

# "ESR" Series

## High Performance Spring Return Electric Actuator



**NEXTEK "ESR" Series Actuator** is a SPRING RETURN electric actuator providing protection in an event of system failure or power loss. A mechanical spring set is utilized to position the controlled device to either a fully OPEN or fully CLOSED position without any external power source. For ON-OFF type, a mechanical buffer is integrated into the end of the spring stroke to reduce the dynamic effects of the spring return system. The ESR Series is designed for load requirements of up to 2,302 in-lbs and is available with an optional manual override to provide full time manual positioning.

### "ESR" SERIES DESIGN FEATURES

"ESR" Series Electric actuators are designed to provide the operating torque required to automate our full line of process-quality ball valves. All "ESR" Series electric actuators are available with the following features:

- ▼ Heavy-duty, fully enclosed, high performance motor is rated for both On/Off and modulating service.
- ▼ Mechanical buffer utilized at the end of the spring stroke to reduce dynamic effects of spring system
- ▼ NEMA 4X or NEMA 7 (Hazardous) certified enclosure with ISO 5211 design for universal mounting
- ▼ Corrosion protection with thermally bonded polyester coating.
- ▼ All motors feature integral thermal overload protection.
- ▼ Designed for operation in temperatures from -22°F to 150°F.
- ▼ Standard travel-stop limit switches can simultaneously be used for light indication.
- ▼ Optional clutchless manual override



### ELECTRIC SPRING RETURN ACTUTOR

With voltage supplied, the "ESR" Series provides on/off or modulating controls based on selected options. A brake is designed to hold the position based on the input signal. Upon power loss, the brake releases and the spring system returns the actuator into the fail position (fully OPEN or fully CLOSED).

### "ESR" SERIES APPLICATIONS

- ▼ Excellent for use in systems where compressed air for actuation is either unavailable or impractical.
- ▼ Electric control circuits may be designed for virtually any control scheme.
- ▼ Readily interfaces with all electric control systems.

*What do you need today?*™



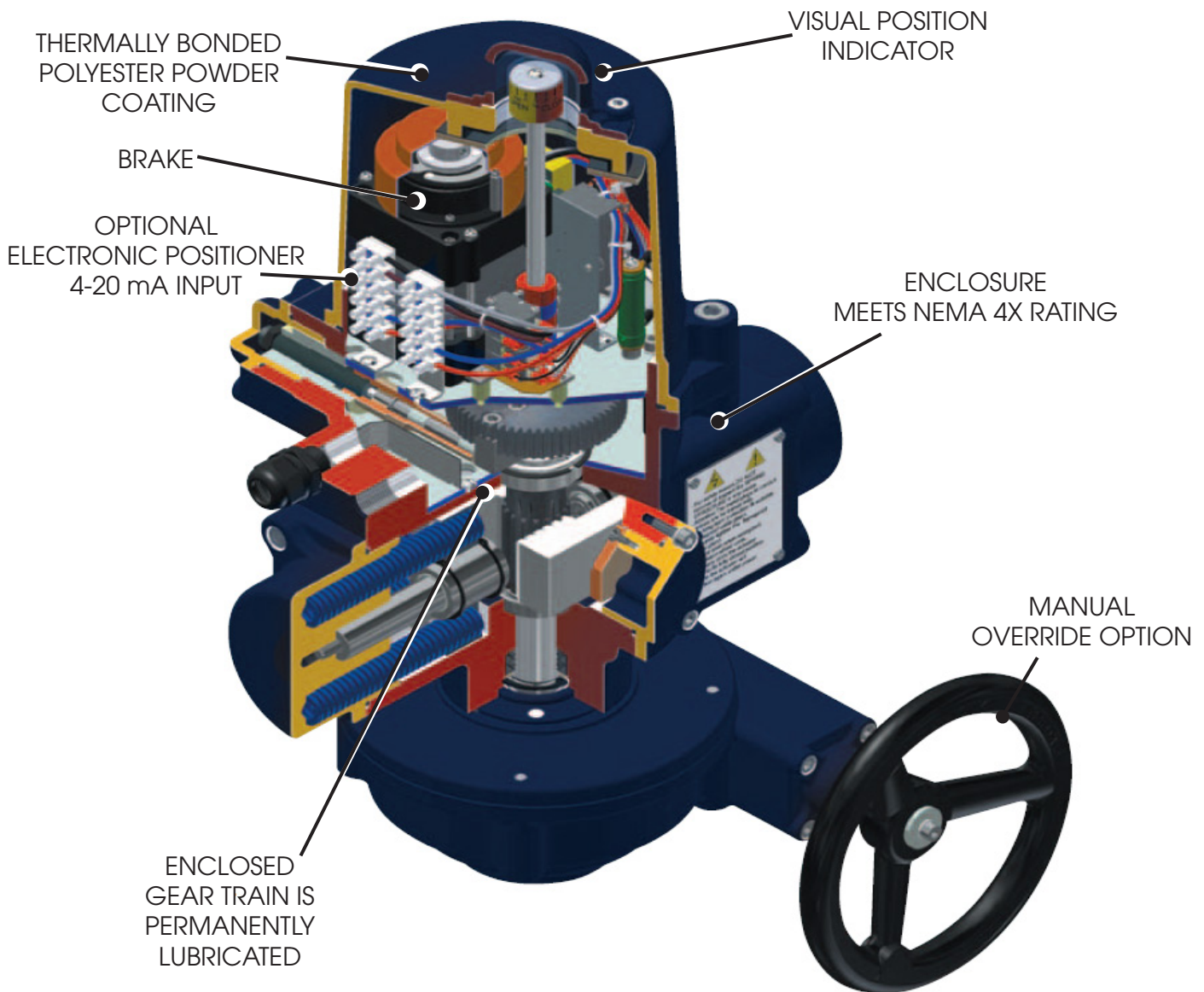
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## "ESR" SERIES SPECIFICATIONS

All "ESR" Series Electric Actuators are available with an optional manual override, visual position indication and ISO 5211 standard mounting arrangement as offered by NEXTEK Controls, Automation & Controls Product Group of SVF Flow Controls.



Sample Specification based on "SR" Series Model ESR50V4MXCM (ESR Series, 443 in-lbs, NEMA 4X, 115 VAC 50% Duty Cycle, Fail Closed, 4-20mA Control Package with Manual Override).

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## "ESR" SERIES DIMENSIONS AND TORQUE

"ESR" SERIES MODEL	BOLT CIRCLE		MOUNTING BOLTS (Qty - 4)	POWER (WATTS)	WEIGHT		TORQUE	
	in.	ISO			Standard (lbs)	With Override (lbs)	in-lbf	Nm
ESR50	2.76	F07	M8 X 1.25	50	60	82	443	50
ESR130	4.02	F10	M10 X 1.50	130	126	163	1,151	130
ESR200	4.92	F12	M12 X 1.75	130	209	298	1,771	200
ESR260	4.92	F12	M12 X 1.75	130	209	298	2,302	260

## "ESR" SERIES ELECTRIC ACTUATOR - QUICK REFERENCE GUIDE

"ESR" SERIES MODEL	CURRENT RATINGS 115 VAC		CURRENT RATINGS 220 VAC		CURRENT RATINGS 24 VAC/VDC		OPERATING TIME (SEC/90 DEGREES)		DUTY CYCLE
	RUN	LOCK	RUN	LOCK	RUN	LOCK	MOTOR	SPRING	
ESR50	1.0 A	2.0 A	0.6 A	1.0 A	3.0 A	4.0 A	7	3	50%
ESR130	2.6 A	10.0 A	1.5 A	5.0 A	9.0 A	19.0 A	7	8	50%
ESR200	2.6 A	10.0 A	1.5 A	5.0 A	9.0 A	19.0 A	11	12	50%
ESR260	2.6 A	10.0 A	1.5 A	5.0 A	9.0 A	19.0 A	14	12	50%

## OPTIONAL EQUIPMENT FOR "ESR" SERIES ACTUATOR

- ▼ **Voltages 115 VAC Standard**  
Optional 220 VAC, 24VAC, 24 VDC
- ▼ **Auxiliary Switches**  
Two additional limit switches may be added for interlocking other equipment such as pumps, compressors, mixers or other valves
- ▼ **Heater & Thermostat**  
For operation at low temperature (to -40°F). Also used to combat condensation in high humidity areas. The combination heater/thermostat will maintain the temperature of the enclosure at 40°F
- ▼ **Analog Positioner**  
Accepts 4-20 mA, 1-5 VDC or 2-10 VDC input signal with 4-20mA or 2-10V output signal
- ▼ **Manual Override**  
Provides full time manual positioning

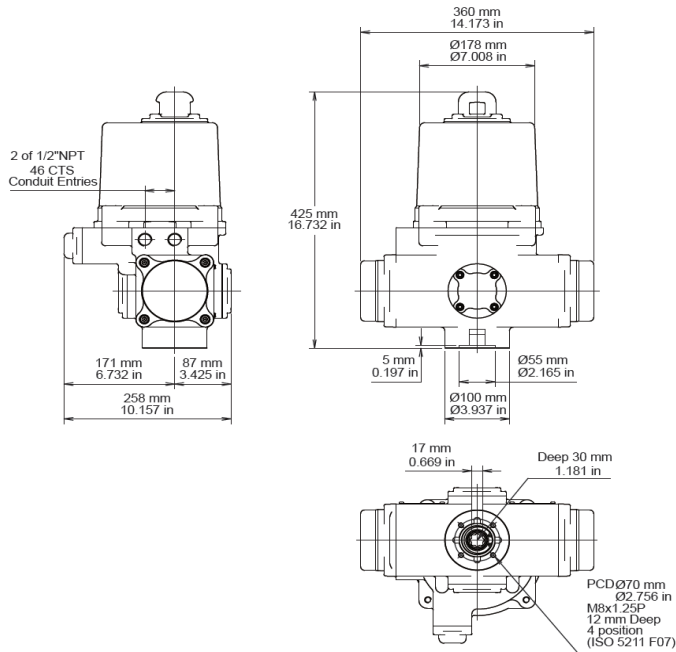
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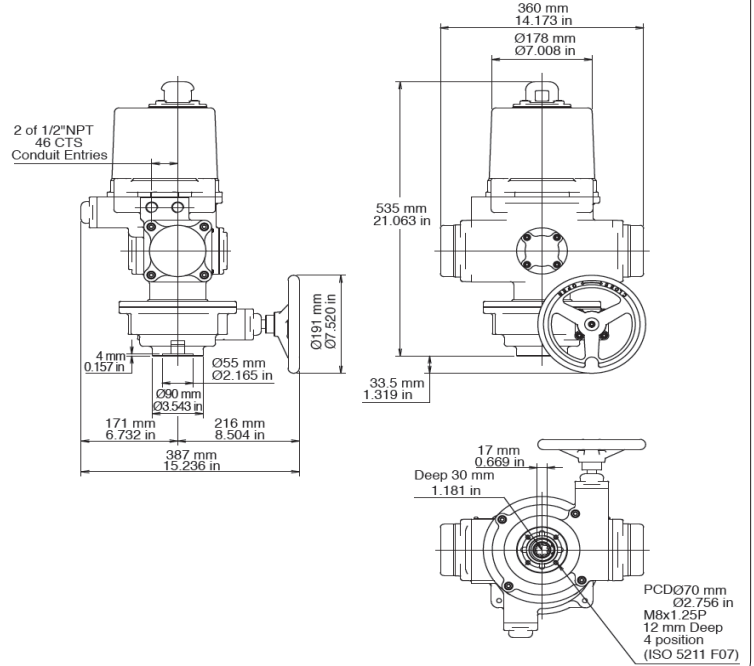


## "ESR" SERIES DIMENSIONS (BASED ON CW - FAIL CLOSED POSITION)

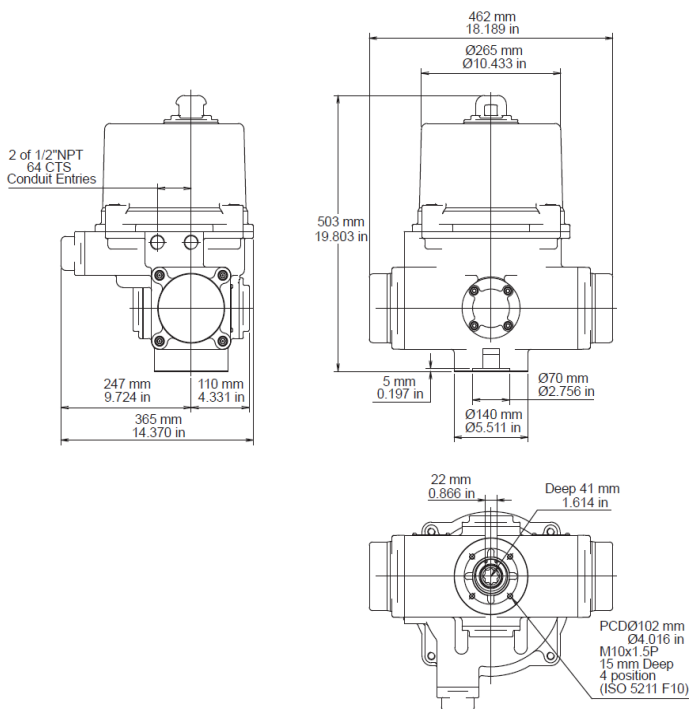
### MODEL ESR50



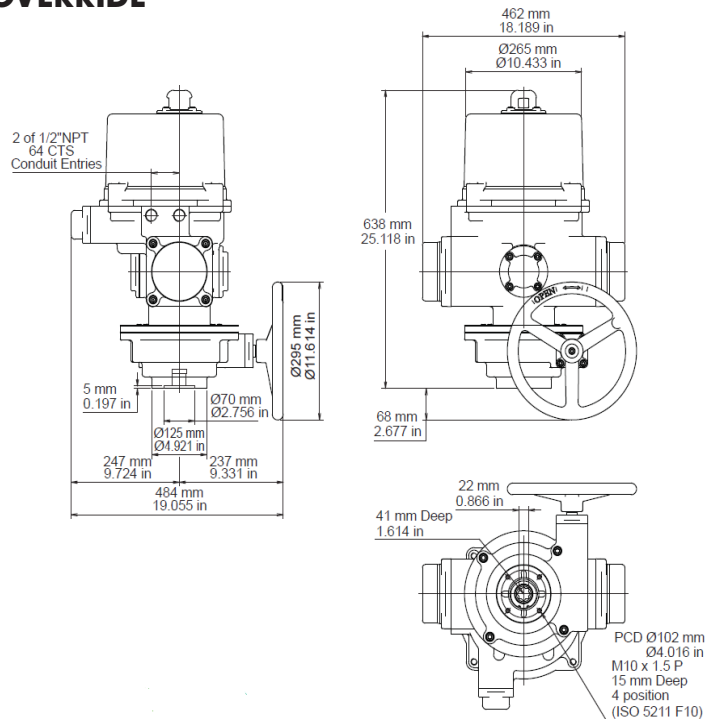
### MODEL ESR50 WITH OPTIONAL MANUAL OVERRIDE



### MODEL ESR130



### MODEL ESR130 WITH OPTIONAL MANUAL OVERRIDE



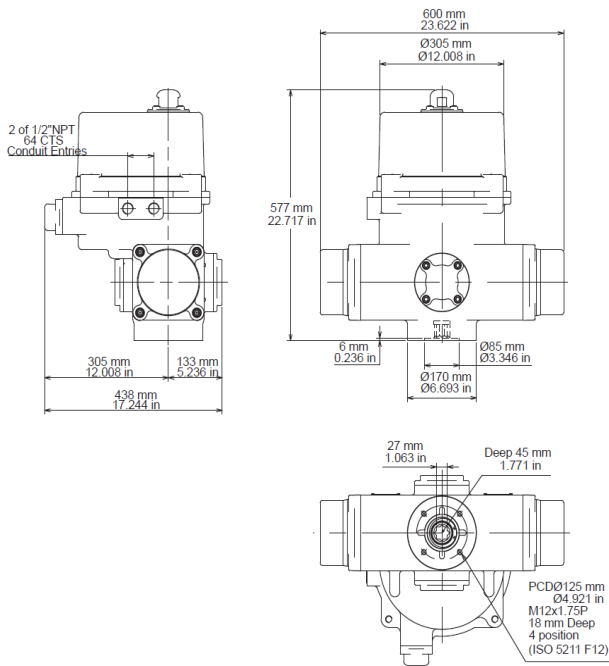
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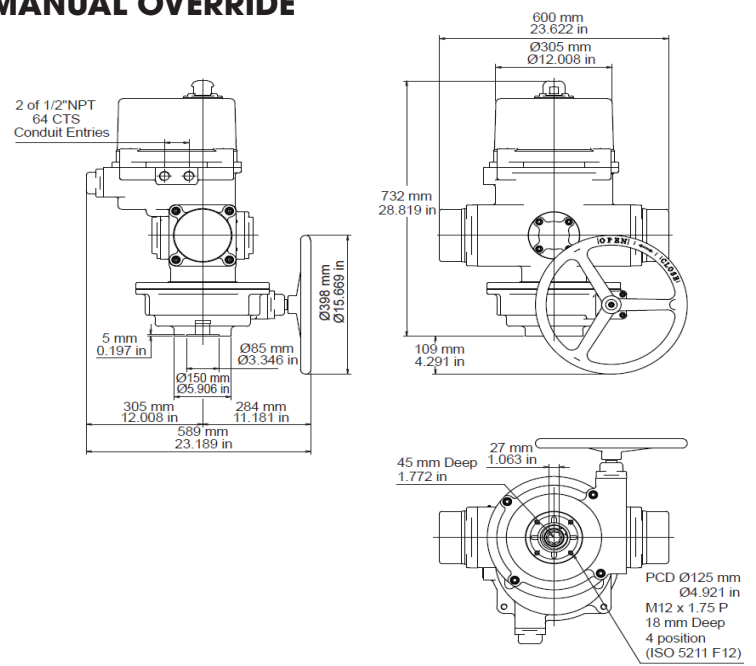


### "ESR" SERIES DIMENSIONS (BASED ON CW - FAIL CLOSED POSITION)

#### MODEL ESR200 AND ESR260



#### MODEL ESR200 AND ESR260 WITH OPTIONAL MANUAL OVERRIDE



### HOW TO ORDER "ESR" SERIES SPRING RETURN ELECTRIC ACTUATOR

SERIES	Model	ENCLOSURE	VOLTAGE	DUTY CYCLE	FAIL POSITION	OPTIONS
ESR	50 130 200 260	V= NEMA 4X (Weatherproof) X= NEMA	2= 24 VDC 4= 115 VAC 5= 220 VAC 6= 24 VAC	M = 50%	X = Fail Closed (CW) Y = Fail Open (CCW)	Blank = None C= 4-20mA Positioner S2= Limit Switch Kit (2- SPDT) <sup>†</sup> T= Heater & Thermostat M = Manual Override  <sup>†</sup> All limit switches are rated 15A, 1/2HP at 125-150 VAC; 0.5A at 125 VDC
<b>Example Description: ESR50 actuator, NEMA 4 enclosure, 115 VAC, 50% duty cycle, Fail Closed with heater and thermostat option</b>						
<b>ESR</b>	<b>50</b>	<b>V</b>	<b>4</b>	<b>M</b>	<b>X</b>	<b>T</b>