



## UNITED KINGDOM CONFORMITY ASSESSMENT

### UK TYPE EXAMINATION CERTIFICATE

Equipment Intended for use in Potentially Explosive Atmospheres  
UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

Certificate Number: **CSAE 21UKEX1207X** Issue: **1**  
Product: **OME Series Explosion-Proof Quarter-Turn Actuators**  
Manufacturer: **Sun Yeh Electrical Ind. Co., Ltd.**  
Address: **No. 68 Lane 854, Sec. 1, Shatian Road,  
Dadu District,  
Taichung City, 432403  
Taiwan**

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

CSA Group Testing UK Limited, Approved Body number 0518, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations. The examination and test results are recorded in the confidential reports listed in Section 14.2.

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018

EN 60079-1:2014

EN 60079-31:2014

Except in respect of those requirements listed at Section 16 of the schedule to this certificate. The above standards may not appear on the UKAS Scope of Accreditation, but have been added through flexible scope of accreditation, which is available on request.

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

This UK TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

The marking of this product shall be in accordance with Regulation 41 and include the following:



II 2GD  
Ex db IIB T4 Gb  
Ex tb IIIC T130°C Db IP68  
Ta = -30°C to +70°C

Name: Michelle Halliwell  
Title: Director of Operations



0011



## SCHEDULE

### UK TYPE EXAMINATION CERTIFICATE

CSAE 21UKEX1207X

Issue 1

#### 13 DESCRIPTION OF PRODUCT

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.

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.

#### **Incorporated amendments:**

The product description includes the following applicable amendments as detailed in the supporting documents as referenced in section 1.10 of this report. Only amendments directly applicable to UKCA



CSA Group Testing UK Ltd., Unit 6 Hawarden Industrial Park, Hawarden, CH5 3US, UK

This certificate and its schedules may only be reproduced in its entirety and without change

QD-1599 Issue 5 (2023-09-11)

Page 2 of 4



## SCHEDULE

### UK TYPE EXAMINATION CERTIFICATE

CSAE 21UKEX1207X

Issue 1

certification have been included in this list. The amendments are numbered to include a reference to the variation at which these were introduced.

1. The introduction of a 'D' Shaped drive to the worm shaft.  
The reinforcement of the top cover.  
The inclusion of a cylindrical portion at the tip of the Screw.  
Typographical correction of the material of the Casting End Cap.  
The amendment of NPT threaded Blanking Elements.  
The introduction of transparent paint on labels.

2. 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

Change of opening indicator type.

Change of transmission shaft length.

**Variation 1** - This variation 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

## 14 DESCRIPTIVE DOCUMENTS

### 14.1 Drawings

Refer to Certificate Annexe.

### 14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	09 August 2021	R80081220C	The release of the prime certificate.
1	14 December 2023	R80190138A	The introduction of Variation 1.

## 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 IEC 60079-1. If specific flamepath dimensions are required then the manufacturer (OEM) must be contacted.



CSA Group Testing UK Ltd., Unit 6 Hawarden Industrial Park, Hawarden, CH5 3US, UK

This certificate and its schedules may only be reproduced in its entirety and without change

QD-1599 Issue 5 (2023-09-11)

Page 3 of 4



## SCHEDULE

### UK TYPE EXAMINATION CERTIFICATE

CSAE 21UKEX1207X

Issue 1

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

#### 16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS (REGULATIONS SCHEDULE 1)

In addition to the Essential Health and Safety Requirements covered by the standards listed in Section 9, all other requirements are demonstrated in the relevant reports.

#### 17 PRODUCTION CONTROL

17.1 Holders of this certificate are required to comply with production control requirements defined in Schedule 3A, as applicable, and CSA Group Testing UK Regulations for Certificate Holders

17.2 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	$\geq 0.92$
OME-2, OME-3	$\geq 0.87$
OME-4, OME-5, OME-6	$\geq 0.87$
OME-7, OME-8	$\geq 1.09$

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

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



CSA Group Testing UK Ltd., Unit 6 Hawarden Industrial Park, Hawarden, CH5 3US, UK

This certificate and its schedules may only be reproduced in its entirety and without change

QD-1599 Issue 5 (2023-09-11)

Page 4 of 4



## Certificate Annexe

Certificate Number: CSAE 21UKEX1207X  
 Product: OME Series Explosion-Proof Quarter-Turn Actuators  
 Manufacturer: Sun Yeh Electrical Ind. Co., Ltd.

### Issue 0

Drawing	Sheets	Rev.	Date (Stamped)	Title
OME-1-□-F-□, OME-A-□- F-□, OME-AM-□- F-□, OME-1-□-M-□, OME-A-□- M-□, OME-AM-□-M-□ Explosion-proof Quarter-Turn Actuator				
Ex 10044 – 1/2	1 of 1	3	28 May 20	OME-1-F Explosion-proof Quarter-Turn Actuator
Ex 10044 – 2/2	1 of 1	3	28 May 20	OME-1-F Explosion-proof Quarter-Turn Actuator
Ex 10047 – 1/2	1 of 1	3	28 May 20	OME-1-M Explosion-proof-Modulating controller Quarter-Turn Actuator
Ex 10047 – 2/2	1 of 1	3	28. May 20	OME-1-M Explosion-proof-Modulating controller Quarter-Turn Actuator
Ex 10048 – 1/2	1 of 1	3	28 May 20	OME-A-M Explosion-proof Quarter-Turn Actuator (modulating controller)
Ex 10048 – 2/2	1 of 1	3	28 May 20	OME-A-M Explosion-proof Quarter-Turn Actuator (modulating controller)
Ex 10049 – 1/2	1 of 1	3	28 May 20	OME-AM-M Explosion-proof Quarter-Turn Actuator (modulating controller)
Ex 10049 – 2/2	1 of 1	3	28 May 20	OME-AM-M Explosion-proof Quarter-Turn Actuator (modulating controller)
Ex 10050 – 1/2	1 of 1	3	28 May 20	OME-A-F Explosion-proof Quarter-Turn Actuator
Ex 10050 – 2/2	1 of 1	3	28 May 20	OME-A-F Explosion-proof Quarter-Turn Actuator
Ex 10051 – 1/2	1 of 1	3	28 May 20	OME-AM-F Explosion-proof Quarter-Turn Actuator
Ex 10051 – 2/2	1 of 1	3	28 May 20	OME-AM-F Explosion-proof Quarter-Turn Actuator
Ex 20211	1 of 1	2	05 Mar 19	Top Cover
Ex 20217-1	1 of 1	1	21 Jul 17	Main housing-NPT1/2"
Ex 20217-2	1 of 1	1	21 Jul 17	Main housing-M20
Ex 20218	1 of 1	1	21 Jul 17	Top cover
Ex 30543	1 of 1	1	21 Jul 17	Transmission shaft
Ex 30551	1 of 1	1	21 Jul 17	Bracket
Ex 40830	1 of 1	1	21 Jul 17	Rubber gasket
Ex 40831	1 of 1	1	21 Jul 17	Glass window fixed sheet
Ex 40832	1 of 1	1	21 Jul 17	4th driving gear
Ex 40832-1	1 of 1	1	28 May 20	4th driving gear
Ex 41575	1 of 1	1	21 Jul 17	Glass window
OME-2-□-□-□, OME-3-□-□-□ Explosion-proof Quarter-Turn Actuator				
Ex 10032-1/3	1 of 1	3	28 May 20	OME-2 & OME-3 Explosion-proof Quarter-Turn Actuator
Ex 10032-2/3	1 of 1	3	28 May 20	OME-2 & OME-3 Explosion-proof Quarter-Turn Actuator
Ex 10032-3/3	1 of 1	3	28 May 20	OME-2 & OME-3 Explosion-proof Quarter-Turn Actuator
Ex 20206-1	1 of 1	1	21 Jul 17	Main housing (NPT 3/4")





## Certificate Annexe

Certificate Number: CSAE 21UKEX1207X  
 Product: OME Series Explosion-Proof Quarter-Turn Actuators  
 Manufacturer: Sun Yeh Electrical Ind. Co., Ltd.

Drawing	Sheets	Rev.	Date (Stamped)	Title
Ex 20206-2	1 of 1	1	21 Jul 17	Main housing (NPT 1/2")
Ex 20206-3	1 of 1	1	21 Jul 17	Main housing (M25)
Ex 20206-4	1 of 1	1	21 Jul 17	Main housing (M20)
Ex 20213	1 of 1	2	05 Mar 19	Top cover
Ex 30487	1 of 1	1	21 Jul 17	Transmission shaft
Ex 30490	1 of 1	1	21 Jul 17	Plate
Ex 30497	1 of 1	2	05 Mar 19	Worm (for torque switch)
Ex 30498	1 of 1	2	05 Mar 19	Casting end cap (for torque switch)
Ex 40748	1 of 1	2	05 Mar 19	Screw
Ex 40786	1 of 1	1	21 Jul 17	Glass window fixed sheet
Ex 40787	1 of 1	1	21 Jul 17	Rubber gasket
Ex 40790	1 of 1	1	21 Jul 17	PE label for ground
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")
Ex 40804-3	1 of 1	2	21 Jul 17	Ex plug (M25)
Ex 40804-4	1 of 1	2	21 Jul 17	Ex plug (M20)
Ex 41570	1 of 1	1	21 Jul 17	Glass window
OME-4-□-□-□, OME-5-□-□-□, OME-6-□-□-□ Explosion-proof Quarter-Turn Actuator				
Ex 10036 – 1/3	1 of 1	3	28 May 20	OME-4 & OME-5 & OME-6 Explosion-proof Quarter-Turn Actuator
Ex 10036 – 2/3	1 of 1	3	28 May 20	OME-4 & OME-5 & OME-6 Explosion-proof Quarter-Turn Actuator
Ex 10036 – 3/3	1 of 1	3	28 May 20	OME-4 & OME-5 & OME-6 Explosion-proof Quarter-Turn Actuator
Ex 20212-1	1 of 1	1	21 Jul 17	Main housing (NPT 3/4")
Ex 20212-2	1 of 1	1	21 Jul 17	Main housing (NPT 1/2")
Ex 20212-3	1 of 1	1	21 Jul 17	Main housing (M25)
Ex 20212-4	1 of 1	1	21 Jul 17	Main housing (M20)
Ex 20213	1 of 1	2	05 Mar 19	Top cover
Ex 30517	1 of 1	1	21 Jul 17	Plate
Ex 30518	1 of 1	1	21 Jul 17	Transmission shaft
Ex 30531	1 of 1	1	21 Jul 17	Casting end cap
Ex 30533	1 of 1	2	05 Mar 19	Worm (for torque switch)
Ex 40793	1 of 1	1	21 Jul 17	Screw
OME-7-□-□-□, OME-8-□-□-□ Explosion-proof Quarter-Turn Actuator				
Ex 10043 – 1/3	1 of 1	3	28 May 20	OME-7 & OME-8 Explosion-proof Quarter-Turn Actuator
Ex 10043 – 2/3	1 of 1	3	28 May 20	OME-7 & OME-8 Explosion-proof Quarter-Turn Actuator



CSA Group Testing UK Ltd., Unit 6 Hawarden Industrial Park, Hawarden, CH5 3US, UK  
 This certificate and its schedules may only be reproduced in its entirety and without change

QD-1599 Issue 5 (2023-09-11)

Page 2 of 4



## Certificate Annexe

Certificate Number: CSAE 21UKEX1207X  
 Product: OME Series Explosion-Proof Quarter-Turn Actuators  
 Manufacturer: Sun Yeh Electrical Ind. Co., Ltd.

Drawing	Sheets	Rev.	Date (Stamped)	Title
Ex 10043 – 3/3	1 of 1	3	28 May 20	OME-7 & OME-8 Explosion-proof Quarter-Turn Actuator
Ex 20219-1	1 of 1	1	21 Jul 17	Main housing (NPT 3/4") (F12)
Ex 20219-2	1 of 1	1	21 Jul 17	Main housing (NPT 1/2") (F12)
Ex 20219-3	1 of 1	1	21 Jul 17	Main housing (M25) (F12)
Ex 20219-4	1 of 1	1	21 Jul 17	Main housing (M20) (F12)
Ex 20219-5	1 of 1	1	21 Jul 17	Main housing (NPT 3/4") (F14)
Ex 20219-6	1 of 1	1	21 Jul 17	Main housing (NPT 1/2") (F14)
Ex 20219-7	1 of 1	1	21 Jul 17	Main housing (M25) (F14)
Ex 20219-8	1 of 1	1	21 Jul 17	Main housing (M20) (F14)
Ex 30555	1 of 1	2	05 Mar 19	Casting end cap (torque switch)
Ex 30557	1 of 1	1	21 Jul 17	Plate
Ex 30558	1 of 1	1	21 Jul 17	Transmission shaft
Ex 30561	1 of 1	2	05 Mar 19	Worm (torque switch)
Ex 40835	1 of 1	1	21 Jul 17	Screw
Nameplates				
Ex 42479	1 of 1	7	27 Jul 21	Nameplate
Ex 42480	1 of 1	7	27 Jul 21	Nameplate

### Issue 1

Drawing	Sheets	Rev.	Date (Stamp)	Title
Ex10044	1 to 2	4	29 Nov 23	OME-1-X2-F-X4 Explosion-proof Quarter-Turn Actuator Assembly Drawing
Ex10050	1 to 2	4	29 Nov 23	OME-A-X2-F-X4 Explosion-proof Quarter-Turn Actuator Assembly Drawing
Ex10051	1 to 2	4	29 Nov 23	OME-AM-X2-F-X4 Explosion-proof Quarter-Turn Actuator Assembly Drawing
Ex10047	1 to 2	4	29 Nov 23	OME-1-X2-M-X4 Explosion-proof Quarter-Turn Actuator Assembly Drawing
Ex10048	1 to 2	4	29 Nov 23	OME-A-X2-M-X4 Explosion-proof Quarter-Turn Actuator Assembly Drawing
Ex10049	1 to 2	4	29 Nov 23	OME-AM-X2-M-X4 Explosion-proof Quarter-Turn Actuator Assembly Drawing
Ex42479	1 of 1	8	29 Nov 23	Nameplate for OME-1, OME-A, OME-AM
Ex10032	1 to 3	4	29 Nov 23	OME-2-X2-X3-X4, OME-3-X2-X3-X4 Explosion-proof Quarter-Turn Actuator Assembly Drawing
Ex42480	1 of 1	8	29 Nov 23	Nameplate
Ex30497	1 of 1	3	29 Nov 23	Worm







## Certificate Annexe

Certificate Number: CSAE 21UKEX1207X  
Product: OME Series Explosion-Proof Quarter-Turn Actuators  
Manufacturer: Sun Yeh Electrical Ind. Co., Ltd.

Drawing	Sheets	Rev.	Date (Stamp)	Title
Ex10036	1 to 3	4	29 Nov 23	OME-4-X2-X3-X4, OME-5-X2-X3-X4, OME-6-X2-X3-X4 Explosion-proof Quarter-Turn Actuator Assembly Drawing
Ex30533	1 of 1	3	29 Nov 23	Worm
Ex10043	1 to 3	4	29 Nov 23	OME-7-X2-X3-X4, OME-8-X2-X3-X4 Explosion-proof Quarter-Turn Actuator Assembly Drawing
Ex30561	1 of 1	3	29 Nov 23	Worm
RD20170510001	1 to 35	D	29 Nov 23	Operating Instruction
RD20170510002	1 to 11	D	29 Nov 23	Product Description

