



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEX SIR 17.0062X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 4	Issue 3 (2022-06-28)
Date of Issue:	2023-12-14		Issue 2 (2020-08-13)
Applicant:	Sun Yeh Electrical Ind. Co., Ltd No. 68, Lane 854, Sec.1., Shatian Rd, Dadu District Taichung City TW-423403 Taiwan		Issue 1 (2019-03-21)
Equipment:	OME Series Explosion-proof Quarter-Turn Actuators		Issue 0 (2017-08-10)
Optional accessory:			
Type of Protection:	Flameproof and Dust Protection by Enclosure		
Marking:	Ex db IIB T4 Gb Ex tb IIIC T130°C Db IP66, IP68 (72h, 7m) Ta = -30°C to +70°C		

Approved for issue on behalf of the IECEx
Certification Body:

Michelle Halliwell

Position:

Director Operations, UK & Industrial Europe

Signature:
(for printed version)

Date:
(for printed version)

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 www.iecex.com or use of this QR Code.



Certificate issued by:

CSA Group Testing UK Ltd
Unit 6, Hawarden Industrial Park
Hawarden, Deeside CH5 3US
United Kingdom





IECEX Certificate of Conformity

Certificate No.: **IECEX SIR 17.0062X**

Page 2 of 4

Date of issue: 2023-12-14

Issue No: 4

Manufacturer: **Sun Yeh Electrical Ind. Co., Ltd**
No. 68, Lane 854, Sec.1., Shatian Rd, Dadu District
Taichung City TW-423403
Taiwan

Manufacturing locations: **Sun Yeh Electrical Ind. Co., Ltd**
No. 68, Lane 854, Sec.1., Shatian Rd,
Dadu District
Taichung City TW-423403
Taiwan

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 equipment 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

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-1:2014](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-31:2022](#) Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0

This Certificate **does not** indicate compliance with 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 Reports:

[GB/SIR/ExTR17.0158/00](#)
[GB/SIR/ExTR20.0148/01](#)

[GB/SIR/ExTR19.0084/00](#)
[GB/SIR/ExTR23.0190/00](#)

[GB/SIR/ExTR20.0148/00](#)

Quality Assessment Report:

[NO/NEM/QAR14.0013/06](#)



IECEX Certificate of Conformity

Certificate No.: **IECEX SIR 17.0062X**

Page 3 of 4

Date of issue: 2023-12-14

Issue No: 4

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The OME Series Explosion-proof Quarter-Turn Actuators are designed to provide control of valves. It comprises of a coated aluminium main body and cover. The cover is secured by means of four hexagonal head cap head screws, forming a cylindrical flameproof joint with the main body.

The enclosure houses a motor and associated electronics, which drive a carbon steel transmission shaft via a mechanical transmitting unit. Some models within the series are fitted with a rotating drive handle that may be used to manually operate the mechanical transmitting unit when it is de-energised. Additionally the enclosure may be fitted with an optional heater.

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

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 provides a degree of ingress protection 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 body housing and transmission/drive handle shafts.

For All Models the equipment also provides with IP66, which is maintained by the thread sealant on cable entry devices or blanking elements in addition to the same design as previous.

The flameproof main body housing features a cylindrical flameproof joint with both the transmission shaft and drive handle shaft (where fitted). Externally it is fitted with two threaded cable entries, for types OME-1, OME-A and OME-AM, either M20x1.5 or 1/2" NPT, and for types OME-2 through OME- 8, either M20 X1.5, M25 X 1.5, 1/2" NPT, or 3/4" NPT.

Each cable entry is supplied fitted with stainless steel blanking plugs, which may be replaced by the end user with a suitably certified and rated flameproof cable entry device. Refer to the Annexe for model nomenclature.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. 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.
2. CAUTION- USE FASTENERS WITH YIELD STRESS $\geq 450\text{MPa}$.



IECEX Certificate of Conformity

Certificate No.: **IECEX SIR 17.0062X**

Page 4 of 4

Date of issue: 2023-12-14

Issue No: 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

This issue, Issue 4, recognises the following changes; refer to the certificate annex to view a comprehensive history:

1. Postal code change from 43244 to 432403.
2. Warning plate change YIELD STRESS value from "≥ 700MPa" to "≥ 450Mpa".
3. The right side of worm is changed from D-type to flat type, and the length is also adjusted from 116 mm to 113 mm, and from 40 mm to 43 mm.
4. The right side of worm is changed from D-type to flat type, and the length is also adjusted from 26.5 mm to 29.5 mm.
5. The right side of worm is changed from D-type to flat type, and the length is also adjusted from 33 mm to 37 mm.
6. Based on IECEx ExTR, 3X Hydrostatic Pressure Type Test complied test results, to allow Zone routine inspection can apply batch testing in the future.
7. Material change for the Handwheel from Plastic (N6) to ADC10.
8. For all Models to add IP66 ingress protection level aside HazLoc markings
9. Upgrade IEC 60079-31:2013 to IEC 60079-31:2022

Annex:

[IECEX SIR 17.0062X Annexe Issue 4.pdf](#)

Annexe to: IECEx SIR 17.0062X Issue 4

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

Apparatus: OME Series Explosion-proof Quarter-Turn Actuators



Type References

OME-X1-X2-X3-X4 Series

Where:

OM stands for Quarter-Turn Actuator.

E stands for Explosion-proof.

X1 stands for type (1, A, AM, 2, 3, 4, 5, 6, 7, 8).

X2 stands for voltage (D12 stands for 12VDC, 12 stands for 12VAC, D24 stands for 24VDC, 24 stands for 24VAC, 100 stands for 100VAC, 120 stands for 110-120VAC, 200 stands for 200VAC, 220 stands for 220-240VAC).

X3 stands for controlling method (M stands for Modulating, F stands for Floating).

X4 Duty rating: 30, 75.

Conditions of Manufacture

1. IEC 60079-1:2014, Cl.16.6 Batch testing method and acceptance criteria applied to all Models.

Test conditions as below:

Applied Model Series	Batch testing routine test value (MPa)
OME-1, OME-A, OME-AM	≥ 0.92
OME-2, OME-3	≥ 0.87
OME-4, OME-5, OME-6	≥ 0.87
OME-7, OME-8	≥ 1.09

Note: Equivalent unit and value may be applied as long as actual value meet above criteria.

2. The blanking devices to be fitted into cable entries shall be stainless steel, suitably certified and temperature rated for a range of at least -30°C and +105°C, providing, with the enclosure, the same degree of ingress protection and explosion safety protection.

Full certificate change history

Issue 1 – this Issue introduced the following changes:

- i. The introduction of a 'D' Shaped drive to the worm shaft.
- ii. The reinforcement of the Top Cover.
- iii. The inclusion of a cylindrical portion at the tip of the Screw.
- iv. Typographical correction of the material of the Casting End Cap.
- v. The amendment of NPT threaded Blanking Elements.
- vi. The recognition of minor administrative drawing modifications including typographical additions, clarifications or corrections.
- vii. The introduction of transparent paint on labels.
- viii. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC 60079-0:2011 Ed.6 and IEC 60079-1:2014 Ed.7 were replaced by IEC 60079-0:2017 Ed.7 and IEC 60079-1:2014/COR1:2018, the Specific Conditions of Use and
- ix. the Markings were amended to recognise the new standards.
- x.

Annexe to: IECEx SIR 17.0062X Issue 4

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

Apparatus: OME Series Explosion-proof Quarter-Turn Actuators



Issue 2 – this Issue 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. Revision of name plate drawings to remove "R.O.C." from the address and change Applicant's and Manufacturer's Name & Address in the report summary to remove "R.O.C." from the address and separate ATEX and IECEx name plate drawings.
- iii. Change of opening indicator type.
- iv. Change of transmission shaft length.

Issue 3 – this Issue introduced the following change:

- i. Add IP66 to Models OME-1, OME-A, OME-AM

Issue 4 – this Issue introduced the following changes:

- i. Postal code change from 43244 to 432403.
- ii. Warning plate change YIELD STRESS value from " $\geq 700\text{MPa}$ " to " $\geq 450\text{Mpa}$ ".
- iii. The right side of worm is changed from D-type to flat type, and the length is also adjusted from 116 mm to 113 mm, and from 40 mm to 43 mm.
- iv. The right side of worm is changed from D-type to flat type, and the length is also adjusted from 26.5 mm to 29.5 mm.
- v. The right side of worm is changed from D-type to flat type, and the length is also adjusted from 33 mm to 37 mm.
- vi. Based on IECEx ExTR, 3X Hydrostatic Pressure Type Test complied test results, to allow Zone routine inspection can apply batch testing in the future.
- vii. Material change for the Handwheel from Plastic (N6) to ADC10.
- viii. For all Models to add IP66 ingress protection level aside HazLoc markings
- ix. Upgrade IEC 60079-31:2013 to IEC 60079-31:2022