



1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira14ATEX1306X** Issue: **6**

4 Equipment: **LE Series Explosion-Proof Linear Valve Actuators**

5 Applicant: **Sun Yeh Electrical Ind. Co., Ltd.**

6 Address: **No. 68 Lane 854, Sec. 1, Shatian Road,
Dadu District,
Taichung City, 43244
Taiwan**

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

8 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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 IEC 60079-0:2018 EN 60079-1:2014/AC:2018-09 EN 60079-31:2014

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-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 GD
Ex db IIB T4 Gb
Ex tb IIIC T130°C Db
Ta = -30°C to +70°C

Project Number 80039657

Signed: J A May

Title: Director of Operations

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CSA Group Netherlands B.V.
Utrechtseweg 310,
6812 AR, Arnhem,
Netherlands



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira14ATEX1306X
Issue 6

13 DESCRIPTION OF EQUIPMENT

The LE Series Explosion-Proof Linear Valve Actuator comprises a cylindrical aluminium flameproof enclosure, containing a motor and associated electronics which drive a stainless steel linear actuator via a mechanical transmitting unit. A rotating handle may be used to manually drive the mechanical transmitting unit, when the equipment is unpowered, which can be removed from the mechanical circuit to prevent movement of the handle when the motor is driven.

The internal motor winding contains a bimetallic strip for thermal protection, which is set to operate at 125°C. The motor is provided with class F insulation.

The equipment is rated as IP68 (7 metres for 72 hours), which is maintained by O-ring seals in each joint and oil seals in the interface between the main housing and actuator/drive handle shafts.

The flameproof housing features two threaded cable entries, which may be NPT3/4", NPT1/2", M20x1.5 or M25x1.5. Each cable entry is supplied by the manufacturer with a proprietary stainless-steel blanking plug which may be replaced by the end user with suitably certified and rated flameproof cable entry devices.

Model nomenclature:

LE-X1-X2-X3

L – Linear Valve Actuator

E – Explosion Proof

X1 – Thrust (kg): 250 / 500 / 1000 / 2000

X2 – Voltage:

- D24 – 24 VDC

- 24 – 24 VAC

- 100– 100 VAC

- 120– 110 - 120 VAC

- 200– 200 VAC

- 220– 220 - 240 VAC

X3 – Control Method:

- M – Modulating

- F – Floating

Variation 1 - This variation introduced the following change:

- i. The company logo was changed on the label drawing.

Variation 2 - This variation introduced the following changes:

- i. The Certificate Holder's address was changed:

From:

No. 81, Lane 355, San Kang Rd.,

Lung Ching Vil.

Lung Ching District

Taichung City, 43444, Taiwan, R.O.C

To:

No. 68 Lane 854, Sec. 1, Shatian Road,

Dadu District,

Taichung City, 43244

Taiwan

- ii. The introduction of a 'D' Shaped drive to the output shaft.



SCHEDULE

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Sira14ATEX1306X
Issue 6

Variation 3 - This variation introduced the following changes:

- i. To permit all model series linear valve actuators to be fitted with an alternative worm gear shaft. The external face of the shaft is recessed with a female square keyway, enabling the valve actuators to be connected to end user type specific output couplings.
- ii. Rationalisation of scheduled drawings to remove those that have been replaced, and/or are no longer used to support manufacturing compliance. In addition to the removal of the IP68 rating from being part of the concept of protection coding text string on the product nameplate.
- iii. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0:2012 and EN 60079-1:2007, were replaced by EN 60079-0:2012/A11:2013 and EN 60079-1:2014, the markings were updated accordingly. Inclusive of a reduction of the NPT thread length on the blanking devices.

Variation 4 – This variation introduced the following changes:

- i. The reinforcement of the Top Cover.
- ii. The introduction of transparent paint on labels.
- iii. The amendment of NPT threaded Blanking Elements.
- iv. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0:2012 and EN 60079-1:2014 were replaced by EN IEC 60079-0:2018 and EN 60079-1:2014/AC: 2018-09, the Specific Conditions of Use, the Product Description and the Markings were amended to recognise the new standards

Variation 5 - This variation introduced the following changes:

- i. Change the type key and related ratings as follows:

Previous	New
110 stands for 110VAC 120 stands for 120VAC	120 stands for 110-120VAC
220 stands for 220VAC 240 stands for 240VAC	220 stands for 220-240VAC

- ii. Correction of the Applicant's and Manufacturer's Name & Address and introduce separate nameplate drawings for ATEX and IECEx

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	29 January 2015	R70009099A	The release of the prime certificate.
1	08 July 2015	R70038697A	The introduction of Variation 1.



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira14ATEX1306X
Issue 6

Issue	Date	Report number	Comment
2	20 October 2016	R70087357A	This Issue covers the following changes: <ul style="list-style-type: none">• EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. <i>(In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</i>• The introduction of Variation 2.
3	07 November 2017	R70156905A	The introduction of Variation 3.
4	21 March 2019	R70211224A	The introduction of Variation 4.
5	31 October 2019	0698	Transfer of certificate Sira14ATEX1306X from Sira Certification Service to CSA Group Netherlands B.V.
6	13 August 2020	R80039657A	The introduction of Variation 5.

15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

- 15.1 The flamepaths in this equipment are different to the standard dimensions given in EN 60079-1. If specific Flamepath dimensions are required then the manufacturer (OEM) must be contacted.
- 15.2 Caution - Use fasteners with yield stress $\geq 700\text{MPa}$.

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.

Certificate Annexe



Certificate Number: Sira14ATEX1306X

Equipment: LE Series Explosion-Proof Linear Valve Actuators

Applicant: Sun Yeh Electrical Ind. Co., Ltd.

Issue 0

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
Ex 10030	1 of 2	1	16 Jan 15	Explosion proof linear actuator
Ex 10030	2 of 2	1	16 Jan 15	Explosion proof linear actuator
Ex 10031	1 of 2	1	16 Jan 15	Explosion proof linear actuator
Ex 10031	2 of 2	1	16 Jan 15	Explosion proof linear actuator
Ex 20207-4	1 of 1	1	16 Jan 15	Main housing (M20)
Ex 20207-3	1 of 1	1	16 Jan 15	Main housing (M25)
Ex 20209-4	1 of 1	1	16 Jan 15	Main housing (M20)
Ex 20207-2	1 of 1	1	16 Jan 15	Main housing (NPT 1/2")
Ex 20209-3	1 of 1	1	16 Jan 15	Main housing (M25)
Ex 20207-1	1 of 1	1	16 Jan 15	Main housing (NPT 3/4")
Ex 20209-2	1 of 1	1	16 Jan 15	Main housing (NPT 1/2")
Ex 20209-1	1 of 1	1	16 Jan 15	Main housing NPT3/4"
Ex 20208	1 of 1	1	16 Jan 15	Top cover
Ex 30502	1 of 1	1	16 Jan 15	Casting end cap
Ex 30503	1 of 1	1	16 Jan 15	Drive shaft
Ex 30504	1 of 1	1	16 Jan 15	Casting end cap
Ex 30505	1 of 1	1	16 Jan 15	Plate
Ex 30506	1 of 1	1	16 Jan 15	Worm gear
Ex 30507	1 of 1	1	16 Jan 15	Drive shaft
Ex 30508	1 of 1	1	16 Jan 15	Casting end cap
Ex 30509	1 of 1	1	16 Jan 15	Worm gear
Ex 30510	1 of 1	1	16 Jan 15	Plate
Ex 30511	1 of 1	1	16 Jan 15	Top cover
Ex 40778	1 of 1	1	16 Jan 15	Nameplate
Ex 40780	1 of 1	1	16 Jan 15	Casting end cap
Ex 40804-4	1 of 1	1	16 Jan 15	Ex plug (M20)
Ex 40804-3	1 of 1	1	16 Jan 15	Ex plug (M25)
Ex 40804-2	1 of 1	1	16 Jan 15	Ex plug (NPT 1/2")
Ex 40804-1	1 of 1	1	16 Jan 15	Ex plug (NPT 3/4")

Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
Ex 42381	1 of 1	-	08 Jul 15	Nameplate

Issue 2

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
Ex 31528	1 of 1	1	11 Aug 16	Drive Shaft
Ex 31530	1 of 1	1	11 Aug 16	Drive Shaft
Ex 42381	1 of 1	1	04 Oct 16	Nameplate

Issue 3

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
Ex 10030	1 to 3	2	13 Oct 17	Explosion proof linear actuator

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Certificate Annexe



Certificate Number: Sira14ATEX1306X

Equipment: LE Series Explosion-Proof Linear Valve Actuators

Applicant: Sun Yeh Electrical Ind. Co., Ltd.

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
Ex 10031	1 to 3	2	13 Oct 17	Explosion proof linear actuator
Ex 30506-1	1 of 1	1	13 Oct 17	Explosion proof linear actuator
Ex 30509-1	1 of 1	1	13 Oct 17	Explosion proof linear actuator
Ex 40804-1	1 of 1	3	13 Oct 17	Ex plug (M20)
Ex 40804-2	1 of 1	3	13 Oct 17	Ex plug (M25)
Ex 40804-3	1 of 1	3	13 Oct 17	Ex plug (NPT 1/2")
Ex 40804-4	1 of 1	3	13 Oct 17	Ex plug (NPT 3/4")
Ex 42381	1 of 1	2	06 Nov 17	Nameplate

Issue 4

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
Ex 42381	1 of 1	3	05 Mar 19	Nameplate
Ex 20208	1 of 1	2	05 Mar 19	Top cover
Ex 40804-1	1 of 1	4	05 Mar 19	Ex plug (NPT 3/4")
Ex 40804-2	1 of 1	4	05 Mar 19	Ex plug (NPT 1/2")

Issue 5. No new drawings were introduced.

Issue 6

Drawing	Sheets	Rev.	Date (Stamp)	Title
Ex 10030	1 to 3	3	25 May 20	Explosion proof linear actuator
Ex 10031	1 to 3	3	25 May 20	Explosion proof linear actuator
Ex 42381	1 of 1	4	07 Aug 20	Nameplate

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