南华® WNM® 皖南电机®

皖南电机

YGP 系列辊道用变频调速三相异步电动机

YGP Series Inverter and Vector Motor For Roller Table

使 用 说 明 书

Operation Manual

安徽皖南电机股份有限公司
Anhui Wannan Electric Machine Co.,Ltd

衷心感谢您选购、使用皖南电机。

在使用电动机之前，请扫码仔细阅读本说明书，以便您正确的使用和维护。

警告！搬运电动机时，应小心谨慎，强烈的摔、碰、震会严重损坏轴承。吊运时一定要将电动机吊攀旋紧后方可吊运。

一、产品概述

1、产品特点

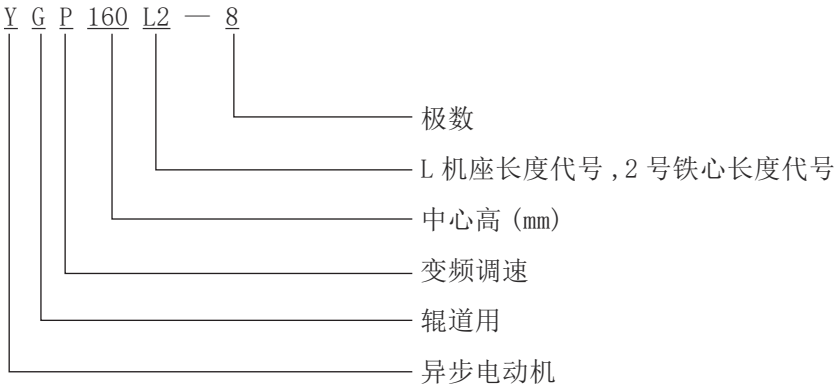
YGP 系列辊道用变频调速三相异步电动机是在 YG 系列三相异步电动机的基础上，扩大变频调速范围。

该电机具有过载能力大、机械强度高，调速范围广、运行稳定等优点。

2、主要用途及适用范围

适用于冶金行业特别是冶金行业中辊道设备在变频控制条件下，电动机既适合于 S1 连续工作制运行的输送辊道棍子，也特别适合于短时或断续周期运行、频繁起动、制动和正、反转运行的工作辊道辊子。

3、型号含义



二、结构与技术特性

1、YGP 系列辊道用变频调速三相异步电动机采用全封闭结构型式，外壳防护等级为 IP54，机壳表面有环形散热筋，冷却方法为 IC410。

2、电动机采用 F 级或 H 级绝缘，F 级绝缘电动机适用于环境空气温度不超过 40℃场所，H 级绝缘电动机适用于环境空气温度不超过 60℃的场所。

3、电动机接线采用 Y 形连结，根据用户需要也可以制成△接法。

4、电动机适用于各种类型工作制，用于断续工作制时，其基准工作制为 S5 60%，起动次数为 300 次 /h（既工作制为 S5，基准负载持续率为 60%，起动次数 300 次 /h）。电动机用于连续工作制时，其温升是在额定频率与电压下，按 S1 工作制时的功率考核。

5、电动机铸件材质采用 HT250，加强了机械强度。

6、电动机的安装型式有 IMB3、IMB5 和 IMB35 三种。

三、检　查

1、仔细检查电动机外观是否损伤，核对电动机铭牌数据，如型号、额定功率、电压、频率等与实际要求是否相符。

2、轻轻转动电机转轴，转动应轻快、灵活（注：装有骨架式橡胶油封的 IP55 电动机，转动时，相对较紧）。

3、检查零部件的装配应良好，紧固件应无松动。

4、打开接线盒，用 500V 兆欧表测量电动机绕组的绝缘电阻，所测值应不低于 5 兆欧。

注意：检查过程中，若有疑问，应向专业技术人员请教或与我们联系。

四、安　装

电动机的安装应由技术人员来完成，对带底脚的电动机，安装平面应坚固，并保证底脚在一个平面上。如果底脚要加垫片，应保证在电动机底脚安装紧固过程中不被挤出。电动机允许采用联轴器、正齿轮及皮带轮传动。

联接电动机的电源线不宜过细、过长（否则，电源线压降过大，使电动机起动困难）。按接线图，将电源线与电动机牢固联接，同时接好接地线，在接通电源前，还应测量输入电压是否正确，然后接通电源，检查旋转转速，旋转方向是否正确。

警告！

1. 电源电压的波动不得超过额定电压的 95% ~ 105%。
2. 严格按图接线。
3. 必须接好接地线。
4. 在通电前应取下轴伸上的轴套和平键，保持身体、衣物远离电动机运转部分。
5. 空载运行足够长的时间（一般在 30 ~ 40 分钟），以确保不会产生异常情况。

五、运行与维护

1、电动机使用的环境最高温度为 40℃，最低温度为 -15℃，海拔不超过 1000m。

2、电动机额定频率下为恒转矩调速，额定频率以上为恒功率调速，适用于 V/F 控制及矢量控制等控制方式。

3、电动机不得用于含有易燃性气体、化学腐蚀性气体或其它有害气体的环境中（特殊环境用电动机除外）。

4、电动机必须保持清洁，应定期进行清理。

5、电动机在运行中若发现异常，如怪声、过热、焦味或轴承发热等，应立即停机检查，待故障排除后方可使用。

6、电动机在运行过程中应保证润滑良好，一般在电机运行 5000 小时左右，即应更换润滑脂（封闭轴承在使用寿命期内不必更换润滑脂）。在运行中若发现轴承过热时，应停机检查轴承润滑脂是否太多。油脂添加量以加到轴承容腔的 1/3~1/2 左右为宜。润滑脂推荐采用 2# 锂基润滑脂小型电动机

专用润滑脂。

7、为保证电动机的正常运行，应根据实际使用情况对电动机进行定期检查，并需每年检修一次。

8、电动机在仓库中搁置不用时，应妥善包装、存放，并保持通风干燥，以免电机受潮，锈蚀。

注意：不要在电动机开机状态添加润滑脂。过多的润滑脂会溢出，并可能附着到定子绕组上，使其绝缘寿命降低，同时使轴承工作温度升高（轴承工作温度不超过 90℃）。

警告！

1. 严禁缺相运行。
2. 反复多次起动会导致电机过热，甚至烧毁电机（特别是连续带负载直接起动）。
3. 防止过载，过载会导致过热，过热将缩短绝缘寿命，降低电动机的可靠性。

在用户按照本使用说明书的规定，正确地使用与存放电动机的情况下，本公司保证电动机在使用的一年内，或自本公司起运的日期不超过二年的时间内能良好运行。对于人为因素或偶然事故性的故障本公司不负责免费维修。

We are truly grateful for your purchasing of Wannan Motors. Before using the motor, please scan the QR code to read the manual so as to use and maintain the motor in a right way.

Warning! Be careful when carry the motor, otherwise strong falling, impact or vibration will cause the bearing severe damaged. Fasten onto the lifting hook tightly as the motor is moved by the crane.

I. Summary

1.1 Product feature

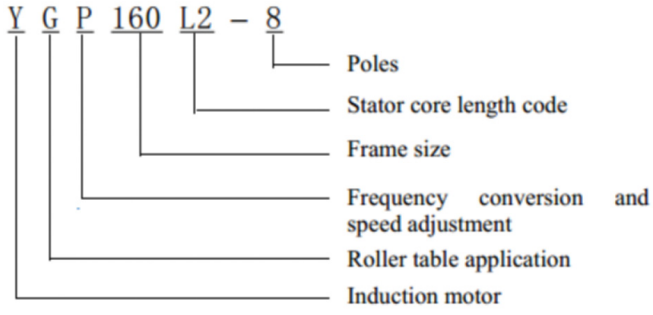
YGP series inverter and vector roll table motor which was upgraded from YG series motors by the technology of frequency conversion and speed adjustment..

With excellent overload capacity, high mechanical strength, wide speed adjustment range and reliable operation, the series motors is ideal for working for driving roller table or other machines in continuous or intermittent duty.

1.2 Main application and use scope

YGP series motors are widely used for metallurgical equipment, especially the one under the frequency conversion control. The motors are ideal for driving live-roller in continuous duty cycle(S1) or driving mill table which features in intermittent/periodic duty cycle, frequent start and brake, positive and negative rotary..

1.3 Designation



II. Structure and technology features

2.1 With totally enclosed casing, YGP series inverter and vector roller table motor is IP54 grade. With annular radiating rib on the surface of frame, the cooling method of the series motor is IC410.

2.2 The series motor is of F (applied where max ambient temperature is 40℃) or H (applied where max ambient temperature is 60℃) insulation.

2.3 Motor adopts Y connection as standard, and can be designed as △ connection if customer needs.

2.4 Motor is suitable for various operation duty mode. When working in intermittent duty cycle,

benchmark being S5 60%, start times 3000/h (that is S5 duty, load duration cycles (Fc) 60%, start times 3000/h); when working in continuous duty cycle, motor temperature is tested under the condition of rated frequency and voltage, S1 operation in rated power

2.5 To strengthen mechanical strength, motor adopt HT250 casting material.

2.6 The motors are designed as 3 installation types: IMB3、IMB5 and IMB35

III. Check

3.1 Check the appearance of the motor to see if there is outer damage or not and check nameplate data like model, rated voltage, frequency etc. to see whether all is conform to actual requirement.

3.2 Rotate the motor shaft by hands to see whether the rotation is flexible and smooth (Tip: The IP55 motors with frame style rubber oil seal rotate a little harder.)

actual requirement.

3.3 Ensure that all parts in the motor are tightly and in good assembling.

3.4 Remove the terminal box cover, and measure the insulation resistance of the motor winding with 500V Meg-ohmmeter. The value should be not less than 5MΩ.

IV. Installation

4.1 The motor should be installed by technicians. For the motor with feet, all feet should be fixed to sound and flat plane. If spacer must be added to the feet, these spacers should be guaranteed not to be forced out during the installation. Coupling, gear, belt pulley can be used for transmission.

4.2 Power wires should be neither too thin nor too long (otherwise it will cause large voltage drop and thus increase difficulty on motor start.) Connect the power wire and motor strictly in accordance with wiring diagram, and ensure that grounding line is also connected. Before power on, input voltage should be measured and checked, and then switch the motor on to inspect the rotating speed, rotating direction.

Warning!

1. Supply voltage fluctuation should not go beyond the range 95% ~105% of the rated voltage.
2. Connect the wires strictly in accordance with diagram.
3. Ground wire must be connected.
4. Take the shaft sleeve and flat keys away from shaft extension before power on, and keep the person and clothes far from rotation part.
5. Make the motor no-load running for sufficient time (usually 30~40 minutes).

V. Operation and maintenance

5.1 The highest ambient temperature for application is 40℃ , the lowest is -15℃ ,altitude exceeds not 1000m above sea level.

5.2 Under rated frequency, the motor speed is adjusted with constant torque; above rated frequency the speed is adjusted with constant power. V/F control and vector control are available.

5.3 Motor can not be used in the circumstance where contains inflammable gas, corrosive gas and other harmful gases (except for the special-purpose motor).

5.4. Keep the motor clean and in good ventilation.

5.5 Stop the motor immediately if the abnormal problems occur like strange sounds, overheat, burning smell or bearing overheating. Restart the motor till all the problems have been solved.

5.6 To ensure lubrication grease shall be replaced every 5000-hour running (Grease need not to be changed in the life cycle of sealing bearing) If bearing is found to be overheating, motor should be stopped immediately to see whether there is too much grease in it. It's proper to fill 1/3~1/2 capacity of the bearing chamber with lubrication grease. No.2 Lithium-base lubricating grease is recommended

7. Motor should to be inspected regularly according to its actual condition, overhaul at least once a year.

8. When the motor need to be laid-out, it must be properly packed and stored. Keep good ventilation and dry to avoid dampness and corrosion.

Note: Don't add grease during operation, since excessive grease will spill over to stator winding and shorten the life of insulation, at the same time will raise bearing temperature (bearing working temperature should be no higher than 90℃ when the ambient temperature is under 40℃).

Warning!

1. Non-full phase operation is prohibited.
2. Repeated starting may result in motor overheat or even burn the motor(especially direct start with load)
3. Prevent overload. Overload may cause overheat, and overheat may shorten its insulation life cycle and reduce its reliability.

敬告用户：

请您按照本使用说明书的规定，正确地使用和储存电动机，我们将为您提供优质、快捷的服务。

在电动机使用过程中，您如有什么疑惑请与我们联系，我们将及时给予您满意的解答；您有什么良好的建议请向我们提出，以便我们改进，为您提供优质、快捷的服务。

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Dear user,

Please use and store the motor right following the instruction of the manual. We will make our effort to provide you with high-quality and prompt service. Contact us if you had any questions in application, and we will offer you timely and effective resolution; let us know if you had any advices or suggestions, with which we can improve ourselves and make service better. Anhui Wannan Motor Co., Ltd. reserves the right of final interpretation of the user manual. No copy, disclosing or using of the content of this user manual to third parties prior to written permission from Anhui Wannan Motor Co., Ltd.

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