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 PTB 15.0033X**

Page 1 of 5

Certificate history:
Issue 2 (2021-05-10)
Issue 1 (2018-01-22)
Issue 0 (2016-01-19)

Status: **Current**

Issue No: 3

Date of Issue: 2025-01-20

Applicant: **DREHMO GmbH**
Zum Eichstruck 10
57482 Wenden
Germany

Equipment: **Actuator type D **** - * - * Ex**

Optional accessory:

Type of Protection: **"db", "eb", "h"**

Marking: Ex db eb h IIC T3...T4 Gb or Ex db eb h IIB T3...T4 Gb

Approved for issue on behalf of the IECEx Certification Body: **Dr.-Ing. Stefan Essmann**

Position: **Head of Department "Explosion Protection in Energy Technology"**

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:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

IECEx Certificate of Conformity

Manufacturer: **DREHMO GmbH**
Zum Eichstruck 10
57482 Wenden
Germany

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 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-1:2014 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-7:2017 Edition:5.1	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
ISO 80079-36:2016 Edition:1.0	Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres - Basic methods and requirements
ISO 80079-37:2016 Edition:1.0	Explosive atmospheres - Part 37: Non-electrical equipment for explosive atmospheres - Non electrical type of protection constructional safety "c", control of ignition source "b", liquid immersion "k"

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:

DE/PTB/ExTR15.0038/03 DE/PTB/ExTR15.0041/00

Quality Assessment Report:

DE/TPS/QAR15.0004/08

IECEx Certificate of Conformity

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

Description

The actuator, type D****-*-* Ex, consists of the following components:

- Enclosure accommodating a planetary gear. (i-matic and standard)

- Flange-mounted motor of Flameproof Enclosure "db" type of protection. (i-matic and standard)

- Optionally a flange-mounted – separately certified – motor of Flameproof Enclosure "db" type of protection or Increased Safety "eb" type of protection. (i-matic and standard)

- Optionally motor terminal compartment of Increased Safety "eb" type of protection cast to the enclosure, with – separately certified – terminals. It is connected to the motor and the electronics compartment by means of – separately certified – wire bushings. (always on i-matic)

- Optionally an electronics compartment of Flameproof Enclosure "db" type of protection cast to the enclosure, provided with an inspection window. (always on i-matic)

- A terminal box of Increased Safety "e" type of protection, with – separately certified – terminals (i-matic and standard)

- Optionally a – separately certified - plug connector type KP, KPH and KES in the type of protection Increased Safety "eb" (IECEx DEK 12.0022X). (i-matic).

- Optionally a - separately certified - terminal compartment type KES-Exd in the type of protection flameproof enclosure "d" (IECEx DEK 12.0022X). (i-matic).

- Optionally a - separately certified - plug connector type K.Exe and K.Exd in the type of protection Increased Safety "eb" and Flameproof Enclosure "db" (IECEx DEK 17.0012U).(i-matic).

- Optionally an external control system. The control system may be outside the potentially explosive area (no ex-protection) or in the type of protection Increased Safety "eb" and Flameproof enclosure "db", inside the potentially explosive area. The electronics compartment of the actuator of Flameproof Enclosure type of protection will in this case be filled with packing material. (i-matic).

Technical data and Nomenclature see Attachment.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Repair and overhaul of the flameproof gaps are only allowed according constructive information given from the original manufacturer. A repair according the values given in Table 1 or Table 2 of IEC 60079-1 is not permitted.

Danger due to electrostatic discharge. The actuator must be cleaned with a damp cloth only. Please refer to operation manual.

IECEx Certificate of Conformity

Equipment (continued):

- Optionally a – separately certified - plug connector type KP, KPH and KES in the type of protection Increased Safety "e" (IECEx DEK 12.0022X). (i-matic).

- Optionally a - separately certified - terminal compartment type KES-Exd in the type of protection flameproof enclosure "d" (IECEx DEK 12.0022X). (i-matic).

- Optionally a - separately certified - plug connector type K.Exe and K.Exd in the type of protection Increased Safety "eb" and Flameproof Enclosure "db"
(IECEx DEK 17.0012U).

- Optionally an external control system. The control system may be outside the potentially explosive area (no ex-protection) or in the type of protection Increased Safety "eb" and Flameproof enclosure "db", inside the potentially explosive area.
The electronics compartment of the actuator of Flameproof Enclosure type of protection will in this case be filled with packing material. (i-matic).

Technical data and Nomenclature see Attachment.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- The mechanical explosion protection is supplemented.
- The maximum output speed is up to 200 rpm.
- The name Markrolon is changed to Exolon

Annex:

COCA150033X-03_1.pdf

Applicant: DREHMO GmbH
Zum Eichstruck 10
57482 Wenden
Germany

Electrical Apparatus: Actuator type D **** - * - * Ex

Description of equipment

The actuator, type D****-*-* Ex, consists of the following components:

- Enclosure accommodating a planetary gear. (i-matic and standard)
- Flange-mounted motor of Flameproof Enclosure "db" type of protection. (i-matic and standard)
- Optionally a flange-mounted – separately certified – motor of Flameproof Enclosure "db" type of protection or Increased Safety "eb" type of protection. (i-matic and standard)
- Optionally motor terminal compartment of Increased Safety "eb" type of protection cast to the enclosure, with – separately certified – terminals. It is connected to the motor and the electronics compartment by means of – separately certified – wire bushings. (always on i-matic)
- Optionally an electronics compartment of Flameproof Enclosure "db" type of protection cast to the enclosure, provided with an inspection window. (always on i-matic)
- A terminal box of Increased Safety "e" type of protection, with – separately certified – terminals (i-matic and standard)
- Optionally a – separately certified - plug connector type KP, KPH and KES in the type of protection Increased Safety "eb" (IECEx DEK 12.0022X). (i-matic).
- Optionally a - separately certified - terminal compartment type KES-Exd in the type of protection flameproof enclosure "d" (IECEx DEK 12.0022X). (i-matic).
- Optionally a - separately certified - plug connector type K.Exe and K.Exd in the type of protection Increased Safety "eb" and Flameproof Enclosure "db" (IECEx DEK 17.0012U).(i-matic).
- Optionally an external control system. The control system may be outside the potentially explosive area (no ex-protection) or in the type of protection Increased Safety "eb" and Flameproof enclosure "db", inside the potentially explosive area. The electronics compartment of the actuator of Flameproof Enclosure type of protection will in this case be filled with packing material. (i-matic).

Electrical data

Rated voltage	up to 690 V
Rated current	max. 27 A *)
Rated cross section	max. 16 mm^2
Ambient temperatures	-25 °C to +40 °C (standard) -30 °C to +40 °C (IIC, T4) -30 °C to +60 °C (IIC, T4) -30 °C to +65 °C (IIB, T3)
Ingress protection	IP66 in accordance with EN 60529
*) may be higher for separately certified motors	

The electrical data are based on the connected motor as well as the electric components accommodated in the electronics compartment.

Nomenclature

D		*	*	*	*	-	*	-	*		Ex
1		2	3	4	5	6	7	8	9	10	11

Position	Range of values	Significance
1	D	DREHMO actuator
2		Multi-turn actuator
	P	Part-turn actuator
3		Actuator without control unit (standard)
	iM	Actuator with i-matic or i-matic C controls
4		Actuator for open-close operation, type of duty S2
	R	Actuator for modulating operation, type of duty S4
5	30 to 2000	Tripping torque in Nm for multi-turn actuator
	30 to 1800	Tripping torque in Nm for part-turn actuator
6	-	Dash
7		Without valve attachment (output drive)
	A, AF, B, B1, B2, B3, B3DO, B4, C, D, DO, DOU, DSTO, DSTU, E, EDO, …	Valve attachment for multi-turn actuators according to EN ISO 5210
	B, V, W, L/D, H, FH, FW, …	Valve attachment for part-turn actuators according to EN ISO 5211
8	-	Dash
9	5 to 200 (50Hz)	Output speed in rpm (Multi-turn)
	6 to 192 (60Hz)	
	7 to 75 (50HZ)	Operating time for 90° in seconds (Part-turn)
	6 to 63 (60Hz)	
10		Blank
11	Ex	Explosion-proof actuator

If components are attached to the drive, all necessary information for the operation and monitoring of these components must also be provided. The operation of a standstill heater requires a separate back-up fuse to intercept faulty operating states.

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100, 38116 Braunschweig, Germany
Postfach 33 45, 38023 Braunschweig, Germany
Telephone +49 531 592-0, Telefax +49 531 592-3605