



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 14.0001X** Page 1 of 4 [Certificate history:](#)
Status: **Current** Issue No: 2 [Issue 1 \(2014-09-15\)](#)
[Issue 0 \(2014-03-05\)](#)
Date of Issue: 2018-06-20
Applicant: **ATB Nordenham GmbH**
Helgoländer Damm 75
26954 Nordenham
Germany
Equipment: **Motor of types CD 71 ..,..... Y_2 and CD 90 .-...**
Optional accessory:
Type of Protection: **Flameproof Enclosure, Increased Safety, Protection by Enclosure**
Marking: Ex db IIC T3...T6 Gb resp. Ex db eb IIC T3...T6 Gb
Ex tb III C T85°C...T200°C Db

Approved for issue on behalf of the IECEx
Certification Body:

Dr. Ing. Detlev Markus

Position:

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

Signature:
(for printed version)

Date:

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





IECEX Certificate of Conformity

Certificate No.: **IECEX PTB 14.0001X**

Page 2 of 4

Date of issue: 2018-06-20

Issue No: 2

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

Additional
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 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

IEC 60079-7:2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
Edition:5.0

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/EXTR14.0002/00](#)

[DE/PTB/EXTR14.0002/01](#)

[DE/PTB/EXTR14.0002/02](#)

Quality Assessment Report:

[DE/TUN/QAR06.0001/05](#)



IECEx Certificate of Conformity

Certificate No.: **IECEX PTB 14.0001X**

Page 3 of 4

Date of issue: 2018-06-20

Issue No: 2

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. 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.

SPECIFIC CONDITIONS OF USE: YES as shown below:

More details are specified in the attachment to the Certificate which is available from the on-line Version.



IECEx Certificate of Conformity

Certificate No.: **IECEX PTB 14.0001X**

Page 4 of 4

Date of issue: 2018-06-20

Issue No: 2

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Change in the type Designation

from CD 80 .._..... to CD 71 .._..... Y_2

Stator housing and drive end shield are changed in the way, that the end shield is now fixed with five screws to the housing instead of four.

Annex:

[COCA14.0001X-02.pdf](#)



Manufacturer: ATB Nordenham GmbH, 26954 Nordenham, Germany

For three-phase motors of type series CD 71 and CD 90

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: Old: CD 80 .._.....
 New: CD 71 .._..... Y_2
 Type designation: CD .. _... e.G. CD 71 L-2 Y._2

- C = Group IIC, flameproof enclosure
- = Group IIIC, protection by enclosure
- D = Three phase motor
- 71 K, L, M1, M2 = Frame size
- 2, 4, 6, 8, ... = No. of poles
- 4/2, 6/4, 8/4, ... = No. of poles (2 times switchable)
- Y. = Energy saving motor "high efficiency"

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

- A = axial flow fan
- F = external driven axial flow fan
- R = integrated resolver
- O = without external fan
- K = without terminal box, direct cable entry
- E = terminal box „increased safety"
- D = terminal box „flameproof enclosure"
- I = Inverter extension



0 bis 9 = design numbers

Stator housing and drive end shield are changed in the way, that the end shield is now fixed with five screws to the housing instead of four.

The standards are adapted. Therefore the Ex-marking is changed as shown on the cover sheet.

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.

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 restarted until after the drain unit has been replaced and tighten.

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



DATA SHEET 01

Manufacturer: ATB Nordenham GmbH, 26954 Nordenham, Germany

For three-phase motors of type series CD 71 and CD 90

Electrical data

The motors of type series CD 80 and CD 90 manufactured by ATB Nordenham GmbH, 26954-Nordenham, Germany, are designed for ratings up to the following values:

	CD 71	CD 90	
Voltage:	1100	1100	V
Current:	25	25	A
Output:	4	7	kW
Max. Speed (converter):	19,000	15,000	Rpm
Frequency (mains):	max. 60		Hz
Frequency (converter):	1 – 316	1-250	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.