



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 CSA 25.0002X** Page 1 of 3 [Certificate history](#):
Status: **Current** Issue No: 0
Date of Issue: 2025-02-17
Applicant: **Kimray Inc**
52 NW 42nd Street
Oklahoma City OK 73118
United States of America
Equipment: **Electric Valve Actuator model KEA-xS-y-mm-nn Series**
Optional accessory:
Type of Protection: **Flameproof 'db'**
Marking: Ex db IIB T6 Gb
Ta = -40°C to +60°C

Approved for issue on behalf of the IECEx
Certification Body:

Dave Magee

Position:

Senior Director of Operations

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
178 Rexdale Boulevard
Toronto, Ontario M9W 1R3
Canada





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Page 2 of 3

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Manufacturer: **Kimray Inc**
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Oklahoma City OK 73118
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Manufacturing locations: **Kimray Inc**
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Oklahoma City OK 73118
United States of America

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

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 Report:

[CA/CSA/ExTR25.0005/00](#)

Quality Assessment Report:

[GB/CSAE/QAR21.0004/03](#)



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Page 3 of 3

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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Kimray Electric Actuator is a flameproof rising-stem actuator intended for ON/OFF or modulating operations on a globe or gate type valve or similar, and is contained in aluminum housing.

The frameless BLDC torque motor is attached to hollow shaft which contains a roller screw. The nut of the roller screw is secured to the hollow shaft such that when the motor rotates, the threaded rod of the roller screw moves up and down, lifting and lowering the valve stem. Several yoke assemblies are available to mate the actuator to the valve body. A yoke assembly is required since it holds the anti-rotate feature for the shaft coupling.

The motor/electronics compartment of the valve actuator contains a frameless brushless DC (BLDC) motor, servo drive controller, Kimray KA7510 PCB, linear position sensor and an optional back-up PTC protected

battery pack. The motor drive controller has an electronic current protection for the motor and power line fuse. KA7510 PCB contains a charger circuit which controls the voltage/current applied to the battery as well as the current drawn from the battery. A user interface consisting of an OLED display and four on-board tactile buttons is provided for commissioning and debugging of the actuator. The control and position sensor used in the actuator provide closed-loop feedback, eliminating the need for limit switches. The electronics provide an analog 4-20mA or discrete input and output, as well as digital input and output.

External connections are made through no more than four conduit entries. No more than two each of 1/2" NPT and 3/4" NPT entries.

The actuator is rated 24VDC, 10A Max, Ta = -40°C to 60°C, 1000 RPM Max, 1500 LBF Continuous; 3200 LBF peak and is marked Ex db IIB T6 Gb, IP66, -40°C to 60°C

Model Nomenclature:

KEAI-xS-Y-mm-nn where;

X = R for roller screw or X = L for linear screw

Y = 1, 2, 3, or 6 for yoke size

mm and nn are place-holders for variations not related to protection method.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Flameproof joints are not intended to be repaired.
2. Potential Static Hazard; Clean only with a water wetted cloth
3. Blanking elements shall be suitably certified to maintain ratings of the equipment.
4. Use only Kimray 7715 Battery Pack.
5. Only metric M8 stainless steel cover fasteners with a property class of A2-70 or yield stress of 450 MPa shall be used.