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

GB/T 13138-2020

Replacing GB/T 13138-2008

General specification for synchro

自整角机通用技术条件

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1:1-2009: This standard replaces GB/T 13138-2008 "General technical conditions for self-aligning machines", and the main technical changes compared with GB/T 13138-2008 Change as follows:

- The direction of rotation has been increased from the end view of the shaft extension (see 3:5, 4:6 in the:2008 edition);
- Added voltage vector diagram (see 3:6);
- The coaxiality of the installation mating surface and the verticality of the installation mating end surface are divided into two test items (see 4:6 and 4:7, :2008 edition 4:3:5 and 5:6:5);
- The terminal is divided into two parts: marking and strength (see 4:8 and 4:25, 4:4 and 5:7 in the:2008 edition);
- Deleted the excitation static friction torque test project (2008 version 4:8:2 and 5:10:2);
- Added the technical requirements and test methods of the ZKFW self-aligning machine (4:8, 4:9, 4:17, 4:18, 4:19, 4:24 and 4:30);
- Modified the insulation resistance value after the constant damp heat test (see 4:13:1, 4:10 of the:2008 edition);
- Added the static error dial reading test method (see 4:20:2:3);
- Deleted the circuit diagram of the calibration method (5:13 and 5:14 in the:2008 edition);
- Deleted the electrical error proportional voltage gradient method test method, and added the electrical error angle indicator method and spin simulator method test Method (see

4:18, 5:17 of the:2008 edition);

--- Electromagnetic interference is changed to electromagnetic compatibility (see 4:29, 4:24 and 5:26 of the:2008 edition);

--- Increased steady-state acceleration (see 4:32);

--- Increased low air pressure (see 4:34);

1 Scope

GB/T 13138-2020 is the Chinese national standard on general specification for synchro, in the field of electrical engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 14 December 2020 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 July 2021.

Classification: ICS 29.160.30, CCS K24. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the classification and basic parameters, technical requirements and test methods, inspection rules, delivery preparation and user services of the self-aligning machine: This standard is applicable to the design, manufacture, inspection and acceptance of 50Hz and 400Hz single-pole self-aligning angle machines:

2 Normative references

The following documents are indispensable for the application of this document: For dated reference documents, only the dated version applies to this article Pieces: For undated references, the latest version (including all amendments) applies to this document:

GB/T 2423:16-2008 Environmental testing of electric and electronic products Part 2: Test method Test J and guideline: Mould

GB/T 2828:1-2012 Sampling inspection procedures by attributes Part 1: Batch inspection sampling plan retrieved by acceptance quality limit (AQL)

GB/T 7345-2008 Basic technical requirements for control motors

GB/T 7346 Control motor basic shape and structure

GB/T 18211-2017 General safety requirements for micromotors

JB/T 8162 Control Motor Packaging Technical Conditions

3 Classification and basic parameters

1 Classification Refer to Appendix A for the classification of the self-aligning machine: 3:

2 Model naming Please refer to Appendix A for the model name of the self-aligning machine, which is stipulated by the product-specific technical conditions: 3:

3 Basic appearance structure and installation type The basic shape structure and installation type of the self-aligning machine should meet the requirements of GB/T 7346 or product-specific technical conditions: Frame size 20 adopts K1; frame sizes 28, 36 and 45 adopt K3; frame sizes 55 and 70 adopt K4; frame sizes above 70 are adopted Use K6 or K7 type; 55 and below frame size adopts the basic type of optical shaft extension; 70 frame size adopts a semicircular keyway shaft with a diameter of 8mm Extend to the basic type: 3:

4 Basic parameters Unless otherwise specified, the basic parameters of the self-aligning machine should be selected in Table 1: Table

1 Basic parameters Parameter name parameter value Frame size 20, 28, 36, 45, 55, 70, 90 Rated frequency/Hz 50, 400 Rated voltage 50Hz 36, 110, 220 400Hz 9, 12, 16, 20, 26, 36, 115