

YE3 系列三相异步电动机  
THREE-PHASE ASYNCHRONOUS MOTOR

# 产 品 说 明 书 INSTRUCTIONS

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## 1 概述 General

YE3 系列电动机为一般用途，全封闭鼠笼式，自扇冷式超高效率三相异步电动机。

Series YE3 motor is a totally enclosed, fan-cooled high-efficiency induction motor for general purpose.

YE3 系列电动机机座号 H80-355，额定功率 0.55-355kW，防护等级：IP55。

Series YE3 motor Frame 80~355, rating power 0.55-355kW, Protection class IP55.

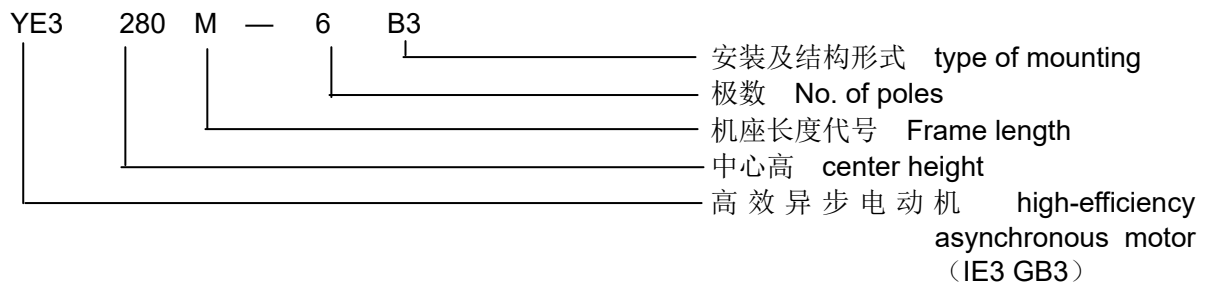
本系列电机符合 GB18613-2020 《中小型三相异步电动机能效限定值及能效等级》标准，能效等级为 3 级，具体规格的能耗指标参见铭牌。

YE3 series motors comply with GB18613-2020 《Minimum allowable values of energy efficiency and the energy efficiency grades for small and medium three-phase asynchronous motors》. Energy efficiency grade of the motors are class 3, and the value of energy efficiency are shown on rating plate.

YE3 系列电动机可用于拖动转速及其它性能无特殊要求的机械，如：金属切削机床、水泵、鼓风机、矿山机械、农业机械等。由于电动机有较好的起动性能，也适用于需要较高起动转矩的机械，如：压缩机、搅拌机、粉碎机等。

Series YE3 motor is suitable for driving machines which have no special requirement, such as machine tools, pumps, blowers, mining machines, agricultural machines etc. As the series of motor has better starting characteristics, it is also suitable for machines which need higher starting torque as compressors, mixers, muller etc.

## 2 型号含义 Motor type designation



## 3 技术条件 Technical condition

- (1) 额定电压：200~690V 伏， Rated voltage: 200~690V.
- (2) 额定频率：50Hz、60Hz， Rated frequency: 50Hz、60Hz.
- (3) 工作方式：连续 S1， Rating: S1 (continuous).
- (4) 接法：△或 Y， connection: △ or Y.
- (5) 绝缘等级：F 等级， Insulation class: F class .

说明：(1) ~ (5) 具体数据见电机铭牌，

Note: The details of (1) ~ (5) are on the name plate.

- (6) 工作条件：环境温度不超过 +40℃，海拔不超过 1000 米，

Ambient temperature: not exceeding 40℃. Altitude above sea level: not be over 1,000 meters.

#### 4 结构型式 Configuration type

有三种基本结构形式：

B3 型 — 机座带底脚，端盖无凸的结构形式。

B5 型 — 机座不带底脚，端盖上带大于机座的凸缘的结构型式。

B35 型 — 机座带底脚，端盖上带大于机座的凸缘的结构型式。

There are three basic configuration type arrangements for series YE3 motor:

B3: Have frame feet but no flange.

B5: Have flange but no frame feet.

B35: Have frame feet and flange on end shield.

#### 5 安装前的准备 Preparation of installation

5.1 电动机开箱前应检查包装是否完整无损，有无受潮迹象，电动机开箱后应细心清除电机上的尘土及轴伸等处的防锈涂层。

Before unpacking, check up to ensure that the package is not damaged. After unpacking, remove dust from the motor surface and rust-preventive coating from shaft extension end.

5.2 核对电动机的铭牌数据，必须符合要求。

Check, Whether the data on the nameplate are correct.

5.3 仔细检查电动机在运输过程中有无变形或损坏，紧固件有无松动或脱落，用手转动转子，不应有定、转子相擦等现象。

Check, if there is any damage or deformation during transportation. The fasteners should all be fixed. The rotor should not rub against the stator, when it is turned by hand.

5.4 用 500 伏兆欧表测量绝缘电阻，其值不应低于 10 兆欧，否则应对定子绕组进行干燥处理，干燥处理温度不超过 120℃。

Check winding insulation resistance with 500 volts ohmmeter, The measured value should not be lower than 10MΩ, otherwise the stator winding has to be dried with temperature lower than 120℃.

#### 6 安装 Installation

6.1 电动机允许用联轴器，正齿轮及皮带轮转动。但对 4 千瓦以上的 2 极电动机和 30 千瓦以上的 4 极电动机不宜采用皮带转动，如选用小皮带轮，可扩大三角皮带的传动范围，双轴伸电动机的风扇端，仅允许用联轴器传动。

Motor can be transmitted through coupling, reduction gear or belt. But it is not suitable for transmitted through belt of motors above 4kW and 2 pole, above 30 kW and 4 pole. The transmission range of V- belt may be enlarged with using a small belt pulley. It is allowed to use coupling only for fan side if the second shaft extension motor.

6.2 采用皮带传动时，电机轴中心线与负载轴中心线平行，且要求皮带中心线与轴中心线垂直，采用联轴器传动时，电机轴中心线与负载轴中心线重合。

With belt drive, the centre line of the motor shaft should be paralleled with centre line of the load shaft, centre line of the belt should be perpendicular to the centre line of the shaft. With coupling drive, the centre line of the motor should coincide with centre line of the load shaft.

6.3 对立式安装电机轴伸除皮带轮或相当于皮带轮负荷外，不允许带其它任何轴向负荷装置。

For vertical installed motor, other axial load is not allowed to shaft extension except for belt ( or its equivalent ).

7 运行 Operation

7.1 电动机应妥善接地，接线盒内有接地装置。

The motor should be grounded properly. The terminal box should have grounding mark.

7.2 电动机接线盒内接线板上有 6 个接线柱对应机内绕组引出线，接电源线对应相序，具体标记如下：

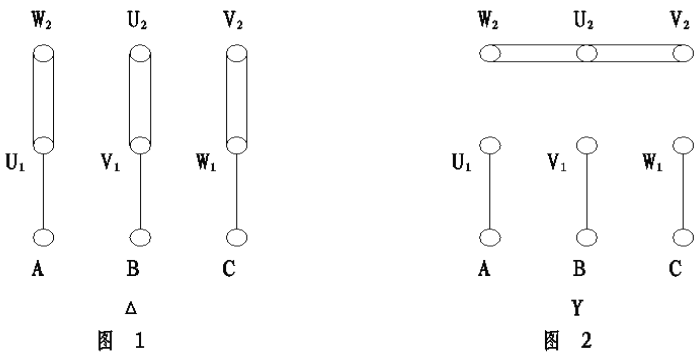
There are six terminals on the terminal board , The identifications are as follows:

表 1

相序 Phase sequence	A	B	C
头 Head of phase winding	U1	V1	W1
尾 Tail of phase winding	U2	V2	W2

7.3 按电动机铭牌规定接法, 接成△或 Y。按图中相序接线时，从轴伸端视之，电动机的转向为顺时针，任意调换三相电源中两相的相序，电动机则反之旋转。

According to the nameplate, the connection of stator winding should be delta or star. When phase sequence A.B.C of the power supply is accord with winding sequence U1,V1,W1, motor rotate direction is C. W. as viewed from the shaft extension end. With any of the two phase of the power line changed, the motor rotates in the opposition direction.



7.4 电动机使用时应有热保护装置，并应根据电动机铭牌电流调整保护装置的额定值。

The motor should has an overheat protecting device and a short-circuit protection device. According to the current given by the name -plate, reset the relays for protecting device.

8 维护 Maintenance

8.1 电机应安装在干燥的环境中，并保持表面清洁, 电机周围良好的通风。

Motors should be installed where atmosphere is relatively clean, dry , well ventilated.

8.2 当电动机的热保护及短路保护连续发生动作时，应判别故障来自电动机，还是超负荷，或是保护装置整定值太低。清除故障后，才可继续运行。

If the overheat protecting device or short circuit protecting device comes to function continually , judgement must be made to determine whether the motor is over- loaded or the protecting value is set too low. Only after the trouble are eliminated. The motor is allowed to resume operation.

8.3 应保证电动机在运行过程中轴承有良好的润滑，一般运行 3000 小时左右。即应补充或更换润滑脂。运行中若发现轴承过热或润滑脂变质时应及时更换润滑脂，更换润滑脂时，应清除旧的润滑脂，并用汽油洗净轴承盖的油槽，然后将润滑脂填充轴承内外圈之间空腔 1/2（对 2 极）或 2/3（对 4、6、8 极）。

Correct lubrication must be maintained during operation Normally, bearing grease should be replace or replenish every 3000 hours of operation ( For totally enclosed bearings, no lube change is necessary during their life span). Bearing grease should be replaced when its lubricant deteriorates or when excessive heat of bearing occurs. Before fresh grease is use, bearing and oil slot of bearing cover should be removed the dirty grease and cleaned with gasoline, then filled with lubricant ,grease up to a half volume ( for 2 pole motors) or 2/3 volume ( for 4, 6 and 8 pole motors ) of the bearing inner space.

8.4 当轴承寿命终了时，电动机运行的振动及噪声将明显增大，检查轴承的径向游隙如达到下列数值时即应更换轴承。

When the bearing is worn out. The motor vibration and noise will go up noticeably. Inspect bearing radial play, replace the bearing If the play has reached the following values:

Bearing I.D 轴承内径(mm)	20-30	35-50	55-80	85-120
Max. Play allowed 极限磨损游隙(mm)	0.10	0.15	0.20	0.30

8.5 拆卸电动机时从轴伸端或非轴伸端取出转子都可以，如果没有必要卸下风扇还是从非轴伸端取转子较为便利。从定子中抽出转子时，应防止损坏定子绕组或绝缘。

When dismantle the motor to draw-out the rotor, it can be draw-out from either side of the motor frame usually. It is more convenient to draw out the rotor from fan side. Carefully handling is imperative in order not to damage the stator winding.

8.6 更换绕组时必须记下原绕组的形式、尺寸及匝数、线规等，当失落这此数据时应向制造厂家索取，如随意更改原设计绕组数据，常会使电动机的性能恶化，甚至无法使用。

When replacing motor winding, correct data of winding turns, wire gauges, coil types must be recorded. In case these data are not available of cost, consult, deviation from design data will cause poor performance or completely unworkable.

**9 运输与贮存   Storage and Transportation**

9.1 电动机在运输过程中，应防止电动机倾斜、倒置、碰撞、雨淋。

Avoid any tilt or up side down during storage and transportation.

9.2 电动机应贮存在清洁、干燥、无酸或其它腐蚀性气体的库房内，避免周围环境温度急剧变化。

The motor must be in a dry space where no sudden change of air temperature.

9.3 电动机贮存时不宜堆积太高，以免损坏下层电动机的包装。

Do not stack too high to damage the packages underneath.

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The company product service by after service room answer.

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