

[1] **EC-TYPE EXAMINATION CERTIFICATE**  
according to Directive 94/9/EC, Annex III  
(Translation)



[2] Equipment and Protective Systems intended for use  
in Potentially Explosive Atmospheres, Directive 94/9/EC

[3] EC-Type Examination Certificate Number: **IBExU04ATEX1118**

[4] Equipment: Three-phase Asynchronous Motors with Squirrel-Cage Rotor  
Type W.1R 112... W.1R 180... W.1R 250...  
W.1R 132... W.1R 200... W.1R 280...  
W.1R 160... W.1R 225... W.1R 315...

[5] Manufacturer: VEM motors GmbH

[6] Address: Carl-Friedrich-Gauß-Straße 1  
38855 Wernigerode  
GERMANY

[7] The design of this equipment and any acceptable variations thereto are specified in the schedule to this EC-Type Examination Certificate.

[8] IBExU Institut für Sicherheitstechnik GmbH, NOTIFIED BODY number 0637 in accordance with article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this Equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.  
The test results are recorded in the test report IB-04-3-133 of 26 May 2004.

[9] The Essential Health and Safety Requirements are fulfilled by compliance with EN 50281-1-1:1998.

[10] If the sign „X“ is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified under [17] in the schedule to this EC-Type Examination Certificate.

[11] This EC-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this directive apply to the manufacture and supply of this equipment.

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

II 2D T125 °C IP 65

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Authorised for certifications  
-Explosion protection-

By order  
  
(Dr. L. Lösch)



(ID no. 0637)

Freiberg, 26 May 2004

Certificates without signature  
and seal are not valid.  
Certificates may only be dupli-  
cated completely and un-  
changed. In case of dispute,  
the German text shall prevail.

Schedule

[13] **Schedule**

[14] **to the EC-Type Examination Certificate IBExU04ATEX1118**

[15] **Description of equipment**

The Three-phase Asynchronous Motors with Squirrel-Cage Rotor of type series W.R 112... up to W.R 315... have the same mechanical construction as the motor type series according to EC-Type Examination Certificate IBExU02 ATEX1019.

The electrical design of the motors corresponds to the specifications of the Type Examination Certificate IBExU03ATEXB004.

Parameters

Rated voltage:	220 up to 725 V
Frequencies:	50 Hz, 60 Hz
Degree of protection:	IP 65
Operating mode:	S1
Ambient temperature range:	-40 °C up to +40 °C
Max. surface temperature:	125 °C
Cooling system:	IC 411 (surface-ventilated)
Degree of protection:	IP 65 DIN VDE 0530 part 5 for motor enclosure IP 65 DIN VDE 0530 part 5 for terminal box
	IP 2x air inlet (horizontal construction) IP 3x air inlet (vertical construction)
	IP 1x air outlet according to DIN EN 50014

(Further specifications are included in the test report IB-04-3-133.)

[16] **Test report**

The proof of dust explosion protection of the Three-phase Asynchronous Motors of type series W.R 112... up to W.R 315... is recorded in the test report IB-04-3-133 of 26 May 2004.  
The test documents are part of the test report and listed there.

Summary

The Three-phase Asynchronous Motors of type series W.R 112... up to W.R 315... fulfil the requirements of dust explosion protection for Equipment Group II and Category 2D by application of the protective measure „Protection by enclosures“.

According to Type Examination Certificate IBExU03ATEXB004 these motors also fulfil the requirements of explosion protection for equipment of Group II and Category 3G, type of protection „n“ for explosive atmospheres with gases and vapors of the temperature class T2, T3 or T4.

Regarding this the type designation is added and is i. e. W.1 R... EEx nA II T3 3G/2D.

Safety instructions

- The manufacturer is obliged to carry out the required tests of the conformity assessment procedures according to the respective annex of Directive 94/9/EC.
- The motors may not be operated in dust layers of excessive thickness. They are suitable for areas of Zone 21.

- At installation of the motors with free shaft end upwards, the falling in of dirty particles into the ventilation openings must be prevented by the mounting.
- The degree of protection - at least IP6X - is reached only at proper use of tested cable entries and sealing plugs.
- During construction and maintenance the specifications of EN 50281-1-2 have to be kept. Especially the ignition temperature of the respective air/dust mixture respectively the smoulder temperature of the respective dust must be higher than the maximum surface temperature of the motors considering the safety factors determined in EN 61241-14.
- Regarding the Equipment Category 3G the safety instructions contained in the Schedule to the Type Examination Certificate IBExU03ATEXB004 keep their validity.

[17] **Special conditions**

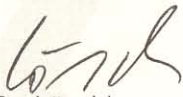
None

[18] **Essential Health and Safety Requirements**

Confirmed by compliance with standards (see [9]).

By order

Freiberg, 26 May 2004

  
(Dr. Lösch)



[1] **1<sup>st</sup> Addition to**  
**EC-TYPE EXAMINATION CERTIFICATE IBExU04ATEX1118**  
according to Directive 94/9/EC, Annex III  
(Translation)

[2] Equipment: Three-phase Asynchronous Motor with Squirrel-Cage Rotor  
Type series W.1R 112... up to W.1R 315...

[3] Manufacturer: VEM motors GmbH

[4] Address: Carl-Friedrich-Gauß-Str. 1  
38855 Wernigerode  
GERMANY

[5] **Modifications / Additions**

The Three-phase Asynchronous Motors with Squirrel-Cage Rotor of type series W.1R 112... up to W.1R 315... are manufactured in future according to the standards EN 61241-0 and EN 61241-1.

[6] **Test report**

The proof of explosion protection of the Addition mentioned under [5] is recorded in the test report IB-07-3-328 of 18 March 2008. The test documents are part of the test report and listed there.

[7] **Test result**

IBExU certifies that the equipment mentioned under [2] fulfils the Essential Health and Safety Requirements given in Annex II to the Directive 94/9/EC by compliance with EN 61241-0:2006 and EN 61241-1:2004 + Cor.:2006.

The Three-phase Asynchronous Motors with Squirrel-Cage Rotor mentioned under [2] of type series W.1R 112... up to W.1R 315... fulfil the requirements of explosion protection for equipment of Group II, Category 2D, type of protection Protection by enclosures „tD“.

The rated values are specified in the test documents respectively in Addition Sheets to this EC-Type Examination Certificate.

The marking of the equipment shall include the following:

II 2D Ex tD A21 IP 65 T 125 °C  
T<sub>a</sub> -30 °C up to +40 °C ... +55 °C

The Safety instructions contained in the Schedule to the EC-Type Examination Certificate IBExU04ATEX1118 are completed as follows:

- The electrical and thermal parameters of the individual types of the Three-phase Asynchronous Motors have to verified separately also in future. It has to be checked that the maximum surface temperature of 125 °C for use in presence of combustible dust is kept. Also, the permissible operating temperatures of the used insulating materials and components must not be exceeded.
- During construction and maintenance the specifications of EN 61241-14 have to be kept. Especially the ignition temperature of the respective air/dust mixture respectively the smoulder temperature of the respective dust must be higher than the maximum surface temperature of the motors considering the safety factors specified/determined in EN 61241-14.

*This Addition is only valid in combination with the EC-Type Examination Certificate IBExU04ATEX1118 of 26 May 2004.*

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(Dr. Lösch)



- Seal -  
(ID no. 0637)

Freiberg, 18 March 2008

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- [1] **2<sup>nd</sup> Addition to  
EC-TYPE EXAMINATION CERTIFICATE IBExU04ATEX1118**  
according to Directive 94/9/EC, Annex III (Translation)

- [2] a) Equipment corresponding to IBExU04ATEX1118: **Three-phase Asynchronous Motor with Squirrel-Cage Rotor**  
type series W.1R 112... up to W.1R 315...  
b) Modified type key: (IE2-)W.1R 112...(KN) up to (IE2-)W.1R 315...(KN)
- [3] Manufacturer: VEM motors GmbH
- [4] Address: Carl-Friedrich-Gauß-Str. 1  
38855 Wernigerode  
GERMANY

[5] **Modifications / Additions**

The type key of the Three-phase Asynchronous Motors with Squirrel-Cage Rotor of type series W.1R 112... up to W.1R 315... is extended as mentioned under [2] b) with the following optional designations:

IE2- IE-Code of the energy efficiency class  
KN Motor optimization (stator enclosure is turned, terminal box on the N-side)

All other mechanical and electrical parameters remain unchanged.

[6] **Test report**

The proof of explosion protection of the Addition mentioned under [5] is recorded in the test report IB-09-3-144/3 of 17 December 2009. The test documents are part of the test report and listed there.

[7] **Test result**

IBExU certifies that the equipment mentioned under [2] fulfils the Essential Health and Safety Requirements given in Annex II to the Directive 94/9/EC by compliance with EN 61241-0:2006 and EN 61241-1:2004 + Cor.:2006.

The Three-phase Asynchronous Motors with Squirrel-Cage Rotor of type series (IE2-)W.1R 112...(KN) up to (IE2-)W.1R 315...(KN) mentioned under [2] fulfil the requirements of explosion protection for equipment of Group II, Category 2D, type of protection protection by enclosures „tD“. The rated values are specified in the test documents respectively in Addition Sheets to this EC-Type Examination Certificate. At this, lower surface temperatures are also possible at appropriate power matching.

The marking of the equipment shall include the following:

II 2D Ex tD A21 IP 65 T 125 °C  
T<sub>a</sub> -30 °C up to +40 °C ... +55 °C

The safety instructions contained in the Schedule to the EC-Type Examination Certificate IBExU04ATEX1118 with 1<sup>st</sup> Addition keep their validity.

**This Addition is only valid in combination with the EC-Type Examination Certificate IBExU04ATEX1118 of 26 May 2004 with 1<sup>st</sup> Addition.**

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Freiberg, 17 December 2009

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