



# 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 15.0030X Issue No: 0 Certificate history:  
Status: **Current** Page 1 of 3 Issue No. 0 (2016-09-12)  
Date of Issue: **2016-09-12**  
Applicant: **ATB Nordenham GmbH**  
Helgoländer Damm 75  
26954 Nordenham  
**Germany**  
Equipment: **Break frame type CM 160**  
Optional accessory:  
Type of Protection: **Flameproof Enclosure, Increased Safety, Protection by Enclosure**  
Marking:  
Ex d IIC T3...T6 Gb or Ex de IIC T3...T6 Gb  
Ex tb IIIC T85 °C...T200 °C Db

Approved for issue on behalf of the IECEx  
Certification Body:

Dr.-Ing. Detlev Markus

Position:

Head of Working Group "Flame Transmission Processes"

Signature:  
(for printed version)

Date:

14.09.16

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 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:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2007-04</b> Edition:6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2008</b> Edition:1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
<b>IEC 60079-7 : 2006-07</b> 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/ExTR15.0008/00](#)

### 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 flameproof and dust tight brake to mount on electric machines in an explosive atmosphere.

More details are specified in the Annex

### 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.

### Annex:

[COCA15.0030X.pdf](#)





Applicant: ATB Nordenham GmbH  
Helgoländer Damm 75  
26954 Nordenham Germany

Electrical Apparatus: Break frame type CM 160

#### Description of equipment

The equipment is a rotary electric brake of frame type CM 160. The enclosure is a cast iron, or steel construction. The shaft rotates in rolling bearings. Together with the end shield on drive end and with the 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 equipment has been designed to Flameproof Enclosure "d" type of protection. A separately certified terminal compartment designed to Flameproof Enclosure "d" or Increased Safety "e" type of protection provide for power input.

For "D" areas (areas with inflammable dust), the enclosure with its terminal compartment 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.

Type Designation: CM 160.-... z.B. CM 160-DN  
C = Group IIC, flameproof enclosure  
= Group IIIC, protection by enclosure  
M = Break of the manufacturer Mayr  
160 = frame size

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

D	= terminal box „flameproof enclosure“
E	= terminal box „increased safety“
T	= terminal box „dust ignition protection by enclosure “
K	= without terminal box, direct cable entry
N	= motor coupling on the DE
NN	= motor coupling on the NDE
U	= peak voltage stability 2,15 kV
0 bis 9	= design numbers

#### Technical Specification:

The brakes are designed for ratings up to the following values:

Rated ambient temperature range (°C):

- 20°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



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Voltage:	207 VDC	±10 %
Current:	4.9 A	
Output:	98 W	
Max. speed:	4.000 rpm	
Braking torque	250 Nm	

For each design, compliance with the governing regulations has to be verified in the form of a type test. Details to the that test are specified in the guidance MB-1002 with is part of the documentation and the agreement „PTB LA 013/00“ in accordance with IECEx OD 024.

#### 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 A2-70 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 brake is in operation o energized. After stopping and de-energizing, a minimum waiting time as specified on the equipment, must be observed before the condensate drain can be removed. The brake must not be restarted until after the drain unit has been replaced and tighten.