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[WWW.VALTORC.COM](http://WWW.VALTORC.COM)  
[AJBENTAL@VALTORC.COM](mailto:AJBENTAL@VALTORC.COM)  
1 (866) VALTORC

# ELECTRIC ACTUATORS

AVAILABLE IN:  
120V, 220VAC  
& 24VDC

# EL-700



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## 120V ELECTRIC ACTUATORS

### DESIGN FEATURES

## VALTORC EL-700 On-Off Rotary Electric Actuator

### Standard Features

**Torque Output Range:** 347in-lb to 17,359in-lb

**Housing:** NEMA 4, watertight, corrosion-resistant, powder coated, robust aluminum die cast

**Electric Motor:** 120VAC, single phase, 60Hz totally enclosed, non-ventilated, high starting torque, reversible induction type, Class F insulation

**Thermal Overload Motor Protection:** Auto reset thermal switch embedded in the motor winding - trips when the maximum winding temperature is exceeded

**Position Limit Switches:** 2 x SPDT for Open and Close travel limit - easily adjustable, cam operated

**Position Indicator:** Mechanical dome type with visible red/yellow closed/open indicator

**Terminal Strip:** Refer to wiring diagrams for details

**Conduit Entries:** 1 x 1/2" NPT for power and control wiring

**Power Gears:** Alloy steel spur gears to final stage aluminum bronze worm sector gear

**Break:** An electro-mechanical brake is NOT required. The worm gear drive prevents back driving and hunting

**Bearings:** High quality alloy steel sleeve and ball bearings

**Manual Override:** Handle

**Ambient Temperature Range:** -31°F to +150°F

**Certification and Approvals:** CE, NEMA 4X

**Internal Heater**



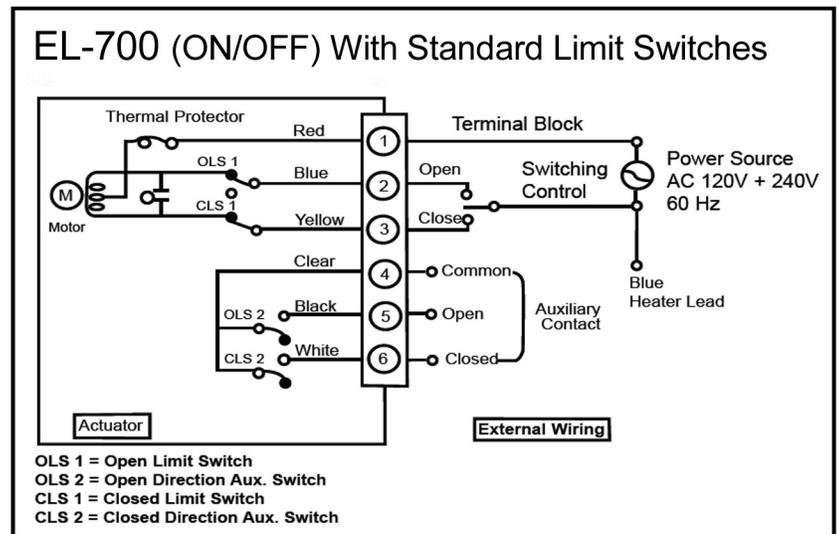
### Optional Features

- 220V AC/1/50-60Hz power
- 12/24V DC
- 24V AC
- Torque Limit Switches for Close direction of travel
- Feedback Potentiometer - 1000ohm
- DeClutchable Handwheel Override

**ON-OFF SPECIFICATIONS**

**EL-700 On-Off Actuator Specifications**

| Model                               | 705                               | 710     | 720      | 730       |
|-------------------------------------|-----------------------------------|---------|----------|-----------|
| Output Torque(in-lb)                | 347                               | 868     | 3472     | 17,359    |
| Output Torque(Nm)                   | 39.23                             | 98.06   | 392.27   | 1961.32   |
| Duty Cycle                          | 75%                               | 75%     | 50%      | 50%       |
| Travel Speed at 60Hz(Sec)           | 25                                | 25      | 25       | 50        |
| Maximum Current (Amp. @ 110/220VAC) | .35/.18                           | .41/.22 | 1.66/.90 | 2.40/1.21 |
| Enclosure Raiting                   | <b>WATERTIGHT NEMA 4, NEMA 4X</b> |         |          |           |
| Weight(lb)                          | 5.7                               | 8.2     | 16.1     | 24.7      |



## 120V ELECTRIC ACTUATORS

### DESIGN FEATURES

## VALTORC EL-700M Modulating Rotary Electric Actuator

### Standard Features

**Control Module:** Direct Digital control input 4~20mA or 2-10VDC from controller. The module provides 4~20mA output for feedback

**Torque Output Range:** 868in-lb to 17,359in-lb

**Housing:** NEMA 4, watertight, corrosion-resistant, powder coated, robust aluminum die cast

**Electric Motor:** 120VAC, single phase, 60Hz totally enclosed, non-ventilated, high starting torque, reversible induction type, Class F insulation

**Thermal Overload Motor Protection:** Auto reset thermal switch embedded in the motor winding - trips when the maximum winding temperature is exceeded

**Resolution:** 80 steps (4-20mA) or 200 steps (2-10VDC) through 90° travel

**Power at Reset:** 2VA

**Position Indicator:** Mechanical dome type with visible red/yellow closed/open indicator

**Terminal Strip:** Refer to wiring diagrams for details

**Conduit Entries:** 2 x 1/2" NPT for power and control wiring

**Power Gears:** Alloy steel spur gears to final stage aluminum bronze worm sector gear

**Break:** An electro-mechanical brake is NOT required. The worm gear drive prevents back driving and hunting

**Bearings:** High quality alloy steel sleeve and ball bearings

**Manual Override:** Handle

**Ambient Temperature Range:** -31°F to +150°F

**Certification and Approvals:** CE, NEMA4X



### Optional Features

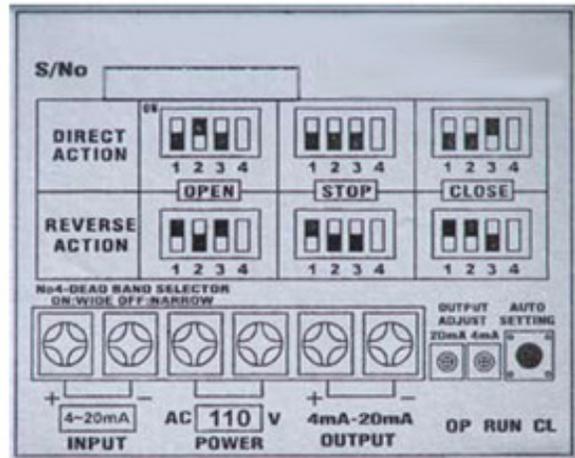
- 220V AC/1/50-60Hz power
- 2 x SPDT Auxiliary Switches
- Torque Limit Switches for Close direction of travel
- DeClutchable Handwheel Override
- Space Heater

120V ELECTRIC ACTUATORS

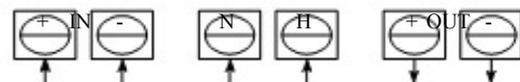
**MODULATING SPECIFICATIONS**

**EL-700M Modulating Actuator Specifications**

| Model                              | 710M                               | 720M   | 730M    |
|------------------------------------|------------------------------------|--------|---------|
| Output Torque(in lb)               | 868                                | 3472   | 17,359  |
| Output Torque(Nm)                  | 98.06                              | 392.27 | 1961.32 |
| Resolution                         | 80 (4-20mA) or 200 (2-10VDC) Steps |        |         |
| Power Consumption                  | 70VA                               | 200VA  | 350VA   |
| Power At Rest                      | 2VA                                |        |         |
| Duty Cycle                         | 75%                                | 50%    | 50%     |
| Enclosure Rating                   | <b>WATERTIGHT, NEMA 4, NEMA 4X</b> |        |         |
| Travel Speed at 60Hz(sec)          | 25                                 | 25     | 85      |
| Insulation Resistance              | 100M ohm (500VDC)                  |        |         |
| Maximum Current (Amp @ 110/220VAC) | 65/35                              | 1.8/9  | 3.2/1.6 |
| Weight(lb)                         | 8.6                                | 16.5   | 26.1    |



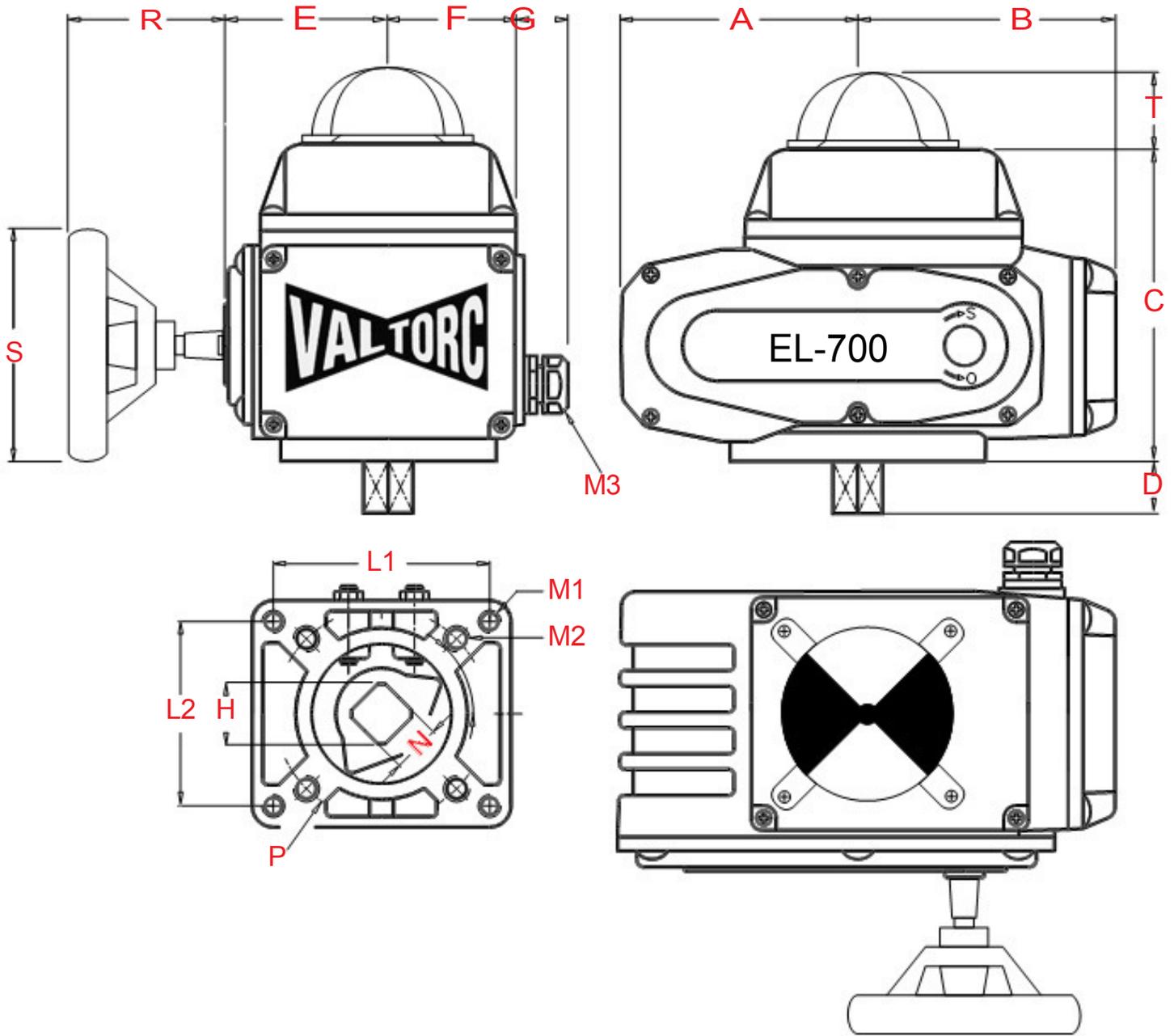
**EL-700M WIRING DIAGRAM**



4-20mA/2-10VDC      AC110V      4-20mA

**DIMENSIONS**

**Dimensional Diagram**



DIMENSIONS

**Dimensions  
Inches (Millimeters)**

| <b>Dimension<br/>Inches(mm)</b> | <b>705</b>     | <b>710<br/>710M</b> | <b>720<br/>720M</b> | <b>730<br/>730M</b> |
|---------------------------------|----------------|---------------------|---------------------|---------------------|
| <b>A</b>                        | 3.386<br>(86)  | 3.858<br>(98)       | 4.843<br>(123)      | 5.039<br>(128)      |
| <b>B</b>                        | 2.898<br>(74)  | 4.331<br>(110)      | 5.236<br>(133)      | 5.984<br>(152)      |
| <b>C</b>                        | 4.528<br>(115) | 4.528<br>(115)      | 5.551<br>(141)      | 6.654<br>(169)      |
| <b>D</b>                        | 0.55<br>(14)   | 0.63<br>(16)        | 0.866<br>(22)       | 1.024<br>(26)       |
| <b>E</b>                        | 2.205<br>(56)  | 2.48<br>(63)        | 3.543<br>(90)       | 3.74<br>(95)        |
| <b>F</b>                        | 1.772<br>(45)  | 2.047<br>(52)       | 2.48<br>(63)        | 2.402<br>(61)       |
| <b>G</b>                        | 0.787<br>(20)  | 1.024<br>(26)       | 1.024<br>(26)       | 1.024<br>(26)       |
| <b>L1</b>                       | 2.677<br>(68)  | 3.228<br>(82)       | 4.646<br>(118)      | 5.827<br>(148)      |
| <b>L2</b>                       | 2.362<br>(60)  | 2.756<br>(70)       | 3.307<br>(84)       | 3.307<br>(84)       |
| <b>P</b>                        | 2.756<br>(70)  | 2.756<br>(70)       | 4.016<br>(102)      | N/A                 |
| <b>N</b>                        | 0.472<br>(12)  | 0.591<br>(15)       | 0.906<br>(23)       | 1.181<br>(30)       |
| <b>H</b>                        | 0.63<br>(16)   | 0.787<br>(20)       | 1.102<br>(28)       | 1.575<br>(40)       |
| <b>M1</b>                       | M6 x 1         | M6 x 1              | M10 x 1.25          | M12 x 1.25          |
| <b>M2</b>                       | M8 x 1.25      | M8 x 1.25           | M10 x 1.25          |                     |
| <b>M3</b>                       | 1/2 NPT        | 1/2 NPT             | 1/2 NPT             | 1/2 NPT             |
| <b>R</b>                        | 2.913<br>(74)  | 2.913<br>(74)       | 2.913<br>(74)       | 2.913<br>(74)       |
| <b>S</b>                        | 4.724<br>(120) | 4.724<br>(120)      | 4.724<br>(120)      | 4.724<br>(120)      |
| <b>T</b>                        | 1.102<br>(28)  | 1.102<br>(28)       | 1.102<br>(28)       | 1.102<br>(28)       |