



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 PTB 14.0014X** issue No.: **1** Certificate history:
 Issue No. 1 (2014-9-16)
 Issue No. 0 (2014-4-23)

Status: **Current**

Date of Issue: **2014-09-16** Page 1 of 4

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

Electrical Apparatus: **Motor of types CD 100 and CD 112**
 Optional accessory:

Type of Protection: **Flameproof Enclosure, Increased Safety, Protection by Enclosure**

Marking: **Ex d IIC T3...T6 Gb resp. Ex de IIC T3...T6 Gb**
Ex tb IIIC T85°C...T200°C Db

Approved for issue on behalf of the IECEX Certification Body: **Uwe Völkel**

Position: **Department Explosion Protection in Energy Technology**

Signature: **(for printed version)**

Date: **2014-09-24**

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.

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 electrical 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 : 2011 Edition: 6.0 | Explosive atmospheres - Part 0: General requirements |
| IEC 60079-1 : 2007-04 Edition: 6 | Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d" |
| IEC 60079-31 : 2008 Edition: 1 | Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure 't' |
| IEC 60079-7 : 2006-07 Edition: 4 | 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/ExTR14.0016/01

DE/PTB/ExTR14.0016/00

Quality Assessment Report:

DE/TUN/QAR06.0001/05



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The equipment is a rotating electric machine. The enclosure is a cast construction and equipped with cooling ribs. 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 on-line Version.

CONDITIONS OF CERTIFICATION: YES as shown below:

Special conditions of safe use apply and are specified in the attachment to the Certificate which is available from the On-Line version.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

New type of motor added:

Type: CD 1001 or CD 1121

The package length and the enclosure length have been changed.

Annex: CoCA140014X-01.pdf



Manufacturer: ATB Nordenham GmbH, 26954 Nordenham, Germany

For three-phase motors of type series CD 100 and CD 112

Description of equipment

The equipment is a rotary electric machine. The enclosure is equipped with cooling ribs and is a cast construction. 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, vapour, 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.

Rated ambient temperature range (°C):

- 60°C up to 60 °C for gas atmospheres / -40°C up to 60 °C for dust atmospheres

These ranges may be restricted by the terminal boxes, components or enclosures selected or by the data sheet specifying the electrical design

The electric motor data, including specifications safeguarding compliance with the temperature class, are defined in a data sheet attached.

Type Designation: CD ...-... e.g. CD 100 M-2.1

| | |
|-----------------|---------------------------------------|
| C | = Group IIC, flameproof enclosure |
| | = Group IIIC, protection by enclosure |
| D | = Three phase motor |
| 100 or 112 | |
| M, M1, M2, S, L | = frame size |
| 2, 4, 6, 8, ... | = no. of poles. |
| . 1 | = long version |



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

| | |
|--------|--|
| X | = increased power |
| Y.. | = High Efficiency |
| A | = axial flow fan |
| D | = terminal box „flameproof enclosure“ |
| E | = terminal box „increased safety“ |
| F | = external driven axial flow fan |
| 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 to 9 | = design numbers |

Special conditions for safe 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.

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.

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 asynchronous motor has been stopped, a minimum waiting period of 10 min. must be observed before the condensate drain can be removed. The motor must not be re-started until after the drain unit has been replaced and tightened.



DATA SHEET 01

Manufacturer: ATB Nordenham GmbH, 26954 Nordenham, Germany

For three-phase motors of type series CD 100 and CD 112

Electrical data

The motors of type series CD 100 and CD 112 manufactured by ATB Nordenham GmbH, 26954 Nordenham, Germany, are designed for ratings up to the following values:

| | CD 100 | CD 112 | |
|-------------------------|---------|---------|-----|
| Voltage: | 1100 | 1100 | V |
| Current: | 25 | 25 | A |
| Output: | 8 | 10 | kW |
| Max. speed (converter): | 12,000 | 12,000 | rpm |
| Frequency (mains): | | max. 60 | Hz |
| Frequency (converter): | 1 – 200 | 1-200 | Hz |

For each motor design, compliance with the governing regulations has to be verified in the form of a type test. Due regard must in this connection be given to the code of practice "Merkblatt für die elektrische Auslegung und Prüfung von Motoren in der Zündschutzart Druckfeste Kapselung im Rahmen der EG-Baumusterprüfbescheinigung" and the agreement „PTB LA 013/00“ in accordance with IECEx OD 024.

The motors may be employed only for the duty type and under the ambient conditions for which they were type tested. This equally applies to operation with frequency converter.