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PEOPLE'S REPUBLIC OF CHINA**

GB/T 10069.3-2024

**Measurement of airborne noise emitted by rotating electrical
machines and the noise limits - Part 3: Noise limits
(English Translation)**

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Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020

"Directives for standardization - Part 1.Rules for the structure and drafting of standardizing documents".

This document is part 3 of GB/T 10069 "Measurement of airborne noise emitted by rotating electrical machines and the noise limits". The following parts of GB/T 10069 has been published.

- Part 1.Method for the measurement of airborne noise emitted by rotating electrical machines;

- Part 3.Noise limits.

This document replaces GB/T 10069.3-2008 "Measurement of airborne noise emitted by rotating electrical machines and the noise limits - Part 3.Noise limits". Compared with GB/T 10069.3-2008, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- Added the no-load maximum A-weighted sound power level LWA of 50 Hz single-speed three-phase cage motors with cooling methods IC01, IC11, IC21, IC31, IC71, and IC81 (see Chapter 6, Table 2 of this Edition);

- Added the maximum no-load A-weighted sound power level LWA of 60 Hz single-speed three-phase cage motor and divided into two levels. A and B (see Chapter 6, Table 3 of this Edition);
- Adjusted the chapter "Determination of noise increment when powered by inverter" and its content from the main text to informative Annex B (see Annex B of this Edition; Chapter 7 of Edition 2008).

This document is equivalent to IEC 60034-9:2021 "Rotating electrical machines - Part

9 Noise limits".

The following minimal editorial changes were made to this document.

- To coordinate with the existing standards, the name of the standard is changed to "Measurement of airborne noise emitted by rotating electrical machines and the noise limits - Part 3.Noise limits".

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The issuing authority shall not be held responsible for identifying any or all such patent rights.

This document was proposed by China Electrical Equipment Industry Association.

This document shall be under the jurisdiction of National Technical Committee on Rotating Electrical Machines of Standardization Administration of China (SAC/TC 26).

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Technology Co., Ltd., Zhejiang Jinlong Motor Co., Ltd., CRRC Zhuzhou Motor Co., Ltd., Harbin Electric Power Equipment Co., Ltd., Shandong Ou Rui'an Electric Co., Ltd., Wolong Electric Nanyang Explosion-proof Group Co., Ltd., Zhejiang Dakker Automotive Electronics Technology Co., Ltd., Shenyang University of Technology, Dalian Zhiding Technology Co., Ltd., Wuhan Feishi Motion Control System Co., Ltd., Wuhan Huanda Electronic Technology Co., Ltd., Zhejiang Jiuzhou New Energy Technology Co., Ltd., Ningbo Dongli Transmission Equipment Co., Ltd., Jiangxi Jiangte Motor Co., Ltd., Dalian Riqian Motor Co., Ltd., Siemens Motor (China) Co., Ltd., Anhui Wannan Motor Co., Ltd., Jiangsu Xianda Explosion-proof Co., Ltd., Jiangsu Yali Explosion-proof Motor Co., Ltd., Lanzhou Motor Co., Ltd., Xiangtan Motor Co., Ltd., Dongfang Electric Group Dongfang Motor Co., Ltd., Nanyang Weite Explosion-proof Motor Co., Ltd., Zhejiang Chaoshun Electromechanical Co., Ltd., Wuhan Autebi Motor Co., Ltd., Shanghai ABB Motor Co., Ltd., Jiangsu Kende Motor Co., Ltd., Shanghai Dianke Motor Technology Co., Ltd., Harbin Electric Group Advanced Motor Technology Co., Ltd., Zhejiang Xinli Electric Technology Co., Ltd.

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Versions of standard substituted by this document are.

- It was first published in 1981 as Chapter 32 of GB 755-1981;
- It was first revised in 1988 as GB 10069.3-1988, second revised in 2006;
- It was third revised in 2008 as GB/T 10069.3-2008;
- This is the fourth revision.

1 Scope

This document

- describes the test method for determining the sound power level of rotating electrical machines;

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3741, Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Precision methods for reverberation test rooms

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

The URLs of the terminology databases for standardization maintained by ISO and IEC are as follows.

4.5 If the test is conducted under rated load conditions, the specified method shall be

used first. Of course, other methods may be used when the load motor and attached devices are soundproofed or the load is placed outside the test environment.

5 Test conditions

The motor shall be rigidly mounted on a surface of adequate size for the motor type (e.g., feet and flanges as specified in the manufacturer's instructions). The motor shall not be subject to incorrect shim adjustment causing additional mounting stresses.

6 Sound power level limits

The sound power level of a rotating electrical machine measured under the conditions specified in Chapter 5 shall not exceed the following values.