# 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 LCIE 22.0001X**



Certificate history:

Status: **Current**

Issue No: 0

Date of Issue: 2022-01-25

Applicant: **Burkert Werke GmbH & Co.**
Christian-Burkert-Strasse 13-17
D-74653 Ingelfingen
**Germany**

Equipment: **Electrical actuator - Type: 3004**

Optional accessory:

Type of Protection: **Ex db and Ex tb**

Marking: Ex db IIB T6…T5 Gb

Ex tb IIIC T80°C…T95°C Db

IECEx LCIE 22.0001X

(Refer to attachment for full marking).



Approved for issue on behalf of the IECEx Certification Body: **Julien GAUTHIER**

Position: **Certification Officer**

LABORATOIRE CENTRAL DES INDUSTRIES ELECTRIQUES
S.A.S au capital de 15.745.984 €
RCS Nanterre B 408 363 174
33 avenue du Général Leclerc
F - 92266 FONTENAY AUX ROSES

Signature: (for printed version)

Date: 2022-01-25

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:

**Laboratoire Central des Industries Electriques (LCIE)**
**33 Avenue du General Leclerc**
**FR-92260 Fontenay-aux-Roses**
**France**

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Certificate No.: **IECEx LCIE 22.0001X** Page 2 of 3

Date of issue: 2022-01-25 Issue No: 0

Manufacturer: **Burkert Werke GmbH & Co.**
Christian-Burkert-Strasse 13-17
D-74653 Ingelfingen
**Germany**

Additional manufacturing locations:

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 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

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:

FR/LCIE/ExTR22.0003/00

Quality Assessment Report:

DE/PTB/QAR07.0002/10

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**EQUIPMENT:**
Equipment and systems covered by this Certificate are as follows:

The electrical actuator 3004 type is an equipment which permits to open or to close a valve. This device is composed of a gear reducer (gear train) driven by a DC motor controlled by an electronic card or by a 400 V asynchronous motor.

The electric actuator has a limit switch system to stop the device in the closed and open valve positions (0° to 90° or 180° - 270° optional).

A backup control is also present: in the event of a power failure, the user can manually operate the valve-actuator assembly.

In addition, the electrical actuator with the DC motor controlled by an electronic card is available in different versions and options.

The BBPR version is available in several options. They integrates a battery pack (EBS.24) controlled by an electronic card. The GPS version correspond to the BBPR version with the addition of an analog function (control and copy) 4 - 20 mA or 0 - 10 V.

(Refer to attachment for more details)

**SPECIFIC CONDITIONS OF USE: YES as shown below:**

- The equipment shall be equipped with suitably certified cable glands and blanking elements with a compatible type of protection for the intended use.
- All special fasteners used for the assembly of the parts of the flameproof enclosure shall have at least a property class A2-70 (stainless steel).
- Every information concerning the flameproof joints of the products are available on request. Please contact the manufacturer.
- The equipment shall be installed and used according to the instruction manual provided by the manufacturer. Removing of stop screws is strictly forbidden.
- Before any intervention on the actuator or around the actuator, to avoid any electrostatic discharge, the apparatus shall be cleaned with a damp cloth.
- The apparatus shall only be installed in areas of low mechanical impact risk.

**Annex:**

IECEx LCIE 22.0001X - Issue 00 - Annex 01 - Burkert_1.pdf

## MARKING

***For standard version of electrical actuators***

Address: …
Type: 3004
Serial number: …
Year of construction: …
Ex db IIB T6 Gb
Ex tb IIIC T80°C Db
IECEx LCIE 22.0001X

-20°C ≤ $T_{amb}$ ≤ +70°C

WARNINGS –
DO NOT OPEN WHEN ENERGIZED.
DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT.
POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS.

SELECTION OF CABLES AND CABLE GLANDS – SEE INSTRUCTIONS.

U = … V; P = … W; f = … Hz (1)

(1): completed by electrical parameters.

***For BBPR version of electrical actuators***

Address: …
Type: 3004
Serial number: …
Year of construction: …
Ex db IIB T6 Gb
Ex tb IIIC T80°C Db
IECEx LCIE 22.0001X

-10°C ≤ $T_{amb}$ ≤ +40°C

WARNINGS –
DO NOT OPEN WHEN ENERGIZED.
DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT.
POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS.

SELECTION OF CABLES AND CABLE GLANDS – SEE INSTRUCTIONS.

U = … V; P = … W; f = … Hz (1)

(1): completed by electrical parameters.

***For 400V version of electrical actuators***

Address: …
Type: 3004
Serial number: …
Year of construction: …
Ex db IIB T5 Gb

Ex tb IIIC T95°C Db
IECEx LCIE 22.0001X

-20°C ≤ $T_{amb}$ ≤ +54°C

WARNINGS –
DO NOT OPEN WHEN ENERGIZED.
DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT.
POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS.

SELECTION OF CABLES AND CABLE GLANDS – SEE INSTRUCTIONS.

U = … V; P = … W; f = … Hz (1)

(1): completed by electrical parameters.

## RANGE DETAILS

N/A – only one type.

## RATINGS

| | |
|---|---|
| Voltage supply and frequency | 15 V to 30 V 50/60Hz or 100 V to 240 V 50/60Hz<br>12 V to 48 VDC (BBPR version : 24 V to 48 VDC) or 100 V to 350 VDC<br>400 V three-phase 50/60Hz |
| Power consumption | 45W (400V : 52W or 135W) |
| Operating time (rotation of 90°) | 7s, 15s, 20s, 30s or 60s (400V : 10s, 15s, 20s or 35s) |
| Manual override | Outgoing axis or wheel |
| Duty cycle | 50 % |
| Additional information for the options | Option feedback signal with potentiometer integrated inside the housing to report valve position on a scale of 100, 1000, 5000 or 10000 Ohms for 90°.<br><br>Option feedback with 5 kΩ potentiometer + transmitter 4-20 mA, 0-20 mA, 0-10V (Integrated transmitter inside the housing to report valve position with a signal from 4 to 20mA, 0 to 20mA or 0 to 10V for 90°).<br><br>2 auxiliary limit switches (one for opening and one for closing), free of potential, for position feedback.<br><br>Anti-condensation resistance<br>230 VAC - 10 W. |
| Installation | Vertical or horizontal.<br>The installation of the actuator with the cover facing down is not allowed. |
| Connection to the valve | Flange connection for the attachment of quarter-turn actuator to valve:<br>F05 / F07 (according to ISO 5211); 17 mm square drive output (Female star) or<br>F07 / F10 (according to ISO 5211); 22 mm square drive output (Female star). |
| Threaded entries into the enclosure | 2 x ISO M20x1.5 – 6H,<br>intended for the mounting of certified cable glands or blanking elements. |

## ROUTINE TESTS

None.