



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx BVS 19.0010X Issue No: 0 Certificate history:
Issue No. 0 (2019-02-18)

Status: Current Page 1 of 4

Date of Issue: 2019-02-18

Applicant: Herforder Elektromotoren-Werke GmbH & Co. KG
Goebenstraße 106
32051 Herford
Germany

Equipment: Flameproof electric motor type D* Ex 280 **/* *
Optional accessory:

Type of Protection: Equipment protection by flameproof enclosures "d", Equipment dust ignition protection by enclosure "t", Equipment protection by increased safety "e"

Marking: Ex db IIC T* Gb or
Ex db eb IIC T* Gb or
Ex db IIB T* Gb or
Ex db eb IIB T* Gb or
Ex tb IIIC T*°C Db
*) See Parameters

Approved for issue on behalf of the IECEx
Certification Body:

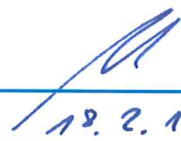
Jörg Koch

Position:

Head of Certification Body

Signature:
(for printed version)

Date:


19.2.19

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 the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany

 **DEKRA**
On the safe side.



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Manufacturer: Herforder Elektromotoren-Werke GmbH & Co. KG
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32051 Herford
Germany

Additional Manufacturing location(s):

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 apparatus 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 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical 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:

[DE/BVS/ExTR19.0004/00](#)

Quality Assessment Report:

[DE/BVS/QAR14.0009/03](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Description

The enclosures of the flameproof electric motors are made of cast iron and have a mounting place for terminal boxes. The shaft will be fixed with ball bearings or cylindrical roller bearings. A terminal compartment in type of protection Flameproof Enclosure "d" or Increased Safety "e" or a direct cable entry is used for electrical connection of the motor. For electric power input into the motor compartment, separately certified cable glands or bushings are used. The cooling of the motor is realised by an external fan that is made of steel (Group I and Group II) or aluminium (Group II and Group III) or a separately tested and certified auxiliary fan. The fan is driven by the electrical machine itself. The fan is fixed on the shaft using a key and a circlip. Optionally a space heater can be mounted inside the stator housing. For direct temperature monitoring the winding of the motor is equipped with temperature sensors (thermistors according DIN 44081 or DIN 44082). The sensors are connected in series. Additional PtO or Pt100 can be installed in winding. Optionally the temperature at the bearings could be monitored separately certified resistance thermometers (Pt100). The sensors or the thermometers will be connected to a trigger unit which is certified for this purpose. The maximum permissible ambient temperatures are -50 °C to +60 °C. This temperature range may be limited as a result of the selected terminal boxes and components, or the electrical design. If the motor is converter-fed the converter must be of type voltage-source converter with pulse width modulation.

SPECIFIC CONDITIONS OF USE: YES as shown below:

The lengths of the flameproof joints are in parts longer and the gaps of the flameproof joints are in parts smaller than the values of table 2 and 3 of IEC 60079-1:2014. For information of the dimensions of the flameproof joints contact the manufacturer. Fasteners with a minimum yield stress of 640 N/mm² must be used for the closing of the flameproof enclosure. Motors which have to be equipped with a direct temperature control must be monitored by a separate certified trigger unit. Before setting-up operation it has to be ensured that no inadmissible overvoltage caused by converter supply may occur at the terminals of the motor. Clearances and creepage distances inside the terminal box do not permit an overvoltage cause by the converter which increase:

- 3.1 x UN for rated voltages ≤ 600 V
- 2.04 x UN for rated voltages > 600 V and ≤ 1100 V

The insulating system of the motor may require an additional limitation of a periodic overvoltage. In case the motor is equipped with cable glands for interconnection with the terminal compartment they have to be integrated into the periodical inspections and maintenance routines in accordance with IEC 60079-17:2013. If the electrical machine will be cooled by forced ventilation, it has to be assured that the electrical machine can only run if the ventilation is running.



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EQUIPMENT (continued):

Subject and Type

See Annex

Listing of all components used referring to older standards

See Annex

Parameters

See Annex

Annex:

[BVS_19_0010X_Herforder_Elektromotorenwerke_Annex.pdf](#)