



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 DEK 23.0016** Page 1 of 4 [Certificate history:](#)
Status: **Current** Issue No: 0
Date of Issue: 2023-06-30
Applicant: **Mokveld Valves BV**
Nijverheidsstraat 67
2802AJ Gouda
Netherlands
Equipment: **Internal electrically actuated valve, Type ZEV**
Optional accessory:
Type of Protection: **Ex eb ia**
Marking: Ex eb ia IIC T4 or T3 Gb

Approved for issue on behalf of the IECEx
Certification Body:

R. Schuller

Position:

Certification Manager

Signature:
(for printed version)

Date:
(for printed version)

2023-06-30

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:

DEKRA Certification B.V.
Meander 1051
6825 MJ Arnhem
Netherlands





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Manufacturer: **Mokveld Valves BV**
Nijverheidsstraat 67
2802AJ Gouda
Netherlands

Manufacturing locations: **Mokveld Valves BV**
Nijverheidsstraat 67
2802AJ Gouda
Netherlands

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 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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:

[NL/DEK/ExTR23.0019/00](#)

Quality Assessment Report:

[NL/DEK/QAR19.0008/02](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The internal electrically actuated valve Type ZEV consists of a valve with integrated brushless motor located in a pressurized oil-filled cartridge, an electrical feedthrough in type of protection increased safety "eb" and a pressure balancing position sensor in type of protection intrinsic safety "ia". The product range consists of 8" to 24" nominal valve size.

The valve is intended for use in a potential explosive atmosphere externally (ambient) requiring EPL Gb and a non-hazardous atmosphere inside (process).

The potential explosive atmosphere can have contact with the electrical parts located at the upper part of the valve; the pressure balancing position sensor and the top side of the feed through.

The oil-filled cartridge is considered as a non-hazardous area.

The valve is to be used with a dedicated control cabinet, including a motor controller, power supply and switching equipment. This control cabinet is not in the scope of this certificate.

Process temperature range: -40 °C to +85 °C (T4);
-40 °C to +100 °C (T3).

Ambient temperature range: max. -40 °C to +50 °C.

SPECIFIC CONDITIONS OF USE: NO



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Equipment (continued):

Electrical data

Only for connection to a dedicated supply and control unit.

Power supply of the integrated brushless motor: max. 34 Vac, 10 A continuous

Sensor connections: 24 Vdc or 7 Vac \pm 5 %, max. 50 mA

Valve duty cycle: S3 50 % (1200 start-stops per hour).

Pressure balancing position sensor:

In type of protection intrinsic safety "ia" with the following parameters:

$U_i = 28 \text{ V}$ $C_i = 25 \text{ nF}$

$I_i = 93 \text{ mA}$ $L_i = 0.2 \text{ mH}$

$P_i = 0.65 \text{ W}$

Type designation

ZEV-A-B-C-D

ZEV: product family.

- A: control or on/off valve indicated with R or X respectively.
- B: cage type. The cage type is often customer specific and influences the flow characteristic. Not relevant for explosion protection.
- C: nominal valve size in inch (8" – 24").
- D: pressure class rating. For instance Class 600. Not relevant for explosion protection.