



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 10ATEX1037X** Issue: **2**

4 Equipment: **EL 100 Linear Actuator**

5 Applicant: **Exlar Corporation**

6 Address: **18400 West 77th Street
Chanhassen
MN 55317
USA**

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2012

EN 60079-1:2007

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



**II 2 G
Ex d IIB+H₂ T3 Gb IP66
(Ta = -29°C to +93°C)**

Project Number **70004661**
C. Index **22**

C Ellaby
Deputy Certification Manager

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 10ATEX1037X
Issue 2

13 DESCRIPTION OF EQUIPMENT

The EL100 Linear Actuator consists of an enclosure assembly, incorporating a resolver, stator, terminal blocks, thermal switch and rear brake. The enclosure assembly incorporates a roller screw mechanism within the armature of a brushless servo motor. The EL100 Linear Actuator is connected to a servo drive controller which commutates the motor and controls the torque, speed and position of the actuator. This rotary motion is translated into linear motion by an internal planetary roller screw mechanism. The actuator and a controller combine to provide a complete motion control system. The electrical to mechanical power conversion and position feedback devices are contained in the actuator.

24-120 V dc – 25 A Max, 2420 W Max
115-460 V ac, 50 / 60 Hz, 25 A Max, 2420 W Max

All bolt fasteners are zinc plated carbon steel to ISO 4017, grade 10.9

Model Code information

EL100-06-x-a-x-x-x-2-b-8-c-x-T3-x

a - denotes Connections, where:

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

b - denotes Voltage Rating, where:

- A = 24 V dc
- B = 48 V dc
- C = 120 V dc
- 1 = 115 V rms
- 3 = 230 V rms
- 5 = 400 V rms
- 6 = 460 V rms
- X = Special Voltage Rating - Not to Exceed 460 V rms

c - denotes Optional Mechanical and Speed Designations, where:

- RB = Rear Brake
- 1-99 = Speed (# x 100 = RPM)
- PF = Preloaded Follower
- AR = External Anti Rotate Assembly
- XT = Special Travel Options
- XL = Special Lubricant

x – denotes Options Not Affecting Safety

Variation 1 - This variation introduced the following changes:

- i. The address of the Applicant was changed from 1470 Lake Dr W, Chanhassen, MN 55317, USA to 18400 West 77th Street, Chanhassen, MN 55317, USA.



SCHEDULE

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Issue 2

Variation 2 - This variation introduced the following changes:

- i. The addition of Hydrogen to the gas group, the update of standard EN 60079-0:2009 to EN 60079-0:2012 and the introduction of a Condition of Certification.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	17 March 2010	R21426A/00	The release of the prime certificate.
1	20 May 2011	R25114A/00	The introduction of Variation 1
2	15 August 2014	R70004661A	This Issue covers the following changes: <ul style="list-style-type: none">• Drawing No. TR163694-2170734 detailed in the Annexe, Issue 1, was corrected to read 86 61106P00-O.• The introduction of Variation 2.

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

- 15.1 At the cable entry point the surface temperature may reach up to 125°C, therefore, supply cable and entries shall be selected accordingly.
- 15.2 The maximum voltage and current ratings marked on the equipment shall not be exceeded.
- 15.3 In accordance with clause 5.1 of EN 60079-1:2007, any maintenance of the critical dimensions of the flamepaths shall not be undertaken without seeking guidance from the manufacture of the equipment.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 CONDITIONS OF CERTIFICATION

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.
- 17.3 The maximum voltage and current ratings marked on the equipment shall not contradict the 2420 W maximum power rating allowed for this equipment, in addition, the products that incorporate Allen Bradley 1492-LMJ3 terminals shall be limited to 20 A and marked accordingly.
- 17.4 Any greases applied to the flamepaths shall not harden, contain evaporating solvents and do not cause corrosion to the joint surfaces can be utilised.

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Certificate Annexe

Certificate Number: Sira 10ATEX1037X
Equipment: EL 100 Linear Actuator
Applicant: Exlar Corporation



Issue 0

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
17308	1 of 1	A	02 Mar 10	Resolver – Deltran PT – Harowe
17309	1 of 1	A	02 Mar 10	Resolver – Deltran PT – Harowe
17310	1 of 1	A	02 Mar 10	Resolver – Deltran PT – Harowe
17312	1 of 1	A	02 Mar 10	Resolver – Deltran PT – Harowe
23064	1 of 1	A	02 Mar 10	Resolver – LTN
39955	1 of 1	A	02 Mar 10	Stator
39975	1 of 1	A	02 Mar 10	Housing, Machined
39976	1 of 1	A	02 Mar 10	Cover, Machined
39989	1 of 1	A	02 Mar 10	Tie Rod, M8X1.25 x 11.80
40093	1 of 1	A	02 Mar 10	Screw, M8x1.25x20, HHCS, ISO 4017
42289	1 of 1	A	02 Mar 10	Label
43766	1 of 1	A	02 Mar 10	Face Plate
43767	1 of 1	A	02 Mar 10	Case
43768	1 of 1	A	02 Mar 10	End Plate
43769	1 of 1	A	02 Mar 10	Main Rod 20mm
43770	1 of 1	A	02 Mar 10	Rod Bushing 20mm
43774	1 of 1	A	02 Mar 10	Housing, RB, Machined
43846	1 of 1	A	02 Mar 10	Nut, M8, ISO 4032
43941	1 of 1	A	02 Mar 10	Tie Rod, M8X1.25 x 14.10
TR163694-2170734	1 of 1	e	02 Mar 10	High Torque Rear Brake

Issue 1

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
42289	1 to 3	B	20 May 11	Label CSA EL100

Issue 2

Drawing No.	Sheets	Rev.	Date (Sira Stamp)	Title
42289	1 of 4	D	05 Aug 14	Label
86 61106P00-O	1 of 1	E	17 Jul 14	High Torque Rear Brake

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