

MT

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

MT/T 249-2019

**YBSD series flameproof mining type double speed
three-phases asynchronous motor
(English Translation)**

Issued on: December 29, 2018

Implemented on: July 1, 2019

Issued by: State Administration of Coal Mine Safety

Table of Contents

Foreword...	3
1 Scope...	5
2 Normative references...	5
3 Types and basic parameters...	6
4 Technical requirements...	7
5 Test methods...	14
6 Inspection rules...	16
7 Marking, packaging, transportation, storage...	18

Foreword

This standard was prepared in accordance with GB/T 1.1-2009 "Directives for standardization - Part 1. Structure and drafting of standards".

This standard is a revision of MT/T 249-1997 "Flameproof mining type double speed three-phase induction motors". It replaces MT/T 249-1997, from the date of implementation.

Compared with MT/T 249-1997, the main changes in the technical content of this standard are as follows.

- CHANGE the standard name into "YBSD series flameproof mining type double speed three-phases asynchronous motor"; SPECIFY the scope of application of the standard, as applicable to the scraper conveyor, belt conveyor, scraper loader for the underground working face of coal mine AND other similar machinery driving motors;
- EXPAND the power rating range of the electric motors to 1000/500 kW. ADD the power classes of 132/50 kW, 160/45 kW, 160/100 kW, 525/263 kW, 600/300 kW, 700/350 kW, 855/430 kW, 1000/500 kW (see 3.2.5; 3.1.8 of the 1997 edition);
- IMPROVE the degree of protection of the overall structure of the motor, from IP44 to IP54 (see 3.1.2; 3.1.1 of 1997 edition);

- The temperature-rise limit of the stator winding of the motor is no longer required to be degraded, according to the heat resistance level, BUT is changed to the requirements of Chapter 8 of GB 755-2008 (see 4.7; 4.8 of the 1997 edition);
- CANCEL the number of no-load reversible starting tests of the motor (4.9 of the

1997 edition);

- CHANGE the requirements for the installation dimension and fit tolerance of the motor to an informative appendix (see Appendix A; 3.1.9 ~ 3.1.15 of the 1997 edition).

This standard was proposed by China Coal Industry Association.

This standard shall be under the jurisdiction of the Technical Committee for Standardization of Coal Mine Special Equipment in the Coal Industry.

Drafting organizations of this standard. Fushun Coal Mine Motor Manufacturing Co., Ltd., China Coal Science and Industry Group Shanghai Co., Ltd., Tiandi Technology Co., Ltd. Shanghai Branch, Ningxia Northwest Junma Motor Manufacturing Co., Ltd., Henan Anyang Hua'an Coal Mine Motor Co., Ltd., Fenyi Hongda Coal Mine Motor Manufacturing Co., Ltd.

1 Scope

This standard specifies the type and basic parameters, technical requirements, test methods, inspection rules, marking, packaging, transportation, storage of YBSD series flameproof mining type double speed three-phases asynchronous motor (hereinafter referred to as motors).

This standard applies to the driving motors of scraper conveyors, belt conveyors, scraper loader, other similar machinery in coal mine underground working face.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) is

applicable to this standard.

GB/T 191 Packaging - Pictorial marking for handling of goods

GB 755 Rotating electrical machines - Rating and performance

GB/T 1032-2012 Test procedures for three-phase induction motors

GB/T 1993 Cooling methods for rotating electrical machines

GB/T 2423.4 Environmental testing for electric and electronic products - Part 2. Test method - Test Db. Damp heat, cyclic (12h + 12h cycle)

GB 3836.1-2010 Explosive atmospheres - Part 1. Equipment - General requirements

GB 3836.2-2010 Explosive atmospheres - Part 2. Equipment protection by flameproof enclosures "d"

GB 3836.3-2010 Explosive atmospheres - Part 3. Equipment protection by increased safety e

GB/T 4772.1 Dimensions and output series for rotating electrical machines - Part 1. Frame numbers 56 to 400 and flange numbers 55 to 1 080

GB/T 4942.1-2006 Degrees of protection provided by the integral design of rotating electrical machines (IP code) - Classification

GB 10068 Mechanical vibration of certain machines with shaft heights 56 mm and higher-measurement evaluation and limits of vibration severity

GB/T 10069.1 Measurement of airborne noise emitted by rotating electrical machines and the noise limits - Part 1. Method for the measurement of airborne noise emitted by rotating electrical machines

3.1.1 The motor shall be made of explosion-proof type for mining, according to the

provisions of GB 3836.1 and GB 3836.2. The explosion-proof mark is Ex d I Mb

[Translator. should be "Exd I Mb"].

3.1.2 The degree of protection of the overall structure of the motor shall comply with

IP54, which is specified in GB/T 4942.1-2006.

3.1.4 The installation dimension and tolerance of the motor shall be designed and

manufactured, according to the order agreement between the user and the manufacturer.

The deviation shall comply with the provisions of GB/T 4772.1 (refer to Appendix A).

3.2 Basic parameters

MT/T 249-2019

Sales@ChineseStandard.net

MT

COAL INDUSTRY STANDARD OF THE

PEOPLE'S REPUBLIC OF CHINA

Replacing MT/T 249-1997

YBSD series flameproof mining type double speed three-phases asynchronous motor

Issued on. DECEMBER 29, 2018

Implemented on. JULY 01, 2019

Issued by. State Administration of Coal Mine Safety

Table of Contents

Foreword... 3

7 Marking, packaging, transportation, storage... 18

Appendix A (Informative) Installation dimension and tolerance of YBSD series flameproof mining type double speed three-phases asynchronous motor... 21

Foreword

This standard was prepared in accordance with GB/T 1.1-2009 "Directives for standardization - Part 1. Structure and drafting of standards".

This standard is a revision of MT/T 249-1997 "Flameproof mining type double speed three-phase induction motors". It replaces MT/T 249-1997, from the date of implementation.

Compared with MT/T 249-1997, the main changes in the technical content of this