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Specification for model of rotating electrical motor

旋转电机产品型号编制方法

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Specification for model of rotating electrical motor

1 Scope

This standard stipulates the compilation method of models of rotating electrical motor.

This standard is applicable to the compilation of product models of various types of rotating electrical motors (except control motors).

2 Principles for the compilation of product models

2.1 The product model is a code that is quoted for ease of use, manufacturing, design and other departments to conduct business contacts and simplify the description of product names, specifications, types in technical documents. It shall be concise and non-repetitive.

2.2 The product model is composed of Chinese Pinyin letters, as well as international symbols and Arabic numerals.

The selection of Chinese Pinyin letters shall be based on the following principles:

- The Chinese characters that have representative meaning in the product name, take the first letter of its Pinyin;
- If the above letters cause duplicate models or cannot be adopted due to other difficulties, the first letter of the Pinyin of the other Chinese characters of the product name may be used;
- If there are difficulties, other letters can be used.

3 Compilation method of product model

3.1 The product model consists of 4 parts: product code, specification code, special environment code, supplementary code, which are arranged in the following order:

design serial number is not marked; for products derived from the basic series, the design serial number is marked according to the basic series; special series products are marked in the order of their own design.

3.2.4 The excitation mode codes are represented by the letter S for the 3rd harmonic excitation, J for the thyristor excitation, X for the phase complex excitation, W for the brushless excitation, which shall be marked after the design serial number. When it is not necessary to mark the design serial number, it is marked after the characteristic code and separated by a short horizontal line.

3.2.5 The main product codes of various types of motors as specified in Table 1 shall comply with the provisions of Appendix A.

3.3 The specification code of the motor is expressed by center height, core outer diameter, frame number, casing outer diameter, shaft extension diameter, flange code, frame length, core length, power, current level, speed or number of poles, etc.

The specification codes of the main series of products are as specified in Table 2. If other series products need to be expressed by other parameters than the above, they shall be described in the product standard.

The length of the frame is expressed by international letter symbols, S is the short frame, M is the medium frame, L is the long frame. The length of the core is indicated by the numbers 1, 2, 3... in the order from short to long. The flange code is expressed by the international letter symbol FF (with a through hole on the flange) or FT (with a screw hole on the flange) together with the value of the base circle diameter of the flange fixing hole.

Table 2 -- Specification codes of main series motors

No.	Series product	Specification code
1	Small asynchronous motor	Center height (mm) - Frame length (letter code) - Core length (number code) - Number of poles
2	Medium and large asynchronous motor	Center height (mm) - core length (digital code) - number of poles
3	Asynchronous generator	Center height (mm) - number of poles
4	Small synchronous motor	Center height (mm) - Frame length (letter code) - Core length (number code) - Number of poles
5	Large and medium synchronous motors	Center height (mm) - core length (number code) - Number of poles (Or) Power (kW) - Number of poles - Core outer diameter (mm)
6	Small DC motor	Center height (mm) - core length (numerical code)
7	Medium DC motor	Center height (mm) or frame number (digital code) - core length (numerical code) - current level (numerical code)

Appendix A

(Normative)

Product codes

The main product codes of various types of motors shall meet the requirements of Table A.1 ~ Table A.11.

Table A.1 -- Product code of asynchronous motor

No.	Product name	Product code	Code meaning of Chinese characters
1	Three-phase asynchronous motor	Y	Asynchronous [异]
2	Fractional horsepower three-phase asynchronous motor	YS	Asynchronous three-phase [异三]
3	Winding rotor three-phase asynchronous motor	YR	Asynchronous winding [异绕]
4	Vertical three-phase asynchronous motor (large and medium)		Asynchronous vertical three-phase [异立三]
5	Winding rotor vertical three-phase asynchronous motor (large and medium)	YRL	Asynchronous winding vertical [异绕立]
6	Large two-pole (fast) three-phase asynchronous motor	YK	Asynchronous (two-pole) [异(二)]
7	Large winding rotor two-pole (fast) three-phase asynchronous motor	YRK	Asynchronous winding (two-pole) [异绕(二)]
8	Resistance start single-phase asynchronous motor	YU	Asynchronous (resistance) [异(阻)]
9	Capacitor start single-phase asynchronous motor	YC	Asynchronous (capacitor) [异(容)]
10	Capacitor running single-phase asynchronous motor	YY	Asynchronous running [异运]
11	Dual-value capacitor single-phase asynchronous motor	YL	Asynchronous (dual-value) [异(双)]
12	Shielded pole single-phase asynchronous motor	YJ	Asynchronous shielded pole [异极]
13	Shielded pole single-phase asynchronous motor (square)	YJF	Asynchronous shielded pole square [异极方]
14	Three-phase asynchronous motor (high efficiency)	YX (YE2)	Asynchronous high efficiency [异效]
15	Three-phase asynchronous motor (ultra-high efficiency)	YE3	Asynchronous high efficiency [异效(超)]
16	Resistance start single-phase asynchronous motor (high efficiency)	YUX	Asynchronous (resistance) high efficiency [异(阻)效]
17	Capacitor start single-phase asynchronous motor (high efficiency)	YCX	Asynchronous (capacitor) high efficiency [异(容)效]
18	Capacitor running single-phase asynchronous motor (high efficiency)	YYX	Asynchronous running high efficiency [异运效]
19	Dual-value capacitor single-phase asynchronous motor (high efficiency)	Y LX	Asynchronous (dual-value) high efficiency [异(双)效]
20	Three-phase asynchronous motor (high starting torque)	YQ	Asynchronous starting [异起]
21	High slip rate (slip rate) three-phase asynchronous motor	YH	Asynchronous (slip) [异(滑)]
22	Multi-speed three-phase asynchronous motor	YD	Asynchronous (multi-speed) [异多]

10	Sine wave three-phase synchronous generator	TFX	Synchronous generator sine [同发弦]
11	Three-phase synchronous generator for test	TFS	Synchronous generator test [同发试]
12	AC exciter	TFL	Synchronous generator exciter [同发励]

Table A.4 -- Product code of DC motor

No.	Product name	Product code	Code meaning of Chinese characters
1	DC motor	Z	DC [直]
2	High-speed (fast) DC motor	ZK	DC (fast) [直(快)]
3	Amplitude voltage DC motor	ZYF	DC voltage amplitude [直压幅]
4	Permanent magnet DC motor (aluminum nickel cobalt)	ZY	DC permanent [直永]
5	Permanent magnet DC motor (ferrite)	ZYT	DC permanent ferrite [直永铁]
6	Stable speed permanent magnet DC motor (aluminum nickel cobalt)	ZYW	DC permanent stable speed [直永稳]
7	Stable speed permanent magnet DC motor (ferrite)	ZTW	DC ferrite stable speed [直铁稳]
8	Slot-less DC motor	ZW	DC slot-less [直无]
9	Wide speed-regulating DC motor	ZT	DC speed-regulating [直调]
10	Separately excited DC motor	ZLT	DC excited separately [直励他]
11	Parallel excitation DC motor	ZLB	DC excitation parallel [直励并]
12	Series excitation DC motor	ZLC	DC excitation series [直励串]
13	Compound excitation DC motor	ZLF	DC excitation compound [直励复]
14	DC motor without commutator	ZWH	DC without commutator [直无换]
15	Hollow cup DC motor	ZX	DC hollow [直心]
16	Printed winding DC motor	ZN	DC (printed) [直(印)]
17	Reducer permanent magnet DC motor	ZYJ	DC permanent reducer [直永减]
18	Permanent magnet DC motor for petroleum well	ZYY	DC permanent petroleum [直永油]
19	Static rectifier power supply DC motor	ZJZ	DC static rectifier [直静整]
20	DC motor for precision machine tools	ZJ	DC precision [直精]
21	DC motor for elevator	ZTD	DC elevator motor [直梯电]
22	DC motor gantry planing	ZU	DC (planing) [直(刨)]
23	DC motor for air compressor	ZKY	DC air compressor [直空压]
24	DC motor for excavator	ZWJ	DC excavator [直挖掘]
25	DC motor for mine hoist	ZKJ	DC mine hoist [直矿卷]
26	DC motor for roller bed	ZG	DC roller [直辊]
27	DC motor for main drive of rolling mill	ZZ	DC rolling [直轧]
28	DC motor for auxiliary drive of rolling mill	ZZF	DC rolling auxiliary [直轧辅]
29	DC motor for lifting of electric shovel	ZDC	DC electric shovel [直电铲]
30	DC motor for metallurgical lifting	ZZJ	DC lifting metallurgical [直重金]
31	Axial-flow DC fan	ZZT	DC axial fan [直轴通]
32	Positive pressure DC motor	ZDZY	DC motor positive pressure [直动正压]
33	Increased safety DC motor	ZA	DC safety [直安]
34	Flameproof DC motor	ZB	DC flameproof [直爆]
35	DC motor with air-air cooler	ZKKL	DC air-air cooler [直空空冷]

1	Hydrogenerator	SF	Hydrogenerator [水发]
2	Horizontal hydrogenerator	SFW	Hydrogenerator horizontal [水发卧]
3	Horizontal hydrogenerator (with tubular turbine)	SFWG	Hydrogenerator tubular horizontal [水发卧贯]
4	Water-cooled hydrogenerator	SFS	Hydrogenerator water [水发水]
5	Water-cooled horizontal hydrogenerator	SFSW	Hydrogenerator water horizontal [水发水卧]
6	Hydrogenerator-motor	SFD	Hydrogenerator motor [水发动]

Table A.8 -- Code of dynamometer

No.	Product name	Product code	Code meaning of Chinese characters
1	DC dynamometer	CZ	Dynamometer DC [测直]
2	Eddy current dynamometer	CW	Dynamometer eddy current [测涡]

Table A.9 -- Code of AC commutator motor

No.	Product name	Product code	Code meaning of Chinese characters
1	Series excitation single-phase motor	HC	Commutator series [换串]
2	AC and DC dual-use series excitation motor	HL	Commutator dual [换两]
3	Stable speed AC/DC dual-use series excitation motor	HLW	Commutator dual stable [换两稳]
4	AC and DC dual-use motor dedicated for circuit breaker	HDZ	Commutator breaker dedicated [换断专]
5	Motor for household sewing machine	HF	Commutator sewing [换缝]
6	Hand-held vacuum cleaner high-speed series excitation motor	HCX	Commutator series excitation [换串励]
7	Horizontal vacuum cleaner series excitation motor	HWX	Commutator horizontal cleaner [换卧吸]
8	Vertical vacuum cleaner series excitation motor	HLX	Commutator vertical cleaner [换立吸]
9	Series excitation motor for floor polisher	HCD	Commutator series floor [换串地]
10	Series excitation motor for drum-type washing machine	HXG	Commutator washing drum [换洗滚]

Table A.10 -- Code of submersible electric pump (coaxial)

No.	Product name	Product code	Code meaning of Chinese characters
1	Mechanical seal type submersible asynchronous electric pump (upper pump)	Q	Submersible [潜]
2	Mechanical seal type submersible asynchronous electric pump (lower pump)	QX	Submersible lower [潜下]
3	Oil-filled submersible asynchronous electric pump (upper pump)	QY	Submersible oil [潜油]
4	Oil-filled submersible asynchronous electric pump (lower pump)	QYX	Submersible oil lower [潜油下]
5	Oil-filled high-pressure submersible asynchronous electric pump (upper pump)	QYG	Submersible oil high [潜油高]
6	Oil-filled high-pressure submersible asynchronous electric pump (lower pump)	QYGX	Submersible oil high lower [潜油高下]

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