	maintenance free					
Agency ratings	UL 873 or UL60730 listed, CE-UL certified to CSA C22.2 No. 24-93					
CE conformity	EMC: 89/336/EEC, Emissions: EN5081-1					
Immunity	IEN50082-2					
Quality standard	ISO 9002					
Weight	2.86 lbs (1.3 kg)			4.85 lbs (2.2 kg)		