



Electra[®]
Quarter Turn



Engineered Performance

Electra actuators can be found controlling today's valves in a wide range of applications, from industrial process to temperature control. The proven design is manufactured by the latest technology. The entire enclosure is die cast then machined on precision CNC machining centers. Electra actuators time tested products are balanced by our continued investment in research and development. Through innovation and cutting edge technology the Electra quarter turn actuator leads the valve automation industry today.

► Modular Construction

Truly modular design allows the actuator to be easily field modified and serviced.

► High Strength Transmission

One piece worm gear and segment are precision machined for efficient energy transfer, quiet operation and long service life.

► Guaranteed Minimum Torques

All actuators are torque tested under load before shipment. We guarantee that the output torque meet the rating on the tag.

► NEMA 4 Enclosure

Actuators contain o-rings to ensure no ingress of moisture. The ceramic heater is standard and protects the actuator against condensation.

► Extended Duty Cycle

Electra actuators are rated for extended duty service with extended performance of starts and stops per hour.



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Model 600



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Model 700



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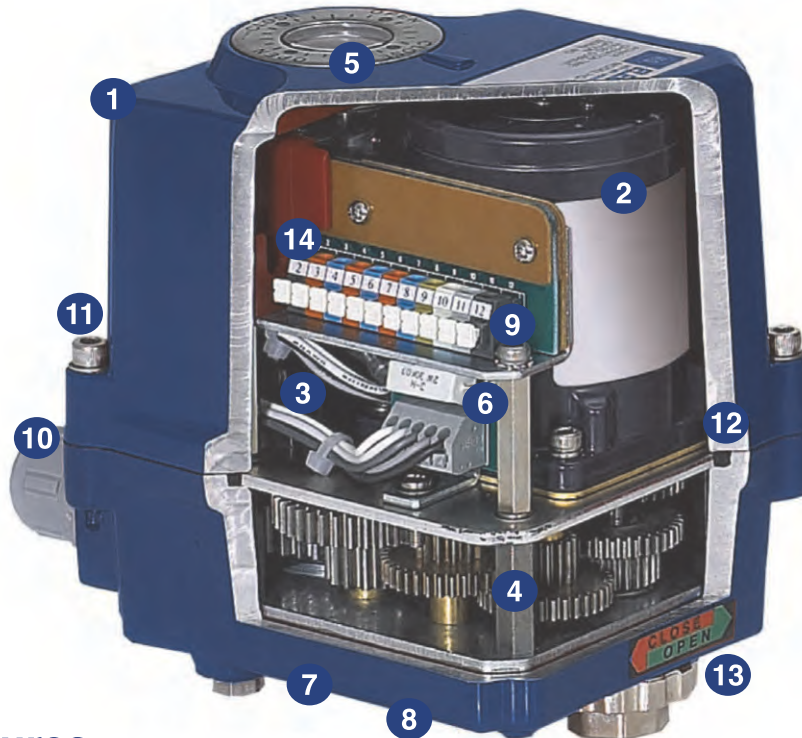
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Model 600 Features



Design Features

► 1. Enclosure

Die cast high grade aluminum alloy housing is light, compact and durable. The housing is hard anodized inside and out, then polyester powder coated on the exterior for superior corrosion protection in all environments. The die cast housing is engineered with a lip where the actuator is joined. This lip allows the water to shed off and not enter the housing. The rugged sealed watertight enclosure is rated NEMA 4, 4X, protected from ingress of any dirt or moisture.

► 2. Motors

Motors are engineered for high-torque, low current draw and high duty cycle ratings. Single phase, squirrel cage capacitor run motors are F class insulated and protected from overload by a thermostat with automatic reset.

► 3. Capacitors

The capacitor is custom engineered for each single phase motor. Each capacitor is peak motor voltage rated for maximum service life.

► 4. Self Locking Gearing

Precision machined cut alloy gearing is self locking and will not back drive. All gearing is greased and lubricated for life.

► 5. Position Indicator

The position indicator is mechanically driven by the output drive shaft for reliable opening and closing status of the valve. The movement of the valve can be easily viewed from the top of the actuator. The lens is permanently sealed to guard against moisture.

► 6. Heater

Guards against condensation, see page 4 for details.

► 7. Actuator Mounting

Drilling is in accordance with ISO 5211 allowing easy installation of the actuator directly to small ISO ball valves.

► 8. Output Drive

The female output drive allows for direct mounting to the shaft of small ball valves. The star drive is machined to conform to DIN 3337 standard.

► 9. Terminal Strip

Highly visible labeling for every connection to help avoid wiring mistakes. Maximum 12 points are standard. Spring loaded terminal strip is proven reliable to keep a tight wiring connection.

► 10. Dual Conduit Entrance

Allows full electrical code access of all wiring through two entrances. Conduit entrances come standard with seal tight, watertight conduit fittings.

► 11. Captive Bolts

Cover bolts are specifically designed to prevent loss during servicing of the actuator. All external captive bolts are stainless steel for corrosion protection.

► 12. Weather Seal

Seals actuator housing against water and debris.

► 13. Manual Override

For manually cycling the valve, see page 4 for details.

► 14. Travel Limit Switch

SPDT switches with adjustable cams, see page 4 for details.

Model 600 Features



Manual Operation

Allows the valve to be rotated when power is not present. First look at the indicator to determine if the valve is open or closed. To move the valve manually to the open position from the closed position rotate the knob counter clockwise. To move the valve manually to the closed position from the open position rotate the knob clockwise. Once power is applied the actuator will return to the original position. Keep manual override knob clear, when power is applied the knob rotates. The manual override is easy to turn and requires very low effort to operate.



Travel Limit Switch

The 600 series actuator comes standard with (2) SPDT travel limit switches open/closed and (2) auxiliary switches open/closed. The (2) travel limit switches are used to shut the motor down at end of travel. The (2) auxiliary switches are used to communicate with other appliances. Cams for each of the four switches are intermittently adjustable by hand with an allen wrench. Each cam is labeled for simple field calibration. Once the cam is set it locks in place and is engineered to withstand plant induced vibration

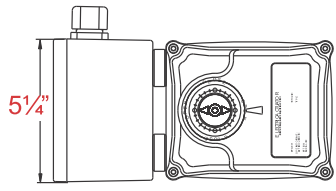
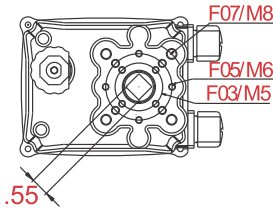
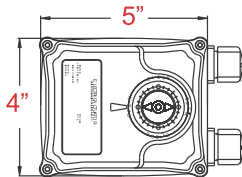
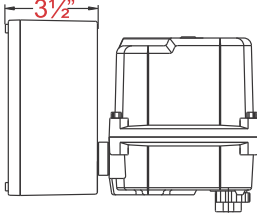
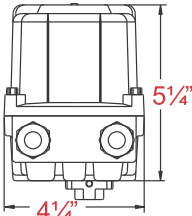
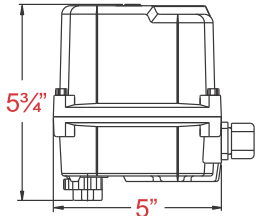


Heater and Thermostat

The pre-wired space heater is installed in every actuator to prevent damage caused by condensation collecting inside the actuator. The heater is equipped with a thermostat to prevent overheating.

- ▶ On/Off actuators need to be wired to supply power to the heater and thermostat.
- ▶ Modulating actuators are pre-jumpered so when power is hooked up to the actuator the heater and the thermostat will function properly.

Outline Dimensions



Note: Allow 3.5" for cover removal

Optional Modulating Actuator

Model 600 Construction

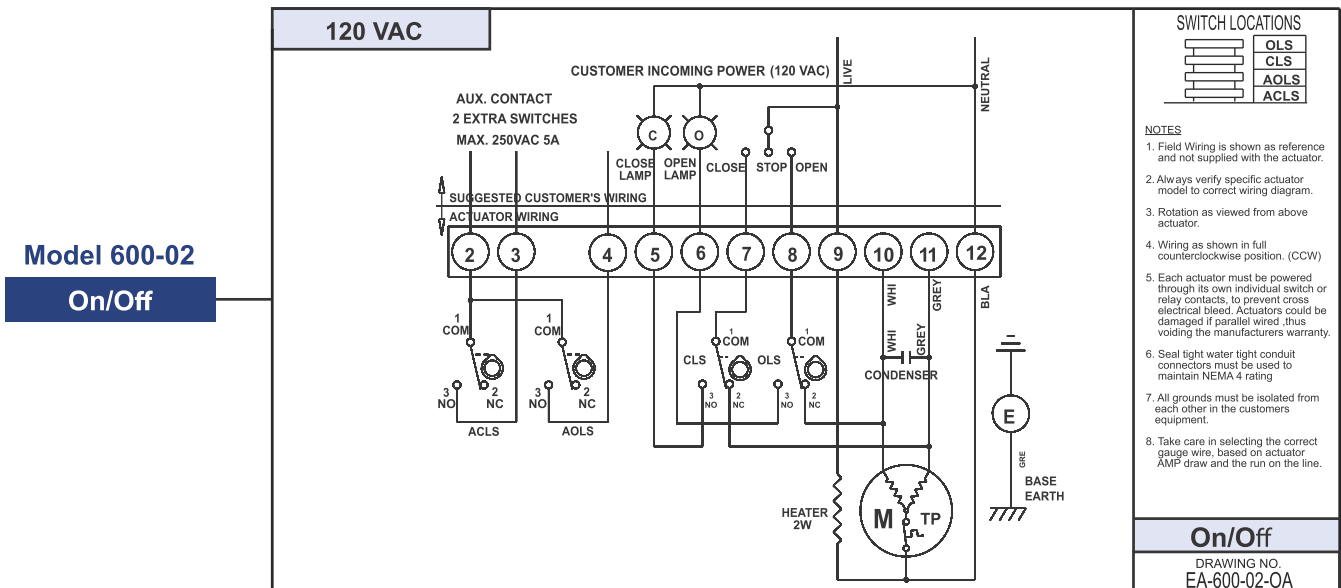
Performance Sample model number: 600-02 (120 VAC Electric, Output Torque of 600 IN-LB)

Torque		Model / Amp Draw			Number of Actuator	Speed of Actuator 60Hz	Number of Handwheel Turns 90°	Duty Cycle 30 min. Thermal Protection	Weight lbs
In-Lb	NM	Single Phase							
		Model 600 120 VAC Series 41	Model 610 24 VAC Series 33	Model 615 24 VDC Series 35					
600	68	0.4	0.8	0.8	02	12	8	70%	8

Specification

Enclosure	Weatherproof enclosure rated NEMA 4, 4X, (IP67)
Power supply (600)	120 VAC, Single phase 50 / 60 Hertz, $\pm 10\%$
Power Supply (610)	24 VAC, Single phase 50 / 60 Hertz, $\pm 10\%$
Power Supply (615)	24 VDC, Single phase 50 / 60 Hertz, $\pm 10\%$
Duty cycle	70%
Motor	Reversible motor
Limit switches	2 SPDT open and closed, 250 VAC 3 Amp rating
Auxiliary switches	2 SPDT open and closed, 250 VAC 3 Amp rating
Space heater	3 Watt (115/220 VAC) anti-condensation
Manual override	Handwheel hexagon design
Conduit entries	Two Hubble type seal tight fittings
Rotation	320° $\pm 10^\circ$ (0°-330°)
Operating temperature	-4°F to 158°F (on/off) -4°F to 140°F (modulating actuators)
External coating	Polyester powder coating
Mounting orientation	Can be mounted in any orientation
Modulating control (Optional)	Proportional control board 0-10 VDC or 4-20 MA input
Feedback current (Optional)	Current position transmitter 0-10 VDC or 4-20 MA output
Application (Optional)	Ball Valves

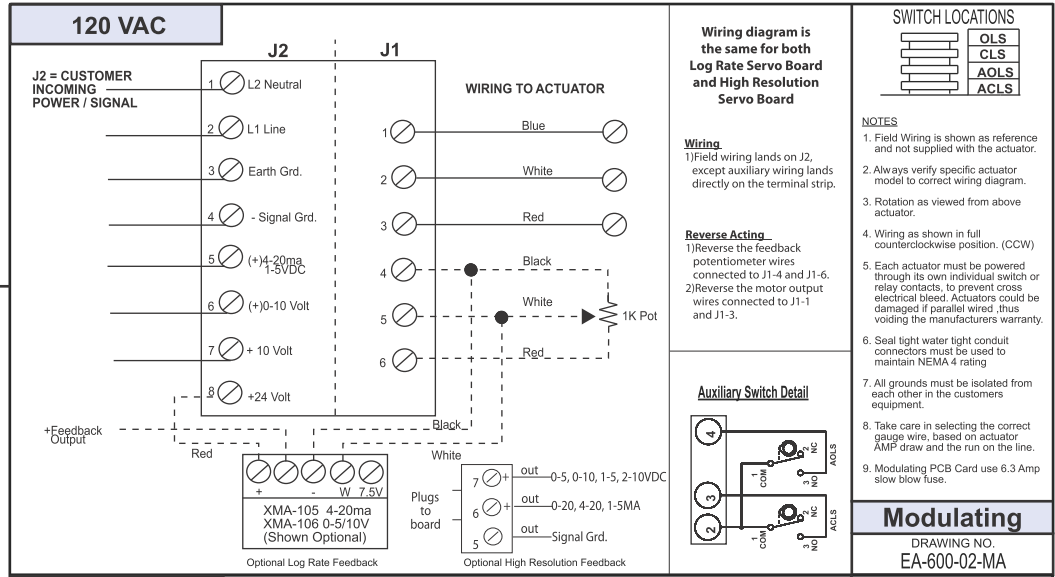
Model 600 Electrical



Model 600 Electrical

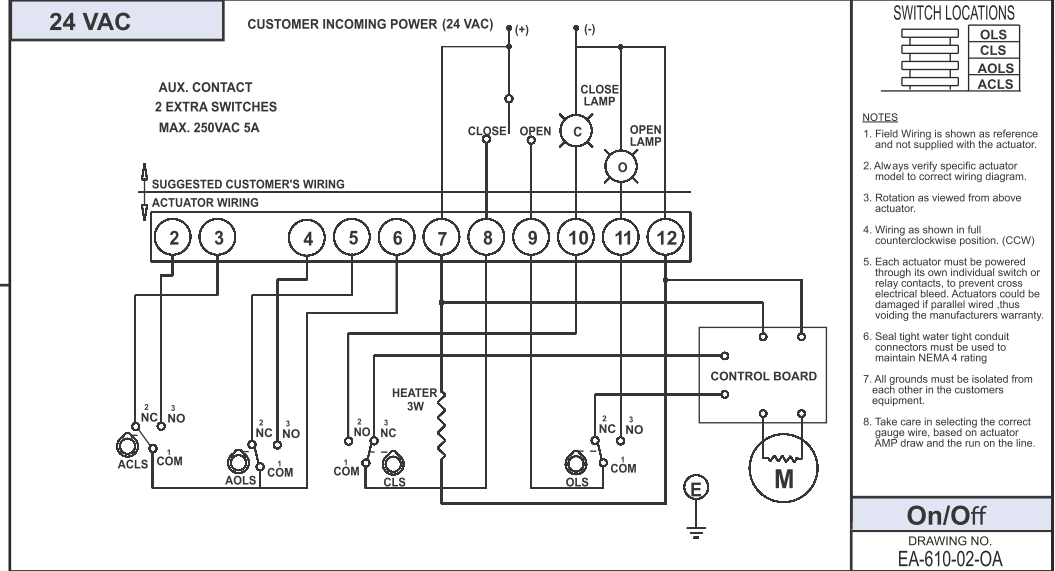
Model 600-02

Modulating



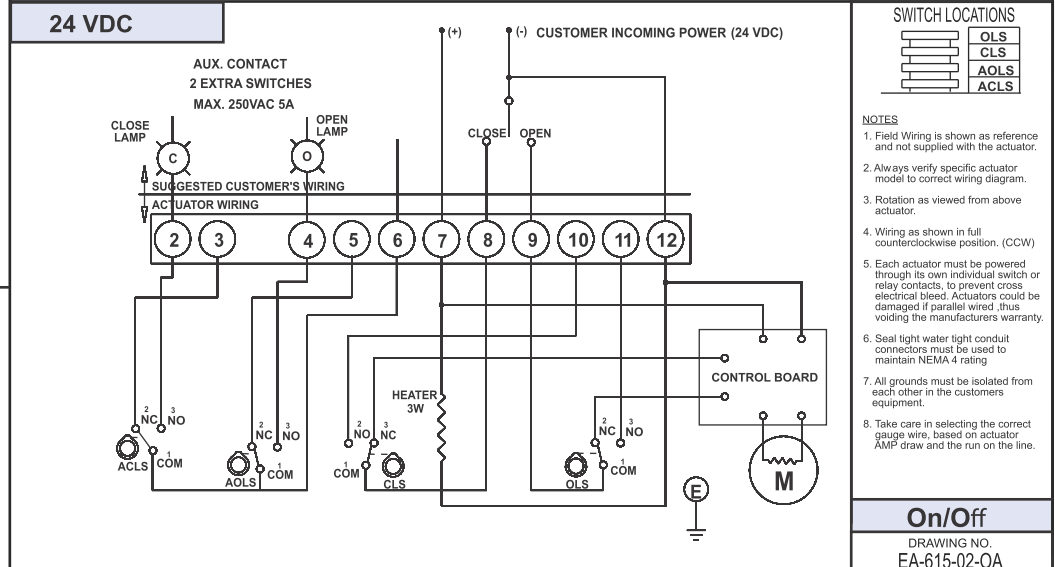
Model 610-02

On/Off



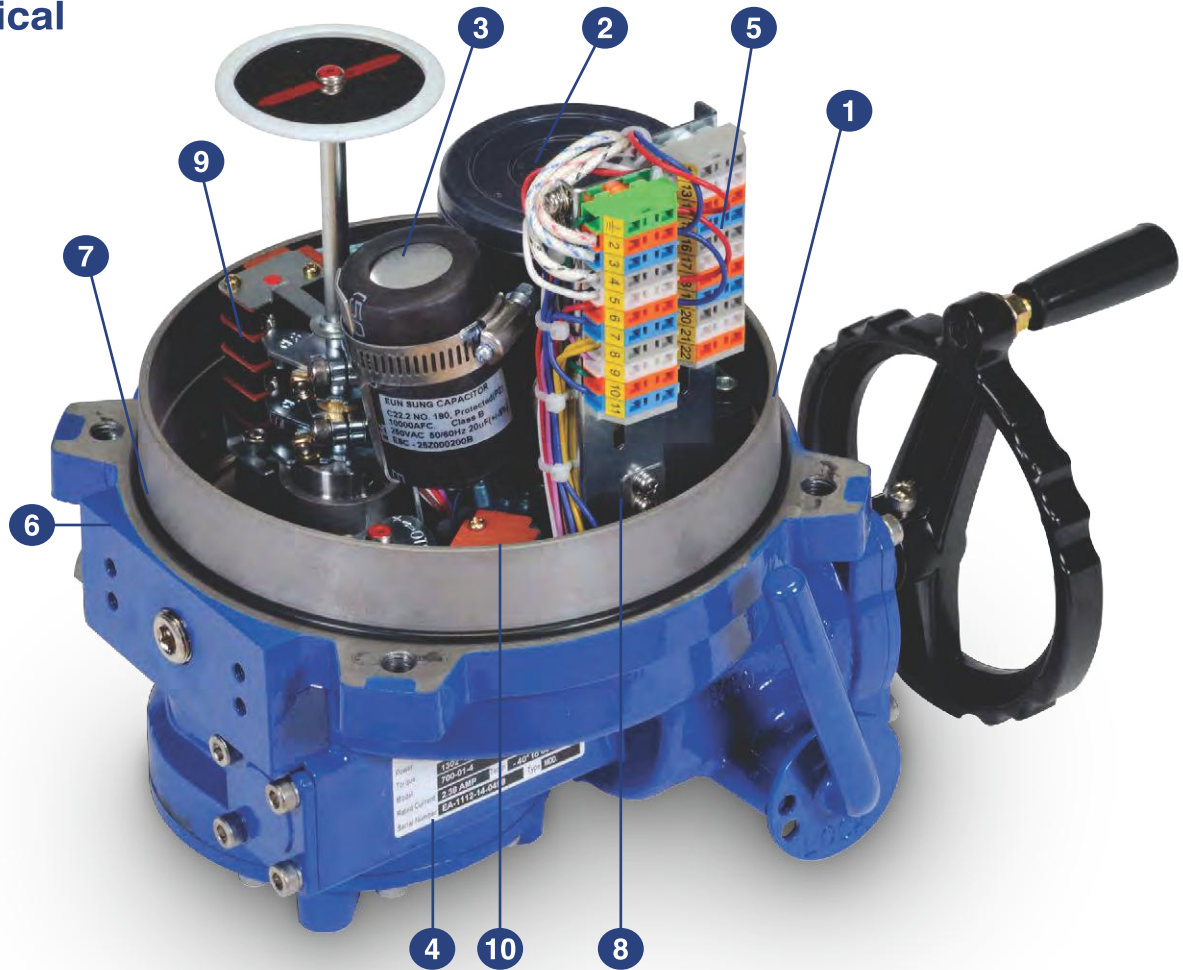
Model 615-02

On/Off



Model 700 Features

Electrical



Design Features

► 1. Enclosure

Die cast aluminum alloy housing is light, compact and durable. The housing is hard anodized inside and out, then polyester powder coated on the exterior for superior corrosion protection in all environments. The housing is engineered with overlaying lips that form a barrier ring that allows the water to shed off and not enter the housing. The housing is rated NEMA 4 for protection from ingress of dirt or moisture.

► 2. Motor

Motors are engineered for high-torque, low current draw, and high duty cycle ratings. Single phase squirrel cage capacitor run motors are F class insulated, and protected by overload by a thermostat with automatic reset.

► 3. Capacitor (700-00)

The capacitor is custom engineered for each single phase motor. Each capacitor is peak motor voltage rated for maximum service life.

► 4. Electra Tag

UL approved label, details electrical ratings and enclosure type.

► 5. Terminal Strip

Highly visible labeling for every connection to help avoid wiring mistakes. Maximum 25 points are standard. Spring loaded terminal strip is proven reliable to keep a tight wiring connection.

► 6. Dual Conduit Entrance

Allows full electrical code access of all wiring through (2) entrances. Conduit entrances are 3/4" NPT connections.

► 7. Weather Seals

Elastomer o-ring seals prevents the ingress of moisture and debris.

► 8. Heater

Anti-condensation heater guards against condensation.

► 9. Travel Limit

(2) - SPDT Switches with adjustable cams.

► 10. Torque Switch

(2) - Fixed torque sensing switches.

Mechanical



▶ 1. Self Locking Gearing

High efficiency, self locking double reduction gearing consists of a worm and segment gear output mechanism. Precision cut steel worm wheel and bronze segment are engineered to withstand locked rotor conditions. When electrical power is off, the gearing provides exact and stable positioning of the actuator without a brake. All gearing is greased and lubricated for life.

▶ 2. Position Indicator

The position indicator is mechanically driven by the output drive shaft for reliable opening and closing status of the valve. The movement of the valve can be easily viewed from the top of the actuator. The lens is permanently sealed to guard against condensation.

▶ 3. Disc Springs

Located at each end of the main worm wheel these “Belleville washers” detect axial torque movement in either the open or the closed location and translate the movement to the torque switch for motor protection.

▶ 4. Actuator Mounting

Drilling is in accordance with ISO 5211 allowing easy mechanical installation of the actuator directly to other ISO flanged valves. Each actuator is supplied with a blank drive insert, machining by others.

▶ 5. Mechanical Travel Stops

Externally adjustable stainless steel mechanical travel stops are provided to permit precise travel adjustment of the actuator movement. The settings of the mechanical stops provides travel limitation for both electrical and manual operation in the open and closed position.

▶ 6. Declutching Override

For manual positioning of the valve when power is off.

▶ 7. High Cycle Mechanical Bearing

Located under the motor to allow smooth energy transfer from the motor to the gear train.

Model 700 Features



Actuator shown in auto mode

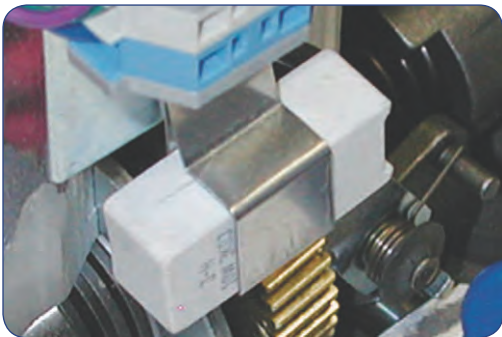
Manual Operation

Allows the valve to be rotated when power is not present. The hand/auto declutch lever makes manual valve operation simple, no cheater bar is needed even for tightly sealed valves. With very low effort the lever pulls towards the handwheel and locks perpendicular. The casting marks on the handwheel show the rotation direction of handwheel. Once power is restored to the actuator, the internal clutch mechanism automatically returns to the original position. The clutch ensures that the handwheel can not be rotated by the motor. The hand lever can be locked out and tagged out for safety.



Torque Limit Switches

Two torque switches are factory installed and calibrated with each actuator. Torque switches will stop the travel of the valve in either the open or close position. If the output torque of the actuator exceeds the preset torque limit, the switches sense the axial movement of the worm shaft and interrupt electrical power to the motor. The torque switches create protection for both the valve and actuator.



Heater and Thermostat

The pre-wired space heater is installed in every actuator to prevent damage caused by condensation. The heater is equipped with a thermostat to prevent overheating.

- ▶ On/Off actuators need to be wired to supply power to the heater and thermostat.
- ▶ Modulating actuators are pre-jumpered so when power is supplied to the actuator, the heater and thermostat will function properly.



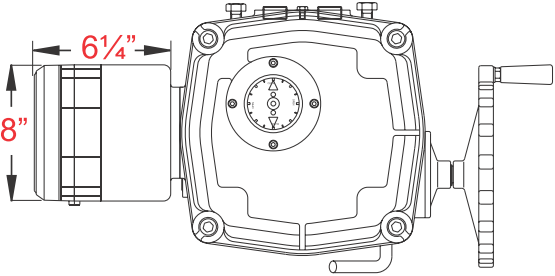
Travel Limit Switch

The 700 series actuator comes standard with (2) SPDT travel limit switches and (2) SPDT auxiliary switches for the open/closed positions. The (2) travel limit switches are used to shut the motor down at end of travel. The (2) auxiliary switches are used to communicate with other appliances. Cams for each of the four switches are intermittently adjustable by hand with an allen wrench. Each cam is labeled for simple field calibration. Once the cam is set it locks in place and is engineered to withstand plant induced vibration.

Model 700 Local Control

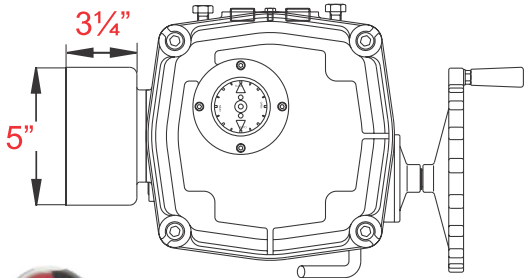
Local Control Station

Light and compact integrated design
Enclosure: powder coated, double sealed to keep out moisture and corrosion
Power supply: single phase 115 VAC
LED display shows conditions: power / remote / fault / opening / closing
Digital display shows local or remote, position bar graph, numerical open/close percent
Stainless steel captive bolts
Designed to withstand high vibration environments
Switch can be padlocked in any position



Local Power Disconnect

Selector switch cuts off incoming power supply.
Non-intrusive method to allow the handwheel clutch to engage to use the manual override.
Power supply: 115 VAC
LED indication: power/manual
Enclosure powder coated and sealed to keep out moisture.
Compact design.

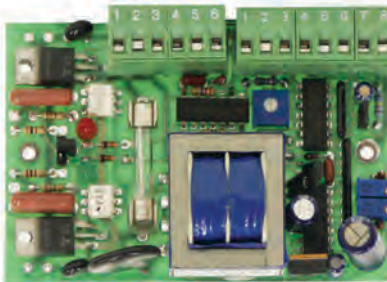


Model 700 Control Boards



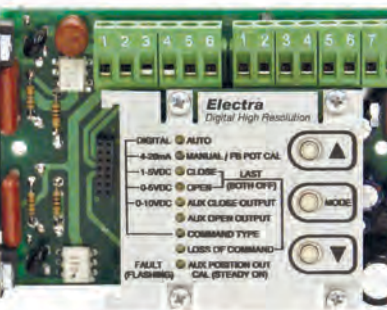
Cycle Timer

The repeat cycle timer is a compact module that extends the operating time of AC actuators by pulsing the motor on and off. Extending the cycle time of an actuator can avoid problems associated with water hammer and control system instabilities. The on time is adjustable 0.1 to 1 seconds, and the off time is adjustable from 0.5 to 10 seconds. The onboard LED indicator aids in setting the on/off times by turning on and off with the load.



Log Rate Controller

The log rate controller (LRC) is designed for continuous modulating applications. The LRC extends the actuator life by averaging the rapidly changing input signals, thus reducing unnecessary hunting for valve position. The LRC includes a red LED indicator for the open output and a green LED indicator for the closed output, with an onboard fuse for protection. With loss of command signal in the 1-5V or the 4-20ma input range, options are fail in place, fail open or fail close. All input and output signals are easily field configurable with jumper plugs. The log rate feature can be turned off by a jumper. Set points are easily calibrated with zero and span pots.



Digital Servo Card

The digital high resolution controller is a high performance digital positioner intended to control AC actuators. The digital controller provides 450 points of resolution, the highest resolution on the market today. The simple three button control is used to configure all parameters and allows the open and closed positions to be easily set for direct or reverse acting without rewiring. The buttons allow for simple set up of all command types and default positions on loss of signal. The controller comes standard with a stall detection feature that acts like an electronic torque switch. The electronic brake feature provides highly accurate braking to the motor. The duty cycle control feature acts as a governor to protect the actuator from untuned control loops.



Feedback Transmitter

The compact transmitter achieves long distance transmission of either a 0-10 VDC or 4-20 ma fixed output signal. The modular design allows for easy field mounting inside the Electra actuator compartment.



Two Wire Control


Relays provide a means of opening and closing a valve with a variety of standard AC or DC maintained control signals. The relays can be used in a fail open or fail closed application upon loss of the control signal. The spring loaded relay is continuously energized and maintains the open signal to the actuator. When the signal is removed, the coil releases, causing the actuator to close.

Model 700 Construction

Performance *Sample model number: 700-01 (115 VAC Electric, Output Torque of 1416 IN-LB)*

Torque		Model / Amp Draw				Number of Actuator	Speed of Actuator 60Hz	Number of Handwheel Turns 90	Duty Cycle 30 min. Thermal Protection	Weight lbs.
In-Lb	NM	Single Phase								
		Model 700 115 VAC Series 41	Model 705 220 VAC Series 43	Model 710 24 VAC Series 33	Model 715 24 VDC Series 35					
885	100	1.35	0.58			00	18	10	70%	16
1416	160	2.38	0.90			01	22	12	70%	34
2124	240	2.38	0.90	2.40	2.40	02	22	12	70%	34
3098	350	3.38	0.95	3.80	3.80	03	26	14	70%	45
4425	500	5.40				05	26	14	70%	45
5311	600	5.40	1.80	6.00	6.00	06	26	14	70%	45
7081	800	8.20	2.20			08	32	17	70%	56
9735	1100	8.20				11	32	17	70%	56
10,621	1200	8.20	2.30			12	32	17	70%	56
26,553	3000	8.20	2.30			30	97	70	70%	169
79,659	9000	11.00				90	149	39	70%	342

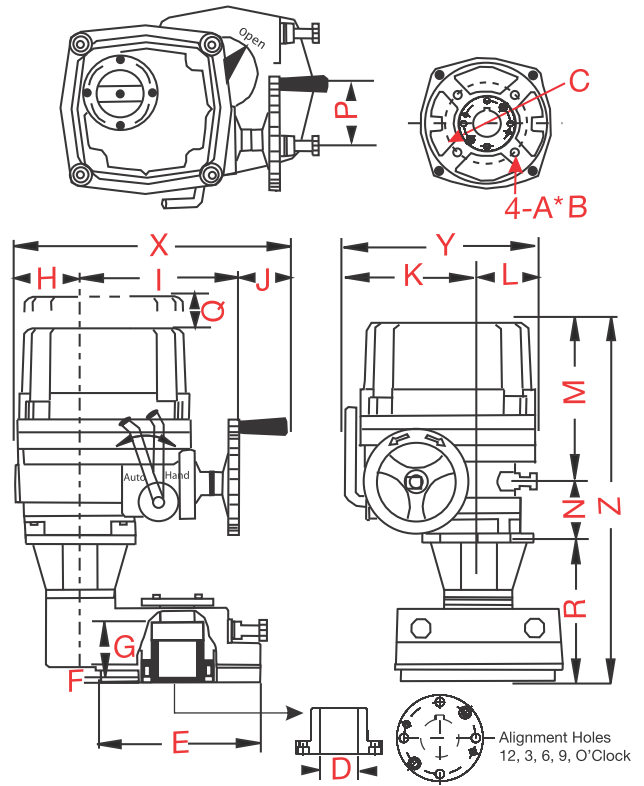
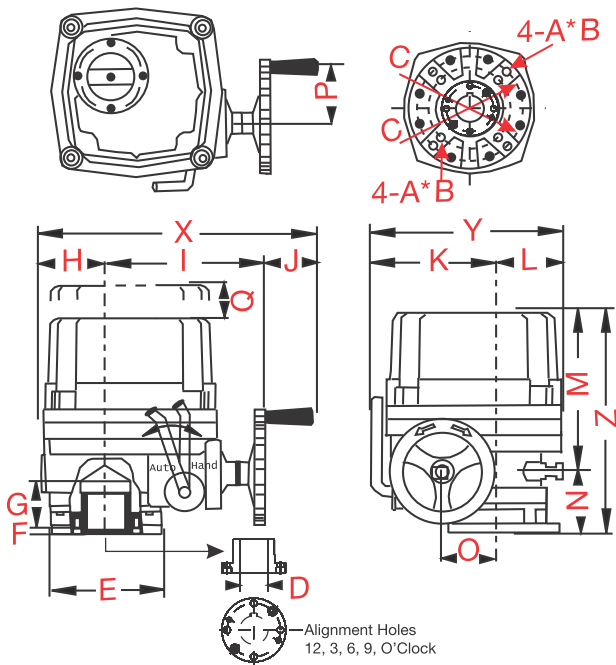
Specification

Enclosure	Weather proof enclosure rated NEMA 4, 4X and 6 (IP67)
Power supply (700)	115 VAC, single phase 50/60 Hertz $\pm 10\%$
Power supply (705)	220 VAC, single phase 50/60 Hertz $\pm 10\%$
Power supply (710)	24 VAC, single phase 50/60 Hertz $\pm 10\%$
Power supply (715)	24 VDC, single phase 50/60 Hertz $\pm 10\%$
Approval (700)	ETL Third Party Approval File # 3102145 / CE
Motor (700/705)	Squirrel caged induction motor
Motor (710/715)	Advanced brushless extended duty DC motor
Limit switches	2 SPDT open and closed, 250 VAC 10 Amp rating
Auxiliary limit switches	2 SPDT open and closed, 250 VAC 10 Amp rating
Torque switches	Open / close, SPDT, 250 VAC 10 Amp rating (Except for 00)
Thermal overload protection	Open 302°F $\pm 40^\circ\text{F}$ / close 206°F $\pm 59^\circ\text{F}$
Rotation	90° $\pm 10^\circ$ (0° - 110°)
Indicator	Continuous position indicator
Manual override	Declutching mechanism with handwheel
Self locking gears	Provided by double reduction worm gearing
Mechanical stop	(2) external adjustable hex head bolts
Space heater	5-7 Watt for anti-condensation
Conduit entries	(2) 3/4" NPT tapped entrances
Lubrication	Grease moly (EP type)
Terminal strip	Spring loaded push lever type
Operating temperature	-4°F to +158°F (on/off) -4°F to + 140°F (modulating)
Humidity	90% RH maximum non-condensing
Anti vibration	X Y Z 10g, 0.2-34 Hz, 30 minute
External coating	Anodized treated, and polyester powder coated
Log rate control board (optional)	For continuous modulating applications
Digital control board (optional)	High performance, high resolution modulating board
Cycle timer module (optional)	Extends cycle time to eliminate water hammer
Feedback current (optional)	4-20 MA or 0-10 VDC position feedback
Standard local control station (optional)	Single phase on/off or modulating local control box
Power Disconnect (optional)	Power kill external box
Explosion Proof Enclosure (optional) (Model EX700 Only - Size "00" to "11") ** Excludes Size "06" **	 Class I, Division 1, Groups C, D; Class II, Division 1, Groups EFG; Class III; T4 Ex d, IIB: T4 / Class I, Zone 1, AEx d, IIB: T4
Submersion Proof Enclosure (optional)	IP68 Rated "Submersible" Housing

Model 700 Dimensions

Models: 700-00,01,02,03,05,06,08,11,12

Models: 700-30, 90

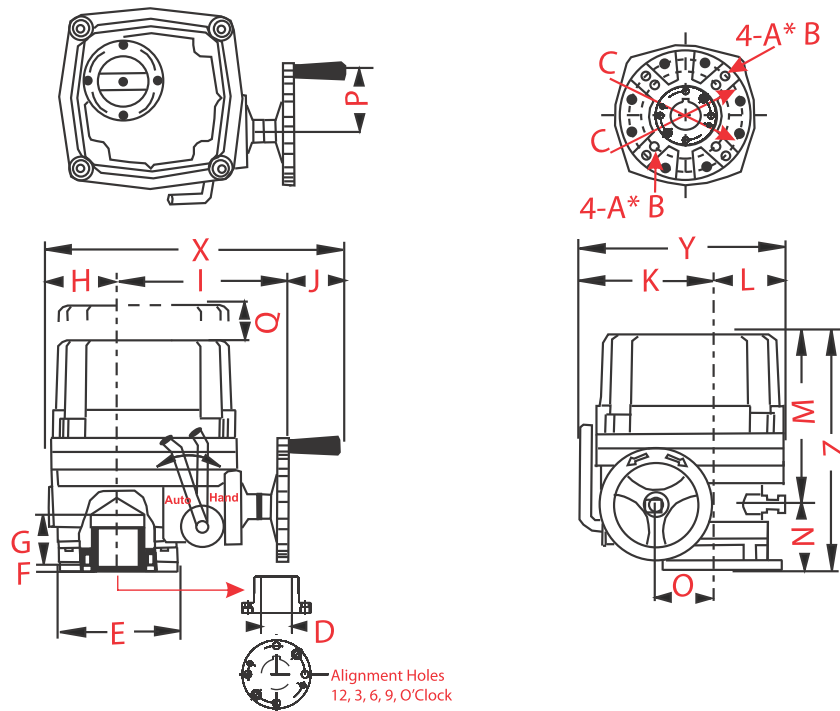


Model	Torque IN-LB	ISO 5211		D	E	F	G	H	I	J	K	L	M	N	O	P	Q	X	Y	Z
		C	B																	
700-00	885	F07	M8	0.87	3.46	0.12	1.46	1.85	6.30	2.01	4.02	2.76	7.56	2.09	1.57	2.36	4.92	10.16	6.77	9.65
		2.76	14																	
700-01	1,416	F07/F10	M8/M10	0.98	4.92	0.12	2.24	2.99	7.76	2.56	5.71	3.31	8.54	2.64	2.24	3.07	5.51	13.31	9.02	11.18
		2.76/4.02	14/17																	
700-02	2,124	F07/F10	M8/M10	0.98	4.92	0.12	2.24	2.99	7.76	2.56	5.71	3.31	8.54	2.64	2.24	3.07	5.51	13.31	9.02	11.18
		2.76/4.02	14/17																	
700-03	3,098	F10/F12	M10/M12	1.57	5.83	0.12	2.44	3.07	8.43	2.56	6.30	3.31	9.65	2.68	2.64	3.54	6.69	14.06	9.61	12.32
		4.02/4.92	17/21																	
700-05	4,425	F10/F12	M10/M12	1.57	5.83	0.12	2.44	3.07	8.43	2.56	6.30	3.31	9.65	2.68	2.64	3.54	6.69	14.06	9.61	12.32
		4.02/4.92	17/21																	
700-06	5,311	F10/F12	M10/M12	1.57	5.83	0.12	2.44	3.07	8.43	2.56	6.30	3.31	9.65	2.68	2.64	3.54	6.69	14.06	9.61	12.32
		4.02/4.92	17/21																	
700-08	7,081	F12/F14	M12/M16	1.89	7.01	0.12	2.64	3.46	8.94	2.56	7.05	4.13	10.43	2.87	3.19	4.33	7.68	14.96	11.18	13.31
		4.92/5.51	20/25																	
700-11	9,735	F12/F14	M12/M16	1.89	7.01	0.12	2.64	3.46	8.94	2.56	7.05	4.13	10.43	2.87	3.19	4.33	7.68	14.96	11.18	13.31
		4.92/5.51	20/25																	
700-12	10,621	F12/F14	M12/M16	1.89	7.01	0.12	2.64	3.46	8.94	2.56	7.05	4.13	10.43	2.87	3.19	4.33	7.68	14.96	11.18	13.31
		4.92/5.51	20/25																	
700-30	26,553	F16	M20	2.95	8.90	0.20	3.54	4.06	10.71	2.56	9.09	5.67	11.81	12.60	4.29	5.31	8.86	17.32	14.76	20.91
		6.5	32																	
700-90	79,659	F25/F30	M16/M20	4.72	13.78	0.20	5.71	4.06	10.71	2.56	9.09	7.32	11.81	14.49	-	5.31	8.86	20.31	16.42	26.30
		10/11.7	30/35																	

- Notes:**
1. The "D" dimension is the maximum allowable bore that can be machined into the insert.
 2. The machining is done by others, as the standard insert is blank.
 3. 700 = 120 VAC

Model 705 / 710 / 715 Dimensions

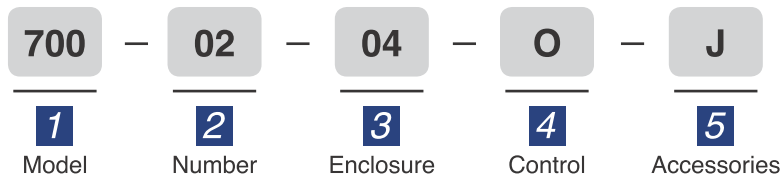
Models: 705, 710, 715








Model	Torque IN-LB	ISO 5211	A	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	X	Y	Z
		C	B																	
705-01 710-01 715-01	1,416	F07/F10	M8/M10	0.98	4.92	0.12	2.24	2.99	7.76	2.55	5.71	3.31	8.54	2.64	2.24	3.07	5.51	13.31	9.02	11.18
		2.76/4.02	14/17																	
705-02 710-02 715-02	2,124	F07/F10	M8/M10	0.98	4.92	0.12	2.24	2.99	7.76	2.55	5.71	3.31	8.54	2.64	2.24	3.07	5.51	13.31	9.02	11.18
		2.76/4.02	14/17																	
705-03 710-03 715-03	3,098	F10/F12	M10/M12	1.57	5.82	0.12	2.44	3.07	8.43	2.55	6.30	3.31	9.65	2.68	2.64	3.54	6.69	14.06	9.61	12.32
		4.02/4.92	17/21																	
705-06 710-06 715-06	5,311	F10/F12	M10/M12	1.57	5.82	0.12	2.44	3.07	8.43	2.55	6.30	3.31	9.65	2.68	2.64	3.54	6.69	14.06	9.61	12.32
		4.02/4.92	17/21																	

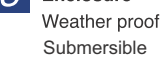
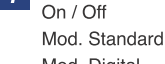
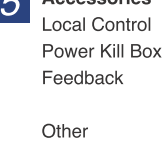
- Notes:**
1. The "D" dimension is the maximum allowable bore that can be machined into the insert.
 2. The machining is done by others, as the standard insert is blank.
 3. 705 = 220 VAC / 710 = 24 VAC / 715 = 24 VDC

Part Numbers



Item	Code	Description
1 Model 600 	600	115 VAC Single Phase
	610	24 VAC / Single Phase
	615	24 VDC / Single Phase
Model 700 	700	120 VAC / Single Phase
	705	220 VAC / Single Phase
	710	24 VAC / Single Phase
	715	24 VDC / Single Phase
	SM700	120 VAC / Single Phase (Submersible)
	EX700	120 VAC / Single Phase (Ex. Proof) <small>*EX700 is CSA Certified per detail on Page 12</small>
2 Number 600 	02	530 In-Lb Torque
	00	885 In-Lb Torque
	01	1,416 In-Lb Torque
	02	2,124 In-Lb Torque
	03	3,098 In-Lb Torque
	05	4,425 In-Lb Torque
	06	5,311 In-Lb Torque
	08	7,081 In-Lb Torque
	11	9,735 In-Lb Torque
	12	10,621 In-Lb Torque
	30	26,553 In-Lb Torque
90	79,659 In-Lb Torque	
700 	02	2,124 In-Lb Torque
	03	3,098 In-Lb Torque
	06	5,311 In-Lb Torque
705, 710, 715 	02	2,124 In-Lb Torque
	03	3,098 In-Lb Torque
	06	5,311 In-Lb Torque

EX700 Size Range: "00" to "11" ** Excludes Size "06" **

Item	Code	Description
3 Enclosure 	04	NEMA 4, 4x, 6 (IP67) Housing
	IP68	IP68 (Submersion Proof) Housing
4 Control 	O	Open / Close Operation
	E	Log Rate Board
	D	High Resolution Board
5 Accessories 	T	Local/Remote Control Station
	J	Power Disconnect Station
	F	4-20 MA or 0-10 VDC
	K	1k pot feedback
	00	Cycle Timer
	01	Two wire relay

**Model 700-00 is ONLY available with On/Off Control **

A. Warranty

The seller warrants its product against defects in material or workmanship, under normal conditions of use, for a period of one year from the date of original shipment. The seller's obligation under this warranty is limited to repair or replacement at seller's option. Shipping charges are prepaid to factory and all goods must have a return authorization number.

B. Storage

The actuator must be stored in a clean, dry, temperature controlled area. The unit shall be stored with the cover installed and with the conduit openings sealed. Storage must be off the floor, covered with an unsealed dust protector that will allow side and bottom ventilation. Care must be taken to guard the actuator from condensation in extreme temperature variations. If actuators sit for an extended period of time it is recommended that the heaters be hooked up.

C. Moisture Warning

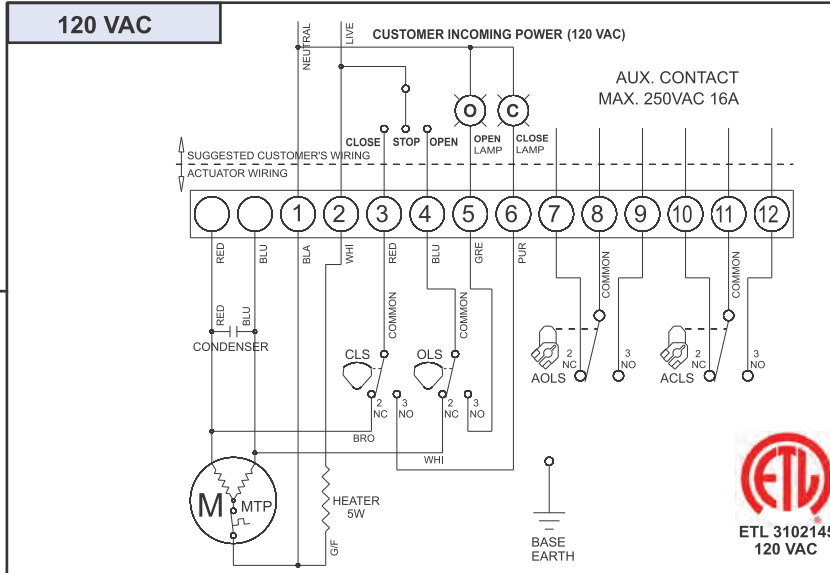
Electra actuators are rated NEMA 4. The only way moisture can enter the actuator is through the conduit entrance. Extra precaution should be used to stop moisture from entering the actuator. Seal tight fittings as well as drip legs and potting compounds should be installed to protect the actuator against condensation. If moisture migrates up the conduit entrance and damages components, the parts are not covered under warranty.

Model 700 / 705 Electrical

Model 700-00

On/Off

Model EX700-00



On/Off

DRAWING NO.

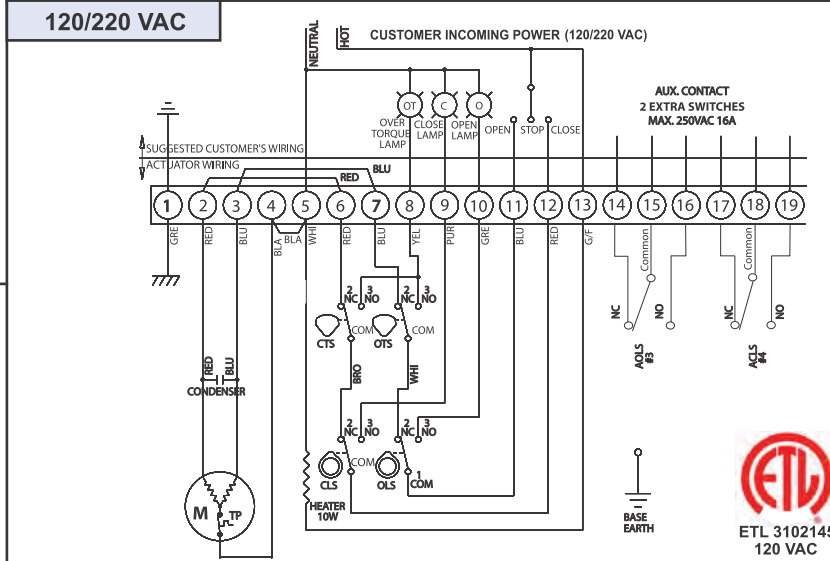
EA-700/EX700-00-A

Model 700-01-04 through 700-30-04

On/Off

Model 705-01-04 through 705-06-04

Model EX700-01-04 through EX700-11-04



On/Off

DRAWING NO.

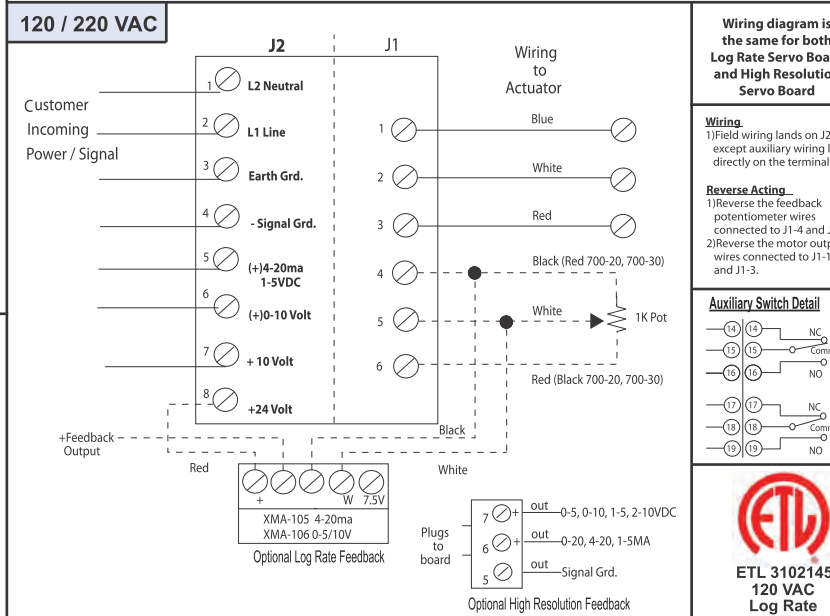
EA-700/705/EX700-0A

Model 700-01-04 through 700-30-04

Modulating

Model 705-01-04 through 705-06-04

Model EX700-01-04 through EX700-11-04

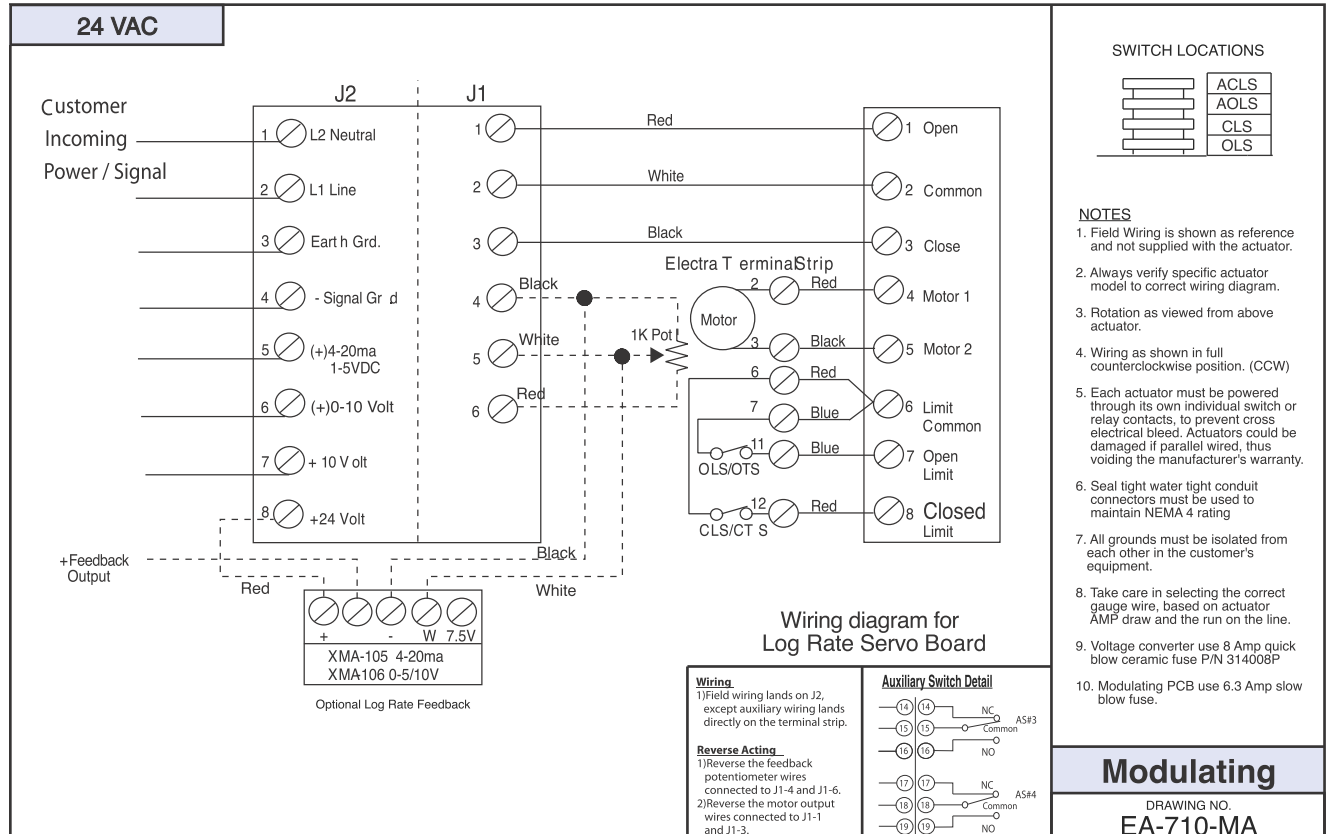
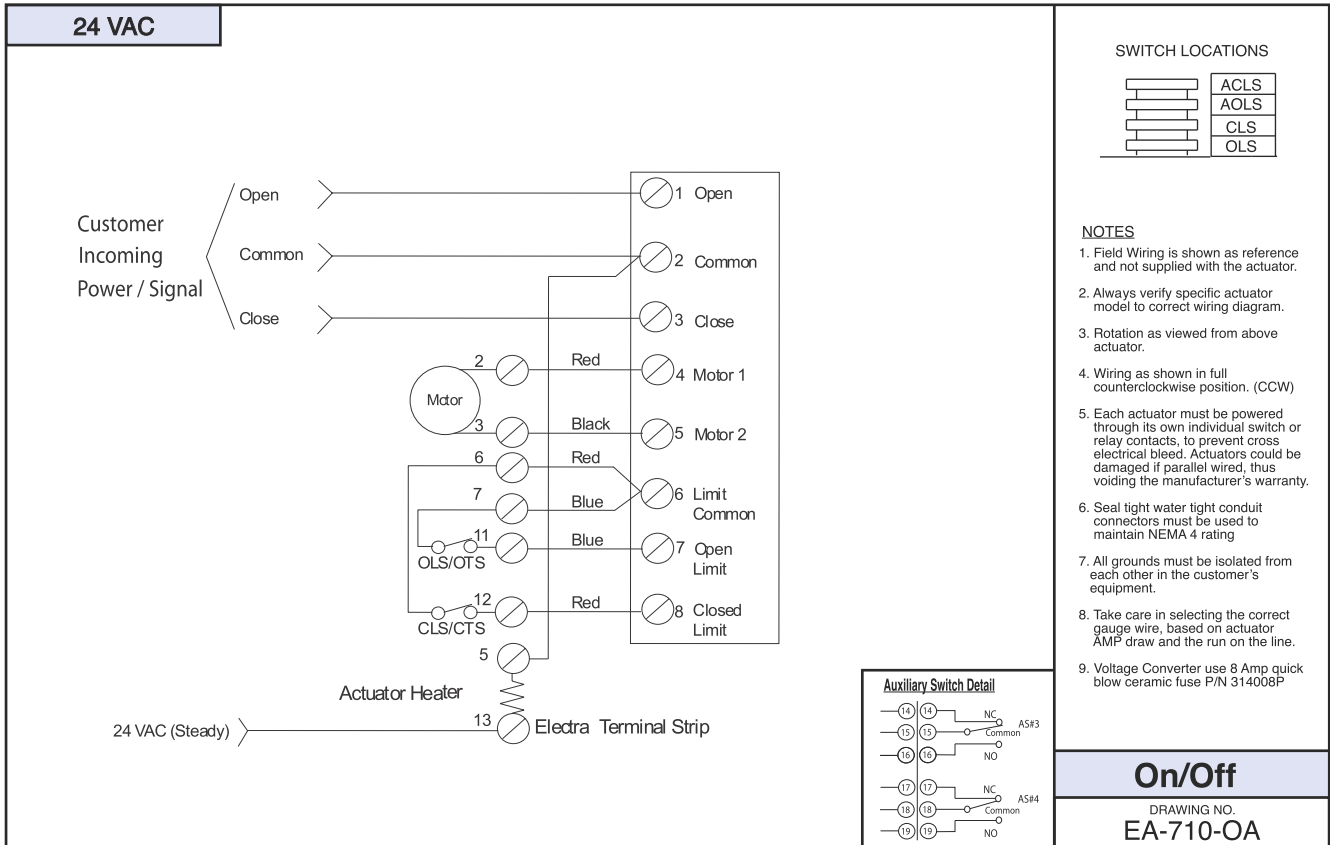


Modulating

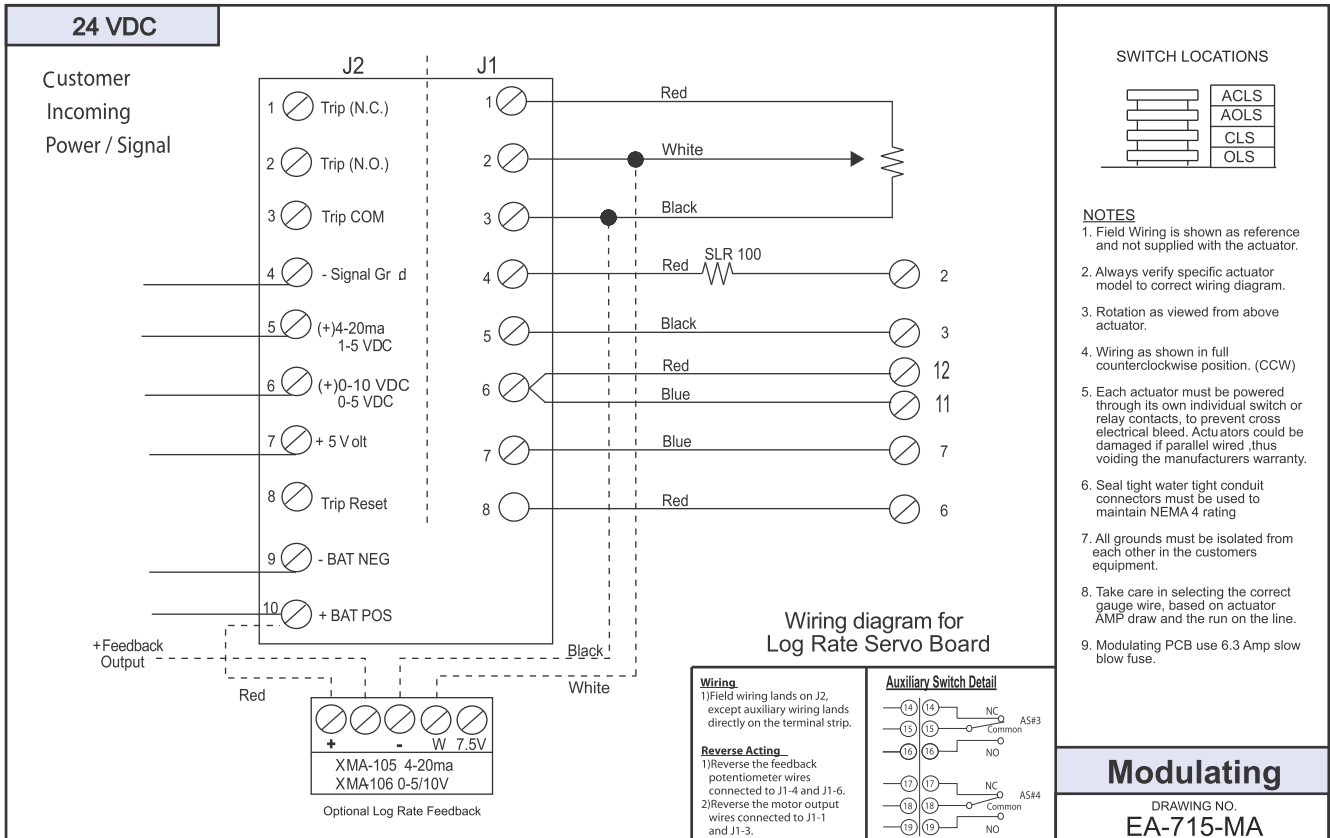
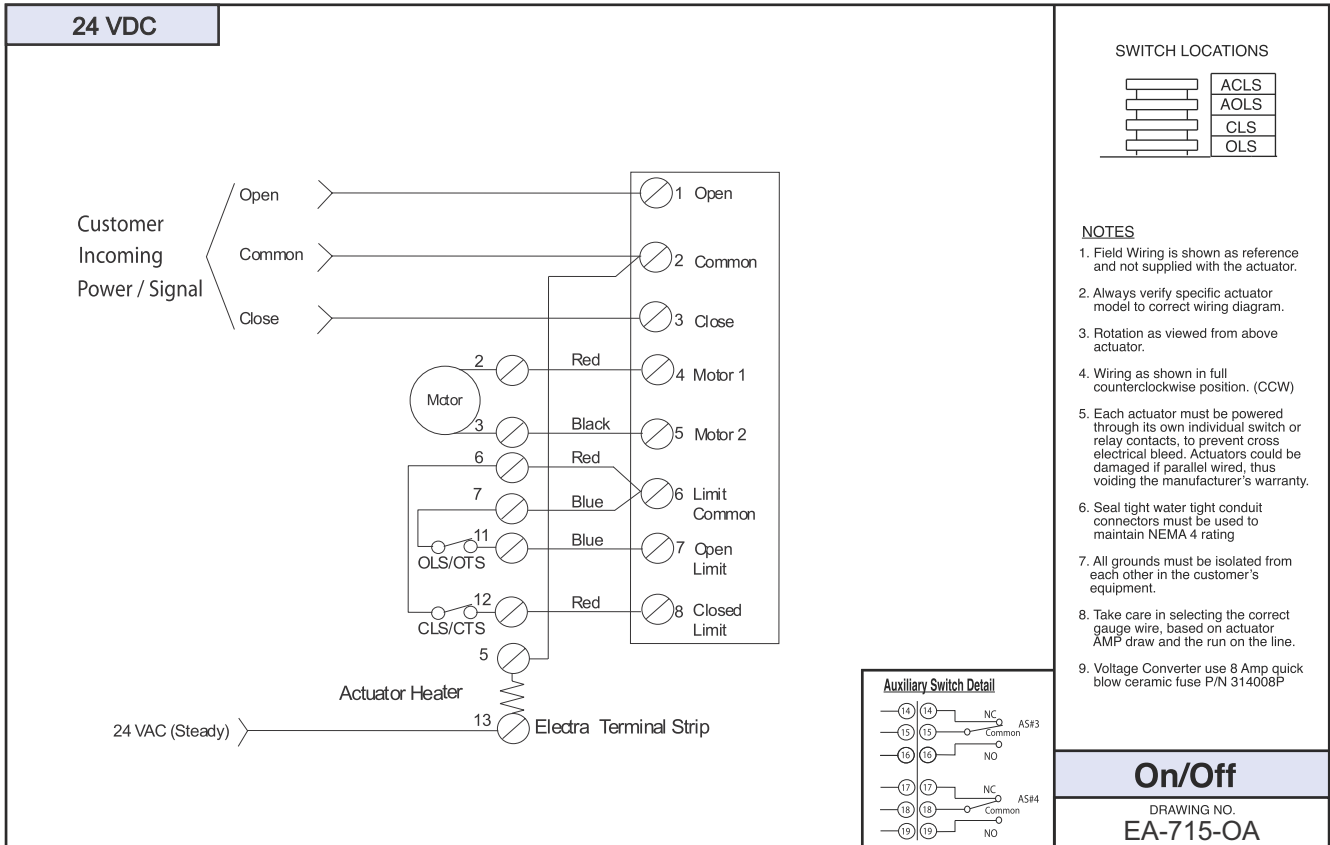
DRAWING NO.

EA-700/705/EX700-MA

Model 710 Electrical



Model 715 Electrical





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