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 19.0022X**	Page 1 of 3	Certificate history:
Status:	**Current**	Issue No: 0	
Date of Issue:	2019-05-17		
Applicant:	**ATB Nordenham GmbH** Helgoländer Damm 75 26954 Nordenham **Germany**		
Equipment:	**Extension brake types CM 80 and CM 90**		
Optional accessory:			
Type of Protection:	**Ex db eb, Ex tb**		
Marking:	**Ex db eb IIC T3 - T6 Gb bzw. Ex db IIC T3 - T6 Gb** **Ex tb IIIC T200 - T85 °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: 22.03.2019

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

PTB
Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

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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 Report:

DE/PTB/ExTR19.0017/00

Quality Assessment Report:

DE/TUN/QAR06.0001/07

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Extension brake for the installation at electrical machinesin an enclosure of the type of protection Ex d. The coil operates with direct current. Optionally a rectifier can be installed in the brake enclosure to allow the operation at the a.c. network. Alternatively operation with terminal compartment type EAR in type of protection Ex e or type CAR ... in type of protection Ex d or direct cable entry.

SPECIFIC CONDITIONS OF USE: YES as shown below:
The gap widths or lengths acc. EN 60079-1: 2014 resp. IEC 60079-1:2014, table 3 fell below or were exceeded. This should be noted in the operating manual.

Repairs on flameproof joints may only be performed in accordance with the manufacturer's design specifications. Repair on the basis of the values in table 3 of EN 60079-1:2014 resp. IEC 60079-1:2014 is not permitted.

Annex:

COCA19.0022X-00.pdf

Manufacturer: ATB Nordenham GmbH, 26954 Nordenham, Germany

For Extension brake types CM 80 and CM 90

Subject and type

Extension brake for the installation at electrical machines in an enclosure of the type of protection Ex d. The coil operates with direct current. Optionally a rectifier can be installed in the brake enclosure to allow the operation at the a.c. network. Alternatively operation with terminal compartment type EAR in type of protection Ex e or type CAR ... in type of protection Ex d or direct cable entry.

Maximum ratings

CM 80 and CM 90			
Voltage	207 VDC	460 VAC	±10 %
Current	2	3,3	A
Powerage	44		W
Drive	3600		min^{-1}
Brake moment	32		Nm

Ambient temperatures

Area with explosive gases : -60 °C to +60 °C
Area with explosive dusts -20 °C to +60 °C

The shaft bearing is realized with rolling bearings. The maximum bearing temperature is 115 °C. Alternatively realization with one or two shaft ends. When designed with one shaft end, a cover lid is installed instead of the shaft sealing.

Cooling is realized by free convection or the motor ventilation.

The brake enclosure can be provided with boreholes with blanking plugs for condensate draining.

Notes for manufacturing

The screws used for delimitation of the flameproof enclosure must at least comply with strength class A2-70.

Components that are attached or installed (terminal compartments. bushings. cable glands. connectors) shall be of a standard that technically complies with the specifications on the cover sheet. They must be suited for the operating conditions and come with a separate examination certificate. The operating conditions specified for the components shall be complied with and the components shall be included in the type test, if necessary.

The Ex marking of the equipment depends on the types of protection that apply from case to case. The type of protection symbols have to be listed in an alphabetical order behind the type

of protection of the device. Types of protection that are listed in the marking above/below but do not apply in the individual case have to be removed from the marking.

To avoid the occurrence of electrostatical chargings, appropriate measures are to be taken regarding the varnishing of the enclosure. If from this restrictions for the operation arise, they are to be included in the operation manual.

Boreholes for draining the condensate must be closed before the start. A note to this effect shall be included in the operating instructions. At the installation location of the draining screw the following warning note has to be applied:

WARNING: AFTER DE-ENERGIZING, DELAY 10 MINUTES BEFORE OPENING!

Compliance with the relevant regulations shall be verified for each electro-thermal design of the brakes in the form of a type test. In this connection, the requirements in the code of practice

Merkblatt für die elektrische Auslegung und Prüfung von Motoren in der Zündschutzart Druckfeste Kapselung im Rahmen der EU-Baumusterprüfbescheinigung shall be observed. It is the manufacturer's responsibility to carry out and log the type tests in compliance with the above code of practice, and to define the operating conditions and the temperature class for every type series.

The brakes may be employed only for the duty type and at the ambient conditions for which they were type tested.

Standard EN 60079-14, clause 7, allows for duty type S1 an overcurrent protection device with inverse time-delay operation (motor protection switch) as the only overload protection, **or** a combined protection consisting of temperature sensors embedded in the winding (e.g. PTC resistors) and a tripping unit.

For operation with duty types other than S1, a combined protection consisting of temperature sensors (e.g. PTC resistors) embedded in the winding in the area of the friction disc and a tripping unit is permitted as the only overload protection.

Monitoring devices shall meet the requirements of Directive 2014/34/EU and EN 1127-1. If non-approved monitoring devices are used, successful function testing must be separately demonstrated and documented. The devices shall be included into the operating company's regular supervision programme. A note to this effect shall be included in the operating instructions.

Special conditions for safe use

The gap widths or lengths acc. EN 60079-1: 2014 resp. IEC 60079-1:2014, table 3 fell below or were exceeded. This should be noted in the operating manual.

Repairs on flameproof joints may only be performed in accordance with the manufacturer's design specifications. Repair on the basis of the values in table 3 of EN 60079-1:2014 resp. IEC 60079-1:2014 is not permitted.

IECEx Test Report Summary

INTERNATIONAL ELECTROTECHNICAL COMMISSION
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ExTR Ref. No.:	**DE/PTB/ExTR19.0017/00**	Page 1 of 1
ExTR Free Ref. No.:	**PTB 19 ATEX 1002 X**	Status: **Issued**
List of Standards Covered:	**IEC 60079-0:2017 Edition:7.0, IEC 60079-1:2014-06 Edition:7.0, IEC 60079-31:2013 Edition:2, IEC 60079-7:2017 Edition:5.1**	Date of Issue: **2019-05-17**
Issuing ExTL:	**PTB - Physikalisch-Technische Bundesanstalt (PTB)**	
Endorsing ExCB:	**PTB - Physikalisch-Technische Bundesanstalt (PTB)**	
Manufacturer:	**ATB Nordenham GmbH**	
Location of Manufacturer:	**Germany**	
Ex Protection:	**Ex db eb** **Ex tb**	
Ratings:	**Ex db eb IIC T3 - T6 Gb resp.** **Ex db IIC T3 - T6 Gb** **Ex tb IIIC T200 - T85 °C Db**	
Equipment:	**Extension brake**	
Model Reference:	**types CM 80 and CM 90**	

Related IECEx Certificates:

IECEx PTB 19.0022X Issue 0

Comments: