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 UL 13.0086X**

Page 1 of 4

Issue No: 10

Certificate history:

Issue 9 (2020-08-25)
Issue 8 (2020-04-30)
Issue 7 (2019-07-31)
Issue 6 (2018-09-27)
Issue 5 (2016-10-31)
Issue 4 (2016-08-29)
Issue 3 (2015-03-18)
Issue 2 (2014-07-14)
Issue 1 (2014-03-27)
Issue 0 (2014-03-03)

Status: **Current**

Date of Issue: 2022-08-18

Applicant: **Derrick Mfg. Corporation**
590 Duke Road
Buffalo, NY 14225
United States of America

Equipment: **Electric Vibrating Motors - Series EX, SGX, SG2X, SG3X, SG4X**

Optional accessory:

Type of Protection: **Flameproof "db", Dust Ignition Protection by Enclosure "tb"**

Marking: EX, SGX, SG2X, SG3X, and SG4X:

Ex db IIB T3 Gb

SGX, SG2X, SG3X, and SG4X:

Ex tb IIIC T200°C Db

-20°C to +40°C; -20°C to +55°C

Approved for issue on behalf of the IECEx Certification Body: **Katy A. Holdredge**

Position: **Senior Staff Engineer**

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:

UL LLC
333 Pfingsten Road
Northbrook IL 60062-2096
United States of America

IECEx Certificate of Conformity

Certificate No.: **IECEx UL 13.0086X** Page 2 of 4

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Manufacturer: **Derrick Mfg. Corporation**
590 Duke Road
Buffalo, NY 14225
United States of America

Manufacturing locations: **Derrick Mfg. Corporation**
590 Duke Road
Buffalo, NY 14225
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 60079-1:2014-06 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 Reports:

US/UL/ExTR13.0098/00
US/UL/ExTR13.0098/01
US/UL/ExTR13.0098/02
US/UL/ExTR13.0098/03
US/UL/ExTR13.0098/04
US/UL/ExTR13.0098/05
US/UL/ExTR13.0098/06
US/UL/ExTR13.0098/07
US/UL/ExTR13.0098/08
US/UL/ExTR13.0098/09
US/UL/ExTR13.0098/10

Quality Assessment Report:

US/UL/QAR14.0003/06

IECEx Certificate of Conformity

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

The series EX motor is a totally enclosed non-ventilated industrial flameproof vibrating motor intended for continuous operation. The series SGX, SG2X, SG3X, and SG4X motors are totally enclosed non-ventilated industrial flameproof and dust ignition protection by enclosure vibrating motors intended for continuous operation. The motors are provided with integral mounting pads and self-contained eccentric weights which cause the motor to produce the desired vibration of the equipment to which the motor is mounted.

Please note that the vibrators marked with 'tb' shall not utilize or rely upon windows for protection.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:
Specific Conditions of Use:

- Flameproof joints are other than those specified in Table 1 of IEC 60079-1. Contact Derrick for joint dimensions.
- Warning - To minimize the risk of electrostatic discharge, adequate grounding must be maintained.
- For motors for use with a frequency converter, use of the 145 ± 5°C thermostat is mandatory for appropriate direct thermal protection and marking of T3 temperature code.
- Vibrators with dust ignition protection by enclosure, 'tb', protection shall not be opened for installation and are to be marked "Warning – Do not open".

Installation Instructions:

- Before opening the enclosure in a flammable atmosphere the circuits must be interrupted.
- The certification applies to equipment with and without cable glands and cables. All cable entry devices, elbows, and blanking elements shall be IECEx certified in type of explosion protection flameproof enclosure "db" and dust ignition protection by enclosure 'tb', suitable for the conditions of use and correctly installed.
- Unused apertures shall be closed with IECEx certified suitable blanking elements.
- Vibrators having IECEx Certification may be repaired only to the extent that the repair does not compromise the flameproof safety aspects of the enclosure.
- Consequently, repair is limited to parts external to the flameproof enclosure. All other repairs shall be performed at Derrick Corporation or a Derrick approved IECEx authorized repair facility.
- Vibrators with dust igniton protection by enclosure, 'tb', protection shall not be opened for installation and are to be marked "Warning – Do not open".

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1: Nomenclature and minor drawing changes not affecting the safety of the device.

Issue 2: Revisions to drawings not affecting the safety of the device.

Issue 3: Minor drawing corrections and additional cover bolts added.

Issue 4: Addition of variable frequency rating from 30 Hz through 60 Hz and revised IP rating from IP56 to IP66.

Issue 5: Minor drawing revisions. No construction changes made as a part of this revision.

Issue 6: Updated to the latest edition of IEC 60079-1 and drawing revisions.

Issue 7: Drawing revisions and alternate construction.

Issue 8: Evaluated already certified equipment for dust ignition protection by enclosure ‘tb’ protection.

Issue 9: Update to drawing that does not affect the protection upon which the equipment relies; correction to typos.

Issue 10: Addition of the SG4X motor; IEC 60079-0 standard edition update; minor schedule drawing revisions; and removal of ‘tb’ protection from the EX series motor.

Annex:

Annex to IECEx UL 13.0086X Issue 10.pdf

IECEx Certificate of Conformity

Certificate No.: IECEx UL 13.0086X

Issue No.: 10

TYPE DESIGNATION AND PARAMETERS RELATING TO THE SAFETY

Nomenclature for type EX, SGX, SG2X, SG3X, and SG4X are as follows:

EX	**-230/460**	**-5**	**-003**
I	**II**	**III**	**IV**

I – Series Designation
- **EX -** EX series
- **SGX -** SGX series
- **SG2X -** SG2X series
- **SG3X** – SG3X series
- **SG4X** – SG4X series

II – Supply Voltage Rating
- **-215/220 -** 215/220 VAC
- **-230** – 215/220/230/240 VAC
- **-230/240 -**230/240 VAC
- **-380/400 -**380/400 VAC
- **-400** – 380/400/415 VAC
- **-415 -** 415 VAC
- **-440 -** 440 VAC
- **-460** – 440/460/480 VAC
- **-460/480 -** 460/480 VAC
- **-500/525** – 500/525 VAC
- **-575/600** - 575/600 VAC
- **-690** - 690/700 VAC

III – Frequency Rating (50 Hz or 60 Hz or variable frequency)
- **-5** – 50 Hertz Sinusoidal Power or 30-60 Hz Constant Torque, Frequency Converter Use
- **-6** – 60 Hertz Sinusoidal Power or 30-60 Hz Constant Torque, Frequency Converter Use

IV - Certified Designation
- **-003** - ATEX Constant
- **-014** – NEC/ATEX/IECEx Constant (Explosionproof and flameproof only)
- **-016** – NEC/CEC/ATEX/IECEx Constant (Explosionproof, flameproof, and dust ignition by enclosure protection)

Temperature range

Ambient Temperature Range, °C	Current, A	Temperature Class
–20°C to 55°C	5.2	T3, T200°C
–20°C to 40°C	8.7	T3, T200°C

IECEx Certificate of Conformity

Certificate No.: IECEx UL 13.0086X

Electrical data

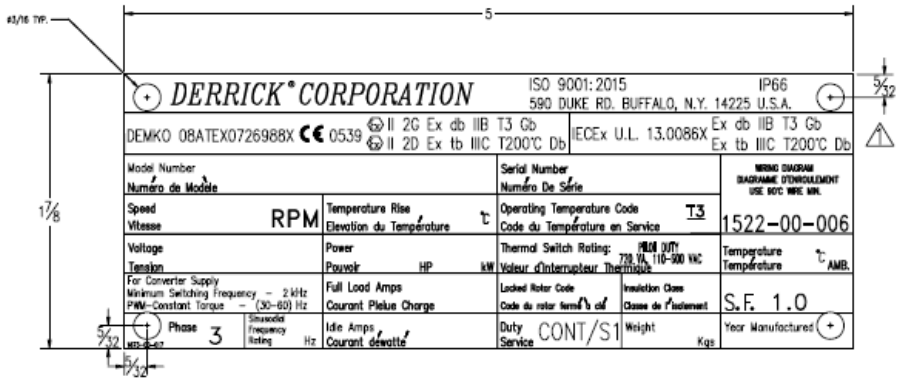
215/220 VAC, 8.7 A Max
215/220/230/240 VAC, 8.7 A Max
230/240 VAC, 8.7 A Max
380/400 VAC, 8.7 A Max
380/400/415 VAC, 8.7 Max
415 VAC, 8.7 A Max
440 VAC, 8.7 A Max
440/460/480 VAC, 8.7 Max
460/480 VAC, 8.7 A Max
500/525 VAC, 8.7 A Max
575/600 VAC, 8.7 A Max
690/700 VAC, 8.7 A Max

IP Code (Ingress Protection)
IP66*
6 = Dust Protection – No ingress of dust; complete protection against contact.
6 = Water Protection – Water projected in powerful jets (12.5 mm nozzle) against the enclosure from any direction shall have no harmful effects.

*Please note that while not 'tb', the EX motor can be marked for unclassified IP66.

MARKING

Marking has to be readable and indelible; it has to include the following indications:



MATERIAL: 304 SS x 0.018 THICK

NOTES:
1) ALL DIMENSIONS TYP. U.O.N.
2) PROTECTIVE PAPER
3) HELVETICA RED BOLD TEXT

IECEx Certificate of Conformity

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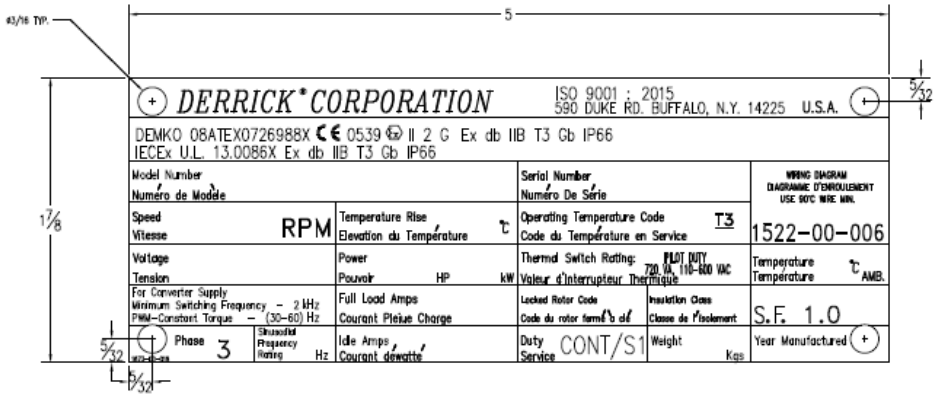

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