



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 16.0003X

Issue No: 0

Certificate history:

Issue No. 0 (2017-06-09)

Status: **Current**

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Date of Issue: **2017-06-09**

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

Equipment: **Flameproof brake CM 100 and CM 112**

Optional accessory:

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

Marking:

Ex db IIC T3...T6 Gb Ex db eb IIC Gb 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:


11.06.17

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:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: 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/PTB/ExTR16.0007/00](#)

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.

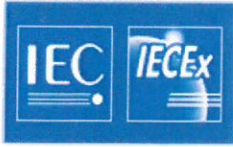
More details are specified in the annex.

SPECIFIC CONDITIONS OF USE: 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:

[COCA160003X-00.pdf](#)



Applicant: ATB Nordenham GmbH
Helgoländer Damm 75
26954 Nordenham
Germany

Electrical Apparatus: Flameproof brake CM 100 and CM 112

Description

The equipment is a flameproof brake to be mounted on rotary electric machines. The cooling of the equipment result from free convection and the enclosure of the equipment is made of gray iron (EN-GJL-200) or steel. The shaft rotates in rolling bearings. Together with the end shield on drive end and the brake 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 degree of protection IP is ensured.

Type Designation	CM .. -...	for example CM 112
	C	= Group IIC, flameproof enclosure = Group IIIC, protection by enclosure
	M	= Brake parts of the company Mayr
	112	= Size 100 or 112

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

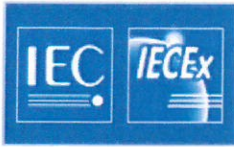
D	= Terminal box „flameproof enclosure“
E	= Terminal box „increased safety“
K	= Without terminal box, direct cable entry
N	= Mounting to the motor on DS
NN	= Mounting to the motor on NS
U	= Peak electric strength 2.15 kV
0 to 9	= Design numbers

Ambient temperature range:

-60 °C up to +60 °C for gas atmospheres

-40 °C up to +60 °C for dust atmospheres

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.



Technical data

Voltage:	207 V DC	460 V AC	± 10 %
Current:	3.6	5.7	A
Power:	69	69	W
Rotation Frequency:	3600	3600	min ⁻¹
Braking torque:	100	100	Nm

The electrical data can be reduced.

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.

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.

Additional notes for production

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 minimum must be used for enclosure of the flameproof chamber.

Components attached or installed (terminal compartments, bushings, cable entry fittings, connectors, blanking plugs) 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 the components 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. After the brake has been stopped, a minimum waiting period of 10 min. 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 tightened properly.