



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 CNEX 19.0007X** Page 1 of 5 [Certificate history:](#)
Status: **Current** Issue No: 2 [Issue 1 \(2020-06-09\)](#)
[Issue 0 \(2020-02-23\)](#)
Date of Issue: 2020-07-02
Applicant: **Wolong Electric Nanyang Explosion Protection Group Co., Ltd.**
No.1801, Dushan Avenue, Nanyang City, Henan, 473008
China
Equipment: **Explosion proof three-phase induction motors model WEX3-80-315**
Optional accessory: None
Type of Protection: **Ex db, db eb, tb/tc**
Marking: Ex db eb IIB/IIC T4 Gb
Ex db IIB/IIC T4 Gb
Ex tb IIIB/IIIC T130°C Db
Ex tc IIIB/IIIC T130°C Dc

Approved for issue on behalf of the IECEx
Certification Body:

Hou Yandong

Position:

Certification Officer

Signature:
(for printed version)

Date:

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Certificate issued by:

CNEX-Global B.V.
Utrechtseweg 310-B38
6812AR, Arnhem
Netherlands





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Manufacturer: **Wolong Electric Nanyang Explosion Protection Group Co., Ltd.**
No.1801, Dushan Avenue
No. 1, Funiu Road
Nanyang City, Henan Province 473008
China

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 Reports:

[NL/CNEX/ExTR19.0007/00](#)

[NL/CNEX/ExTR19.0007/01](#)

[NL/CNEX/ExTR19.0007/02](#)

Quality Assessment Report:

[NO/PRE/QAR19.0016/00](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Explosion proof three-phase induction motors model WEX3-80-355, with self-ventilated, squirrel-cage rotor and seated with ball bearings or roller bearings. The enclosure of the motor and terminal box is made in cast iron. The enclosure of the motor is constructed in type of protection flameproof enclosure 'db' for explosive gas atmospheres. The terminal box can be constructed in type of explosion protection 'db' or 'eb', for explosive gas atmospheres. The motor enclosure and terminal box can also be constructed in type of explosion protection 'tb/tc', for use in explosive dust environments. The motors can be operated direct-on-line (DOL), or with variable speed convertors (VSD), see details below and in the instruction manual. For VSD the max speed is 5400 rpm.

For nomenclature and further details, see the Annex to this certificate.

SPECIFIC CONDITIONS OF USE: YES as shown below:

The ambient temperature range for DOL operation is limited to -40 °C ... +60 °C.

The ambient temperature range for VSD operations is limited to -40 °C ...+50 °C (for frame sizes 80-315) and to -40 °C ...+45 °C (for frame size 355).

The ambient temperature range for special size WEX3-280M-2 105kW 440V 60Hz is limited to: -40 °C ... +50 °C.

The ambient temperature range for special size WEX3-315L2-4 250kW 440V 60Hz is limited to: -40 °C ... +50 °C.

For repair of the flameproof joints due regard must be given to the structural specifications provided by the manufacturer. Repair in compliance with the values in Tables 1 and 2 of IEC 60079-1 is not allowed.

All electrical connections shall be tightened with the tightening torques specified in the manufacturer's instructions.

For VSD operation and for duty types other than S1, the motor temperature shall be monitored by PTC-thermistors, in the stator windings. These devices have to be connected to suitable tripping units that have been functionally tested for this purpose.

For VSD operation, the manufacturer's instructions for machine fed from converters have to be respected. For VSD operation, the motor was tested with converter power source, with the following specifications:

- switching frequency: ≥ 2000 Hz
- inverter output du/dt : ≤ 1500 V/ μ s

Use fasteners with a minimum yield stress of 640 N/mm².



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 2 updates:

- addition of brand name SCHORCH
- addition for brand name BROOK CROMPTON
- addition of Terminal Boxes in Ex 'db':
 - additional Ex code: **Ex db IIB/IIIC T4 Gb**
- addition of Dust protection Ex 'tb/tc':
 - additional Ex code: **Ex tb IIIB/IIIC T130°C Db** or **Ex tc IIIB/IIIC T130°C Dc**



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Additional information:

The enclosure of the explosion proof three-phase induction motors model WEX3-80-355, successfully passed the tests for the Ingress Protection level IP66 to IEC 60529. The IP degree can be specified as IP55/IP56/IP65/ IP66, depending on motor variation and client request.

Annex:

[P20031IAC-CCA2 certificate IECEx CNEX19.0007X issue 2 Annex.pdf](#)



Annex to Certificate IECEx CNEX 19.0007X Issue 2

Equipment or Protective System: **Explosion proof three-phase induction motors
Model WEX3-80-355**

Applicant: **Wolong Electric Nanyang Explosion Protection Group
Co., Ltd.**

Address: **No.1801, Dushan Avenue, Nanyang City, Henan, 473008
No. 1, Funiu Road, Nanyang City, Henan, 473008
CHINA**

Nomenclature for motor model WEX3- 315ab-c

W	-	Wolong brand
E	-	High Efficiency
X	-	Explosion-proof
3	-	Third design
315	-	Shaft height (80, 90, 100, 112, 132, 160, 180, 200, 225, 250, 280, 315, 355)
a	-	Frame length: M = medium frame, L = long frame, S = short frame
b	-	Core length: 1 = short core, 2 = long core
c	-	Number of poles: 2, 4, 6, 8, 10, 12, 14, 16

Motor models covered:

The motor models that are covered by this certificate are detailed in the Test Report Cover document.
(ref. CQST1912G004 and CQST2002G002).

Electrical Data:

Rated voltages for power ≤ 3 kW: 200V, 220V, 230V, 240V, 290V, 380V, 400V, 415V, 440V, 460V, 480V, 500V, 525V, 550V, 575V, 660V, 690V, 220/380V, 230/400V, 240/415V, 380/660V, 400/690V, 50/60Hz

Rated voltages for power > 3 kW and frame size 112-280: 112-280V, 230V, 290V, 380V, 400V, 415V, 440V, 460V, 480V, 500V, 525V, 550V, 575V, 660V, 690V, 380/660V, 400/690V, 50/60Hz

Rated voltages for power > 3 kW and frame size 315-355: 230V, 290V, 380V, 400V, 415V, 440V, 460V, 480V, 500V, 525V, 550V, 575V, 660V, 690V, 720V, 1000V, 1140V, 380/660V, 400/690V, 415/720V, 550/950V, 660/1140V, 50Hz/60Hz

Rated power : 0.37 kW to 375 kW

Rated frequency: 50Hz/60Hz

Certification Body: CNEX-Global B.V., Utrechtseweg 310-B38, 6812 AR, Arnhem, the Netherlands

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Note: The motors are originally designed for 400V AC, 50 Hz. When used with 60Hz and voltages different from 400V, the rated power can be multiplied by the following factor:

Rated voltage (V)	380	400	415	440	460	480
Rated power	1	1	1.05	1.1	1.15	1.2

See the Test Report Cover Sheet (ref. CQST1912G004 and CQST2002G002), for the electrical data per motor model.

Descriptive Documents:

Detailed in the Test Report Cover document. (ref. CQST1912G004 and CQST2002G002).

Mounting Instructions:

See manufacturer's instructions.

Installation Instructions:

All cable entry devices and blanking elements shall be certified to valid standards for use in explosive gas or dust atmospheres (as applicable), with the same IP rating as the motor, suitable for the conditions of use and correctly installed.

All parts installed in the Ex e terminal box shall be certified to valid standards for use in explosive gas atmospheres, suitable for the conditions of use and correctly installed.

Unused apertures shall be closed with suitable certified blanking elements. See manufacturer's instructions.

Routine tests:

Routine overpressure tests on enclosure parts are detailed in the Test Report Cover Sheet. (ref. CQST1912G004 and CQST2002G002).

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Annex A – Motor models covered by this certificate:

Frame size	No. of poles	Power [kW]	Frequency [Hz]	Model numbers
80	2	0.75	50/60	WEX3-80M1-2
	2	1.1	50/60	WEX3-80M2-2
	4	0.55	50/60	WEX3-80M1-4
	4	0.75	50/60	WEX3-80M2-4
	6	0.37	50/60	WEX3-80M1-6
	6	0.55	50/60	WEX3-80M2-6
90	2	1.5	50/60	WEX3-90S-2
	2	2.2	50/60	WEX3-90L-2
	4	1.1	50/60	WEX3-90S-4
	4	1.5	50/60	WEX3-90L-4
	6	0.75	50/60	WEX3-90S-6
	6	1.1	50/60	WEX3-90L-6
100	2	3	50/60	WEX3-100L-2
	4	2.2	50/60	WEX3-100L1-4
	4	3	50/60	WEX3-100L2-4
	6	1.5	50/60	WEX3-100L-6
	8	0.75	50/60	WEX3-100L1-8
	8	1.1	50/60	WEX3-100L2-8
112	2	4	50/60	WEX3-112M-2
	4	4	50/60	WEX3-112M-4
	6	2.2	50/60	WEX3-112M-6
	8	1.5	50/60	WEX3-112M-8
132	2	5.5	50/60	WEX3-132S1-2
	2	7.5	50/60	WEX3-132S2-2
	4	5.5	50/60	WEX3-132S-4
	4	7.5	50/60	WEX3-132M-4
	6	3	50/60	WEX3-132S-6
	6	4	50/60	WEX3-132M1-6
	6	5.5	50/60	WEX3-132M2-6
	8	2.2	50/60	WEX3-132S-8
	8	3	50/60	WEX3-132M-8
160	2	11	50/60	WEX3-160M1-2
	2	15	50/60	WEX3-160M2-2
	2	18.5	50/60	WEX3-160L-2
	4	11	50/60	WEX3-160M-4

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	4	15	50/60	WEX3-160L-4
	6	7.5	50/60	WEX3-160M-6
	6	11	50/60	WEX3-160L-6
	8	4	50/60	WEX3-160M1-8
	8	5.5	50/60	WEX3-160M2-8
	8	7.5	50/60	WEX3-160L-8
180	2	22	50/60	WEX3-180M-2
	4	18.5	50/60	WEX3-180M-4
	4	22	50/60	WEX3-180L-4
	6	15	50/60	WEX3-180L-6
	8	11	180	WEX3-180L-8
200	2	30	50/60	WEX3-200L1-2
	2	37	50/60	WEX3-200L2-2
	4	30	50/60	WEX3-200L-4
	6	18.5	50/60	WEX3-200L1-6
	6	22	50/60	WEX3-200L2-6
	8	15	50/60	WEX3-200L-8
225	2	45	50/60	WEX3-225M-2
	4	37	50/60	WEX3-225S-4
	4	45	50/60	WEX3-225M-4
	6	30	50/60	WEX3-225M-6
	8	18.5	50/60	WEX3-225S-8
	8	22	50/60	WEX3-225M-8
	10	15	50/60	WEX3-225S-10
	10	18.5	50/60	WEX3-225M-10
250	2	55	50/60	WEX3-250M-2
	4	55	50/60	WEX3-250M-4
	6	37	50/60	WEX3-250M-6
	8	30	50/60	WEX3-250M-8
	10	22	50/60	WEX3-250M-10
	12	18.5	50/60	WEX3-250M-12
280	2	75	50/60	WEX3-280S-2
	2	90	50/60	WEX3-280M-2
	4	75	50/60	WEX3-280S-4
	4	90	50/60	WEX3-280M-4
	6	45	50/60	WEX3-280S-6
	6	55	50/60	WEX3-280M-6
	8	37	50/60	WEX3-280S-8
	8	45	50/60	WEX3-280M-8

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	10	30	50/60	WEX3-280S-10
	10	37	50/60	WEX3-280M-10
	12	22	50/60	WEX3-280S-12
	12	30	50/60	WEX3-280M-12
	14	18.5	50/60	WEX3-280S-14
	14	22	50/60	WEX3-280M-14
315	2	110	50/60	WEX3-315S-2
	2	132	50/60	WEX3-315M-2
	2	160	50/60	WEX3-315L1-2
	2	185	50/60	WEX3-315L-2
	2	200	50/60	WEX3-315L2-2
	4	110	50/60	WEX3-315S-4
	4	132	50/60	WEX3-315M-4
	4	160	50/60	WEX3-315L1-4
	4	185	50/60	WEX3-315L-4
	4	200	50/60	WEX3-315L2-4
	4	250	50/60	WEX3-315L2-4
	6	75	50/60	WEX3-315S-6
	6	90	50/60	WEX3-315M-6
	6	110	50/60	WEX3-315L1-6
	6	132	50/60	WEX3-315L2-6
	8	55	50/60	WEX3-315S-8
	8	75	50/60	WEX3-315M-8
	8	90	50/60	WEX3-315L1-8
	8	110	50/60	WEX3-315L2-8
	10	45	50/60	WEX3-315S-10
	10	55	50/60	WEX3-315M-10
	10	75	50/60	WEX3-315L1-10
	10	90	50/60	WEX3-315L2-10
	12	37	50/60	WEX3-315S-12
	12	45	50/60	WEX3-315M-12
	12	55	50/60	WEX3-315L1-12
	12	75	50/60	WEX3-315L2-12
	14	30	50/60	WEX3-315S-14
	14	37	50/60	WEX3-315M-14
	14	45	50/60	WEX3-315L1-14
	14	55	50/60	WEX3-315L2-14
	16	22	50/60	WEX3-315S-16
16	30	50/60	WEX3-315M-16	

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	16	37	50/60	WEX3-315L1-16
	16	45	50/60	WEX3-315L2-16
355	2	185	50/60	WEX3-355S1-2
	2	200	50/60	WEX3-355S2-2
	2	220	50/60	WEX3-355M1-2
	2	250	50/60	WEX3-355M2-2
	2	280	50/60	WEX3-355L1-2
	2	315	50/60	WEX3-355L2-2
	2	355	50/60	WEX3-355LX1-2
	2	375	50/60	WEX3-355LX2-2
	4	185	50/60	WEX3-355S1-4
	4	200	50/60	WEX3-355S2-4
	4	220	50/60	WEX3-355M1-4
	4	250	50/60	WEX3-355M2-4
	4	280	50/60	WEX3-355L1-4
	4	315	50/60	WEX3-355L2-4
	4	355	50/60	WEX3-355LX1-4
	4	375	50/60	WEX3-355LX2-4
	6	160	50/60	WEX3-355S-6
	6	185	50/60	WEX3-355M1-6
	6	200	50/60	WEX3-355M2-6
	6	220	50/60	WEX3-355L1-6
	6	250	50/60	WEX3-355L2-6
	6	280	50/60	WEX3-355LX1-6
	6	315	50/60	WEX3-355LX2-6
	8	132	50/60	WEX3-355S-8
	8	160	50/60	WEX3-355M-8
	8	185	50/60	WEX3-355L1-8
	8	200	50/60	WEX3-355L2-8
	8	220	50/60	WEX3-355LX1-8
	8	250	50/60	WEX3-355LX2-8
	10	90	50/60	WEX3-355S-10
	10	110	50/60	WEX3-355M1-10
	10	132	50/60	WEX3-355M2-10
10	160	50/60	WEX3-355L1-10	
10	185	50/60	WEX3-355L2-10	
10	200	50/60	WEX3-355LX1-10	
12	75	50/60	WEX3-355S-12	
12	90	50/60	WEX3-355M1-12	

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12	110	50/60	WEX3-355M2-12
12	132	50/60	WEX3-355L1-12
12	160	50/60	WEX3-355L2-12
12	185	50/60	WEX3-355LX1-12
14	75	50/60	WEX3-355S-14
14	90	50/60	WEX3-355M1-14
14	110	50/60	WEX3-355M2-14
14	132	50/60	WEX3-355L-14
14	160	50/60	WEX3-355LX1-14
16	55	50/60	WEX3-355S-16
16	75	50/60	WEX3-355M1-16
16	90	50/60	WEX3-355M2-16
16	110	50/60	WEX3-355L-16
16	132	50/60	WEX3-355LX1-16

Additionally, two higher power motor versions are covered in this certificate:

- Motor model WEX3-280M-2:
 Rated voltage: 440 V, 60 Hz
 Rated power: 105kW
 Ambient temperature range: -40 °C ... +50 °C.
- Motor model WEX3-315L2-4:
 Rated voltage: 440 V, 60 Hz
 Rated power: 250kW
 Ambient temperature range: -40 °C ... +50 °C.