



# 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](http://www.iecex.com)

Certificate No.: IECEx PTB 17.0040X

Issue No: 0

Certificate history:

Issue No. 0 (2018-09-26)

Status: **Current**

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Date of Issue: **2018-09-26**

Applicant: **ATB Nordenham GmbH**  
Helgoländer Damm 75  
26954 Nordenham  
Germany

Equipment: **Motor type CD 280**

Optional accessory:

Type of Protection: **Flameproof Enclosure "db", Increased Safety "eb", Protection by Enclosure "tb"**

Marking:

Ex db IIC T3...T6 Gb or Ex db eb IIC T3...T6 Gb  
Ex tb IIIC T85°C...T200°C Db

Approved for issue on behalf of the IECEx  
Certification Body:

Dipl.-Phys. U. Völkel

Position:

"Explosion Protection in Energy Technology"

Signature:

(for printed version)

Date:

27.09.18

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:

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





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Manufacturer: **ATB Nordenham GmbH**  
Helgoländer Damm 75  
26954 Nordenham  
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:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2014-06</b> Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2013</b> Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
<b>IEC 60079-7 : 2015</b> 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/PTB/ExTR17.0048/00](#)

#### Quality Assessment Report:

[DE/TUN/QAR06.0001/06](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The equipment is a rotary electric machine. The enclosure is equipped with cooling ribs and is a cast construction. As an option the enclosure can also be a welded construction made of steel. The shaft rotates in rolling bearings. Together with the end shield on drive end and the motor enclosure on the non-drive end, the shaft forms a flameproof shaft joint.

More details are specified in the attachment to the Certificate which is available from the online version.

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

Details are specified in the attachment to the Certificate which is available from the online version.

### Annex:

[CoCA170040X-00.pdf](#)



Applicant: ATB Nordenham GmbH, 26954 Nordenham, Germany  
Electrical Apparatus: Three-phase motors of type series CD 280  
Marking: Ex db IIC T3...T6 Gb or Ex db eb IIC T3...T6 Gb  
Ex tb IIIC T85°C...T200°C Db

### Description of equipment

The equipment is a rotary electric machine. The enclosure is equipped with cooling ribs and is a cast construction. As an option the enclosure can also be a welded construction made of steel. The shaft rotates in rolling bearings. Together with the end shield on drive end and the motor enclosure on the non-drive end, the shaft forms a flameproof shaft joint.

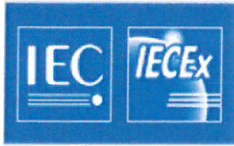
For "G" areas (areas with potentially explosive gas, vapor, mist, air mixtures), the terminal compartment has been designed to Flameproof Enclosure "d" type of protection. A separately certified direct flameproof cable gland or terminal compartments designed to Flameproof Enclosure "d" or Increased Safety "e" type of protection provide for power input.

For "D" areas (areas with inflammable dust), the machine with its terminal compartments is designed to type of protection by enclosure "tb". For "D" areas, the shaft is provided with sealing rings, which ensure that the IP degree of protection is maintained.

<u>Type Designation</u>	CD *** *_***	for example CD 280 M1-2
	C	= Group IIC, flameproof enclosure = Group IIIC, protection by enclosure
	D	= Three phase motor
	280	= frame size
	S, M	= design
	2, 4, 6, 8, ...	= no. of poles

The type designation can optionally be extended by additional characters. For instance:

X	= increased power
Y	= High Efficiency
A	= axial flow fan
W	= water cooling
D	= terminal box „flameproof enclosure“
E	= terminal box „increased safety“
F	= external driven axial flow fan
G	= encoder mounting
K	= without terminal box, direct cable entry
O	= without external fan
R	= integrated resolver
S..	= div. brakes
U	= peak voltage stability 2.15 kV
0 bis 9	= design numbers



#### Technical data

Max. voltage:	1100 V AC	± 10 %
Max. current:	250	A
Max. power:	121	kW
Max. rotation frequency (inverter):	6300	min <sup>-1</sup>
Max. frequency (electric grid):	60	Hz
Frequency (frequency inverter):	1 up to 120	Hz
PE conductor size:	150	mm <sup>2</sup>
Torque for fasteners:	49...210	Nm

The electrical data can be reduced.

#### Ambient temperature range

-20 °C up to +60 °C

These ranges may be reduced by the manufacturer due to the selection of the terminal compartment, components, enclosure or due to the data sheet of the electric design.

#### Additional notes for production

The word "Warning" must be added to the text of the warning label.

Type and size of any hole for cable entries needs to be identified on the name plate or a separate label on the motor.

The fasteners to mount the end shield with the enclosure have to be considered as special fasteners as defined in IEC 60079-0. The tolerances class of the screw and the hole must be 6g/6H or better.

#### Additional notes for safe operation

Screws complying with strength class A\*-70 or 8.8 as a minimum must be used for enclosure of the flameproof chamber.

Components attached or installed (terminal compartments, bushings, cable entry fittings, connectors) have to be of a technical standard that complies with the specifications on the cover sheet. They must be suited for the operating conditions, and be covered by a separate examination certificate. The special conditions specified for the components must be complied with and may have to be included in the type test. This also applies to components already specified in the technical description.

Monitoring devices must satisfy the requirements of IEC 60079-14.

The drain holes must not be removed while the three-phase motor is in operation. After the three-phase motor has been stopped, a minimum waiting period, as specified on the equipment must be observed before the condensate drain can be removed. The motor must not be restarted until after the drain unit has been replaced and tightened.



Attachment to Certificate  
IECEX PTB 17.0040X  
And Test report  
DE/PTB/ExTR17.0048/00



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Specific Conditions of Use

Repairs of the flameproof joints must be made in compliance with the structural specifications provided by the manufacturer. Repair in compliance with the values in tables 1 and 2 of IEC 60079-1 is not accepted.

By using special painting/coating systems the unit should not be used in proximity to processes generating high charges. Details are specified in the manufacturer's documents. In case of any restrictions a separate label will appear on the enclosure.