VALTORC

WWW.VALTORC.COM
AJBENTAL@VALTORC.COM
1 (866) VALTORC

Spring Return Fail-safe

Electric Valve Actuator

CONTACT US TODAY!

TOLL FREE: 1-866-VALTORC
LOCAL: 770-423-7100
FAX: 770-499-7483

WWW.VALTORC.COM
SALES@VALTORC.COM

P.O. BOX 1928 KENNESAW, GA 30156 / 3105 CARTER CIRCLE KENNESAW, GA 30144

Perfect solution

is the only goal for us.

Product Overview

Our electric spring return fail-safe actuators in addition to the normal function (floating control, on-off control, modulating control) are designed to provide fail-safe positioning of valves and dampers upon loss of supply voltage. A mechanical spring set is utilized to position the controlled device to either the fully OPEN or fully CLOSED position without any external power source. For ON-OFF type, a mechanical BUFFER employed at the end of the spring stroke in order to reduce the dynamic effects of the spring return system. A clutch-less and lever-less manual override is optional for standard units to provide full-time manual positioning of the controlled device.

Product Features

- Controls : Proportional, Floating and ON-OFF.
- Clutch-less Manual Override (optional).
- NEMA 4X, 5 & IP 67, enclosure conform to outdoor use.
- ISO 5211 Mounting Flange.
- Domed Position Indicator.
- Built-in thermal protection prevents motor burnout.

Standard Specification

Enclosure

- Ingress protection：IP67, NEMA 4X, 5 (Waterproof and dustproof enclosure, intended for outdoor usage).
- Material：Dry powder coated aluminum alloy.

Domed Position Indicator

- All models are equipped with continuous mechanical position indicator on the top of actuator cover.

Duty Cycle

- Duty cycle rating：50% (In accordance with IEC standard)
- ON-OFF control type (standard)

Lubrication

- Gear trains have been already lubricated sufficiently with high temperature resistant lubricant at the factory. Lubricant in not necessary under normal operating condition in fire years.

Operating Voltages

Model	24V	1-Phase		3-Phase		
	24V DC / AC	120V	220V	220V	380V	440V
S500	√	√	√	√	√	√
S1300	√	√	√	√	√	√
S2000	√	√	√	√	√	√
S2600	√	√	√	√	√	√

- Contact sales person for other voltage requirements.

Service Condition

- Ambient temperature：-30˚C~+65˚C / -22˚F~+149˚F
- Relative humidity：30%~95%

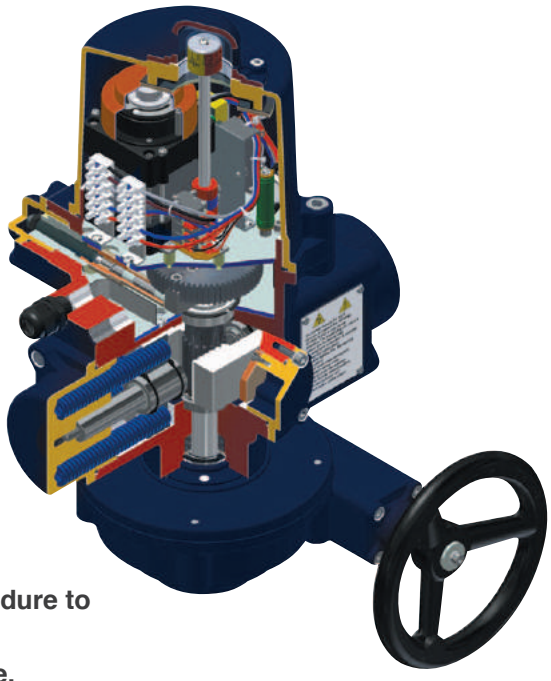
Certifications

- CE
- RoHS
- CSA
- Reach

Technical Data

Model	Torque		Nominal Motor Power	Weight				Mounting Base				
	Nm	in·lbs		Standard		W/Manual Override		Mounting Flange	Shaft		Depth of Shaft	
			w	kg	lbs	kg	lbs	ISO 5211	mm	inch	mm	inch
S500	50	443	50	27	60	37	82	F07	17	0.67	30	1.18
S1300	130	1151	130	57	126	74	163	F10	22	0.87	41	1.61
S2000	200	1771	130	95	209	135	298	F12	27	1.06	45	1.77
S2600	260	2302	130	95	209	135	298	F12	27	1.06	45	1.77

- The motor power and speed data are based on 110V AC 60Hz.



Important Notices and Maintenance

After using the 『manual override』 for positioning, the user must manually return the actuator to its unloaded position before the electrical operation of actuator.

- **Make sure that the supply voltage is correct.**
- **Turn power off before servicing or for maintenance purpose.**
- **Use proper sealant to seal the conduit connection after wiring procedure to prevent dust or water from entering the actuator.**
- **The electric actuators should be installed in between 0 to 180 degree. Do not mount the assembly with the actuator top below a horizontal position.**
- **Not intended for vacuum spaces.**
- **The actuator should be stored in clean, dry area and with an outer box to protect against excessive temperature differentials or vibration and prevent from affecting the function of the product.**
- **To avoid functional failure caused by statics, do not touch any components on the PCB with metal tools or bare hands.**
- **Please connect the ground wire to PE inside the electric actuator.**
- **When more than one actuator needs to be operated simultaneously, please connect with the individual wire install extra relays.**
- **The warranty period is one year after from original ship date.**

Option Items

Enclosures

- **Hazardous Area Enclosures**

ATEX-European Hazardous Area Directive

Directive Code	Enclosure Code	Standard Temperature
ATEX II 2 GD	Ex d IIB T4 Gb	-30°C ~ +70°C (-22°F ~ +158°F)
ATEX II 2 GD	Ex tb IIIC T130°C Db	-30°C ~ +70°C (-22°F ~ +158°F)

IECEx-International Hazardous Area

Enclosure Code	Standard Temperature
Ex d IIB T4 Gb	-30°C ~ +70°C (-22°F ~ +158°F)
Ex tb IIIC T130°C Db	-30°C ~ +70°C (-22°F ~ +158°F)

Anti-condensation Heater

- A space heater can increase the internal temperature and keep the inside of actuator dry from the freezing lubricant and moisture causing actuator failure under low temperature or high humidity.
  - · Heater is not recommended if the ambient temperature is over 35˚C (95˚F).
  - · When the temperature varies much from day to night or between summer and winter, heater and thermostat (25±5˚C / 77±41˚F) are recommended.

24V AC / DC　220V AC　110V AC　380V ~ 440V AC / 3PH

Heater Thermostat

- This option can switch the anti-condensation heater off when the temperature inside the actuator is over 25±5˚C / 77±41˚F.

Additional Limit Switches

- The standard model is equipped with the LS1 & LS2 switches for fully-open and fully-closed position setting. This option consisted of the LS3 & LS4 as auxiliary switches provides dry contacts for fully-open and fully-closed position feedback.

Modulating Controller

- A modulating control unit will follow input signal for positioning and output signal for indicator.
  - · Input signal：4-20mA, 1-5V or 2-10V
  - · Output signal：4-20mA or 2-10V

Potentiometer Unit

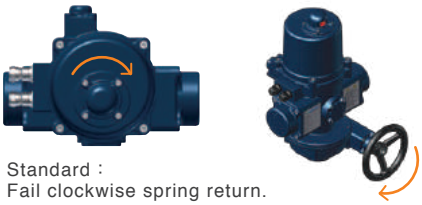
- This option can be ordered with ON-OFF or Floating control type actuators to provide feedback signal to position indicator. Two difference resist ance values, 1K or 5K ohm are available for selection.

Analog Signal Output

- This option provides 4-20mA output signal and suit for two-position control units.

Floating Controller

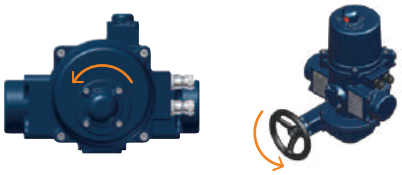
- The actuator can be controlled by external controller to open, close and stop at any position between 0 and 90 degree and will fail clockwise to the end position on loss of power.
  (Based on the standard running direction that the actuator fails clockwise on loss of power.)



Standard :
Fail clockwise spring return.

Operating Direction

- The spring return direction can't be changed and the actuator must be configured spring return direction at manufacturer's factory, please select the drive according to the application requirements of the clockwise or counter clockwise operation.
  - Standard : Fail clockwise spring return.
  - Optional : Fail counter-clockwise spring return.
    (See the right figure)
    (Running direction is base on viewing of actuator from the top)



Optional :
Fail counter-clockwise spring return.
(Running direction is base on viewing of actuator from the top)

Conduit Entrance

- Standard : 1/2 " NPT
- Optional : 3/4" NPT, M20

Manual Override

Standard : Without manual override

Optional : With manual override

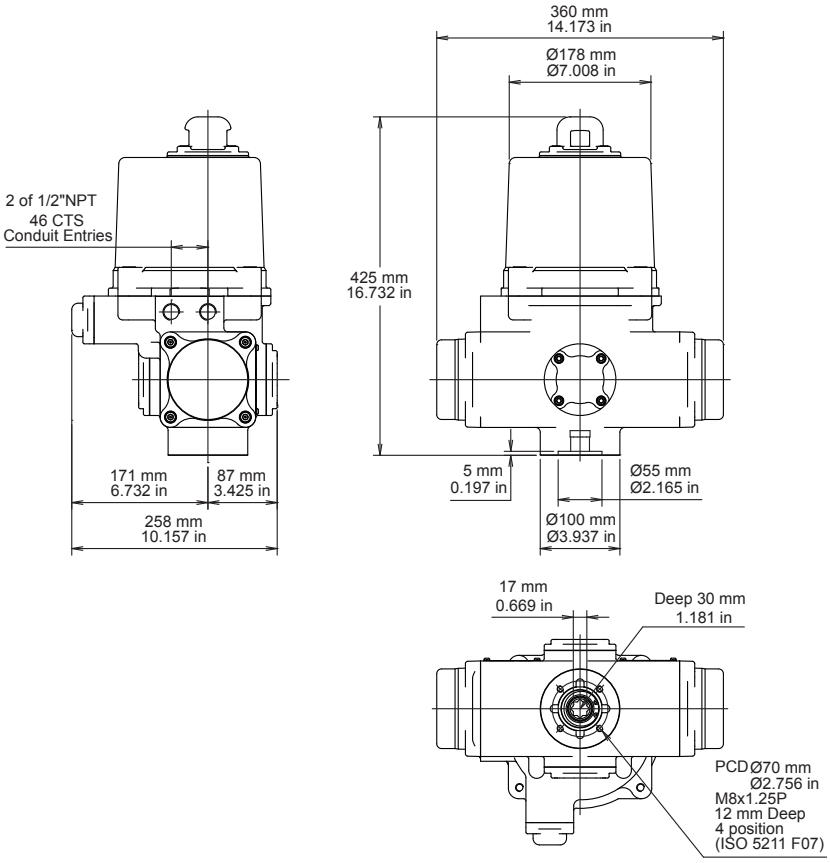
Controller	Voltage	Options	
ON-OFF	24V AC / DC 110 / 220V AC 380 / 440V 3PH	· Anti-condensation Heater · Heater Thermostat · Additional Limit Switches	· Fail Spring Direction CCW · Manual Override · Potentiometer Unit (1K or 5K Ohm)
Floating	110V / 220V AC	· Anti-condensation Heater · Heater Thermostat · Additional Limit switches · Fail spring return direction CCW	· Manual Override · Analog signal output · Potentiometer Unit (1K or 5K Ohm)
Modulating	110V / 220V AC	· Anti-condensation Heater · Heater Thermostat · Additional Limit switches	· Operating Direction to fail (CW / CCW) · Manual Override

Outline Dimensions

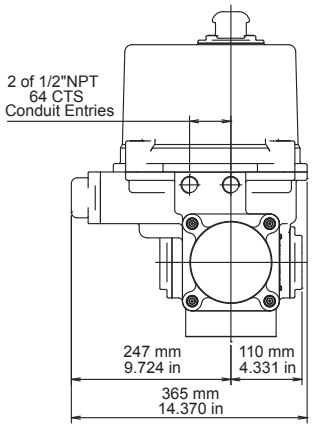
Standard

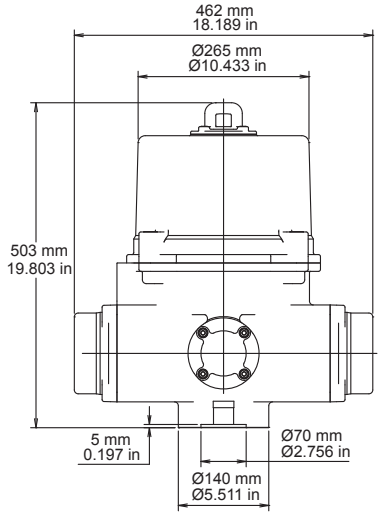
- Running direction is base on viewing from the top of actuator.
- The drawing is based on actuator in power fail clockwise spring return.

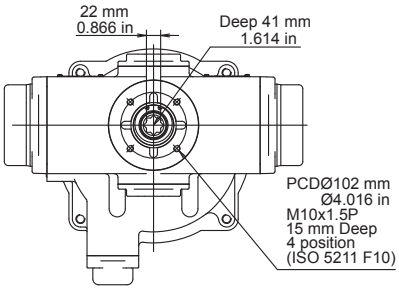
S500



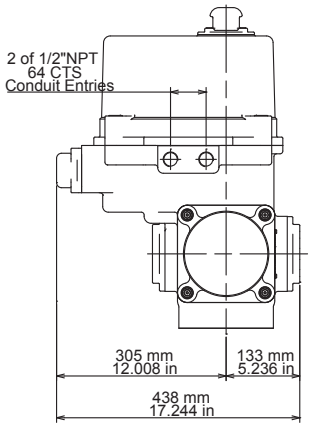
S1300

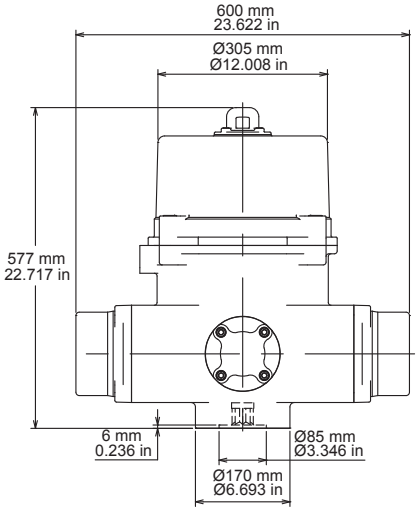


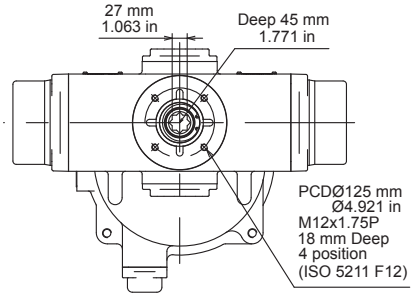




S2000, S2600



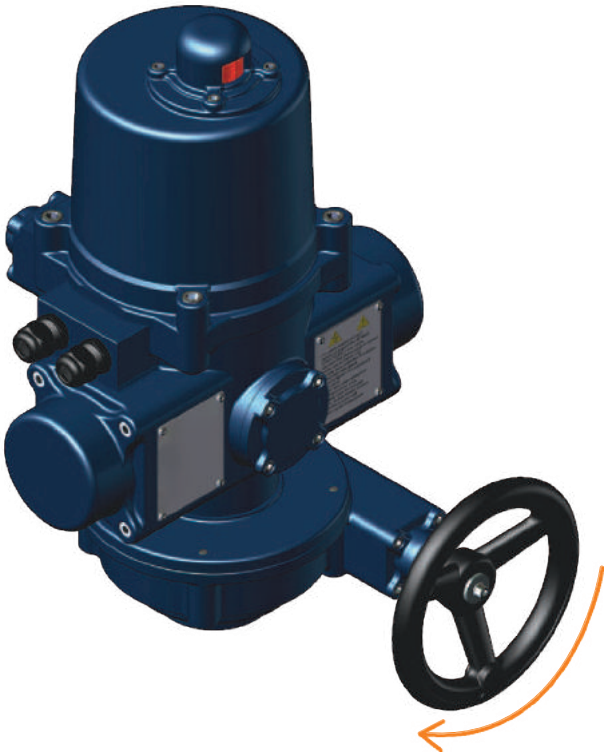




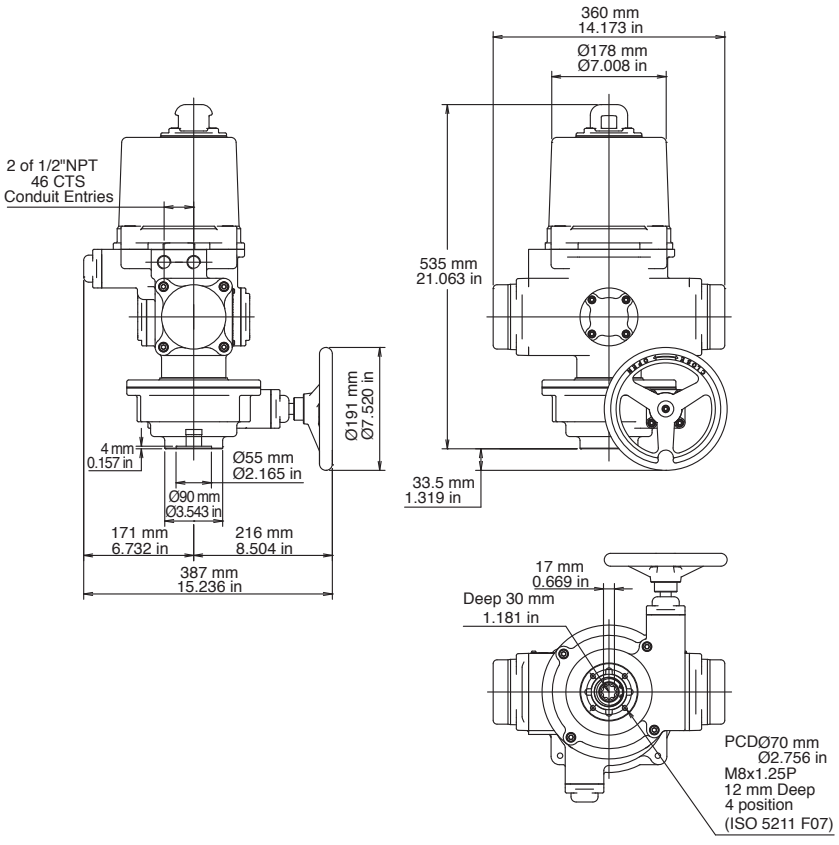
Outline Dimensions

W/ Manual Override

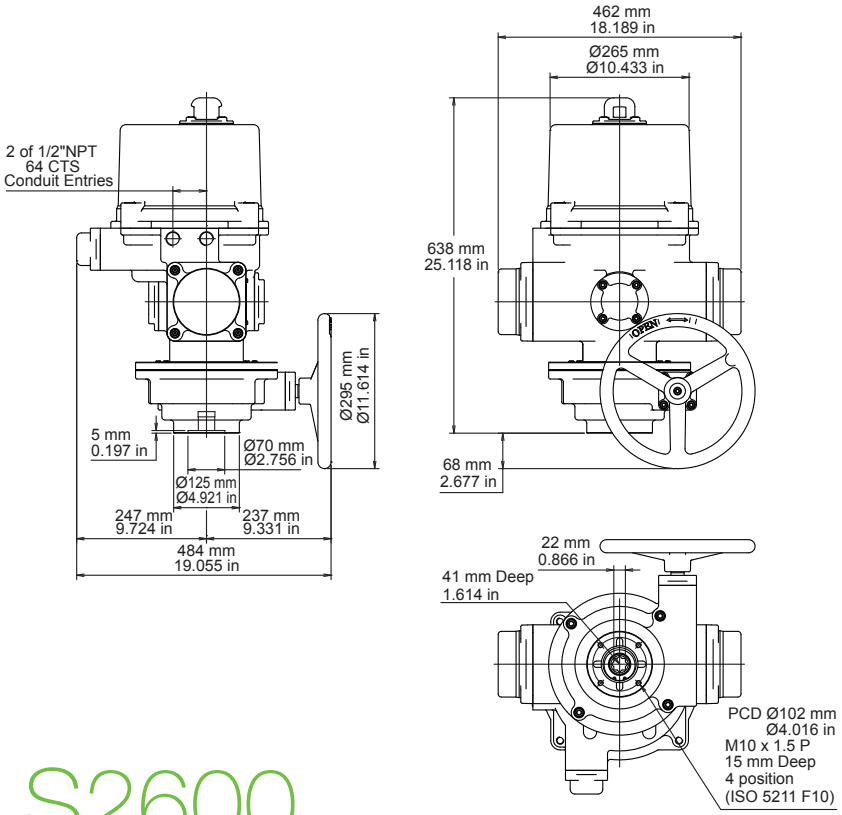
- Running direction is base on viewing from the top of actuator.
- The drawing is based on actuator in power fail clockwise spring return.



S500



S1300



S2000, S2600