

**AWWA**  
C540-93

**CSA**<sup>®</sup>  
C 201383 US  
TYPE 4, 4X

**WE Series Weatherproof**  
CSA Approved TYPE 4 & 4X IP67

SIL<sup>✓</sup>  
IEC 61508 / IEC 61511



**KE Series**  
Weatherproof IP67

**XE Series Explosion Proof**  
ATEX/IECEX Certified  
Ex db IIB T4 Gb  
Ex tb IIIC T135°C Db  
IP67



**XC Series**  
**CSA Explosion Proof**  
Class I, Division 1, Group C & D, T4  
Ex d IIB T4 Gb  
Class I, Zone 1, AEx d IIB T4 Gb

**CSA**<sup>®</sup>  
C 258948 US  
TYPE 4, 4X, 6 & 7

**Ex**  
II 2 G  
II 2 D  
**IECEX**

## WE-350

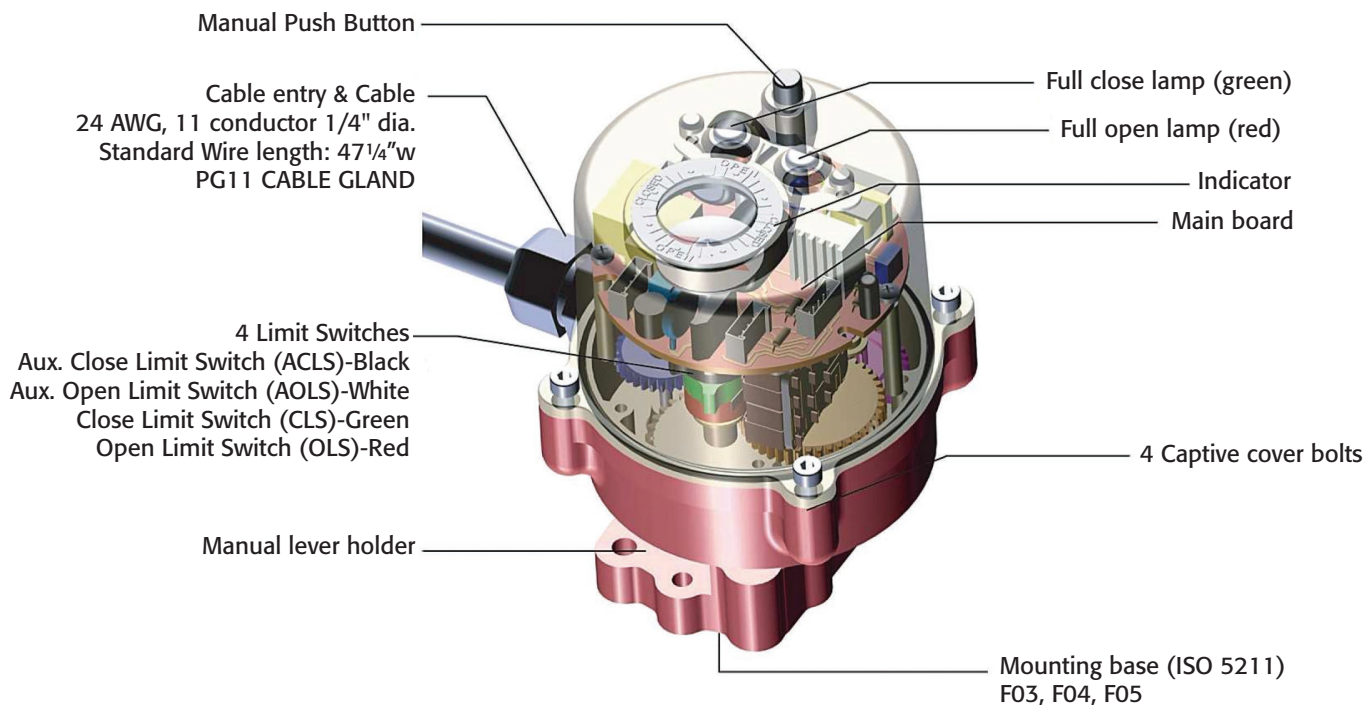
The WE-350 Electric Actuator is specifically designed to operate small size ball valves (1" and less) and other quarter-turn devices.

### Features

- Compact and light weight
- High resistance to corrosion due to hard anodizing on inside and outside with polyester powder coating on external surface
- Multi-voltage (85-265VAC/1PH, 24VDC)
- Standard space heater (0.5W)
- Weather proof (IP67)
- Push Button and Manual lever
- Wide, easy mounting base standard to ISO 5211 (F03/F04/F05)
- (2) Operational & (2) Auxillary, Open / Close, SPDT, 6A 125/250VAC
- Captive cover bolts
- Mechanical position indicator & LED lamp indicators (Open/Close)



### Construction



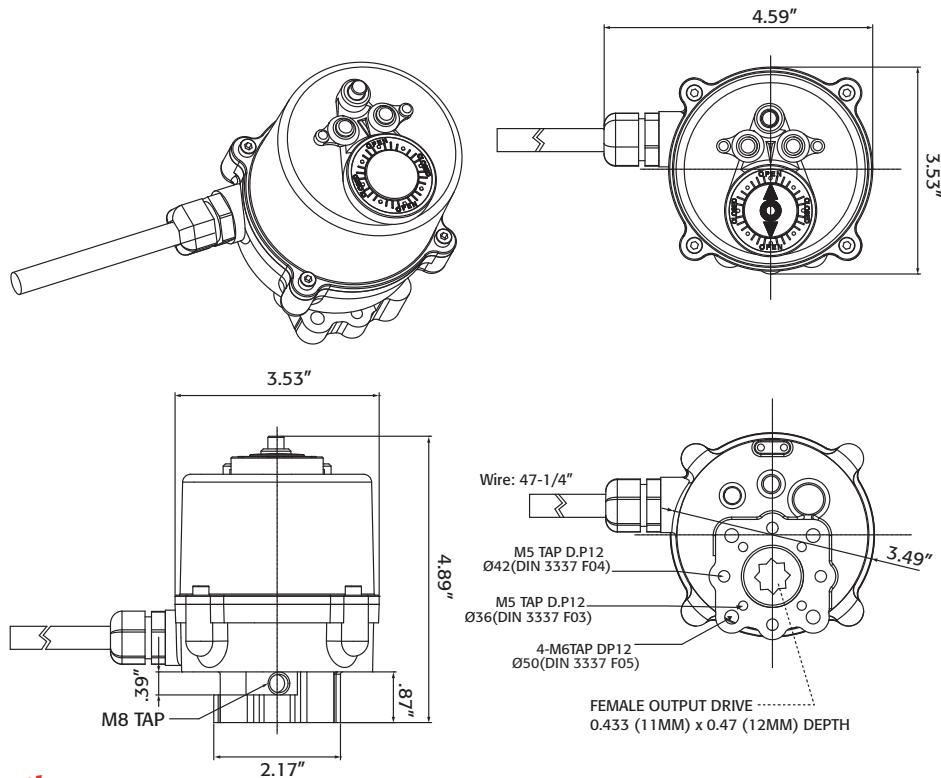
# WE-350

## ELECTRIC ACTUATORS

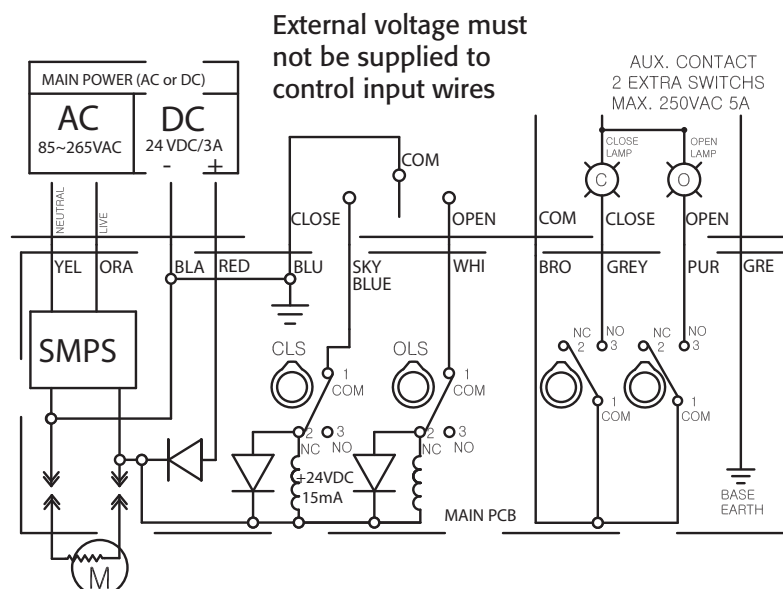
### Performance

Type (Model)	Maximum Load Torque	Speed 60/50 Hz	Mounting Size	Supply Power & Rated Current (A) 60/50Hz, 1 Phase			Duty Cycle IEC34-1	Manual Lever Angle	Weight
	In-Lbs.	Sec/90°		110VAC	220VAC	24VDC			Lbs.
WE-350	354	12 sec.	F03/F04/F05	.12	.06	.46	70%	90°	2.65
WE-350HS	270	6.5 sec.		.065	.033	.25			

### Dimensions



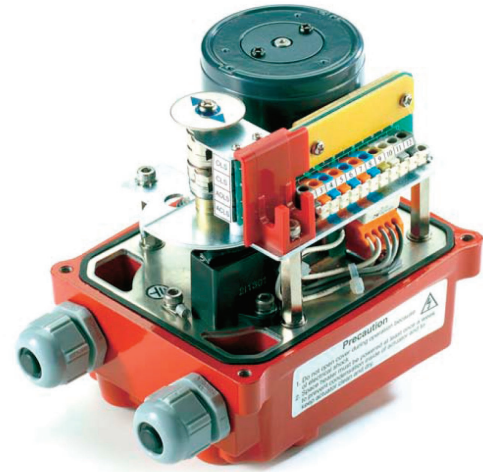
### Wiring Connection



# WE/XE Series

## WE/XE-500

The WE-500 and XE-500 Electric Actuators have a compact design ideal for use with small ball valves (2" and less), and other quarter-turn devices. Each actuator includes a visual indicator, two auxiliary switches and a compartment heater. A convenient wrench manual override shaft is standard. This actuator is the clear choice when a compact, efficient electric actuator is required!



### Standard Features

- Compact and light due to high grade aluminum alloy housing.
- High resistance to corrosion due to hard anodizing on inside and outside with polyester powder coating on external surface
- Output torque: 530 In-lbs.
- Reversible, high torque and low current motor
- Enclosure: Weatherproof (IP67, Type 4, 4X) or Explosion Proof (ATEX/IECEX Ex d IIB T4 Gb)
- Captive cover bolts
- Terminal block (11P)

### Standard Specifications

<b>Enclosure</b>	Weatherproof (IP67, Type 4, 4X) or Explosion Proof (ATEX/IECEX Ex d IIB T4 Gb)
<b>Power Supply</b>	110/220V AC 1PH, 50/60Hz, $\pm 10\%$ , 24V AC/DC
<b>Duty cycle</b>	IEC60034-1 S2 30 min.; S4 50-70%, 1200 starts per hour (average 50% rated torque at 25°C/77°F)
<b>Motor</b>	Class F Reversible motor
<b>Limit switches</b>	(2) Operational & (2) Auxillary, Open / Close, SPDT, 6A 125/250VAC
<b>Space heater</b>	2W Anti-condensation
<b>Manual override</b>	Drive Nut (4mm hex)
<b>Cable conduit</b>	Two 1/2" NPT
<b>Movement angle</b>	320° $\pm 10^\circ$
<b>Ambient temperature</b>	-4°F - 158°F (optional -40°F Low Temp Kit)
<b>External coating</b>	Polyester powder coating
<b>Mounting</b>	ISO 5211 (F03/F05/F07)

### Performance

Type (Model)	Maximum Load Torque In-Lbs.	Speed 60/50 Hz Sec/90°	Motor Size Watts	Full Load Amps			Locked Rotor Amps			Duty Cycle IEC 34-1 S4	Number of Handle Turns N	Weight Lbs.
				AC 1PH. 50/60Hz	AC/DC	AC 1PH. 50/60Hz	AC/DC	AC/DC				
				110V	220V	24V	110V	220V	24V			
WE-500	530	12/14	10	0.4	0.2	1.4	0.5	0.25	2.5	70%	8	6.61
XE-500												9.90

### Optional Configurations

#### Position Indication Unit (Potentiometer kit)

High resolution potentiometer with precisely machined gearing directly engaged with drive shaft provides continuous monitoring of position of valve and actuator.



#### AC/DC 24V Control Unit

Dip Switch

Mode	1	2
DC	ON	OFF
AC	OFF	ON



(setting shown here applies to WE/XE-500A only)

#### TMC4 Electronic Control Card

- For WE Series only; See details on page 16

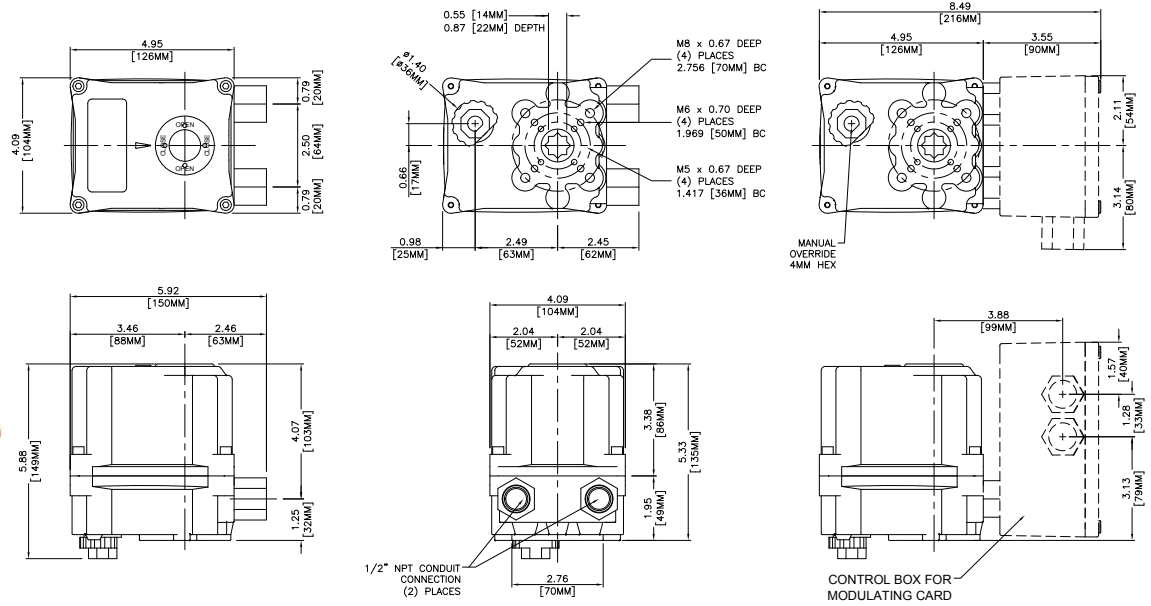
# WE/XE-500

ELECTRIC ACTUATORS

## Dimensions

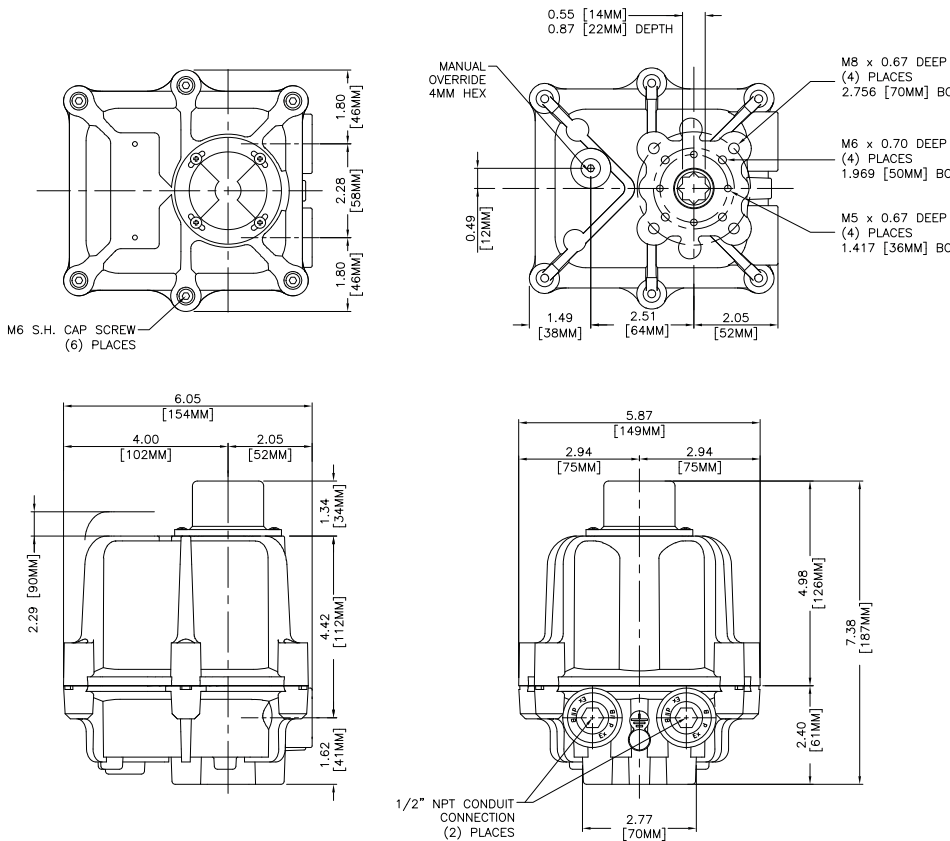
### WE-500

CSA Approved,  
Type 4 & 4X IP67



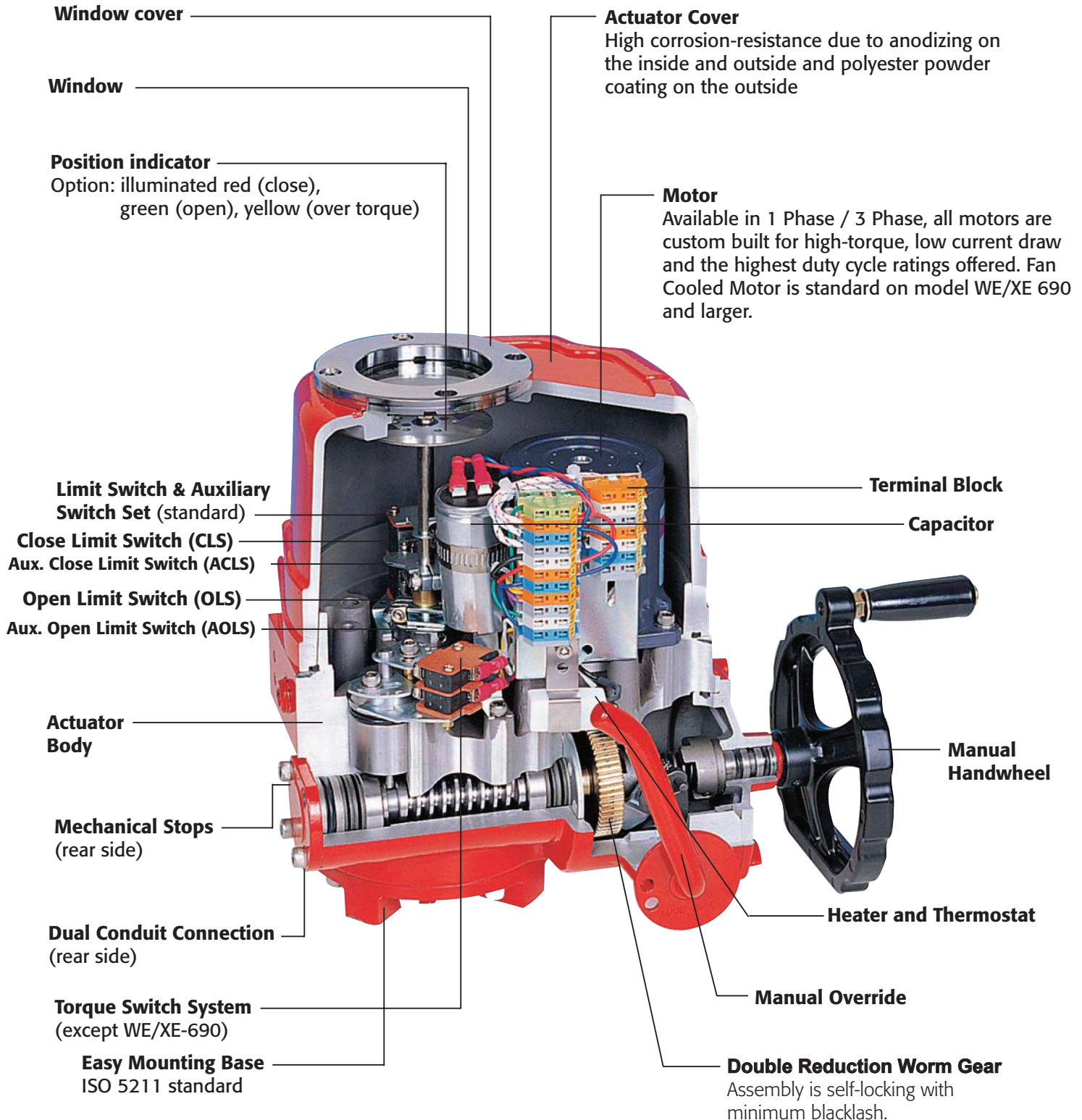
### XE-500

ATEX/IECEx Ex d IIB T4 Gb, IP67



# WE/XE Series

## Electric Actuators WE/XE Features



# WE/XE Series

ELECTRIC ACTUATORS

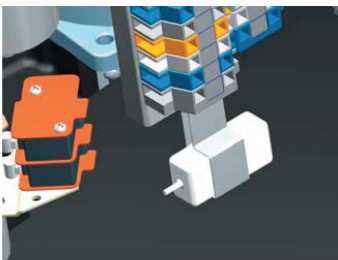
## *WE/XE-690 thru WE/XE-25900*



### ***Terminal block***

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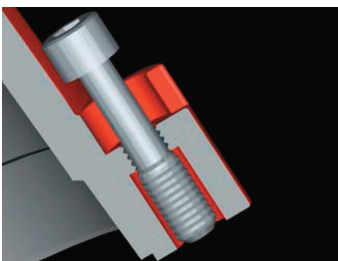
- Extra terminals for customer's convenience
- Spring Loaded Terminal Strip provides secure connection



### ***Heater***

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- Ceramic housing with thermostat to eliminate condensation (5-10 watt Standard)
- Optional High Wattage Heater for Low Temp applications to -40°F



### ***Captive cover bolt***

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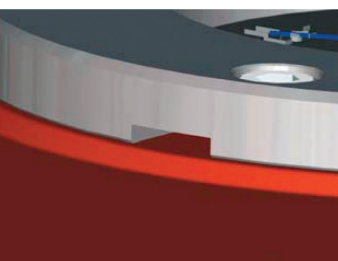
- Cover bolts are specially designed to prevent loosening during maintenance or installation
- All external bolts are stainless steel for rust prevention



### ***Indicator sustained by spring***

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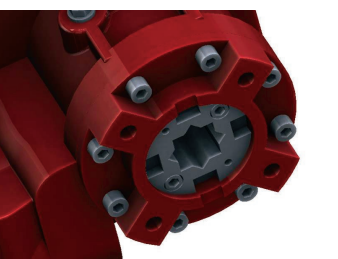
- Direction of visual indicator is set by factory
- To change its direction, simply grip the indicator plate and rotate to the new position
- Spring beneath the indicator plate sustains the set position
- No need to loosen screw and tighten it again



### ***Slot on window cover for draining water***

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- A drain slot is provided to eliminate water buildup on window



### ***Removable Drive Bushing***

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- Easily changeable drive size

# WE/XE Series

## WE/XE Series



**WE** CSA Approved,  
Type 4 & 4X,  
IP67



**XE**  
ATEX/IECEX  
Ex db IIB T4 Gb  
Ex tb IIIC T135°C Db  
IP67



**SE** Type 4,  
4X & 6, IP68

Actuator Models	Maximum Load Torque	Speed 60 / 50 Hz	Motor Size	Full Load Amps				Locked Rotor Amps				Duty Cycle	Handwheel Turns	Weight		
				AC/DC	1 Phase		3 Phase		AC/DC	1 Phase					3 Phase	
<b>WE / XE</b>	In-Lbs.	Sec/90°	Watts	24V	110V/60Hz	220V/60Hz	380V	440V	24V	110V/60Hz	220V/60Hz	380V	440V	IEC 34-1 S4	N	Lbs.
<b>-690</b>	690	13 / 16	15	5	1.2	0.6	N/A	N/A	12.8	1.4	0.7	N/A	N/A	70%	10	16.4
<b>-1350</b>	1350	21 / 25	40	6	2	1	0.28	0.36	16.9	2.5	1.2	0.75	0.66	70%	11	36.7
<b>-1700</b>	1700	21 / 25	40	7.4	2.3	1.1	0.28	0.36	16.9	2.5	1.2	0.75	0.66	70%	11	36.7
<b>-2640</b>	2640	26 / 31	40	8.9	2.3	1.3	0.27	0.34	30.8	2.9	1.4	1	0.87	70%	13.5	48.6
<b>-4400</b>	4400	26 / 31	90	N/A	4.5	1.9	0.42	0.47	N/A	5	2.4	1.73	1.5	70%	13.5	50.8
<b>-5200</b>	5200	26 / 31	90	N/A	4.5	2	0.42	0.47	N/A	5	2.4	1.73	1.5	70%	13.5	50.8
<b>-6900</b>	6900	31 / 37	180	N/A	5.1	2.4	0.61	0.67	N/A	7.3	3.8	2.73	2.38	50%	16.5	64
<b>-10500</b>	10500	31 / 37	180	N/A	5.4	3.4	0.61	0.67	N/A	7.3	3.8	2.73	2.38	50%	16.5	64
<b>-17500</b>	17500	95 / 112	180	N/A	5.8	2.4	0.61	0.67	N/A	7.3	3.8	2.73	2.38	50%	49.5	167
<b>-25900</b>	25900	95 / 112	180	N/A	6.3	3.4	0.61	0.67	N/A	7.3	3.8	2.73	2.38	50%	49.5	167

### Standard Specifications

<b>Enclosure</b>	<b>Series WE</b> - Weatherproof, CSA Type 4, 4X, IP67 <b>Series XE</b> - ATEX/IECEX Explosion/Flame Proof & Dust Ignition Proof; IP67, Ex db IIB T4 Gb, Ex tb IIIC T135°C Db <b>Series SE</b> - Submersible, Type 4, 4X, & 6, IP68, 10m for 72hr
<b>AWWA</b>	Conforms to AWWA C540-93 requirements
<b>SIL</b>	SIL2/SIL3 capable
<b>Power supply</b>	12/24VDC, 24/110/220VAC 1PH, 220/380/440/460/480VAC 3 PH, 50/60Hz, ±10%
<b>Duty cycle</b>	S2 30 min.; S4 50-70%, 1200 starts per hour; average 50% rated torque at 25°C/77°F
<b>Motor</b>	Class F Reversible Induction motor
<b>Limit switches</b>	Open / Close, SPDT, 16A 1/2HP 125/250VAC, 0.6A 125VDC, 0.3A 250VDC; (2) Operational & (2) Auxillary
<b>Torque switches</b>	Open / Close, SPDT, 16A 1/2HP 125/250VAC, 0.6A 125VDC, 0.3A 250VDC (except size -690)
<b>Stall protection</b>	Built-in thermal protection, Open 302°F (150°C) / Close 207°F (97°C)
<b>Travel angle</b>	0 to 90° ± 10° (Standard), 360° (Optional)
<b>Indicator</b>	Continuous position indicator
<b>Manual override</b>	Declutching mechanism
<b>Self locking</b>	Provided by double worm gearing
<b>Mechanical stopper</b>	Open / Close (external adjustable screws)
<b>Space heater</b>	Anti-condensation 5-10 W (Standard) 30-45 W (Low-Temp option)
<b>Cable Conduit</b>	Two 3/4" NPT
<b>Lubrication</b>	Grease moly (EP type)
<b>Terminal block</b>	Spring loaded lever push type
<b>Materials</b>	Steel, Aluminium alloy, Al bronze, Polycarbonate
<b>Ambient temperature</b>	Standard: -4°F — 158°F   Explosion Proof standard: -4°F — 140°F
<b>Ambient humidity</b>	90% RH Max. (non-condensing)
<b>Anti-Vibration</b>	XYZ 10g, 0.2~34Hz, 30 minutes
<b>External coating</b>	Anodizing treatment before dry powder, Polyester



# WE & XE Series

ELECTRIC ACTUATORS

## Options

Option	WE	XE	SE	Available Models
Explosion/Dust Ignition Proof Enclosure (ATEX/IECEX Ex db IIB T4 Gb; Ex tb IIIC T135°C Db, IP67)	-	X	-	-500 to -25900
Submersible Enclosure (Type 4, 4X & 6, IP68, 10m for 72hr)	-	-	X	-690 to -10500
Potentiometer Unit (1kΩ to 10kΩ)	X	X	X	-500 to -25900
TMC4 Electronic Control Card; 4-20mA, 0-10VDC, 0-5VDC, 0-135Ω, 0-1kΩ or discrete open/close command signal	X	X	X	WE-500 to -25900 XE/SE-1350 to -25900
(TDC) High Resolution Electronic Modulating Card; 4-20mA, 1-5VDC, 0-5VDC, 0-10VDC command signal	X	X	X	WE-500 to -25900 XE/SE-1350 to -25900
Local Control Unit (local/remote control)	X	-	-	-500 to -25900
Semi-Integral Control Unit (local/remote control with feedback)	X	X	X	-1350 to -25900
Intelligent Digital Control Unit (local/remote control with feedback and digital LCD display)	X	X	X	-1350 to -80000
Current Position Transmitter (4-20mA output)	X	X	X	-500 to -25900
Low Temp Kit (-40°F)	X	X	X	-500 to -25900
24V AC/DC Control	X	X	X	WE/XE-500A to -2640A SE-690A to -2640A
DC Motor (24VDC)	X	X	X	WE/XE-500C to -2640C SE-690C to -2640C
Rotation 120°, 180°, 270° (bidirectional), 360°(unidirectional)	X	X	X	-690 to -10500
Visual LED Indicator (open, close, power, torque)	X	X	X	-690 to -10500



## Enclosure Ratings

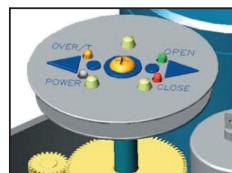
**Series WE** - Weatherproof, CSA Type 4, 4X, IP67

**Series XE** - ATEX/IECEX Explosion/Flame Proof & Dust Ignition Proof; IP67, Ex db IIB T4 Gb, Ex tb IIIC T135°C Db

**Series SE** - Submersible, Type 4, 4X, & 6, IP68, 10m for 72hr



**XE Explosion/Flame Proof & Dust Ignition Proof Enclosure**  
ATEX/IECEX Certification



**Signal LED Unit**  
Large indicator with monitoring lamps (Over torque, open and close)



## Wiring Diagram References

Model	Description	Drawing
<b>WE-500</b>	115 VAC/1 Phase, Two Position	SE 1010
<b>WE-500A</b>	24 VAC/24 VDC, Two Position	SE 1168/SE 1130
<b>WEM-500</b>	115 VAC/1 Phase, Modulating with TMC4 Servo Card	SE01687
<b>WE-690</b>	115 VAC/1 Phase, Two Position	SE 1032
<b>WEM-690</b>	115 VAC/1 Phase, Modulating with TMC4 Servo Card	SE01689
<b>WE/XE-1350 thru 25900</b>	115 VAC/1 Phase, Two Position	SE 1080
<b>WE/XE-1350A thru 2640A</b>	24 VAC/24 VDC, Two Position	SE 1221/SE 1220
<b>WEM/XEM-1350 thru 25900</b>	115 VAC/1 Phase, Modulating with TMC4 Servo Card	SE01691
<b>Digital Control Unit</b>	3 Phase/Modulating	SE 1222
<b>Digital Control Unit</b>	3 Phase/Two Position	SE 1301
<b>Semi-Integral Unit</b>	1 Phase/Proportional	SE 1176
<b>Semi-Integral Unit</b>	1 Phase/Two Position	SE 1097

» See [www.atcontrols.com](http://www.atcontrols.com) to download specific wiring diagrams (Download > Sort by Document Type > Electric Schematic)

## High Speed Electric Actuators

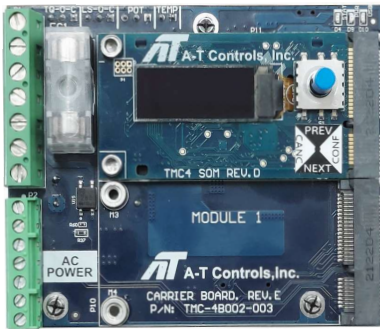
Model	Output Torque (In-Lbs)	Speed (60Hz) (Sec/90°)	Torque Switch Setting (In-Lbs)
WE-690*HS2	290	4.5	N/A
WE-690*HS1	400	7.0	N/A
WE-1350*HS2	840	7.0	1,350
WE-1350*HS1	1,200	10.5	1,350
WE-2640*HS2	1,390	8.5	2,640
WE-2640*HS1	2,050	13.0	2,640
WE-4400*HS2	2,350	8.5	4,400
WE-4400*HS1	3,500	13.0	4,400
WE-6900*HS2	4,500	10.5	6,900
WE-10500*HS1	6,700	15.5	10,500
WE-17500*HS2	12,000	31.0	17,500
WE-25900*HS1	18,000	47.0	25,900

Motor specifications remain the same.

\*Must specify voltage - see part number matrix

## Control Options for WE-500 thru 25900

### Control Cards



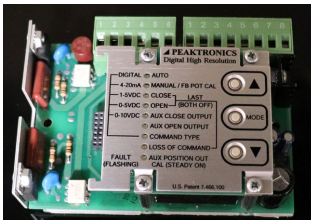
#### TMC4 Electronic Control Card (12VDC, 24VDC, 24VAC, 120VAC, 220VAC)

##### Standard Features:

- 4-20mA, 0-10VDC, 0-5VDC, Ohms, or Open/Close command signal
- Programmable fail mode on loss of command or out of range signal: In Place, Fail Close, Fail Open, Fail to Percent
- On board 4-20mA or 0-10V self-powered feedback transmitter
- Adjustable command and feedback to non-standard ranges
- LCD screen with easy to navigate UI for setup and configuration
- External brake control for spring return actuators (excluding with 24VAC supply)
- Expansion module slot for communication protocol options: Modbus RTU, Modbus TCP, Profibus DP, Ethernet/IP
- Adjustable deadband setting down to 0.2%
- Direct/Reverse action setup by zero & span
- +24VDC output for powering external 2-wire transmitters

##### Optional Features:

- Communication protocols: Modbus RTU, Modbus TCP, Profibus DP, Ethernet I/P (consult factory for other protocols)
- Motor temperature management programmable fail positions on loss of command signal: Fail in Place, Fail CW, Fail CCW, Fail % Value
- Power monitor for AC operation



#### TDC Electronic Modulating Card (12/24VDC, 24/120/220 VAC)

- 450 Point Resolution, 16 Bit Micro Processor
- Adaptive Control Feature (continuously adjusts for load and actuator conditions and positions to  $\pm 0.1^\circ$ )
- Dynamic Breaking
- 4-20mA, 1-5V, 0-5V, 0-10V
- Programmed to Fail in place, Fail CW, or Fail CCW on loss of command signal
- 4-20mA Feedback Transmitter (Optional)

#### EPC Electronic AS-i Network Card

- AS-i Version 2.1
- 24VDC Power
- Emergency Override-Normal Operation is overridden when actuator is driven to either CW or CCW position on command
- Built in Emergency Position Command (EPC) overrides normal operation and automatically operates the valve into either the open or closed position (normally this is the closed position) as defined in the user specifications
- Signal Sentinel continuously monitors the EPC system offering additional failsafe backup in the event of an unexpected local event



#### Boiler Feedwater Application

- **WEL** Control signal 4-20mA, specify these parts: LRC-101, POT-102 & Extended Bracket.
- **WES** Control signal 0-135 ohm, specify these parts: TDC-100, XMA-108, POT-102 & Extended Bracket
- Logarithmically averages rapidly changing signals to reduce unnecessary hunting for position.

# Options

## Special Application

### Local / Remote Control Unit

- Aluminum die-cast, compact size, light weight
- Weatherproof Type 4/4X, IP67
- 24V AC/DC, 120VAC, 220VAC
- Local/Remote, Open/Off/Close selector switches
- Full open/close position indicator lamps (Green = Open, Red = Close)
- Easy to add to WE series actuators



### Intelligent Digital Control Unit

- Aluminum die-cast, compact size, integrated design
- Weatherproof Type 4/4X, IP67/IP68
- LCD screen: configurable menu settings, status indicators, open percentage number and bar graph
- Auto phase discriminator; detects phase reversal and angle
- Separate terminal chamber
- LED lamp indicators (Red = open/opening, Green = close/closing, Yellow = fault)
- Relay contact status feedback (remote, opening, closing, fault)
- Supply Voltage: 110/220VAC 1-phase, 50/60Hz,  $\pm 10\%$  | 220 to 480VAC 3-phase, 50/60Hz,  $\pm 10\%$



### Semi-Integral Control Unit

- Aluminum die-cast, compact size, integrated design
- Weatherproof Type 4/4X, IP67/IP68
- Phase protection monitor by LED in case of reverse wiring
- Relay contact status feedback (remote, opening, closing, fault)
- Supply Voltage: 110/220VAC 1-phase, 50/60Hz,  $\pm 10\%$  | 220 to 480VAC 3-phase, 50/60Hz,  $\pm 10\%$



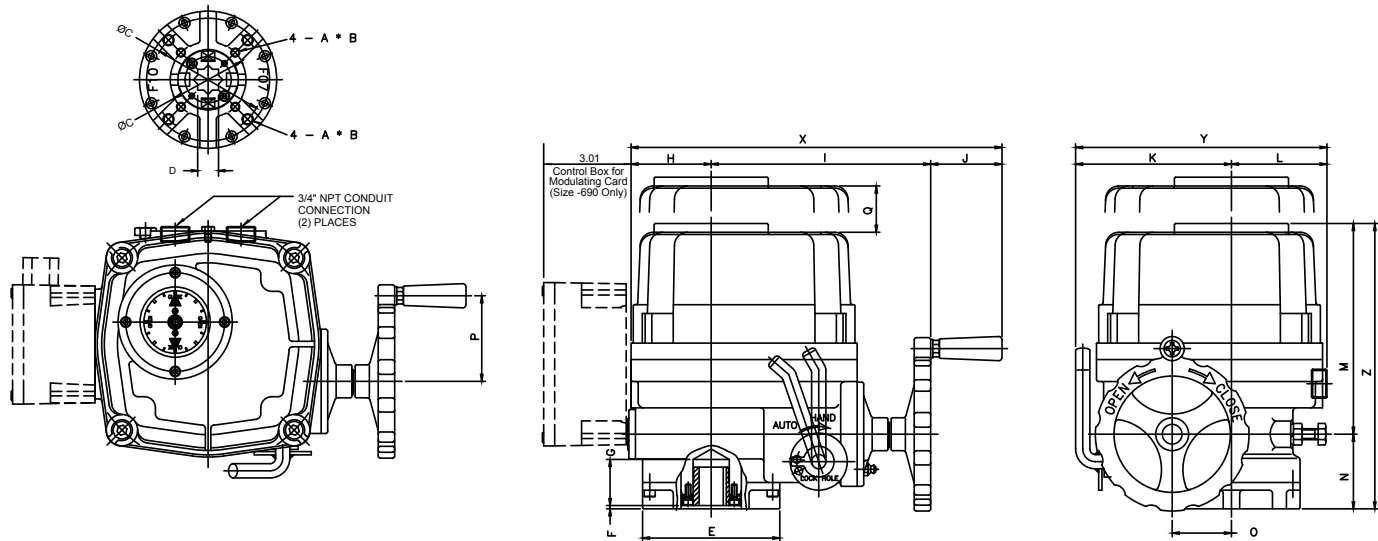
LED lamp signal	
White	○ :Power
Blue	● :Remote
Yellow	● :Fault
Red	● :Open/Opening
Green	● :Close/Closing



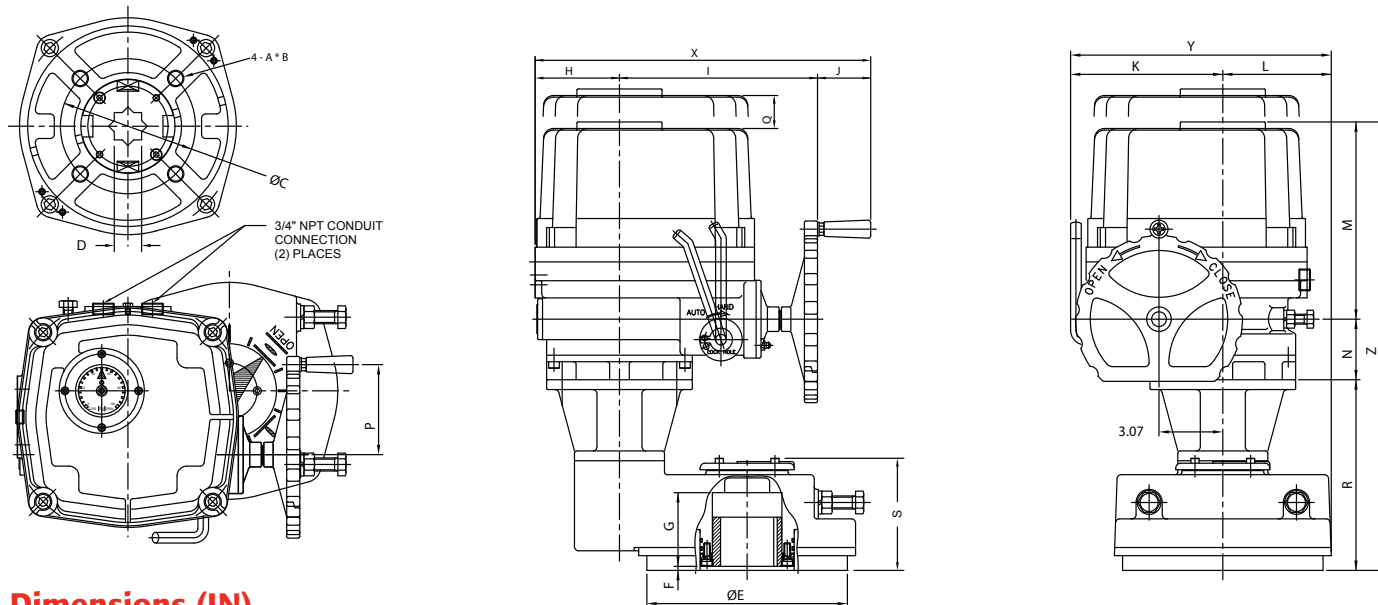
# WE & XE Series

## Dimensional Drawing

**WE/XE-690, 1350, 1700, 2640, 4400, 5200, 6900, 10500**



**WE/XE-17500, 25900**



### Dimensions (IN)

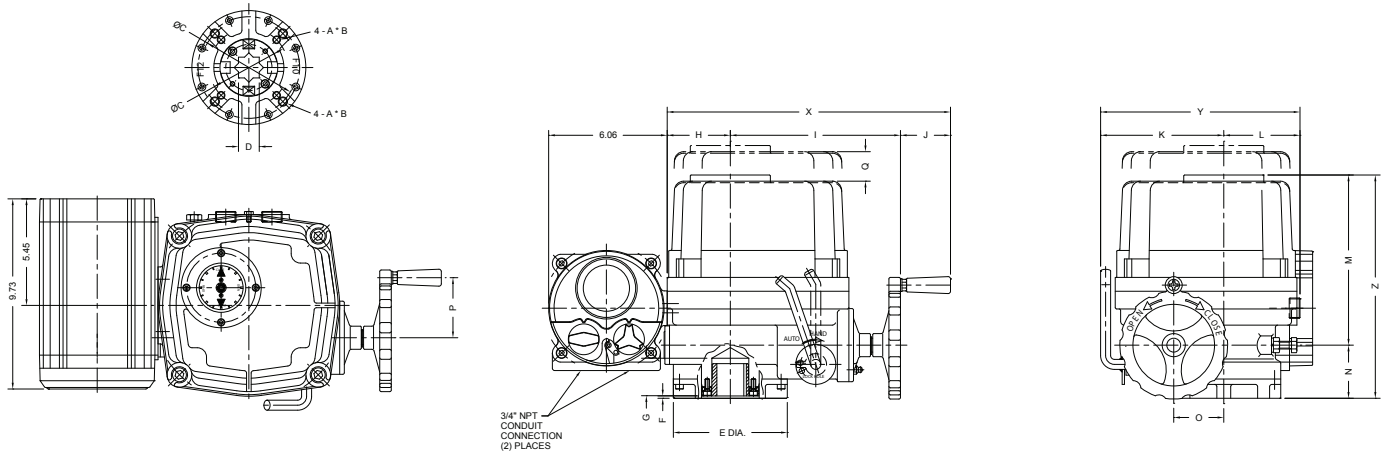
Model WE/XE	ISO 5211	A	B	C	D sq	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	X	Y	Z
-690	F07	M8	0.47	2.756	0.669	3.46	0.12	1.26	1.97	6.18	2.01	3.94	2.76	6.57	2.09	1.57	2.36	4.72	-	-	10.16	6.69	9.25
-1350	F07/F10	M8/M10	0.47/0.59	2.756/4.016	0.748	4.92	0.12	1.65	2.87	7.87	2.56	5.59	3.43	7.56	2.68	2.13	3.07	6.30	-	-	13.31	9.02	10.55
-1700	F07/F10	M8/M10	0.47/0.59	2.756/4.016	0.748	4.92	0.12	1.65	2.87	7.87	2.56	5.59	3.43	7.56	2.68	2.13	3.07	6.30	-	-	13.31	9.02	10.55
-2640	F10/F12	M10/M12	0.59/0.71	4.016/4.921	1.063	5.83	0.12	1.93	3.23	8.70	2.56	6.30	3.90	8.70	2.72	2.56	3.07	7.09	-	-	14.49	10.20	11.42
-4400	F10/F12	M10/M12	0.59/0.71	4.016/4.921	1.063	5.83	0.12	1.93	3.23	8.70	2.56	6.30	3.90	8.70	2.72	2.56	3.07	7.09	-	-	14.49	10.20	11.97
-5200	F10/F12	M10/M12	0.59/0.71	4.016/4.921	1.063	5.83	0.12	1.93	3.23	8.70	2.56	6.30	3.90	8.70	2.72	2.56	3.07	7.09	-	-	14.49	10.20	11.97
-6900	F14	M16	0.95	5.512	1.417	7.01	0.12	2.24	4.06	9.53	2.56	7.32	4.37	9.49	2.91	3.07	4.33	8.27	-	-	16.14	11.69	12.99
-10500	F14	M16	0.95	5.512	1.417	7.01	0.12	2.24	4.06	9.53	2.56	7.32	4.37	9.49	2.91	3.07	4.33	8.27	-	-	16.14	11.69	12.99
-17500	F16	M20	1.18	6.496	1.417	9.65	0.20	3.54	4.06	9.53	2.56	7.32	5.24	9.49	2.91	3.07	4.33	8.27	9.17	5.24	16.14	12.56	22.17
-25900	F16	M20	1.18	6.496	1.417	9.65	0.20	3.54	4.06	9.53	2.56	7.32	5.24	9.49	2.91	3.07	4.33	8.27	9.17	5.24	16.14	12.56	22.17

# WE Series

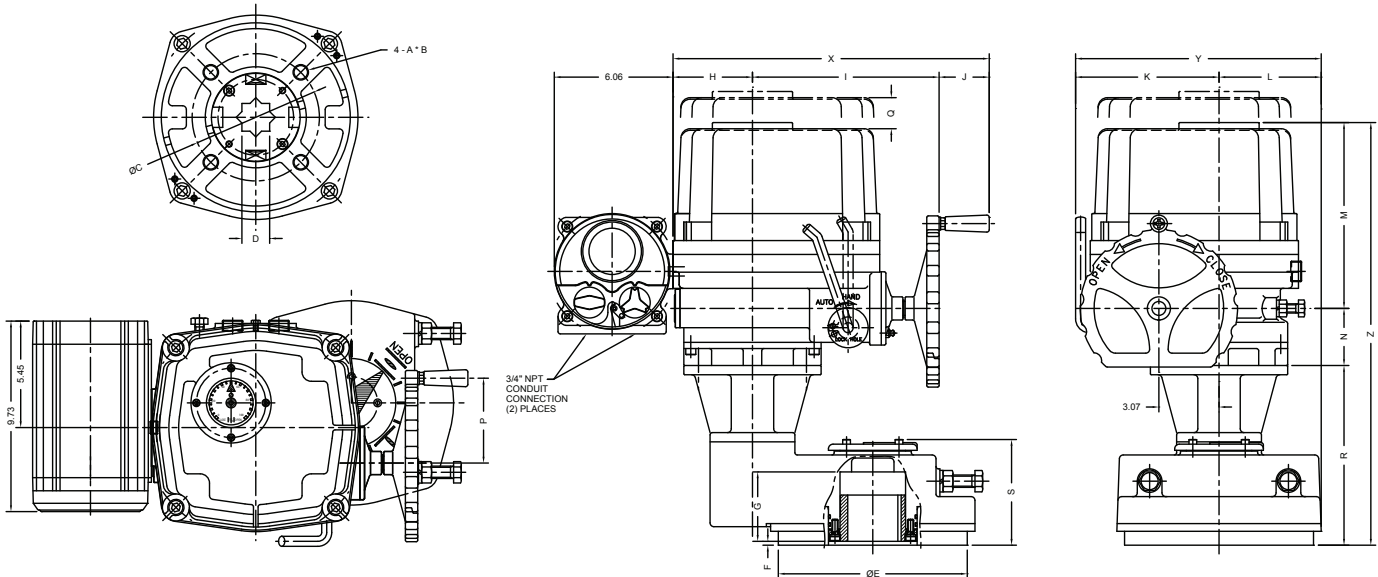
ELECTRIC ACTUATORS

## Dimensional Drawing

**WE-1350, 1700, 2640, 4400, 5200, 6900, 10500** *Intelligent Digital Control Unit*



**WE-17500, 25900** *Intelligent Digital Control Unit*

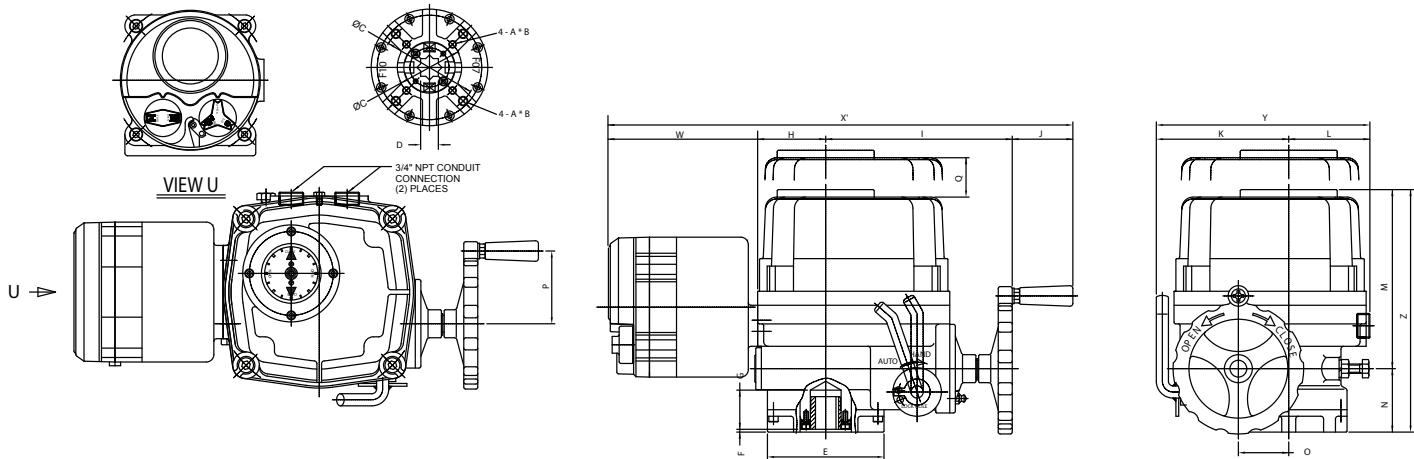


### Dimensions (IN)

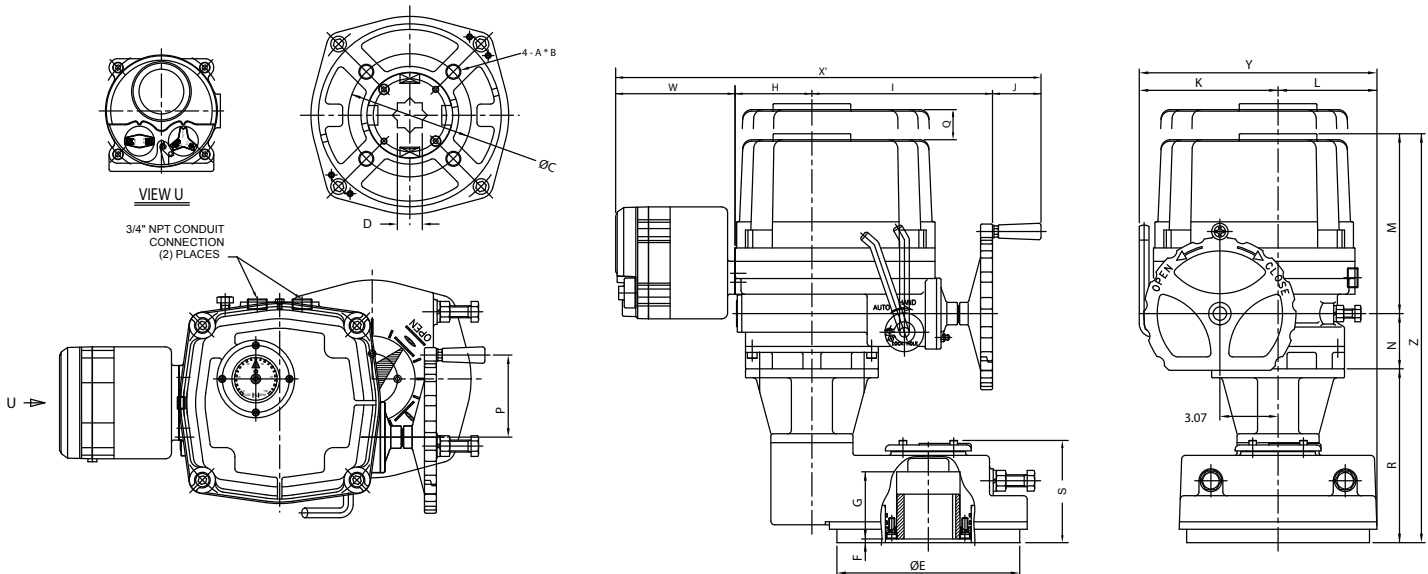
Model WE	ISO 5211	A	B	C	D sq	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	X	Y	Z
-1350	F07/F10	M8/M10	0.47/0.59	2.756/4.016	0.748	4.92	0.12	1.65	2.87	7.87	2.56	5.59	3.43	7.56	2.68	2.13	3.07	6.30	-	-	13.31	9.02	10.55
-1700	F07/F10	M8/M10	0.47/0.59	2.756/4.016	0.748	4.92	0.12	1.65	2.87	7.87	2.56	5.59	3.43	7.56	2.68	2.13	3.07	6.30	-	-	13.31	9.02	10.55
-2640	F10/F12	M10/M12	0.59/0.71	4.016/4.921	1.063	5.83	0.12	1.93	3.23	8.70	2.56	6.30	3.90	8.70	2.72	2.56	3.07	7.09	-	-	14.49	10.20	11.42
-4400	F10/F12	M10/M12	0.59/0.71	4.016/4.921	1.063	5.83	0.12	1.93	3.23	8.70	2.56	6.30	3.90	8.70	2.72	2.56	3.07	7.09	-	-	14.49	10.20	11.97
-5200	F10/F12	M10/M12	0.59/0.71	4.016/4.921	1.063	5.83	0.12	1.93	3.23	8.70	2.56	6.30	3.90	8.70	2.72	2.56	3.07	7.09	-	-	14.49	10.20	11.97
-6900	F14	M16	0.95	5.512	1.417	7.01	0.12	2.24	4.06	9.53	2.56	7.32	4.37	9.49	2.91	3.07	4.33	8.27	-	-	16.14	11.69	12.99
-10500	F14	M16	0.95	5.512	1.417	7.01	0.12	2.24	4.06	9.53	2.56	7.32	4.37	9.49	2.91	3.07	4.33	8.27	-	-	16.14	11.69	12.99
-17500	F16	M20	1.18	6.496	1.417	9.65	0.20	3.54	4.06	9.53	2.56	7.32	5.24	9.49	2.91	3.07	4.33	8.27	9.17	5.24	16.14	12.56	22.17
-25900	F16	M20	1.18	6.496	1.417	9.65	0.20	3.54	4.06	9.53	2.56	7.32	5.24	9.49	2.91	3.07	4.33	8.27	9.17	5.24	16.14	12.56	22.17

## Dimensional Drawing

### WE-1350, 1700, 2640, 4400, 5200, 6900, 10500 Semi-integral Control Unit



### WE-17500, 25900 Semi-integral Control Unit



## Dimensions (IN)

Model WE	ISO 5211	A	B	C	D sq	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	X	Y	Z
-690	F07	M8	0.47	2.756	0.669	3.46	0.12	1.26	1.97	6.18	2.01	3.94	2.76	6.57	2.09	1.57	2.36	4.72	-	-	10.16	6.69	9.25
-1350	F07/F10	M8/M10	0.47/0.59	2.756/4.016	0.748	4.92	0.12	1.65	2.87	7.87	2.56	5.59	3.43	7.56	2.68	2.13	3.07	6.30	-	-	13.31	9.02	10.55
-1700	F07/F10	M8/M10	0.47/0.59	2.756/4.016	0.748	4.92	0.12	1.65	2.87	7.87	2.56	5.59	3.43	7.56	2.68	2.13	3.07	6.30	-	-	13.31	9.02	10.55
-2640	F10/F12	M10/M12	0.59/0.71	4.016/4.921	1.063	5.83	0.12	1.93	3.23	8.70	2.56	6.30	3.90	8.70	2.72	2.56	3.07	7.09	-	-	14.49	10.20	11.42
-4400	F10/F12	M10/M12	0.59/0.71	4.016/4.921	1.063	5.83	0.12	1.93	3.23	8.70	2.56	6.30	3.90	8.70	2.72	2.56	3.07	7.09	-	-	14.49	10.20	11.97
-5200	F10/F12	M10/M12	0.59/0.71	4.016/4.921	1.063	5.83	0.12	1.93	3.23	8.70	2.56	6.30	3.90	8.70	2.72	2.56	3.07	7.09	-	-	14.49	10.20	11.97
-6900	F14	M16	0.95	5.512	1.417	7.01	0.12	2.24	4.06	9.53	2.56	7.32	4.37	9.49	2.91	3.07	4.33	8.27	-	-	16.14	11.69	12.99
-10500	F14	M16	0.95	5.512	1.417	7.01	0.12	2.24	4.06	9.53	2.56	7.32	4.37	9.49	2.91	3.07	4.33	8.27	-	-	16.14	11.69	12.99
-17500	F16	M20	1.18	6.496	1.417	9.65	0.20	3.54	4.06	9.53	2.56	7.32	5.24	9.49	2.91	3.07	4.33	8.27	9.17	5.24	16.14	12.56	22.17
-25900	F16	M20	1.18	6.496	1.417	9.65	0.20	3.54	4.06	9.53	2.56	7.32	5.24	9.49	2.91	3.07	4.33	8.27	9.17	5.24	16.14	12.56	22.17

See wiring drawings reference on page 15 or call factory for special requests.

# WE-53000 & WE-80000

ELECTRIC ACTUATORS

## Technical Information

Actuator Model	Maximum Load Torque	Speed 60/50 Hz	Mounting Size	Rated Current(A) 60Hz			Motor Insulation Class	Maximum Bore Size (mm)		Duty Cycle	Number of Handwheel Turns	Weight
				1 Phase	3 Phase							
	In-Lbs	Sec/90°	ISO 5211	220V	380V	440V	AC 1PH 50/60Hz			S2		Lbs.
WE-53000	53000	66 / 78 sec.	F25/F30	6.3	3.3	1.8	F	100	100	30%	39	474
WE-80000	80000	99 / 117 sec.		6.3	3.3	1.8						

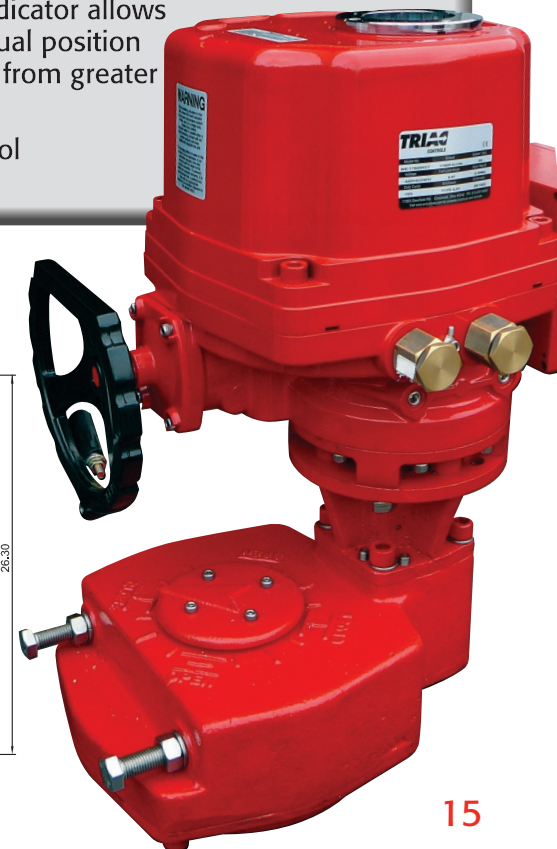
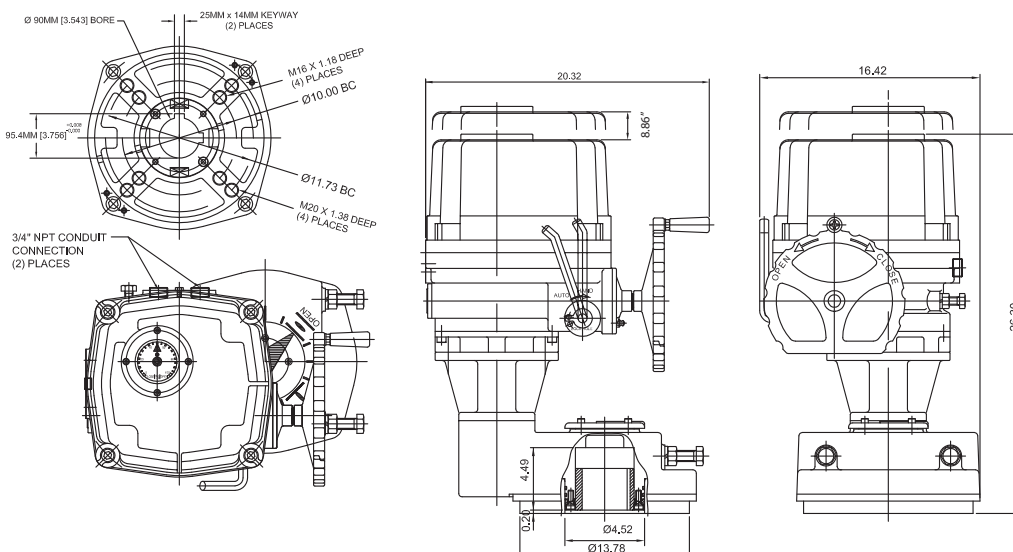
## Standard Specifications

<b>Enclosure</b>	Weatherproof enclosure IP67, Type 4, 4X & 6, O-ring Sealed
<b>Power Supply</b>	220VAC/1PH/60Hz, 380/440/VAC/3Ph/60Hz ± 10%
<b>Duty Cycle</b>	30%
<b>Motor</b>	Squirrel Cage induction motor
<b>Aux. Limit Switches</b>	2 each for Open/Close, SPDT, 250 VAC, 10A Rating
<b>Torque Switches</b>	1 each for Open/Close, SPDT, 250 VAC, 10A Rating
<b>Space Heater</b>	10W (220VAC) Anti-condensation
<b>Manual Override</b>	Declutchable
<b>Cable Conduit</b>	Two 3/4" NPT
<b>Movement Angle</b>	90° ± 5°
<b>Ambient Temperature</b>	-4°F to 158°F (optional -40°F Low Temp Kit)
<b>Ambient Humidity</b>	90% RH Max (Non-Condensing)
<b>Position Indicator</b>	Continuous mechanical indicator with arrow
<b>Self Locking</b>	Provided by double worm gearing (no brake)
<b>Mechanical Stopper</b>	1 for each travel end (open/close), external & adjustable
<b>Stall Protection / Set Temp</b>	Built in thermal protection, Open 302°F (150°C) / Close 207°F (97°C)
<b>Terminal Block</b>	Spring loaded lever push type
<b>Eternal Coating</b>	Polyester powder coating
<b>Lubrication</b>	EP type grease
<b>Anti-Vibration</b>	XYZ 10g, 0.2~34Hz, 30 minutes

## Features

- Compact, robust and lightweight construction covers a wide range of torques up to 80,000 In-lbs.
- Polyester powder coated exterior and hard anodized aluminum interior provides excellent protection from the most severe industrial environments.
- Double worm gear design prevents any valve movement from dynamic forces within the pipeline.
- Standard ISO 5211 mounting configuration for direct mount.
- Declutchable manual override with hand wheel.
- Mechanical torque switches prevent motor and gear set damage during excessive torque scenarios.
- Large visual indicator allows for positive visual position identification from greater distances.
- Digitized control components.

## Dimensions



# How to order WE/XE Series

## TRIAQ® WE / XE Series Part Number Reference

1. Model	
WE	Weather Proof, CSA TYPE 4, 4X, IP67
XE	Explosion Proof Design, ATEX & IECEx Ex d IIB T4 Gb, IP67
SE	Submersible unit (IP68, 10 meters for 72 Hours)

2. Main Control		
Blank	2-Position Control (Open / Close)	
M	Standard Modulating Control Card with transmitter	500 - 10500
D	Modulating Card (TDC-100 or TDC-400)	See 7 Misc. Options 1 for transmitter 500 - 10500
E	Ethernet/IP	(go to 3) 500 - 25900
P	Profibus DP	(go to 3) 500 - 25900
R	Modbus RTU Single Channel	(go to 3) 500 - 25900
T	Modbus/TCP	(go to 3) 500 - 25900
U	Modbus RTU Dual Channel Isolated	(go to 3) 500 - 25900
L	Boiler Feed (4-20mA)	TSM extension recommended 500 - 25900
S	Boiler Feed (0-135Ω)	TSM extension recommended 500 - 25900
Y	Fireye Burner Control	(Proprietary) 500 - 25900



3. Main Control Type (with Communication Option)	
Blank	No Communication Control Type
A	Communication Control, Proportional Control/Feedback
B	Communication Control, (2) Position Control (Open/Close)

4. Actuator Size			
350	350 In-Lbs	5200	5200 In-Lbs
350HS	270 In-Lbs	6900	6900 In-Lbs
500	500 In-Lbs	10500	10500 In-Lbs
690	690 In-Lbs	17500	17500 In-Lbs
1350	1350 In-Lbs	25900	25900 In-Lbs
1700	1700 In-Lbs	53000	53000 In-Lbs
2640	2640 In-Lbs	80000	80000 In-Lbs
4400	4400 In-Lbs		

5. Motor		Applicable Models
X	110VAC/1PH <sup>(1)</sup> Place holder only - omit when at end of part number	
A	24VDC/VAC - On/Off <sup>(1)</sup> (includes motor reversing control card)	500 - 2640
C	24VDC (DC motor only unless with 2 - Main Control option)	500 - 2640
N	12VDC/VAC - On/Off (includes motor reversing control card)	690
B	12VDC (DC motor only unless with 2 - Main Control option)	690
D	24VAC/1PH	500 - 2640
E	220VAC/1PH <sup>(1)</sup>	500 - 80000
F	220VAC/3PH	1350 - 80000
G	380VAC/3PH	1350 - 80000
H	480VAC/3PH	1350 - 80000
K	440VAC/3PH	1350 - 80000

6. Secondary Control Options		Applicable Models
X	No options Place holder only - omit when at end of part number	
B	Semi-integral Control Unit (1PH/3PH)	WE/XE 1350 - 25900
C	Intelligent Digital Control Unit (1PH/3PH)	WE/XE 1350 - 80000
D	Local / Remote Control Switches	WE 500 - 25900
E	RCT Electronic Speed Control Module <sup>(2)</sup> (both directions standard)	(24VAC, 110VAC, 220VAC only) 500 - 25900
F	AMI AC Motor Interface & Speed Control	(24VAC, 110VAC, 220VAC only) 500 - 25900
G	AST Sequence Timer	500 - 25900
HS1	High Speed 1	See High Speed Options
HS2	High Speed 2	See High Speed Options
R	2-Wire Control <sup>(1) (2)</sup>	110VAC control voltage
S	2-Wire Control <sup>(1) (2)</sup>	24VAC control voltage
T	2-Wire Control <sup>(1) (2)</sup>	24VDC control voltage

7. Miscellaneous Options 1		Applicable Models
Blank	No designation, Actuator Series Standard	
X	Multiple Option Designation	
T	0-10VDC or 4-20mA Transmitter (specify) (On/Off or modulating control "D")	
G	General I/O Module (with TMC4 only, CF for options)	
N	1000 Ohm Potentiometer <sup>(1)</sup>	
O	5000 Ohm Potentiometer <sup>(1)</sup>	
P	10K Ohm Potentiometer <sup>(1)</sup>	
Y	180° Operation	500 - 10500
Z	270° Operation	690 - 10500
3	180° Operation, 3-Position Control	500 - 10500
4	270° Operation, 4-Position Control <sup>(2)</sup>	690 - 10500
8	180° Operation, 3-Position Control Board for WE-500 Wine Application	
9	90° Operation, 3-Position Control <sup>(2)</sup>	500 - 25900
L	-40°F Low Temp Kit	500 - 25900
I	Visual LED Indicator (Open/Close/Power)	690 - 10500
S	(4) Auxillary limit switches (6 total)	690 - 25900

8. Conduit Thread Options	
Blank	No Designation, Actuator Series Standard
X	Multiple Option Designation
M	M20
A	M25

9. Drive Bushing	
Blank	No Designation, Actuator Series Standard
X	Multiple Option Designation
D	Nonstandard DD Drive Bushing
K	Nonstandard Key Drive Bushing
N_	Nonstandard Star Drive Bushing, Followed by Drive Size in mm (ex. N14)
6	316 Stainless Steel Standard Drive Size

10. Miscellaneous Options 2		Applicable Models
Blank	No Designation, Actuator Series Standard	
X	Multiple Option Designation	
2	F12 Mounting	6900 - 10500
4	F14 Mounting	17500 - 25900
C	Corrosion Resistant NANO Polymer Coating	
L	CCW Operation	500 - 25900
R	CW Operation	500 - 25900
S	125 g Shock Configuration	690 - 10500
P	Non Standard Coating Color	

<sup>(1)</sup> XE-500 applicable options  
<sup>(2)</sup> Use 10-Miscellaneous Options 2 to specify direction  
 \*\* Floor Drive Mounting Configuration - See Floor Drive Catalog

**HOW TO ORDER ELECTRIC ACTUATORS**

1 2 3 - 4 5 6 7 - 8 - 9 - 10  
 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓  
**WE M - 2640 X X X - X - X - C**

**Example**  
**WEM-2640\_ \_ \_ \_ \_**  
 (Weather Proof Housing, Modulating Control, model size 2640, 110VAC / 1PH)

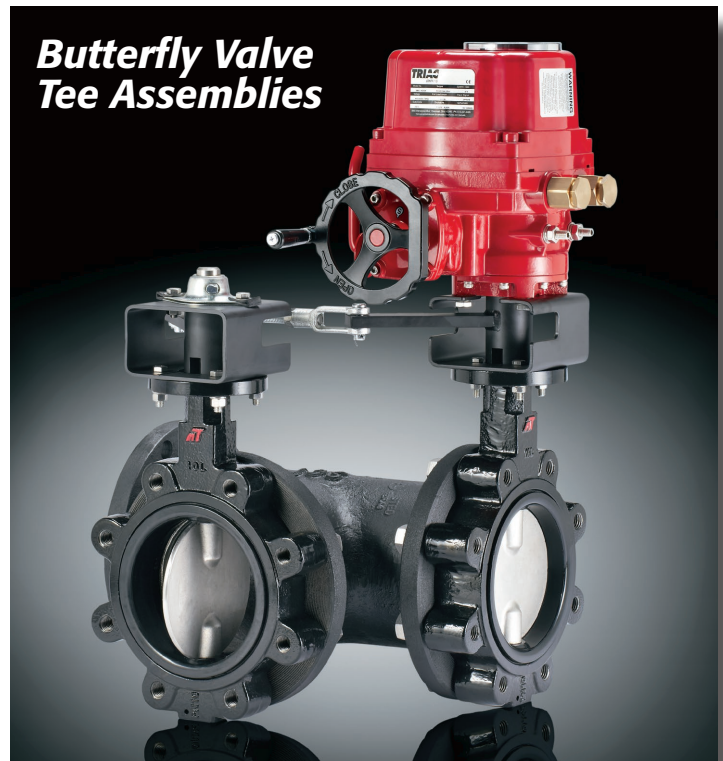
# Specials and Applied Solutions

## ELECTRIC ACTUATORS

While you have come to know A-T Controls for superior service in automated valves and day-to-day automation and controls, we specialize in offering solutions to your more unique and difficult applications. Listed below are some of the electric specials and solutions oriented products and services we offer.



**Electric Floor Damper Drive**



**Butterfly Valve Tee Assemblies**

See these catalogs for additional offerings included in the TRIAC® Electric Actuator product line:

