



[1] **EU-TYPE EXAMINATION CERTIFICATE - TRANSLATION**

[2] Equipment and protective systems intended for use  
in potentially explosive atmospheres, directive 2014/34/EU

[3] EU-Type Examination Certificate Number **IBExU23ATEX1030 X** | Issue 0

[4] Equipment: **Three-phase Asynchronous Motor frame size 100**  
Type series: (IE.-) KPRD 100... (Ex db (eb) (tb)...),  
(IE.-) KPERD 112... (Ex db (eb) (tb)... ) and  
(IE.-) KPERD 132... (Ex db (eb) (tb)...)

[5] Manufacturer: VEM motors GmbH, Werk Zwickau

[6] Address: Äußere Dresdner Straße 35  
08066 Zwickau  
GERMANY

[7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8] IBExU Institut für Sicherheitstechnik GmbH, Notified Body number 0637 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential test report IB-21-3-0076.

[9] Compliance with the essential health and safety requirements has been assured by compliance with:  
EN IEC 60079-0:2018 EN 60079-1:2014 EN IEC 60079-7:2015/A1:2018 EN 60079-31:2014  
Except in respect of those requirements listed at item [18] of the schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the specific conditions of use specified in the schedule to this certificate.

[11] This EU-type examination certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the product shall include the following:

(IE.-) KP(E)RD \*\*\* (Ex db (tb)...):

II 2G Ex db IIC T4 Gb

II 2D Ex tb IIC T125 °C Db

(IE.-) KP(E)RD \*\*\* (Ex db eb (tb)...):

II 2G Ex db eb IIC T4 Gb

II 2D Ex tb IIC T125 °C Db

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(Notified Body-number 0637)

Certificates without seal and signature are not valid. Certificates may only be duplicated completely and unchanged. In case of dispute, the German text shall prevail.

Freiberg, 25.08.2023

[13] **Schedule**

[14] **Certificate Number IBExU23ATEX1030 X | Issue 0**

[15] **Description of product**

The Three-phase Asynchronous Motor frame size 100 is a flameproof encapsulated low-voltage motor in surface-cooled cast iron design. The types (IE-) KPRD 100..., (IE-) KPERD 112... and (IE-) KPERD 132... differ only in the attached mounting feet, these result in different mechanical axis heights.

The Three-phase Asynchronous Motor equipped with temperature limiters. The connection is made via the terminal box in type of protection flameproof enclosure or increased safety. For group IIIC, protection is provided by the type of protection "Ex tb".

Rated values and technical data

- Rated voltage:	max. 690 V
- Rated power:	max. 20 kW
- Mode of operation:	S1 (S3, S6, S9)
- Design according to EN 60034-7:	IM B3/IM 1001, IM B35/IM 2001, IM B5/IM 3001, IM B14/IM3601, IM B34/IM2101 and derived designs
- Cooling method according to EN 60034-6:	IC411, IC410, IC416, IC418
- Property class fastening screws:	mind. 8.8 or A*-70 according to ISO 4762
- Ambient temperature range:	-40 °C or -20 °C up to +40 °C ... +60 °C (gas) -30 °C or -20 °C up to +40 °C ... +60 °C (dust)

The specific electrical data as well as the permissible cooling and operating modes and a surface temperature for dust deviating from 125 °C are specified Continuation Sheets to this certificate.

[16] **Test report**

The test results are recorded in the confidential test report IB-21-3-0076 of 2023-07-19. The test documents are part of the test report and they are listed there.

*Summary of the test results*

The Three-phase Asynchronous Motor frame size 100 of type series (IE-) KPRD 100... (Ex db (tb)...), (IE-) KPERD 112... (Ex db (tb)...) and (IE-) KPERD 132... (Ex db (tb)...) fulfils the requirements of explosion protection for equipment of Group II, Category 2G, type of protection flameproof enclosure "db" and Category 2D, type of protection dust ignition protection by enclosure "tb".

The Three-phase Asynchronous Motor frame size 100 of type series (IE-) KPRD 100... (Ex db eb (tb)...), (IE-) KPERD 112... (Ex db eb (tb)...) and (IE-) KPERD 132... (Ex db eb (tb)...) fulfils the requirements of explosion protection for equipment of Group II, Category 2G, type of protection flameproof enclosure "db" and increased safety "eb" and Category 2D, type of protection dust ignition protection by enclosure "tb".

[17] **Special conditions for use**

- Repairs of the flameproof joints must be made in compliance with the constructive specifications provided by the manufacturer. Repairs must not be made on the basis of values specified in tables 2 and 3 of EN 60079-1.
- Only fastening screws according to ISO 4762 (property class 8.8 or A\*-70), specified by the manufacturer, shall be used.
- The Three-phase Asynchronous Motor can be used also in an extended ambient temperature range. This is specified in the respective continuation sheet to this certificate and in the motor-specific data sheet or on the type plate.

- The rated values and the measures to comply with the temperature class and the maximum surface temperature for dust are specified in the respective Continuation Sheet to this certificate. The instructions and electrical data contained therein, in particular for operation on the frequency inverter, must be observed for the individual motor types. The three-phase asynchronous motor can also be marked with a surface temperature for dust deviating from 125 °C if tested accordingly.
- For the construction types IM V6, IM 2131 and IM V19, additional measures must be taken by the user to prevent foreign objects from falling vertically into the fan.
- Only cable glands and blanking plugs with seal may be used for the Three-phase Asynchronous Motors with terminal box in type of protection Ex eb/Ex tb (type series (IE.-) KP(E)RD \*\*\* (Ex db eb tb...)).

**[18] Essential health and safety requirements**

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following are considered relevant to this product, and conformity is demonstrated in the test report:

- not applicable -

**[19] Drawings and documents**

The documents are listed in the test report.

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Freiberg, 25.08.2023

IBEXU

[1] **CONTINUATION SHEET TO EU-TYPE EXAMINATION  
CERTIFICATE - Translation**



[2] Equipment or protective systems intended for use in potentially explosive atmospheres, Directive 2014/34/EU

[3] **Continuation Sheet 01 | Issue 0**  
to the EU-Type Examination Certificate Number **IBExU23ATEX1030 X | Issue 0**

[4] Product: **Three-phase Asynchronous Motors size 100**  
Type series: (IE.-) KPRD 100... (Ex db (eb) (tb)...),  
(IE.-) KPERD 112... (Ex db (eb) (tb)... und  
(IE.-) KPERD 132... (Ex db (eb) (tb)...)

[5] **Rated values and technical data**

The details are valid under the prerequisite that the Three-phase Motors of this type series do not exceed the safety-related maximum values and operating limits specified in the test report mentioned below with regard to the electrical and thermal design.

Nominal power:	max. 11	kW
Nominal voltage:	max. 690	V
Nominal frequency (mains operation):	50 / 60	Hz
Frequency (converter):	5 ... 60	Hz
Operation mode:	S1 (S3, S6, S9)	
Cooling system acc. to EN 60034-6:	IC 411	
Max. ambient temperature:	40	°C
Temperature class:	T4	
Maximum surface temperature:	125	°C

Motor variants Type designation	P <sub>50Hz</sub> [kW]	U <sub>50Hz/P50Hz</sub> [V]	U <sub>60Hz/P50Hz</sub> [V]	P <sub>60Hz</sub> [kW]	U <sub>60Hz/P60Hz</sub> [V]
IE3-KPRD 100 LY2	3	B	460	-	-
IE3-KPRD 100 L2	3	B	B	3.6	B
IE4-KPRD 100 L2	3	B	B	3.3	B
IE3-KPERD 112 MY2	4	B	B	4.8	460...480
IE4-KPRD 100 LV2	3	B	-	-	-
IE3-KPERD 112 M2	4	B	B	4.8	B
IE4-KPERD 112 M2	4	B	B	4.8	B
IE3-KPERD 112 MX2	5.5	400	400...480	6.4	B
IE3-KPERD 132 S2T					
IE3-KPRD 100 L4	2.2	B	-	-	-
IE3-KPRD 100 LW4	2.2	B	-	-	-
IE3-KPRD 100 LV4	2.2	B	380...460	2.6	B
IE3-KPRD 100 LZ4	3	400		-	-
IE3-KPRD 100 LU4	3	B	400...460	3.6	460
IE3-KPRD 100 LX6	1.5	B	-	0.92	380...460
IE3-KPERD 112 MV6	2.2	400	-	-	-
IE3-KPRD 100 L8	0.75	B	B	0.9	B
IE3-KPRD 100 LX8	1.1	B	B	1.25	B

**IBExU Institut für Sicherheitstechnik GmbH**  
An-Institut der TU Bergakademie Freiberg

Specification B =  
Wide voltage

U50Hz/P50Hz	U60Hz/P50Hz	U60Hz/P60Hz
380 V...420 V	380 V...480 V	440 V...500 V

The other electrical data are given in the motor data sheets. The motors can be designed for rated voltages from 52 V to max. 690 V. The associated currents must be converted in the reciprocal ratio of the voltages. Compared to the rated values, the mains voltage and mains frequency may fluctuate in accordance with Range B to EN 60034-1.

The motors may only be used in the operating mode and under the ambient conditions for which they have been type-tested. This is also valid for the operation at the frequency converter.

The Three-phase Asynchronous Motors can also be operated in intermittent duty / short-time duty S3, S6 and S9. A general conversion to higher power ratings is not permissible. The associated nominal values must be dimensioned so that the temperature rise of the surface and the components is below the temperature rise of the operating mode S1.

[6] **Test report**

The test results are recorded in the confidential test report IB-21-3-0076/1 of 2023-11-01. The test documents are part of the test report and they are listed there.

[7] **Specific conditions of use**

- To comply with temperature class T4 or the max. surface temperature of 125 °C, the motors of this type series must be protected by a device for direct temperature monitoring. This consists of three temperature limiters built into the winding in the form of PTC thermistors with a maximum response temperature of 130 °C and a suitable tripping device certified in accordance with Directive 2014/34/EU.
- For operating mode S1 (mains operation) a current-dependent delayed protective device is alternatively permissible as the sole monitoring device. This must be certified in accordance with RL 2014/34/EU, i.e. marked  II (2)G or  II (2)D.
- During operation on the frequency inverter, the minimum switching frequency must not be below the specified value on the type plate.

[8] This *Continuation Sheet* is only valid in combination with the EU-Type Examination Certificate IBExU23ATEX1030 X | Issue 0.

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