



# Certificate of Compliance

**Certificate:** 2166693 (109156\_0\_000)

**Master Contract:** 163694

**Project:** 70105666

**Date Issued:** 2017-03-17

**Issued to:** Exlar Corporation  
18400 West 77th St  
Chanhassen, Minnesota 55317  
USA

**Attention:** Larry Lunzer

*The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.*



**Issued by:** Sorin Tat  
Sorin Tat

## **PRODUCTS**

**CLASS - C322882 - VALVES-Actuators - For Hazardous Locations-Certified to U.S. Standards**

**CLASS - C322802 - VALVES-Actuators - For Hazardous Locations**

### **Class I, Division 1, Group BCD**

-Model EL 100 Linear Actuator, Rated:  
24-120Vdc – 25A Max, 2420 W Max or  
115-460 Vac, 50 / 60 Hz, 25A Max, 2420 W Max  
T3C, Ta -29°C to +93°C.

### EL100 Model Code information

EL100-06xx-axx-xxx-xbx-xx-cx-T3-xxxxx

#### a – Connections

- T – Terminal Strip with 3/4" NPT housing access, Two Rows
- S – Terminal Strips with 3/4" NPT housing access, Single Row

#### b - Voltage Rating

- A = 24 VDC
- B = 48 VDC



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C = 120 VDC  
1 = 115 Volt RMS  
3 = 230 Volt RMS  
5 = 400 Volt RMS  
6 = 460 Volt RMS  
X = Special Voltage Rating - Not to Exceed 460 Vrms

c – Optional Mechanical and Speed Designations

RB = Rear Brake  
01-99 = Speed (RPMx100)  
PF = Preloaded Follower  
AR = External Anti Rotate Assembly  
XT = Special Travel Options  
XL = Special Lubricant

x – denotes options not affecting safety

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**Class I, Division 1, Group B,C,D**

-Model EL120 Linear Actuator and ER120 Rotary Actuator, Rated:  
24Vdc, 48Vdc, 120Vdc, 115Vrms, 230Vrms, 400Vrms, 460Vrms (or a Special Voltage Rating not exceeding 460 Vrms) and 30Arms max. Temperature Code T4 (135°C),  $-29^{\circ}\text{C} \leq \text{Ta} \leq +93^{\circ}\text{C}$ , IP66, Enclosure Type 4

EL120 Model Code information:

EL120-aaxx-bxx-xxx-cde-ff-(gg-...-gg)-xxxxx

aa – Stroke length

18" maximum

b – Connection

F - Two 3/4" NPT Ports: Front Facing as viewed from shaft end

B - Two 3/4" NPT Ports: Back Facing as viewed from shaft end

R - Two 3/4" NPT Ports: Right Facing as viewed from shaft end

L - Two 3/4" NPT Ports: Left Facing as viewed from shaft end

X – Special NPT Ports – up to 4 x 3/4" NPT or Smaller

c – Motor Stacks

1 – One stack of magnets

2 – Two stacks of magnets

3 – Three stacks of magnets

d – Voltage Rating

A – 24Vdc

B – 48Vdc

C – 120Vdc

1 – 115Vrms

3 – 230Vrms



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- 5 – 400Vrms
- 6 – 460Vrms
- X – Special Not to Exceed 460Vrms
- e – Poles
  - 8 – 8 pole Motor
- ff – Motor Speed
  - 01-45 = Speed RPMx100
- gg – Optional Mechanical
  - XL – Special Lubrication
  - PF – Preloaded Follower
  - AR = Anti-Rotate Assembly
  - RB – Rear Brake
  - HW – Side Handwheel Drive
  - SD – Side Hex Drive
  - CD – Crank Drive
  - XT – Special Travel Option
    - Non-Standard Roller Count
    - Deep Groove Ball Bearings
    - Stainless Steel Main Rod
  - XH – Special Housing Option
    - Special Coating

“x” designation are options that do not affect safety

ER120 Model Code information:

ER120-xxx-xax-xxx-bcd-ee-(ff-...-ff)-xxxxx

a – Connection

- F - Two ¾” NPT Ports: Front Facing as viewed from shaft end
- B - Two ¾” NPT Ports: Back Facing as viewed from shaft end
- R - Two ¾” NPT Ports: Right Facing as viewed from shaft end
- L - Two ¾” NPT Ports: Left Facing as viewed from shaft end
- X – Special NPT Ports – up to 4 x ¾” NPT or Smaller

b – Motor Stacks

- 1 – One stack of magnets
- 2 – Two stacks of magnets
- 3 – Three stacks of magnets

c – Voltage Rating

- A – 24Vdc
- B – 48Vdc
- C – 120Vdc
- 1 – 115Vrms
- 3 – 230Vrms
- 5 – 400Vrms
- 6 – 460Vrms
- X – Special Not to Exceed 460Vrms



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d – Poles

8 – 8 pole Motor

ee – Motor Speed

01-45 = Speed RPMx100

ff – Optional Mechanical

XL – Special Lubrication

LB – Low Backlash Gears

HW – Side Handwheel Drive

SD – Side Hex Drive

CD – Crank Drive

XH – Special Housing Option

- Special Coating

“x” designation are options that do not affect safety

**Notes:**

1. Supply wires to be rated 105°C or more
2. This report covers certification of the actuator only. The associated electronic controller(s) required for the use of the actuator are not covered in this report. The suitability of the controller-actuator combination is based upon acceptance of the authority having jurisdiction.
3. Maximum Ratings limited to 20 A max and 2420 W when using Allen Bradley 1492-LMJ3 terminals.

**APPLICABLE REQUIREMENTS**

CAN/CSA Standard C22.2 No. 0-10

CSA Standard C22.2 No. 0.4-04

CSA Standard C22.2 No. 0.5-1982

CSA Standard C22.2 No. 30-M1986

CSA Standard C22.2 No. 139-2013

CSA Standard C22.2 No. 145-11

UL Standard 429 - 7<sup>th</sup> Edition

UL 674 5th Ed

ANSI/UL Standard 1203 – 4<sup>th</sup> Edition

- General Requirements - Canadian Electrical Code, Part II
- Bonding of Electrical Equipment
- Threaded Conduit Entries
- Explosion-Proof Enclosures for Use in Class I Hazardous Locations
- Electrically Operated Valves
- Electric motors and generators for use in hazardous (classified) locations
- Electrically Operated Valves
- Electric Motors and Generators for Use in Division 1 Hazardous (Classified) Locations
- Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations



## *Supplement to Certificate of Compliance*

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*The products listed, including the latest revision described below,  
are eligible to be marked in accordance with the referenced Certificate.*

### **Product Certification History**

<b>Project</b>	<b>Date</b>	<b>Description</b>
70105666	2017-03-17	To update 2166693 report to CSA 139-13 and UL 427 7th standards Editions as per CSA Signal Sensing and Controls No.12
70050712	2015-11-18	Update to Report 2166693 to include drawing revision updates
2669970	2014-05-27	Update to report 2166693 to include models EL120 (linear) and ER120 (rotary) actuators for Class I, Div 1, Grp BCD.
2631417	2013-06-19	Update of Report 2166693 to include addition of spring retraction assembly.
2525457	2012-05-25	Update to report 2166693 to update four controlled drawings and add resolver series.
2378848	2010-12-23	Update to Report 2166693 to document drawing revisions to model EL 100 linear actuator.
2236594	2009-11-30	update to report 2166693 to clarify construction and include alternate documentation
2166693	2009-09-18	Evaluation of EL100 Series Servo Linear Actuators for hazardous locations