



# 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](http://www.iecex.com)

Certificate No.: **IECEx BVS 14.0022** Page 1 of 4 Certificate history:  
Status: **Current** Issue No: 2 [Issue 1 \(2017-09-21\)](#)  
[Issue 0 \(2014-03-06\)](#)  
Date of Issue: 2020-09-07  
Applicant: **Getriebebau Nord GmbH & Co. KG**  
Getriebebau-Nord-Straße 1  
22941 Bargteheide  
Germany  
Equipment: **Three phase cage motor type SK \*\*\* \*\*/\* IDB \*\*\*\*\* and SK \*\*\* \*\*/\* IDC \*\*\*\*\***  
Optional accessory:  
Type of Protection: **Equipment dust ignition protection by enclosure "t"**  
Marking: Ex tb IIIC T°C Db (Type SK \*\*\* \*\* / \* IDB \*\*\*\*\*)  
Ex tc IIIB T°C Dc (Type SK \*\*\* \*\* / \* IDC \*\*\*\*\*)  
\* The asterisks will be replaced according to the highest measured surface temperature. See also Parameters for details.

Approved for issue on behalf of the IECEx  
Certification Body:

**Dr Franz Eickhoff**

Position:

**Lead Auditor and officially recognised expert**

Signature:  
(for printed version)

Date:

\_\_\_\_\_  
\_\_\_\_\_

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Certificate issued by:

**DEKRA Testing and Certification GmbH**  
Certification Body  
Dinnendahlstrasse 9  
44809 Bochum  
Germany

 **DEKRA**  
On the safe side.



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Manufacturer: **Getriebebau Nord GmbH & Co. KG**  
Getriebebau-Nord-Straße 1  
22941 Bargteheide  
**Germany**

Additional manufacturing locations: **Nord Motoriduttori s.r.l.**  
Via Newton 22  
San Giovanni in Persiceto 40017  
**Italy**

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 60079-0:2011** Explosive atmospheres - Part 0: General requirements  
Edition:6.0

**IEC 60079-31:2013** Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

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/BVS/ExTR14.0023/02](#)

Quality Assessment Report:

[DE/PTB/QAR10.0005/03](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

### **Subject and type**

See Annex

### **Description**

The complete motor is designed in type of protection Protection by Enclosure 't' for use in areas endangered by dust atmosphere.

This three phase cage motor is manufactured with different sizes in the same design.

Optionally the motor is equipped with thermistors (DIN 44082) for the direct temperature monitoring.

The joint between the stator housing and the bearing shields on both sides can be sealed by use of a flat gasket.

The motor can be used within an ambient temperature range of  $-20\text{ }^{\circ}\text{C} \leq T_{\text{amb}} \leq 40\text{ }^{\circ}\text{C}$ . Furthermore the motor can be used up to an upper temperature range of  $60\text{ }^{\circ}\text{C}$  while reducing the rated power of the motor.

The motor can be used with converters if it has been tested with the related converter or with a comparable voltage-source converter with identical parameters.

### **Parameters**

See Annex

**SPECIFIC CONDITIONS OF USE: NO**



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

- Addition of a second manufacturing location

### Annex:

[BVS\\_14\\_0022\\_Issue02\\_Annex.pdf](#)



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**Annex**  
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## Subject and type

Three phase cage motor type SK \*\*\* \*\*/\* IDB \*\*\*\*\* or type SK \*\*\* \*\*/\* IDC \*\*\*\*\*

### Asterisk Description

- 1 - 3 Value of size  
Values: 63, 71, 80, 90, 100, 112, 132, 160, 180 and 200
- 4 - 5 Power class within the sizes  
Values: S, M, L, LA, MA, SA, LX, MX, SX, X, Y, A, R or LB  
The values can be added by an addition character N, H or P. These additional characters identify indirectly the efficiency factor class.
- 6 Quantity of poles  
Values: 2, 4, 6, 8, etc.
- 7 - 14 Optional values for variants
  - TF Thermistors
  - RD Protective cover
  - WE Second shaft ending
  - KB Draining hole
  - OL Without fan
  - OL/H Without fan / hood

## Parameters

### Electrical parameters

#### 1.1 Electrical parameters (rotating electrical machine)

##### 1.1.1 Size 63

Rated voltage <sup>1</sup>	up to	690	V
Rated current	up to	1.5	A
Rated power	up to	0.36	kW
Rated torque	up to	1.26	Nm
Rated frequency	up to	100	Hz
Poles	up to	6	
Rotational speed	up to	3000	min <sup>-1</sup>
Duty type		S1	

##### 1.1.2 Size 71

Rated voltage <sup>1</sup>	up to	690	V
Rated current	up to	2.5	A
Rated power	up to	0.74	kW
Rated torque	up to	2.56	Nm
Rated frequency	up to	100	Hz
Poles	up to	6	
Rotational speed	up to	3000	min <sup>-1</sup>
Duty type		S1	

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### 1.1.3 Size 80

Rated voltage <sup>1</sup>	up to	690	V
Rated current	up to	4.5	A
Rated power	up to	1.5	kW
Rated torque	up to	5.2	Nm
Rated frequency	up to	100	Hz
Poles	up to	6	
Rotational speed	up to	3000	min <sup>-1</sup>
Duty type		S1	

### 1.1.4 Size 90

Rated voltage <sup>1</sup>	up to	690	V
Rated current	up to	8.0	A
Rated power	up to	2.98	kW
Rated torque	up to	10.3	Nm
Rated frequency	up to	100	Hz
Poles	up to	6	
Rotational speed	up to	3000	min <sup>-1</sup>
Duty type		S1	

### 1.1.5 Size 100

Rated voltage <sup>1</sup>	up to	690	V
Rated current	up to	15.1	A
Rated power	up to	3.82	kW
Rated torque	up to	20.3	Nm
Rated frequency	up to	100	Hz
Poles	up to	6	
Rotational speed	up to	3000	min <sup>-1</sup>
Duty type		S1	

### 1.1.6 Size 112

Rated voltage <sup>1</sup>	up to	690	V
Rated current	up to	20.0	A
Rated power	up to	6.8	kW
Rated torque	up to	27.0	Nm
Rated frequency	up to	100	Hz
Poles	up to	6	
Rotational speed	up to	3000	min <sup>-1</sup>
Duty type		S1	

### 1.1.7 Size 132

Rated voltage <sup>1</sup>	up to	690	V
Rated current	up to	44.0	A
Rated power	up to	14.7	kW
Rated torque	up to	61.0	Nm
Rated frequency	up to	100	Hz
Poles	up to	6	
Rotational speed	up to	3000	min <sup>-1</sup>
Duty type		S1	

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## 1.1.8 Size 160

Rated voltage <sup>1</sup>	up to	690	V
Rated current	up to	62	A
Rated power	up to	25.4	kW
Rated torque	up to	98	Nm
Rated frequency	up to	100	Hz
Poles	up to	6	
Rotational speed	up to	3000	min <sup>-1</sup>
Duty type		S1	

## 1.1.9 Size 180

Rated voltage <sup>1</sup>	up to	690	V
Rated current	up to	91	A
Rated power	up to	30	kW
Rated torque	up to	145	Nm
Rated frequency	up to	100	Hz
Poles	up to	6	
Rotational speed	up to	3000	min <sup>-1</sup>
Duty type		S1	

## 1.1.10 Size 200

Rated voltage <sup>1</sup>	up to	690	V
Rated current	up to	110	A
Rated power	up to	36	kW
Rated torque	up to	185	Nm
Rated frequency	up to	100	Hz
Poles	up to	6	
Rotational speed	up to	3000	min <sup>-1</sup>
Duty type		S1	

<sup>1</sup> In case of converter-fed: Voltage of the fundamental wave measured at the motor terminals. This voltage must not be decreased by 10 %, taken into account the minimum converter input voltage and the voltage drop caused by the supply line and an optional sinus filter.

The exact fixation of the electrical parameters of the motor including the ambient temperature range and, if applicable, the direct temperature monitoring will be done by the manufacturer.

The verification of this fixation in the context of the temperature measurements and the validation of the results will be done by the manufacturer according to the agreement with the BVS.

## 1.2 Electrical parameters (voltage-source converter)

Maximum permitted input voltage	Rated voltage of motor, but max. 500	V
Minimum switching frequency	4	kHz
Current limiting value	$1.5 \times I_N$	
Maximum overload time <sup>2</sup>	60	s
Output frequency	up to 100	Hz

<sup>2</sup> The maximum overload time and the permitted time for operation below the minimum output frequency are in relation with a period of 10 minutes



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## 1.3 Electrical parameters (monitoring circuits)

Temperature sensors (ptc thermistors)	According to the specifications given in the certificate of the trigger unit and the electrical design.
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## 2 Thermal parameters

### 2.1 General

Surface temperature	The surface temperature is determined by a routine test of the manufacturer considering the ambient temperature range and the electrical variant
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