



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: **IECEx SIR 14.0109X** issue No.: **0** Certificate history: [View Certificate History](#)

Status: **Current**

Date of Issue: **2015-02-10** Page 1 of 3

Applicant: **Sun Yeh Electrical Ind. Co., Ltd.**  
No. 81, Lane 355, Sankang Rd.,  
Lungching Vil.  
Lungching District,  
Taichung City, 43444  
**Taiwan**

Electrical Apparatus: **SE Series Explosion-Proof Spring Return Actuators**  
Optional accessory:

Type of Protection: **Flameproof and Dust Protection by Enclosure**


Marking: **Ex d IIB T4 Gb**  
**Ex tb IIIC T130°C Db**  
**Ta = -30°C to +70°C**

Approved for issue on behalf of the IECEx Certification Body: **C Ellaby**

Position: **Deputy Certification Manager**

Signature:  
(for printed version)

Date:

  
2015-02-10

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**SIRA Certification Service**  
**Rake Lane**  
**Eccleston**  
**Chester**  
**CH4 9JN**  
**United Kingdom**

**sira**  
CERTIFICATION





# IECEx Certificate of Conformity

Certificate No.: IECEx SIR 14.0109X

Date of Issue: 2015-02-10

Issue No.: 0

Page 2 of 3

Manufacturer: **Sun Yeh Electrical Ind. Co., Ltd**  
No. 81, Lane 355, Sankang Rd.,  
Lungching Vil.  
Lungching District,  
Taichung City, 43444  
**Taiwan**

Additional Manufacturing location  
(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2011</b> Edition: 6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2007-04</b> Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2013</b> Edition: 2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

##### Test Report:

[GB/SIR/ExTR15.0030/00](#)

##### Quality Assessment Report:

[NO/NEM/QAR14.0013/00](#)



# IECEx Certificate of Conformity

Certificate No.: IECEx SIR 14.0109X

Date of Issue: 2015-02-10

Issue No.: 0

Page 3 of 3

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The SE Series Explosion-Proof Spring Return Actuator comprises an aluminium flameproof enclosure, containing a motor and associated electronics which drive a carbon steel transmission shaft 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. Within the flameproof enclosure is a double rack and pinion arrangement driven by the transmission shaft. Each rack is supported by a pair of springs, such that when power to the equipment is lost the actuator will be driven back to its original position.  
Refer to the Annexe for additional information

### CONDITIONS OF CERTIFICATION: YES as shown below:

1. The manufacturer recommends that any cable entry device used must maintain the IP rating of the enclosure.
2. The end user must ensure that any cable and cable entry devices used with the equipment are suitable for use at temperatures above 90°C.
3. The flamepaths in this equipment are different to the standard dimensions given in IEC 60079-1. If specific flamepath dimensions are required then the manufacturer (OEM) must be contacted.

**Annexe to:** IECEx SIR 14.0109X Annexe Issue 0  
**Applicant:** Sun Yeh Electrical Ind. Co., Ltd.  
**Apparatus:** SE Series Explosion-Proof Spring Return Actuators



The flameproof enclosure has a mechanical indicator at the upper end to show the position of the actuator valve which can be viewed through a cemented toughened glass window.

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 transmission/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 flameproof cable entry devices.

Model Nomenclature:

SE-X1-X2-X3-X4-X5

S – Spring Return Actuator  
E – Explosion Proof  
X1 – Torque (Nm)  
X2 – Voltage:

D24 – 24 VDC	24 – 24 VAC	100 – 100 VAC
110 – 110 VAC	120 – 120 VAC	200 – 200 VAC
220 – 220 VAC	240 – 240 VAC	380 – 380 VAC
440 – 440 VAC		

X3 – Direction of Rotation:

- CW – Clockwise
- CCW – Counter Clockwise

X4 – Control Method:

- T – Two Position
- M – Modulating
- F – Floating

X5 – Manual Override:

- Y – With Manual Override
- N – Without Manual Override

## Conditions Of Manufacture

- i. Each unit shall withstand an overpressure test according to IEC 60079-1 clause 16, at a pressure no less than those listed below for a period of at least ten seconds. The test shall be considered as satisfactory if on completion the enclosure has suffered no permanent deformation or damage affecting the type of protection.
- For SE-500-□-□-□-□: The static overpressure test is not less than 9 bar.
  - For SE-1300-□-□-□-□: The static overpressure test is not less than 10 bar.
  - For SE-2000 and SE-2600-□-□-□-□: The static overpressure test is not less than 12 bar.

**Date:** 05 February 2015

Page 1 of 1

**Form 9530 Issue 1**

## Sira Certification Service

Rake Lane, Eccleston, Chester, CH4 9JN, England

Tel: +44 (0) 1244 670900  
Fax: +44 (0) 1244 681330  
Email: [info@siracertification.com](mailto:info@siracertification.com)  
Web: [www.siracertification.com](http://www.siracertification.com)