

spirax sarco®

EL3500 Series Electric Actuator for 1/2" to 2" K & L Series Valves

Description

The EL3500 series actuators are suitable for either two position or modulating control. This actuator range can be used with the following valves:

2 Port L Series Valves • 2 Port K Series Valves

Operation

The drive of a synchronous motor is converted into a linear motion of the actuator stem by using a spur gear transmission. An integrated spring package limits the stem force to a pre-set value in both directions. Installed microswitches switch off the actuator precisely, when the specified stem force is reached.

Available types

The EL3500 series actuators are available in the following configurations:

Spring reserve actuators have the suffix SR or SE appended to the basic actuator code e.g. EL3501SE.

Where :

SR = Spring retract.

SE = Spring extend.

EL3501, 3502, 3512. Each available with spring reserve. The spring will either raise or lower the actuator spindle to match a safe closed / open state.

EL3501SE, 230 Vac operating voltage. Two position control from thermostat, time-switch or other device having mains rated change-over contacts. Modulating control from any VMD (valve motor drive) output.

EL3502SE, 24 Vac operating voltage. Two position control from thermostat, time-switch or other device having mains rated change-over contacts.

Modulating control from any controller having a 3 wire voltage output. Alternatively, modulating control from any controller with VMD (valve motor drive) output.

EL3512SR, EL3512SE, 24 Vac operating voltage with 0 to 10 Vdc, or 2 Vdc to 10 Vdc control signal. Modulating control from any controller providing this control signal.

Ambient limits

Storage temperatures -40° to 155°F (-40 to +70 °C) at 5 to 95 % RH

Operating temperatures 14° to 120°F (-10 to +50 °C) at 5 to 95 % RH

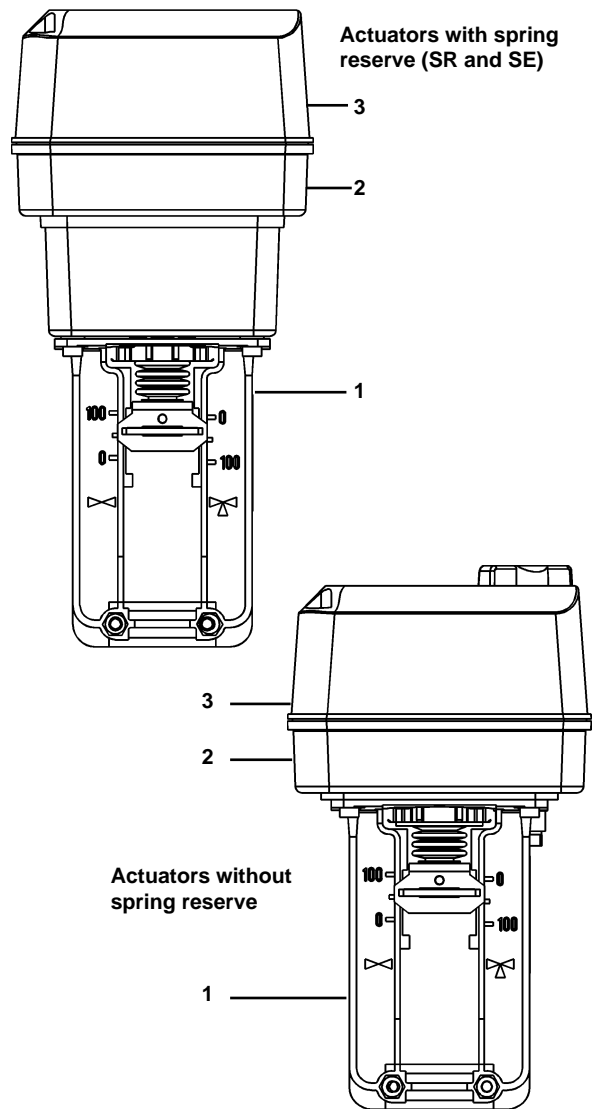
Maximum valve medium temperature 300°F (+150 °C)

Protection

IP rating	IP54
Insulation for EN 60730	Class II
Flame resistant to UL 94-V0 (with metal cable gland)	

Specifications

Model	EL3501	EL3502	EL3501SE	EL3502SE	EL3512	EL3512SE	EL3512SR
Supply voltage	230 Vac 50 / 60 Hz	24 Vac 50 / 60 Hz	230 Vac 50 / 60 Hz	24 Vac 50 / 60 Hz	24 Vac 50 / 60 Hz	24 Vac 50 / 60 Hz	24 Vac 50 / 60 Hz
Power consumption	6.5 VA	4 VA	12 VA	11 VA	5 VA	16 VA	16 VA
Actuator speed	3.1 s/mm	3.1 s/mm	5.3 s/mm	5.3 s/mm	3.1 s/mm	5.3 s/mm	5.3 s/mm
Control signal	230 Vac	24 Vac	230 Vac	24 Vac	0-10 / 2-10 Vdc	0-10 / 2-10 Vdc	0-10 / 2-10 Vdc
Spring reserve	NO	NO	YES	YES	NO	YES	YES



Materials

No.	Part	Material
1	Yoke	Aluminium die casting
2	Base	Glass fibre reinforced plastic
3	Cover	ABS-FR

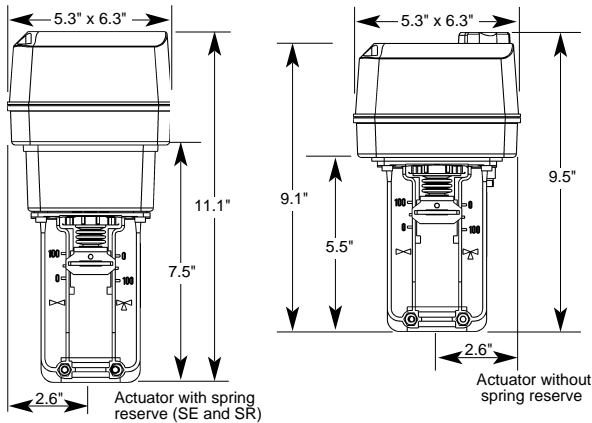
Local regulation may restrict the use of this product below the conditions quoted. Limiting conditions refer to standard connections only.

In the interests of development and improvement of the product, we reserve the right to change the specification.

TI-P321-13 US 04.01

EL3500 Series Electric Actuator

Description (approximate in inches)



Weight

Spring reserve (SE / SR)	5.2 lb	(2.4 kg)
Non spring reserve	2.9 lb	(1.3 kg)

Installation and wiring

The valve should be installed in the horizontal line. The position of the actuator will depend on the type of valve to which it is fitted. However, it is not recommended that the actuators should be fitted directly below the valve in a wet environment. Full instructions are supplied with the product.

Table for maximum K / L valve and actuator differential pressures

Differential pressures (Δp) bar*

Valve size	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Valve stroke	3/4" (20 mm)					
C_{VS} Value	4.7	7.4	11.7	18.7	29.3	42
Maximum differential pressure	230	230	195	95	50	25

* Refer to valve TI for maximum valve operating pressures. For reduced capacity trims, size the actuator against C_{VS} value.

Accessories

A linkage kit is supplied as standard for use with the L & K series valves 1/2" to 2"

Auxiliary potentiometer: EL3901 (10 k Ω) or EL3902 (220 Ω) are available for mounting on site. They can be used as a feedback potentiometer and / or to provide remote indication to the valve position. A cable gland is supplied with this.

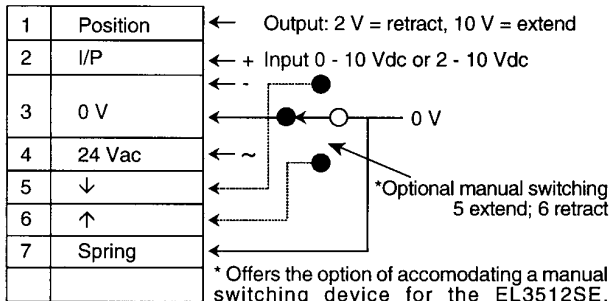
EL3903 auxiliary switches: Their switching points are adjustable over the full length of the actuator stroke. The switches can be used e.g. to provide remote indication of any stroke position. A cable gland is supplied with this.

How to order

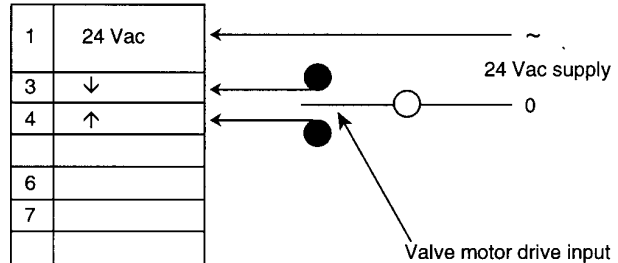
To receive this actuator for use with an L or K valve, order:
1 - EL3501 actuator

Termination details

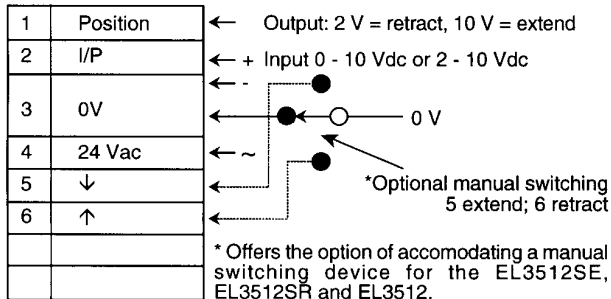
EL3512SE and EL3512SR



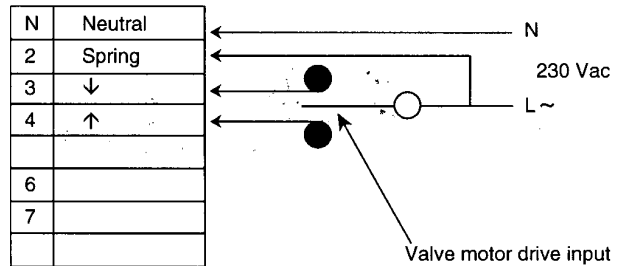
EL3502



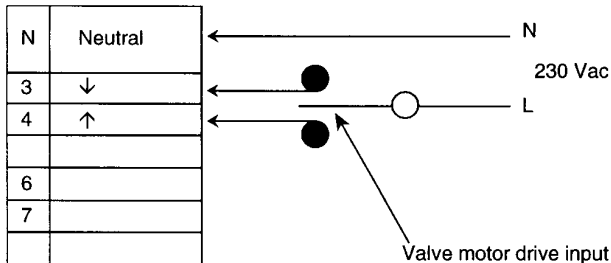
EL3512



EL3501SE



EL3501



EL3502SE

