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 CQM 24.0015X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 0	
Date of Issue:	2024-07-05		
Applicant:	**WUXI TECO ELECTRIC & MACHINERY CO.,LTD** No.9 Changjiang South Road, Wuxi, Jiangsu, 214028 **China**		
Equipment:	**Flameproof 3-phase induction motor TEB4-***-* series**		
Optional accessory:			
Type of Protection:	**Ex "db"**		
Marking:	Ex db IIB T4 Gb -20℃≤Ta≤+55℃		

Approved for issue on behalf of the IECEx Certification Body: **Ji Xiaodong**

Position: **President**

Signature: (for printed version)

Date: 2024-07-05 (for printed version)

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China Quality Mark Certification Group Co., Ltd.
No. 33 Zengguang Road, Haidian District
Beijing City, Postal code: 100048
China

CQM China Quality Mark

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Manufacturer: **WUXI TECO ELECTRIC & MACHINERY CO.,LTD**
No.9 Changjiang South Road, Wuxi, Jiangsu, 214028
China

Manufacturing locations:

WUXI TECO ELECTRIC & MACHINERY CO.,LTD
No.9 Changjiang South Road, Wuxi, Jiangsu, 214028
China

TECO Electric & Machinery Co. Limited
Factory Number 1 and 2
11 An Tung Road
Chung Li Industrial District
Taoyuan
Taiwan 320
Taiwan

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 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

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:

CN/CQM/ExTR24.0032/00 CN/CQM/ExTR24.0033/00

Quality Assessment Reports:

GB/BAS/QAR08.0012/10 GB/BAS/QAR14.0011/06

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

Description

TEB4-**-* series FLAMEPROOF 3-PHASE INDUCTION MOTOR, S1 duty, are mainly used in the explosive environments of the petroleum, chemical and pharmaceutical industries, in the hazardous areas designated as zone 1, zone 2.

The motor's cooling method is IC411 as stipulated in IEC 60034-6, its thermal class according to IEC 60085 is 155(F), installation mode could be IMB3, B35, V1 as stipulated in IEC 60034-7.

Each type of motor consists of at least two independent flameproof chambers, the rotating machine part which has a squirrel cage structure and the terminal box part.

Furthermore, the motor is integrated with auxiliary functions of heater and windings temperature monitoring, and an auxiliary terminal box which also adopts type of "d" independently will be added for these purposes.

Type Designation

TEB 4 - * * * - *

TEB: Type code (TECO, Enclosed, Flameproof); 4: Energy-efficiency class, IE4; The first *: Shaft centre height (could be 315, 355); The second *: Length of the frame (could be S, M, L, when applicable); The third *: Length of the core (single numeric, or omissible when without distinction); The fourth *: No. of poles (could be 2P, 4P, 6P, 8P).

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Rated ambient temperature range: -20°C to +55°C.
2. Repairs of the flameproof joints shall contact the manufacturer for the detailed data and shall be made in compliance with the data provided by the manufacturer.
3. The operating parameters and service conditions described in the instructions shall be followed, and the temperature monitoring for overtemperature protection shall be connected to an appropriate control device. Over temperature protection parameters are detailed in instruction.
4. Separated certified cable glands or blanking elements, type of flameproof, with minimum Group IIB, EPL Gb, minimum IP66, service temperature -20°C to +75°C, shall be used during the operation.
5. Where Ex auxiliary equipment (e.g., sensor, heater) is fitted, as appropriate, the installer and/or the user shall ensure those conditions of use are followed and those Ex auxiliary equipment shall not invalidate this certificate.
6. Observe the warning and caution: "WARNING - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT"; "CAUTION - USE FASTENERS WITH YIELD STRESS ≥ 640MPa".

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Equipment (continued):

Rated voltage, Rated power: refer to “detailed rated voltage/ power ratings/poles characterized by series”.

Rated fixed frequency: refer to “detailed frequency conversion characteristic”.

Rated voltage (auxiliary circuit): 220VAC (heater), 24VDC (stator windings temperature monitoring);

Ingress protection: IP66 (as the client’s design).

Detailed rated voltage/ power ratings / poles characterized by series are given below:

Rated voltage (power supply): alternating current three-phase	Specification of frame and core	Number of the poles				
		2P	4P	6P	8P	10P
		Power(kW)				
220V, 230V, 380V, 400V, 415V, 440V, 460V, 480V, 525V, 660V, 690V, 200/346V, 220/380V, 230/400V, 240/415V, 254/440V, 265/460V, 277/480V, 380/660V, 400/690V, 220-240/380-415V, 380-415V V	TEB4-315S	110	110	75	55	/
	TEB4-315M	132	132	90	75	/
	TEB4-315L1	160	160	110	90	/
	TEB4-315L2	(185)	(185)	132	110	/
	TEB4-315L3	200	200	/	/	/
	TEB4-355M1	(220)	(220)	160	132	/
	TEB4-355M2	250	250	200	160	/
	TEB4-355L1	(280)	(280)	(220)	185	/
	TEB4-355L2	315	315	250	200	/
	TEB4-355L3	355	/	/	(220)	/

Detailed frequency conversion characteristics are given below:

Power more than 45kW of 2 poles & Power more than 200kW of 4 poles			
rated 50Hz		rated 60Hz	
5~50Hz	decreasing torque	6~60Hz	decreasing torque
25~50Hz	constant torque	30~60Hz	constant torque
50~60Hz	constant power	/	/
others			
rated 50Hz		rated 60Hz	
5~50Hz	decreasing torque	6~60Hz	decreasing torque
25~50Hz	constant torque	30~60Hz	constant torque
50~100Hz	constant power	60~100Hz	constant power

Note 1: Under the “decreasing torque” operation characteristic, the intended load torque shall be generally proportional to the square of the speed.

Note 2: As the same electromagnetic design, either fixed-speed (50Hz or 60Hz sinusoidal supply) operation or converter-fed operation can be selected.