

"EM" Series

High Performance Electric Actuator



NEXTEK "EM" Series Actuators are geared motors that provide rotary output (torque) to power all types of rotary valves (ball, plug and butterfly valves as well as dampers and diverters). Output is achieved through the application of a supply voltage (AC or DC). Rotary action is controlled through two limit switches (one for "OPEN" and one for "CLOSED") located in the unit and in conjunction with two cams. Precise setting of either position is achieved by adjusting the cam to activate the switch at exactly the desired point in the rotary cycle. The power wiring procedure is indicated on the wiring diagram supplied with each unit.



"EM" SERIES DESIGN FEATURES

"EM" Series electric, rotary actuators are designed to provide the operating torque required to automate our full line of process-quality ball valves. All "EM" 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.
- ▼ NEMA 4X, or NEMA 7 certified enclosure
- ▼ Corrosion protection with thermally bonded polyester coating.
- ▼ Operating speeds and output torque generated through a permanently lubricated gear train.
- ▼ All motors feature integral thermal overload protection.
- ▼ Designed for operation in temperatures from -22°F to 150 °F.
- ▼ All models feature a manual override, ISO mounting pad and are wired for light indication.
- ▼ Standard travel-stop limit switches can simultaneously be used for light indication.

REVERSING MOTORS

Reversible motors open the valve in one direction and close the valve in the reverse direction. Reversible motors are ideal for precise flow control, since the actuator does not have to travel through the full stroke to start the reverse stroke. For example, one coil in the motor controls the counter-clockwise rotation or "open cycle" while the other coil controls the clockwise or "closing cycle".

"EM" 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 schemes.
- ▼ Ideal for multi-ported valves. Provides three or four distinct stop positions.
- ▼ May be used in manual jogging systems.
- ▼ When fitted with a heater, electric actuators are well suited for use in sub-freezing environment.

What do you need today?™



"EM" Series

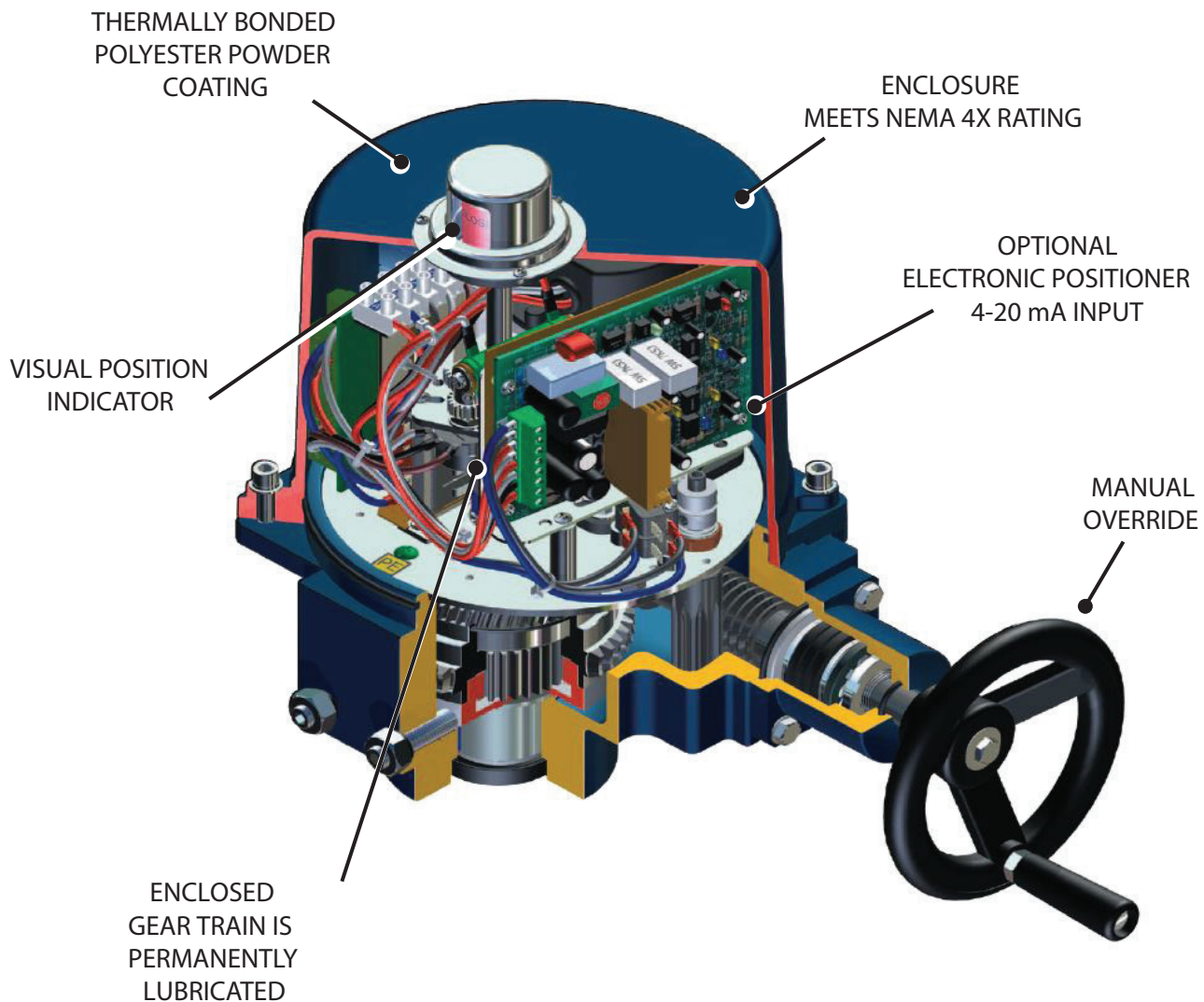
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"EM" SERIES SPECIFICATIONS

All "EM" Series Electric Actuators shall be reversible type, capacitor run motor design, thermally protected and with a permanently lubricated hardened steel gear train.

Each actuator shall be available with a manual override, visual position indication and ISO standard mounting arrangement as offered by NEXTEK Controls, Automation & Controls Product Group of SVF Flow Controls.



Sample Specification based on "EM" Series Model EM50V4SC.

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"EM" SERIES DIMENSIONS AND TORQUE

"E" SERIES MODEL	BOLT CIRCLE #1		MOUNTING BOLTS (Qty - 4)	BOLT CIRCLE #2		MOUNTING BOLTS (Qty - 4)	TORQUE	
	in.	ISO		in.	ISO		in-lbf	Nm
EM06	1.417	F03	M5 X 0.8	1.969	F05	M6 X 1.0	53	6
EM15	1.417	F03	M5 X 0.8	1.969	F05	M6 X 1.0	132	15
EM35	1.417	F03	M5 X 0.8	1.969	F05	M6 X 1.0	300	35
EM50	1.969	F05	M6 X 1.0	2.76	F07	M8 X 1.25	440	50
EM90	-	-	-	2.76	F07	M8 X 1.25	750	90
EM150	-	-	-	2.76	F07	M8 X 1.25	1,300	150
EM400	-	-	-	4.02	F10	M10 X 1.5	3,500	400
EM500	-	-	-	4.02	F10	M10 X 1.5	4,400	500
EM650	-	-	-	4.02	F10	M10 X 1.5	5,750	650
EM1000	-	-	-	5.51	F14	M16 X 2.0	8,850	1,000
EM1500	-	-	-	5.51	F14	M16 X 2.0	13,275	1,500
EM2000	5.51	F14	M16 X 2.0	6.50	F16	M20 X 2.5	17,700	2,000
EM2500	5.51	F14	M16 X 2.0	6.50	F16	M20 X 2.5	22,125	2,500
EM3000	5.51	F14	M16 X 2.0	6.50	F16	M20 X 2.5	26,550	3,000
EM3500	5.51	F14	M16 X 2.0	6.50	F16	M20 X 2.5	30,975	3,500

OPTIONAL EQUIPMENT FOR "EM" SERIES ACTUATORS

- ▼ Voltages 115 VAC Standard
Optional 220 VAC/50/60 Hz, 12VDC, 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 input signal or optional 1-5 and 10-50 mA, 0-10 VDC are available
- ▼ Three-Position Control
For use with multi-ported valves
- ▼ Network Communication
Modbus output
- ▼ Torque Sensor Control
Protects the actuator in the event of unforeseen torque increases often associated with valve wear or pipeline obstructions (Only available on some models - consult SVF)
- ▼ Speed Control Circuit
Pulsing circuit to adjust (slow) the overall cycle time

HOW TO ORDER "EM" SERIES ELECTRIC ACTUATORS

MODEL	ENCLOSURE	VOLTAGE	DUTY CYCLE	OPTIONS
EM06*	V= NEMA 4X Weatherproof	1= 12 VDC	S= 30%	Blank = None
EM15*	X = NEMA 7 Hazardous Locations	2= 24 VDC	E= 70%**	C= 4-20mA Positioner
EM35		4= 115 VAC		S2= Limit Switch Kit (2- SPDT) †
EM50		5= 230 VAC		T= Heater & Thermostat
EM90		6= 24 VAC		M = Manual Override
EM150				
EM400				
EM500			** 70 % Duty Cycle is only available on Models EM35 ~ EM4500.	* Options are only available on Models EM35 thru EM4500
EM650				† All limit switches are rated 15A, 1/2HP at 125-150 VAC; 0.5A at 125 VDC
EM1000				NOTE: NEMA 7 enclosure available on Models EM35 thru EM1000
EM2000				
EM2500				
EM3000				
EM3500				
	Order Example: (EM35V4ST)			
	Example Description: EM35 actuator, NEMA 4 weatherproof enclosure, 115 VAC, 30% duty cycle with heater and thermostat option			
EM35	V	4	S	T

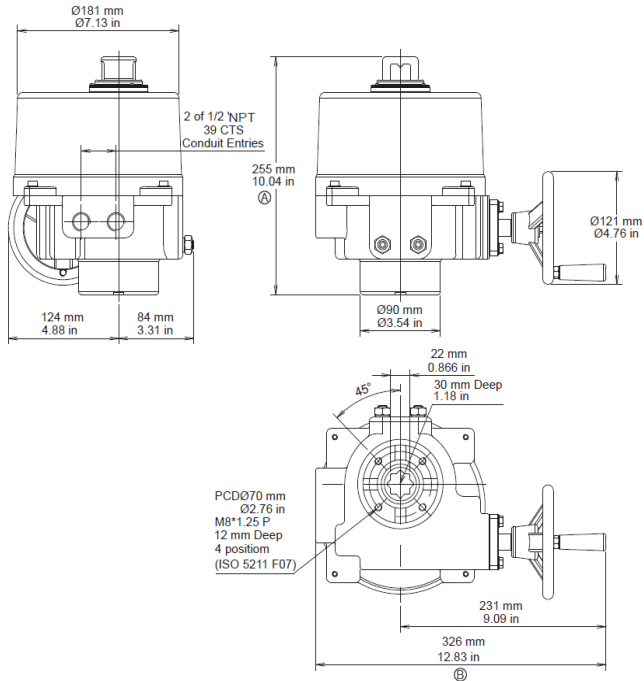
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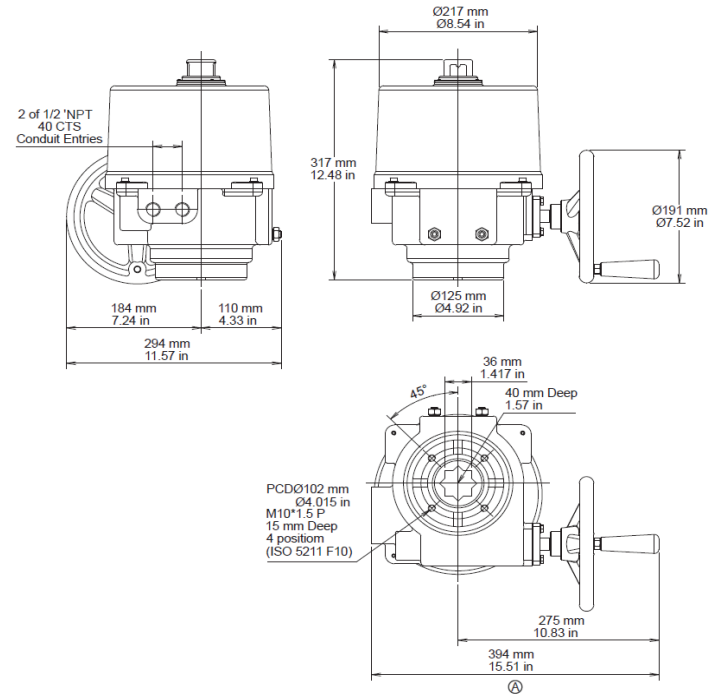


"EM" SERIES DIMENSIONS

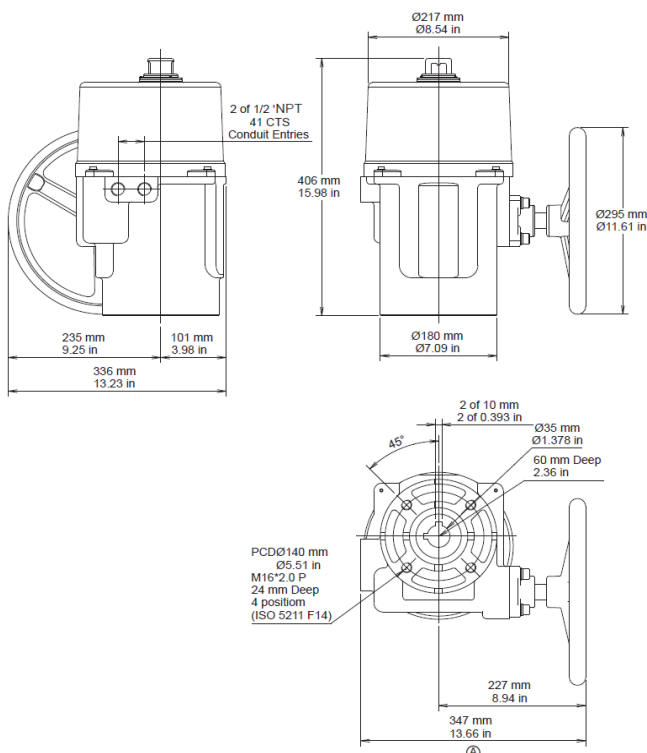
MODEL EM90 - EM115



MODEL EM400 - EM500



MODEL EM1000 - EM1500



MODEL EM2000 - EM3500

