AC
GEAR MOTOR

交流减速电机

Select type
of Product
manuals
2023

匠心制造 · 专注 · 用心

安全注意事项
SAFETY CAUTIONS

●总体 General

●请不要在齿轮箱及电机铭牌或产品目录的规格以外使用,以免触电,受伤及损坏装置等。●请不要把手指或物品进入齿轮或电机开口部分,以免触电、受伤、发生火灾及损坏装置等。●请不要使用带伤的齿轮箱或电机,以免有可能受伤,发生火灾等。●请不要拆下铭牌。●若客户对产品私自进行改造的,不属于保修范围,本公司不承担任何责任。

● Please don t use motor out of the range which is clarified in of nameplate of gear box and motor and the specification of product catalogue, avoidinggetting an electric shock, hurting or damaging the device. ● Please do net put your fingers into the opening part of gear of motor, in order to prevent getting an electric shock, hurting catching a fire or damagingdevice etc. ● Please do not use the injured gear head or motor, in order to prevent hurting, catching a fire etc. ● Please do not put off the nameplate. ● If the products are reformed by the customers personally, it no belongs to the guarantee scope, and our company doesn ' t undertake any responsibility.

●搬动 Moving

搬动时,若发生脱落或倾倒,是很危险的,请充分注意。

When you move it, if it shed off or tit to one side it is very dangerous, please pay more attention.

●安装 Assembly

●请绝对不要在齿轮箱和电机周围放置可燃物,以免发生火灾。●请不要在电机周围放置物品,影响电机通风、冷却,甚至因异常多热而烫伤或发生火灾。●裸手请不要触碰齿轮及电机齿轮部的键槽,以免受伤。●在食品机械等可能发生漏油的装置中,请在安装部分另加一个能盛油的油杯,防止万一漏油对产品有不良的影响。

● Please never put the flammable thing near and motor, for fear of a fire. ● Please do put the things around motor, otherwise it can effect ventilation and cooling even burning or catching a fire because of too hot. ● Please do not touch the gear, the motor shaft and the key slot of the gear with naked hand or you may be hurt. ● The device may creating the smoke, such as food machine, please add an oil cup assembly part, to prevent leaking oil which may have a badeffect.

●对主机械的连接 Assemble to themain machine

●在旋转部分,请设安全罩等,防止受伤。●在与对方机械连接前,请确认旋转方向。若旋转方向不正确,有可能受伤或破坏装置。

● Please set a safe cover above the revolving part, to prevent being hurt. ● Before linking to the other machine, please confirm the revolving direction is not right, it may hurt the gear motor or destroy the device.

●配线 Wiring

●在测试绝缘电阻时,请不要接触端子,以免触电危险。

● Please don't get in touch with terminal, when you measure insure insulated resistance, preventing danger of getting an electric shock.

●运转 Operation

●请按照接线图或使用说明书实施与电源的连接,以免触电或发生火灾。(无接线盒的, 请确实加强连接部分的绝缘)。●对电源电缆和电机引线请不要过分弯曲、拉伸、夹紧,以免触电危险。●接地端子应牢固接地,以免触电危险。务必使用符合铭牌要求的电源,以免烧毁电机、发生火灾。

● Please link with the electric source according to wire diagram and usage manual, in order to prevent getting an electric shock or catching a fire. (No terminal box, please strengthen the insulation of the connection part surely). ● Referring to the electrical source cable and the motor wire, please do not bend, stretch, and clip tightly excessively, in order to prevent getting anelectric shock. ● The terminal box connecting to the ground must be firm, in order to prevent getting an electric shock. Please adopt the electrical source accordingto the nameplate, to avoid burning the motor and catching a fire.

●日常检查保养 The daily checkand maintain

●在运转中,绝对不要接近或接触旋转物体(轴等)。有卷入受伤时,请马上切断电源开关,及时处理。●停电时,请务必切断电源开关,防止来电后伤人或破坏装置。●请注意:带有热保护的电机,当电机温度异常时会自动切断电源,当电机温度下降到一定值时,电机会自动恢复工作。(注:电机在没有烧坏的情况下,会自动复原)

● When operating, do not get close to or touch the revolving parts(shaft). If something or somebody engulfs or hurts, Please turn off the electricalpower switch right and handle at once. ● Please turn off the electrical source switch when electricity stops, in order to prevent hurting the person and damaging the device. ● Please note, motor with the thermal protector, when temperature of the motor is unusual, it will turn off the electrical source automatically, when the temperature of the motor fal down to a fixed data, the motor can work automatically(Note: when the motor is not burned-not the motor can work automatically)

●在平常时,保持电机在正常的工作环境工作运转。(特殊型号除外)●检查时,请绝对不要接触旋转物体(轴等)。有可能被卷入、受伤。

● In daily you should keep the motor operating in the normal work environment. (Except the special model) ● While checking, please do not get close to or touch the revolving parts (shaft). Something or somebody may engulf of hurt.

●接受货物时检查 Receiving confirm

●请确认现货是否和订货一样。选择错误的产品,有可能导致电机受损或破坏装置等。

● Please confirm if it is the right one with the order when receiving Choosing wrong probably leads to damage of motor of damage the device and etc.

故障排除
TROUBLE SHOOTING

● 减速机故障排除 Trouble shooting for Reducer

不良原因 Defect cause		原因分析 Cause analysis	解决方案 Troubleshooting
噪音 Noise	Gear knocking	齿轮表面受伤 Gear surface damaged	更换受伤齿轮组 Replace damaged gear group
	Continuous noise	轴承损坏 Bearing damaged	更换损坏轴承 Replace damaged bearing(s)
	Aging noise	异物附着齿轮 Foreign matter attached to gear surface	检查齿轮齿面 Check on the gear surface
	Hissing	油量不足 Insufficient oil	添加润滑油 Add lubricating oil
	Subsequent noise	润滑油不洁 Unclean lubricating oil	更新新润滑油 Replace with new lubricating oil
不正常运转 Vibration	Fixed base vibration	安装平面歪斜 Deflection of installation plane	重新调整固定底座 Re-adjust fixed base
	Output shaft vibration	轴承损坏 Bearing damaged	更换损坏轴承 Replace damaged bearing(s)
	Internal gear part vibration	齿轮受伤 Gear damaged	更换受伤轴承 Replac damaged gear
	Body vibration	齿轮组安装不良 The installation of gear group is out of condition	重新调整齿轮组 Re-adjuse gear group
漏油 Oil leakage	Oil seal leakage	油封损坏 The oil seal is damaged	更换损坏油封 Replace damaged oil seal
	Body leakage	箱体有砂孔 There is sand hole in zhe body	更换箱体 Replace the body with sand hole
	Joint surface leakage	O-型环损坏 O-ring damaged	更换损坏O-型环 Replace damagedO-ring
过热 Overheating	Oil seal	油封太紧 Over-tightened oil seal	更换太紧油封 Replace the over-tightened oil seal
	Overheated body	过负载 Over-loaded	重新计算负载马力 Re-calculate the load horsepower
	Lack of lubricating oil	油量不足 Insufficient oil	加入润滑油 Add Inbricating oil
	备注：马达国标温升80℃		

● 直流刹车器故障排除 Trouble shooting for DC Brake

不良原因 Defect cause	原因分析 Cause analysis	解决方案 Troubleshooting
刹车器不动作或刹车不良 Brakes don't work or work poorly	未供电源 The power is not supplied	供应电源 Supply the power
	摩擦片磨损 The lining is worn out	换新摩擦片 Replace with new lining
	电源电压不足或电压错 Insufficient power voltage	提供正确电压 Supply proper voltage
	电源供应器损坏 Power supplier damaged	电源供应器换新 Replace with new power supplier
	异物入侵 Intrusion of foreign matter	清洁零件 Clean parts
	接线脱落 Connection fallen off	重新接线 Connect again
	摩擦片卡死 lining got stuck	清洁零件 Clean parts
	刹车线圈烧毁 Braking coil burnt	刹车线圈换新 Replace with new braking coil
	间隙过大 Too large clearance	调整间隙 Adjust the clearance
	摩擦片沾染油 The lining is tainted with oil	清洁摩擦片 Clean the lining
	负载过大 Over-loaded	重新设计 Re-design the load
	刹车表面歪斜 Deflection of brake surface	更换零件 Replace parts
	下降衡量过大 Too large dscending weighting	机构重新设计 Re-design the structure
	选用机型错误 Error selection of machine type	选用正确机型 Choose the right machine type
	环境温度过高 Too high ambient temperature	改善环境温度 Better ambient temperature

减速电机的一般规格
GENERAL SPECIFICATIONS OF GEAR MOTORS

● 6W~200W型

项 目 Items	规 格 Specifications
绝缘电阻 Insulation Resistance	于常温 · 常湿下的电机额定运行后，以 DC500V 电阻表测量线圈外壳间时，测量值为 100MΩ 以上 In the circumstance of normal temperature and humidity, the resistance can be up to 100100MΩ, measured DC 500vinsulation resistance measurerbetween the motor wiring and motor shell while the motor is working.
绝缘耐压 Insulation voltage	于常温 · 常湿下电动机额定运行后，在线圈外壳间施加一分钟 50Hz 或 60Hz、1.5kv(三相 380V 为 1.8kV) 的电压，亦无异常 In the circumstance of normal temperature and humidity there will be no problem supplying the power of 1.5kv (three-phase 380V is 1.8kV)at 50Hz/60Hz between the metal wiring and motor shell for 1 minute while the motor is working.
温度上升 Temperature Rise	在装上减速机或同等散热板 ※ 并于常温 · 常湿下进行额定运行时，以电阻法测定其线圈温度上升值为 80℃以下 (三相型为 70℃以下) The temperature rise of winding are 80℃ or less measured by the resistance change method after rated motor operation under normal ambientemperature and humidity, with connecting a gearhead or equivalent heat radiation plat.
绝缘等级 insulation Class	UL/CSA 规格 :A 种 (105℃)、EN 规格 :B 种 (130℃)、F 种 (155℃) UL/CSA Standards: Class A(105℃) EN Standards: Class B(130℃),Class F(155℃)
过热保护装置 Oevrhaet Protection	内藏热保护装置 (自动复位型) B 种 (开放 :120℃ ±5℃、80℃ ±15℃) F 种 (开放 :145℃ ±5℃、95℃ ±15℃) Thermal protector inside (automatic return) Class B(opening:120℃ ±5℃、80℃ ±15℃) Class F(opening:145℃ ±5℃、95℃ ±15℃)
使用环境温度 Ambient Temperature	单相 100V、三相 200V:-10~+50℃ (无结冰) 其他电压 :-10℃ ~+40℃ (无结冰) Single-phase 100VAC. Three-phase 200VAC: -10℃ ~+50℃ (Non Freezing) Others: -10℃ ~+40℃ (Non Freezing)
使用环境湿度 Ambient Humidity	85% 以下 (无结露) ≤85% (Non condensing)
保护等级 protection Class	导线型 Lead wire type:IP20 接线盒型 Terminal box type 单相 Single-phase100V 50/60HZ、110/120V 60HZ、220/230V 50Hz、220230V 60Hz 25W~180W Type:IP54(不包括圆轴安装面 Excluing the installation surface of the round shaft type) 三相 Three-phase 200V/220V/230v 50/60HZ、380/400/415V 50/60HZ 25W~180W Type:IP54(不包括圆轴安装面 Excluing the installation surface of the round shaft type

型号的阅读方法
PRODUCT NUMBER CODE

●电动机 Motor

5	I	K	40	R	GN	-	C	T
①	②	③	④	⑤	⑥		⑦	⑧

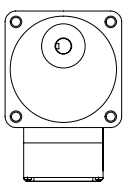
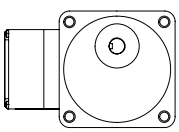
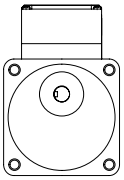
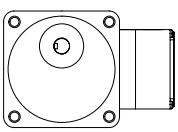
①	电机的尺寸 Motor frame size	2 :60mm 3 :70mm 4 :80mm 5 :90mm 6 :104mm 7 :120mm
②	机型名称 Motor type	I: 感应电机 Induction Motor R: 阻尼电机 Reversible Motor T: 力矩电机 Torque Motor
③	系列名称 Series	K: 系列 Series
④	输出功率 Output (W)	例（Example）40:40W
⑤	R: 表示带调速电机，无：表示未带 The suffix"-R" after the output power means speed adjustable motor	
⑥	转轴形状 Motor shaft type	GN: GN 型齿轮轴 GN type pinion shaft GU: GU 型齿轮轴 GU type pinion shat A: 圆轴型 Round shaft A1: 键槽型 Keyway
⑦	电源电压 · 极数 Voltage·poles	A: 单相 Single- phase 110V 50/60Hz 4P B: 单相 Single- phase 110V 50/60Hz 2P C: 单相 Single- phase 220V 50/60Hz 4P D: 单相 Single- phase 220V 50/60Hz 2P S: 三相 Three- phase 220V 50/60Hz 4P S3: 三相 Three- phase 380V 50/60Hz 4P E: 三相 Three-phase 220V 50/60HZ 2P Y: 三相六线 Three-phase 220V/380V 50/60HZ 4P
⑧	T: 带接线盒型及方向 Terminal box type： T 常规、T1 左方向、T2 上方向、T3 右方向 F: 带自冷风扇 Since the cool fan FF: 强制风扇 W/Fan M: 电磁制动电动机 Power off activated electromagnrtic brake motor P: 带热保器 Thermal protector	

●减速机Reducer

5	GN	60	K	-	T
①	②	③	④		⑤

①	减速器的尺寸 Reducer frame size	2 :60mm 3 :70mm 4 :80mm 5 :90mm 6 :104mm 7 :120mm
②	类型 type of pinion	GN:GN 型齿轮轴 GN type pinion shaft GU:GU 型齿轮轴 GU type pinion shaft
③	减速比 Gear ratio	例（Example）60: 1:60
④	轴承种类 Bearing type	K: 滚珠轴承（对 5GU 方型箱体标注为 KB）Bearing（make KB for type GU square case)
⑤	安装孔类型 Mounting hole type	T: 箱体通孔，无则表示箱体螺纹孔 If not, it represents the threaded hole of box body

●接线盒方向的选定 Selection of junction box direction

T- 常规 Standard	T1- 左方向 Left	T2- 上方向 Up	T3- 右方向 Right
			

减速电机的特性
GEAR MOTOR FEATURES

●感应减速电机的特性 Induction Gear Motor Features

1. 一般来说，微型感应电机所指的是感应运转型感应电机。这种电机不只在启动时，在运转当中也使用电磁线圈和电容器。虽然启动转矩不是很大，但其结构简单，信赖度高，效率也比较高，可连续运转。
2. 单相电机运转时，产生与运转方向逆方向的转矩，因此不可能在短时间内改变方向。请在电机完全停止以后，再转换其运转方向。
3. 三相电机以三相电源驱动感应电机，其效率很高，启动力矩也比较大，信赖度高。

1. Generally, micro Induction motor refers to the motor rotated by the induction. Induction motor relies on capacitor and electromagnetism when starting and rotating. Though itsstarting torque is not very high, it has a simple structure, high efficiency and can rotate continue.
2. The single -phase motor have a reverse direction with the rotating s when operated Pls change the direction of single-phase motor rotation only after bring the motor to a stop.
3. Three-phase motor relies on three-phase supply. It has a high efficiency and can get a high starting torque.

●阻尼减速电机的特性 Reversible Gear Motor Features

1. 阻尼电机，在电机后部设有简易制动器，是适用于短时间内频繁正反转用途的电机。简易制动器的构造，带弹簧压力的制动柱作用在转动的制动盘上并保持连续压力。阻尼电机的简易制动器如下作用：
①加摩擦负荷，提高瞬间可逆特性。
②縮小超程。
③具有某种程度的保持力矩。（额定力矩 10% 左右）。
2. 简易制动器的保持力矩及超程表示在表 1，但随动转时间的长短或温度高低，也会有变化，仅供参考。且初期使用，其保持力矩比表 1 的值低的情况也会发生，请注意。
3. 阻尼电机和感应电机相同，都是电容动转单相电机，力矩特性与感应电机特性相同。但是，为了提高瞬间可逆特性，设计为加大起动力矩。受此影响，加大了输入的损耗，温升比感应电机高，因此，时间定额为 30 分钟。特性表中的额定力矩，起动力矩，电流特性等是在电机上装上有制动柱状态下的特性值。

1. Reversible motor has a friction brake at the back of the motor body which is designed for applications where reversal of direction is frequently required.For the friction brake.The damp with spring impacts the rotating brake disk and supplies with continuous press. The functions of the friction brake are as following:
① With friction load, increasing the instant reversal.
② Shorten over-run.
③ Keep the torque in some way. (About 10% of the rated torque)
2. The keeping torque or more of the friction brake and over-run are listed in the table 1 It is only for reference. As it will change according to the rotating period as well as thetemperature. Pls also note that the torque may be a little lower than the one listed in the table when being operated initialy.
3. The reversible motor, like induction motor, is started by the capacitor and has a same torque characteristic with the induction motor. But the Reversible Motor is designed with ahigher starting torque to increase the instant reversal features.

●表1：保持力距和超程 Keep Torque And Over-run

相数 Phase	尺寸 Size	输出功率 Output	电机型号 Motor Model	保持力距 Keep Torque		超程 Over-run
	mm	W		N.cm	Kgf.cm	圈数 Cycles
单相 Sing-phase	60	6	2RK6	0.5	0.05	4
	70	15	3RK15	1.3	0.15	5
	80	25	4RK25	1.5	0.14	5
	90	40	5RK40	4	0.4	6
		60	5RK60			
		90	5RK90			
		120	5RK120			

●调速减速电机特性 The Features Of The Speed Control Gear Motor

1. 是控制器和电机组合的单元产品，由于电机和控制品只需一次连接，故不需要单独接线。速度调节由安装在外部的电位器便可简单进行。在控制器上安装了速度控制器回路、电机用的电容，速度设定器等。其中单元式速度控制器无瞬间停止功能。
2. 用控制器的速度调节器进行速度调节。可以在 50Hz 为 90~1400r/min,60H 为 90~1700/min 范围内，调节电机的速度。
3. 电机不允许长时间在低转速下运行，以免电机过热。

1. It is a unit of the controller and motor It only needs to connect one time The speed can be easily adjusted by the potentiometer. the controller is fixed with speed-control loopcapacitor, speed enactment and etc. There is no function of instant stop in the unit.
2. The controller can make the speed variable between 90-1400r/min at 50Hz and 90-1700r/min at 60Hz.
3. Please don' t run motor at low speed for long time avoiding overheat.

●电磁制动减速电机的特性 Poewr Off Activatde type Electromagnrtic Brake Gear Motor Features

1. 构造及运行原理

本公司生产的电磁制动电机是无励磁动作型，在线圈上施加电压，则立即吸引被弹簧压着的可动衔铁和制动衬垫之间产生间隙，使电机处于运转状态。一旦线圈电压被切断，在弹簧力的作用下，可动衔铁压向制动衬垫，产生制动力，电机停止。

2. 电磁制动器的特点

①该制动器是交流无励磁动作型电磁制动器，与电机直接连接。在切断电源的同时，即瞬间停止，保持负荷。保持力矩 0.5-2N.M(参照表 2)。由于是电源切断时的保持力动作型，故最适合于作为无意间切断电源时的安全制动器使用。电磁制动电机可以进行频繁的瞬间正反转。简单的切换，1 分钟内可停止 6 次。但是时间必须确保 3 秒以上。

②电机和制动器可以使用同一个电源。制动器内设置整流回路，可和电机使用同一个交流电源。

※这个数值是标准的,根据使用条件的不同,以这个频度连续使用不能进行制动器操作的情况也有,实际使用时,必须在电机表面温度为90℃以下的下使用。

3. 起动时间，制动时间的特性

电磁制动电机的起动时间是电机自身的起动时间加上电磁制动器的释放时间，制动时间是从电源切断开始至电机完全停止的时间。电磁制动电机的超程、起动时间、制动时间应用场合而不同。

1. Structure and operation principle

We produce the power off activated type. Exerting the voltage on the winding, it will magnetize the armature pressedby the spring The motor will be in a stage of rotating when there is a backlash between the armature and brake rim. Once the winding voltage is cut down, under the influence of spring, the armature press the brake rim which will create a brake force. then the motor gets to a stop.

2. The characteristics of the electromagnetic brake

① It is an ac power off activated type electromagnetic brake which is connected directly with the motor. It will get to a blink stop and keep load when the supply is power off. It willkeep the torque between 0.5-2N.M. It is especially suitable for the safety brake in the circumstance of unconsciously power off. The electromagnetic can change its directionfrequently. It can be stopped 6 times in a minute. But be sure that it lasts for 3 seconds or more.

② After we set a commutating loop in the brake, it can share the power supply with the motor.

※The value is standard. It will be change in different condition. When actually used, be sure to make the surface temperature of the motor less than 90℃ .

3. The features for the starting time and brake time

The starting time means the time for the motor's starting time plus the electromagnetic brake release time. The brake time means the time from power cut off to the time of motorcompletely stop. The over-run, starting time and brake time will be different according to the different applications.

●表2: 电磁制动部分（无励磁动作型）ELectromagnrtic Brake（Poewr Off Activatde type）

尺寸 Size	输出功率 Output	电压 Voltage	频率 Frequency	电流 Current	输入功率 Input	保持力距 Keep Torque		超程 Over-run
mm	W	V	Hz	A	W	N.m	Kgf.cm	圈数 Cycles
70	15	220	50/60	0.111	10.0	0.5	5	3.5
80	25							
90	40			0.144	13.0	2.0	20	
	60							
	90							
	120							
100	200							

感应减速电机
INDUCTION GEAR MOTOR

6W
60mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
2IK6GN-C	2IK6A-C	6	1ph220	50	0.13	1200	44	65	0.8/450
				60	0.12	1550	34	65	
2IK6GN-A	2IK6A-A	6	1ph110	50	0.24	1200	44	64	3.0/250
				60	0.21	1550	40	65	

- 各种安全规格以电机铭牌上的型号名取得认证。
- 注 :"-A" 型号中电压为 110V 时 , 配置电容器容量以实际铭牌为准。
- When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.
- Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

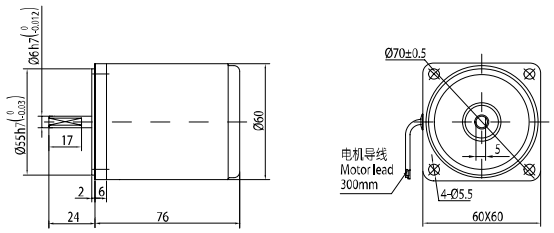
减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	0.10	0.13	0.18	0.21	0.27	0.32	0.36	0.45	0.54	0.64	0.70	0.80	0.96	1.16	1.29	1.61	1.74	2.17	2.60	2.89	3.00	3.00	3.00	3.00
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	0.09	0.11	0.15	0.18	0.23	0.27	0.30	0.38	0.45	0.54	0.60	0.68	0.82	0.98	1.09	1.36	1.47	1.84	2.20	2.45	2.94	3.00	3.00	3.00

- 表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
- 表中 色框表示输出轴的旋转方向与电机旋转方向相反。
- 表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
- 减速箱的最大容许转矩为 3N·M。
- In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 3N·M.

●外形尺寸（单位mm）Dimension (unit mm)

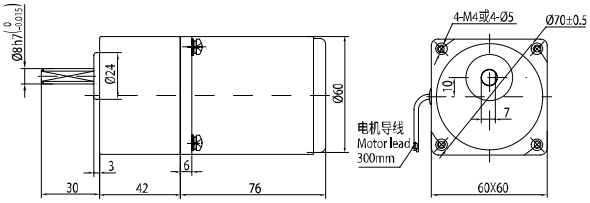
●圆轴电机

重量 Weight: 0.75kg



●组合：引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 1.15kg



●短箱体Short Gear Box

●其中速比 3~18 可以做成短型减速箱，高度为 32mm。Gear ratio 3~18, short case is possible，Height of 32 mm.

●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

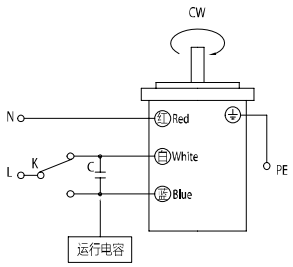
●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

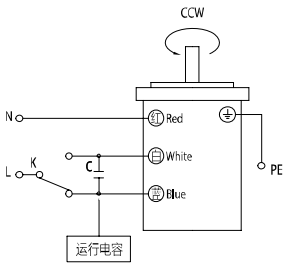
● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type

2IK6GN-A、2IK6GN-C

顺时针方向 CW



逆时针方向 CCW



●请注意Note

单相电机运转方向的转换应在电机停止后进行。

若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

感应减速电机
INDUCTION GEAR MOTOR

15W
70mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
3IK15GN-C	3IK15A-C	15	1ph220	50	0.17	1250	125	84	1.2/450
				60	0.17	1550	92	86	
3IK15GN-A	3IK15A-A	15	1ph110	50	0.34	1250	127	109	5.0/250
				60	0.35	1550	94	120	
3IK15GN-S	3IK15A-S	15	3ph220	50	0.12	1250	108	183	/
				60	0.12	1550	88	132	
3IK15GN-S3	3IK15A-S3	15	3ph380	50	0.07	1250	108	183	/
				60	0.07	1550	88	132	

●各种安全规格以电机铭牌上的型号名取得认证。
●注 :"-A" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。
● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.
● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

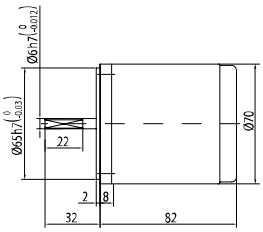
减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	0.26	0.36	0.50	0.61	0.76	0.91	1.01	1.26	1.5	1.64	1.82	2.27	2.73	3.27	3.63	4.54	4.90	5	5	5	5	5	5	5
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	0.22	0.27	0.37	0.45	0.56	0.67	0.74	0.93	1.11	1.20	1.34	1.67	2.01	2.41	2.67	3.34	3.11	4.11	5	5	5	5	5	5

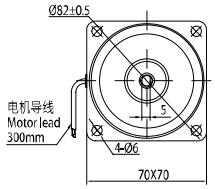
●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中 色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 5N·M。
● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
● The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
● The maximum allowable torque of the decelerator is 5N·M.

●外形尺寸（单位mm）Dimension (unit mm)

●圆轴电机

重量 Weight: 1.1kg



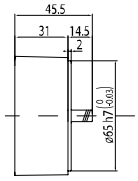


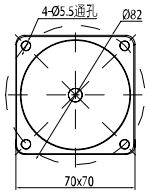
● 中间齿轮箱 Decimal Gearhead

可安装在齿轮轴型上 Can be connected to GN pinion shafe type

电动机外形与齿轮轴型相同 3GN10XK

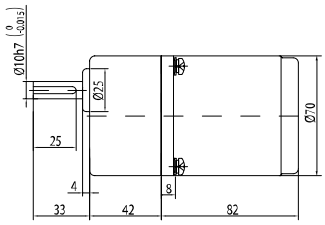
重量 Weight：0.35kg

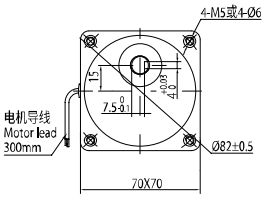




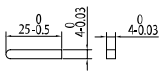
●组合：引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 1.6kg





●键（减速器附件）



●短箱体Short Gear Box

●其中速比 3~15 可以做成短型减速箱，高度为 32mm。Gear ratio 3~15, short case is possible，Height of 32 mm.

●接线图Wiring Diagram

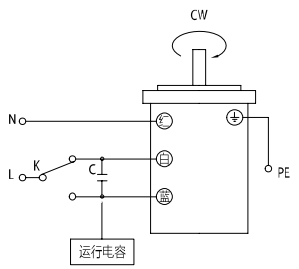
●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

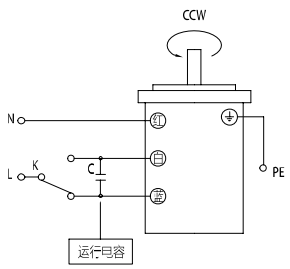
●表中所记型号为齿轮轴型，圆轴型亦同。

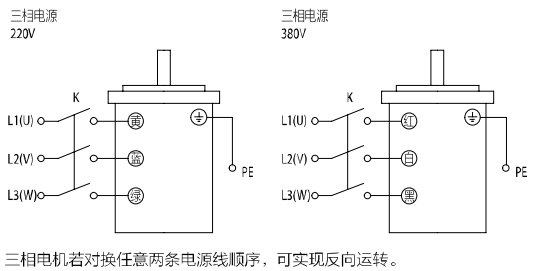
● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type

3IK15GN-A、3IK15GN-C		3IK15GN-S、3IK15GN-S3
顺时针方向 CW	逆时针方向 CCW	顺时针方向 CW







三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

感应减速电机
INDUCTION GEAR MOTOR

25W
80mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
4IK25GN-C	4IK25A-C	25	1ph220	50	0.24	1250	184	165	1.8/450
				60	0.24	1550	149	168	
4IK25GN-A	4IK25A-A	25	1ph110	50	0.54	1250	201	144	7.0/250
				60	0.50	1550	152	154	
4IK25GN-S	4IK25A-S	25	3ph220	50	0.26	1250	181	543	/
				60	0.21	1550	150	389	
4IK25GN-S3	4IK25A-S3	25	3ph380	50	0.15	1250	182	556	/
				60	0.12	1550	149	400	

●各种安全规格以电机铭牌上的型号名取得认证。
●注 :"-A" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。
● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.
● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

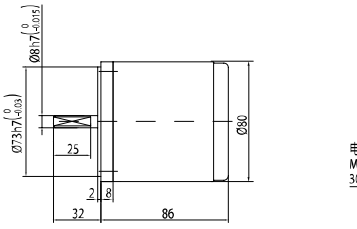
减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	0.45	0.54	0.75	0.90	1.12	1.35	1.50	1.87	2.25	2.69	2.99	3.37	4.04	4.85	5.39	6.74	7.27	8	8	8	8	8	8	8
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	0.36	0.44	0.61	0.73	0.91	1.09	1.21	1.52	1.82	2.18	2.43	2.73	3.27	3.93	4.37	5.46	6.55	8	8	8	8	8	8	8

●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中■色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 8N·M。
● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
● The ■ box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
● The maximum allowable torque of the decelerator is 8N·M.

●外形尺寸（单位mm）Dimension (unit mm)

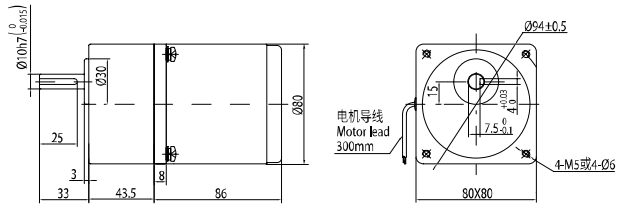
●**圆轴电机**

重量 Weight: 1.6kg



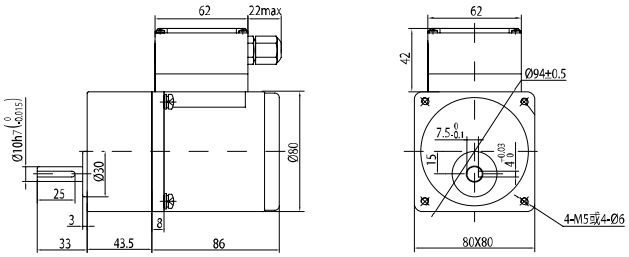
●**组合：**引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 2.4kg



●**组合：**接线盒（可选，详见 P150）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 2.55kg

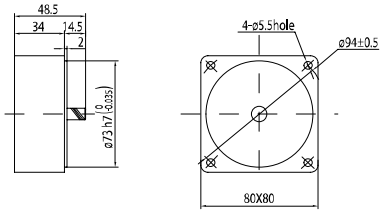


● **中间齿轮箱** Decimal Gearhead

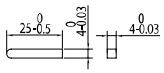
可安装在齿轮轴型上 Can be connected to GN pinion shafe type

电动机外形与齿轮轴型相同 4GN10XK

重量 Weight：0.41kg



●**键**（减速器附件）



●短箱体Short Gear Box

●其中速比 3~20 可以做成短型减速箱，高度为 32mm。Gear ratio 3~20, short case is possible，Height of 32 mm.

●接线图Wiring Diagram

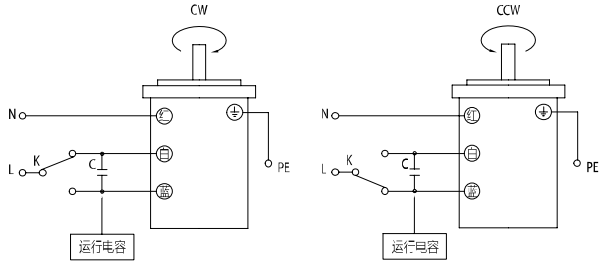
●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

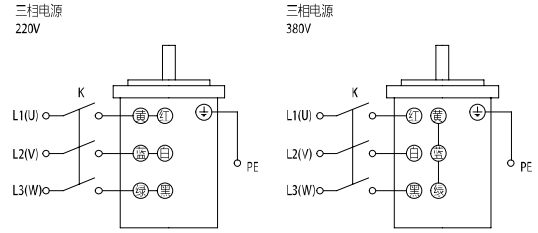
●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

4IK25GN-A、4IK25GN-C		4IK25GN-S、4IK25GN-S3
顺时针方向 CW	逆时针方向 CCW	顺时针方向 CW





三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

感应减速电机
INDUCTION GEAR MOTOR

40W
90mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
5IK40GN-C	5IK40A-C	40	1ph220	50	0.35	1350	294	194	2.5/450
				60	0.35	1550	232	199	
5IK40GN-A	5IK40A-A	40	1ph110	50	0.64	1350	286	226	10.0/250
				60	0.66	1550	234	231	
5IK40GN-S	5IK40A-S	40	3ph220	50	0.32	1350	284	1130	/
				60	0.28	1550	241	846	
5IK40GN-S3	5IK40A-S3	40	3ph380	50	0.18	1350	284	1086	/
				60	0.16	1550	241	837	

●各种安全规格以电机铭牌上的型号名取得认证。
●注 :"-A" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。
● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.
● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

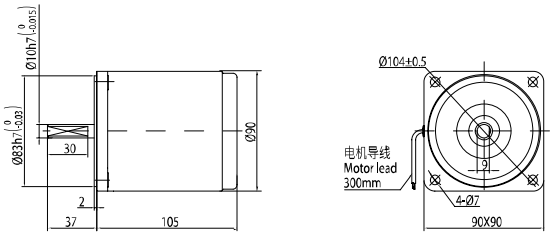
减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.98	3.57	3.86	4.29	5.36	6.43	7.72	7.72	9.64	10	10	10	10	10	10	10	10
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	0.56	0.68	0.94	1.13	1.41	1.69	1.88	2.35	2.82	3.04	3.38	4.23	5.07	6.09	6.09	7.61	9.13	10	10	10	10	10	10	10

●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中■色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 10N·M。
● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
● The ■ box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
● The maximum allowable torque of the decelerator is 10N·M.

●外形尺寸（单位mm）Dimension (unit mm)

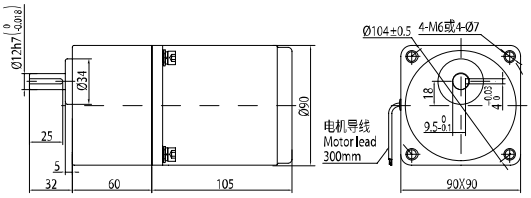
●**圆轴电机**

重量 Weight: 2.4kg



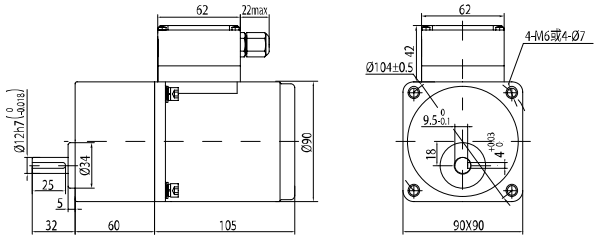
●**组合：**引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 3.75kg



●**组合：**接线盒（可选，详见 P150）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 3.9kg

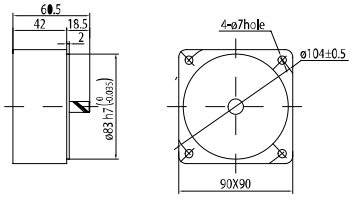


●**中间齿轮箱** Decimal Gearhead

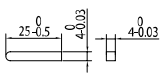
可安装在 GN 齿轮轴型上 Can be connected to GN pinion shafe type

电动机外形与齿轮轴型相同 5GN10XK

重量 Weight：0.6kg



●**键**（减速器附件）



●短箱体Short Gear Box

●其中速比 3~20 可以做成短型减速箱，高度为 42mm。Gear ratio 3~20, short case is possible，Height of 42 mm.

●接线图Wiring Diagram

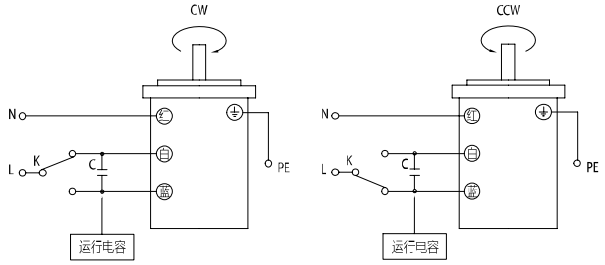
●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

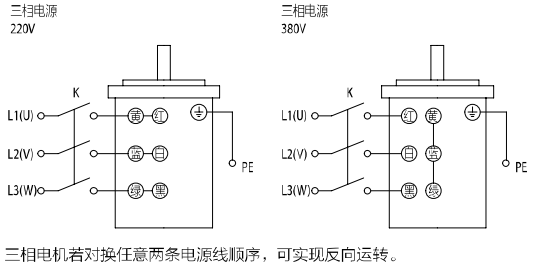
●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

5IK40GN-A、5IK40GN-C		5IK40GN-S、5IK40GN-S3
顺时针方向 CW	逆时针方向 CCW	顺时针方向 CW





三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

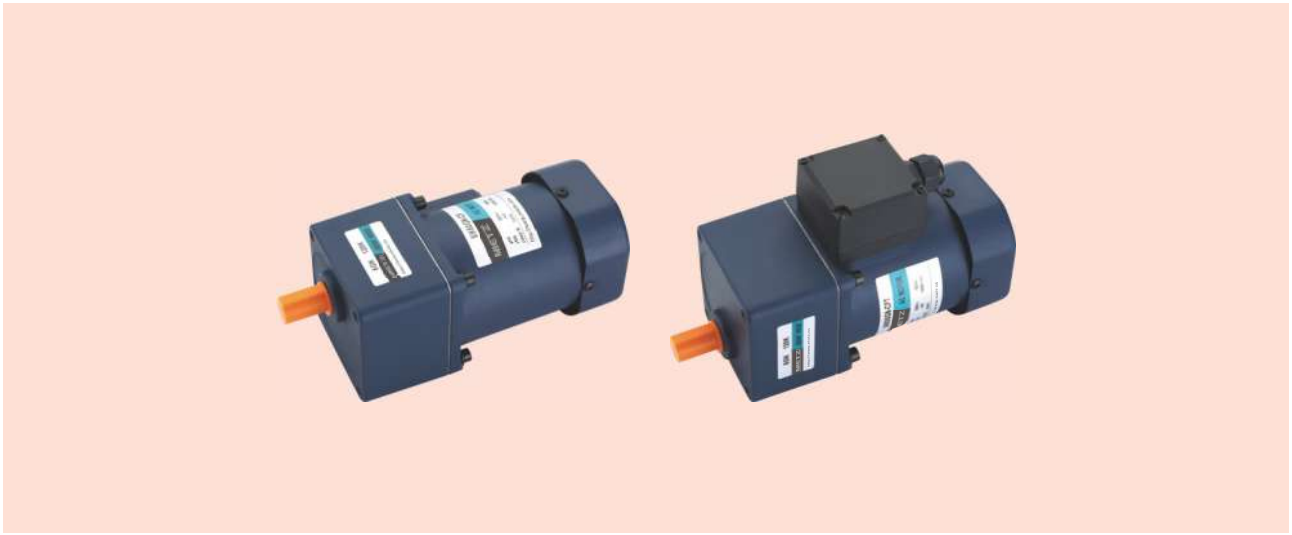
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

感应减速电机
INDUCTION GEAR MOTOR

60W
90mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
5IK60GN-CF	5IK60A-CF	60	1ph220	50	0.50	1350	427	384	4.0/450
				60	0.54	1550	353	384	
5IK60GN-AF	5IK60A-AF	60	1ph110	50	0.91	1350	431	349	15.0/250
				60	1.01	1550	355	360	
5IK60GN-SF	5IK60A-SF	60	3ph220	50	0.38	1350	465	1110	/
				60	0.35	1550	390	840	
5IK60GN-S3F	5IK60A-S3F	60	3ph380	50	0.22	1350	464	1080	/
				60	0.20	1550	390	837	

●各种安全规格以电机铭牌上的型号名取得认证。
●注 :"-A" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。
● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.
● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

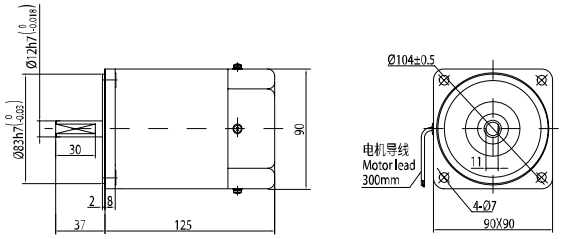
减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	0.99	1.18	1.64	1.97	2.47	2.96	3.29	4.11	4.93	5.33	5.92	7.40	8.88	10	10	10	10	10	10	10	10	10	10	10
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	0.86	1.03	1.43	1.72	2.14	2.57	2.86	3.57	4.29	4.63	5.15	6.43	7.72	9.26	9.5	10	10	10	10	10	10	10	10	10

●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中■色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 10N·M。
● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
● The ■ box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
● The maximum allowable torque of the decelerator is 10N·M.

●外形尺寸（单位mm）Dimension (unit mm)

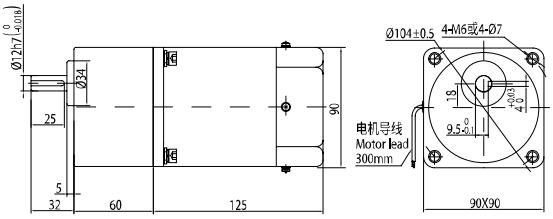
●**圆轴电机**

重量 Weight: 2.7kg



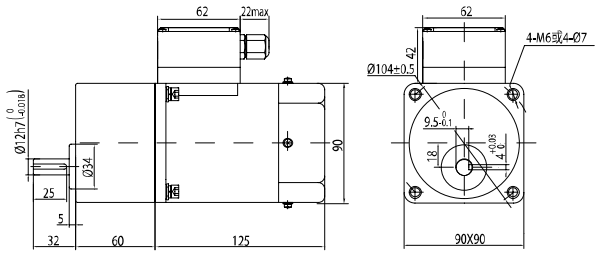
●**组合：**引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 4.05kg



●**组合：**接线盒（可选，详见 P150）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 4.2kg

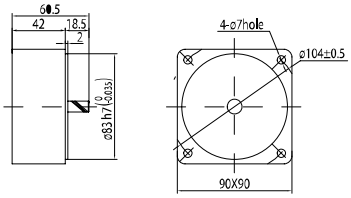


●**中间齿轮箱** Decimal Gearhead

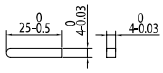
可安装在 GN 齿轮轴型上 Can be connected to GN pinion shafe type

电动机外形与齿轮轴型相同 5GN10XK

重量 Weight：0.6kg



●**键**（减速器附件）



●短箱体Short Gear Box

●其中速比 3~18 可以做成短型减速箱，高度为 42mm。Gear ratio 3~18, short case is possible，Height of 42 mm.

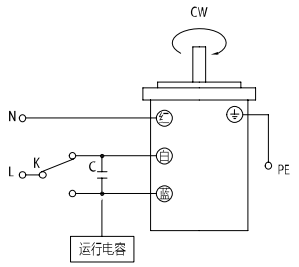
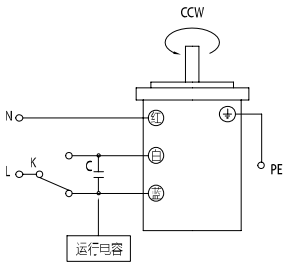
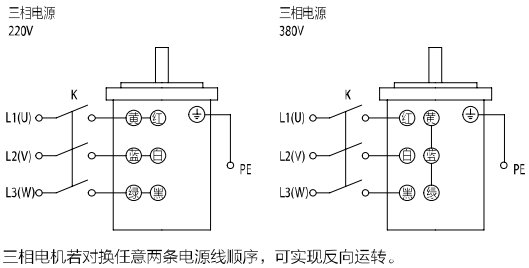
●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

5IK60GN-AF、5IK60GN-CF		5IK60GN-SF、5IK60GN-S3F
顺时针方向 CW	逆时针方向 CCW	顺时针方向 CW
		

三相电机若对换任意两条电源线顺序，可实现反向运转。

To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

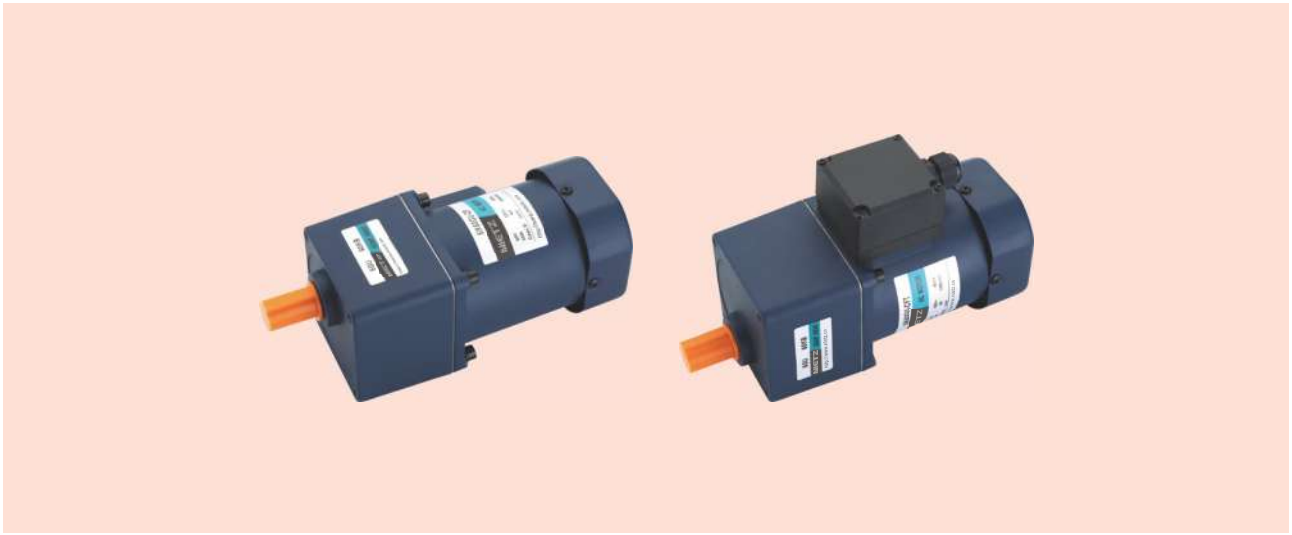
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

感应减速电机
INDUCTION GEAR MOTOR

60W
90mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
5IK60GU-CF	5IK60A-CF	60	1ph220	50	0.50	1350	427	384	4.0/450
				60	0.54	1550	353	384	
5IK60GU-AF	5IK60A-AF	60	1ph110	50	0.91	1350	431	349	15.0/250
				60	1.01	1550	355	360	
5IK60GU-SF	5IK60A-SF	60	3ph220	50	0.38	1350	465	1110	/
				60	0.35	1550	390	840	
5IK60GU-S3F	5IK60A-S3F	60	3ph380	50	0.22	1350	464	1080	/
				60	0.20	1550	390	837	

- ●各种安全规格以电机铭牌上的型号名取得认证。
- ●注 :"-A" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。
- ● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.
- ● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

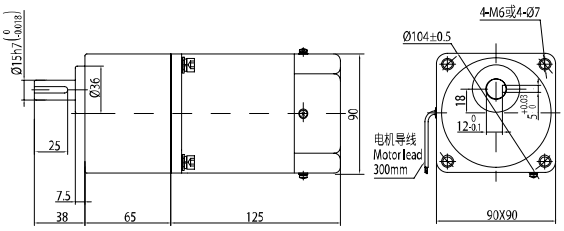
减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	0.99	1.18	1.64	1.97	2.47	2.96	3.46	3.70	4.44	5.33	5.33	6.66	7.99	9.59	10.66	13.32	15.98	19.98	20	20	20	20	20	20
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	0.86	1.03	1.43	1.72	2.14	2.57	2.86	3.22	3.86	4.63	5.01	5.79	6.95	8.34	9.26	11.58	13.90	17.37	18.76	20	20	20	20	20

- ●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
- ●表中■色框表示输出轴的旋转方向与电机旋转方向相反。
- ●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
- ●减速箱的最大容许转矩为 20N·M。
- ● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- ● The ■ box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- ● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- ● The maximum allowable torque of the decelerator is 20N·M.

●外形尺寸（单位mm）Dimension (unit mm)

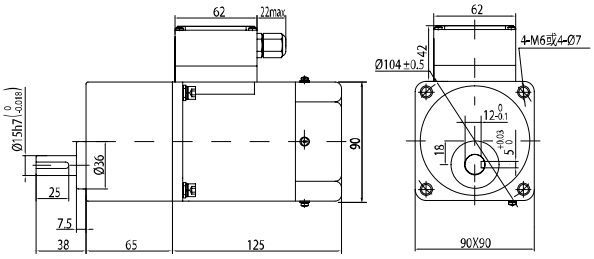
●**组合：**引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 4.15kg



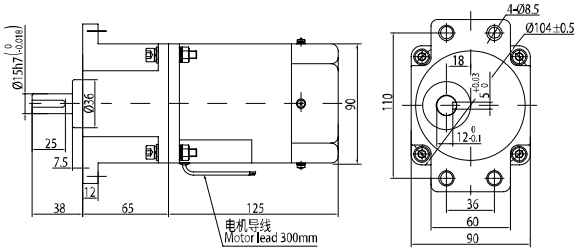
●**组合：**接线盒（可选，详见 P148）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 4.2kg



●**组合：**引线型电机 + 带耳型减速箱（减速比 1:3~200）

重量 Weight: 4.35kg

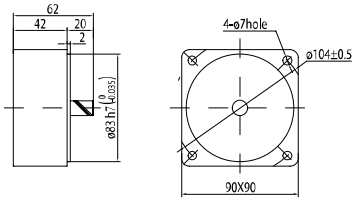


●**中间齿轮箱** Decimal Gearhead

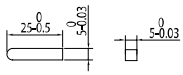
可安装在 GU 齿轮轴型上 Can be connected to GU pinion shafe type

电动机外形与齿轮轴型相同 5GU10XK

重量 Weight：0.7kg



●**键**（减速器附件）



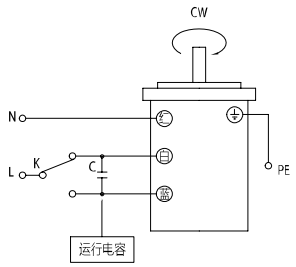
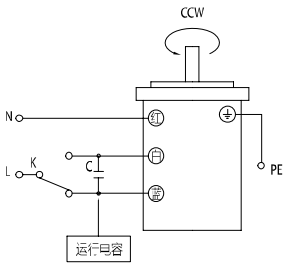
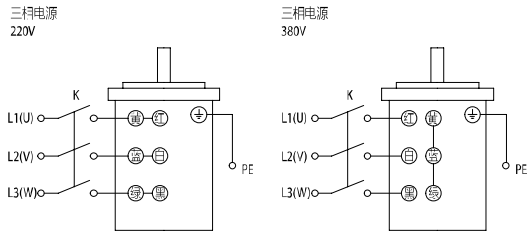
●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

5IK60GU-AF、5IK60GU-CF		5IK60GU-SF、5IK60GU-S3F
顺时针方向 CW	逆时针方向 CCW	顺时针方向 CW
		

三相电机若对换任意两条电源线顺序，可实现反向运转。

To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

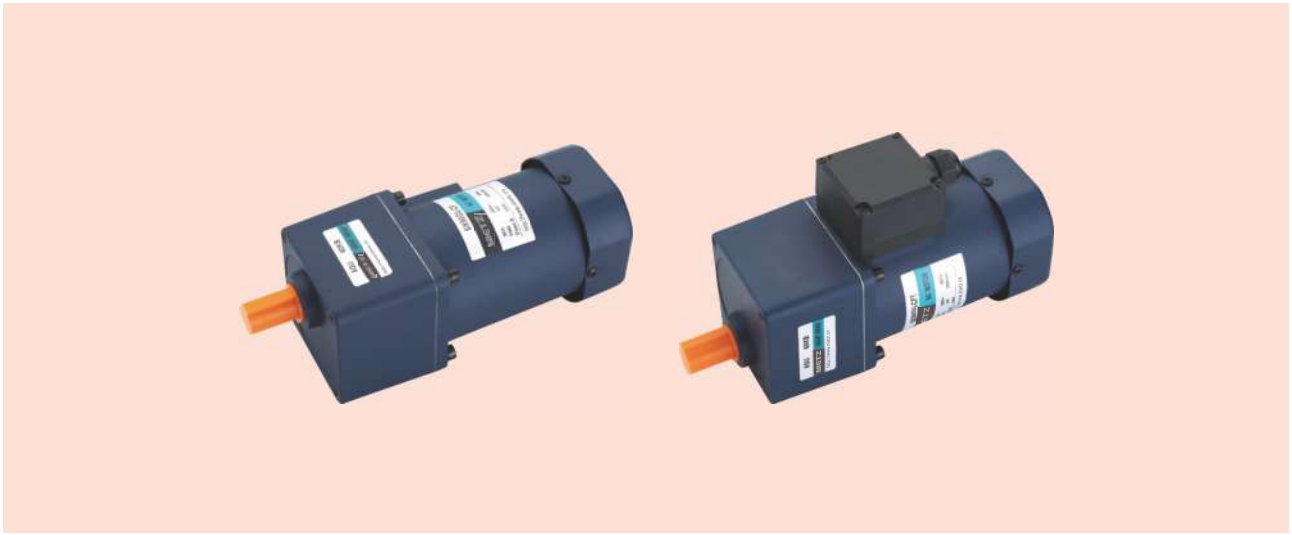
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

感应减速电机
INDUCTION GEAR MOTOR

90W
90mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
5IK90GU-CF	5IK90A-CF	90	1ph220	50	0.64	1350	643	459	5.0/450
				60	0.71	1550	530	450	
5IK90GU-AF	5IK90A-AF	90	1ph110	50	1.26	1350	646	475	20.0/250
				60	1.40	1550	525	489	
5IK90GU-SF	5IK90A-SF	90	3ph220	50	0.53	1350	625	2800	/
				60	0.61	1550	527	2150	
5IK90GU-S3F	5IK90A-S3F	90	3ph380	50	0.37	1350	625	2660	/
				60	0.35	1550	519	2030	

●各种安全规格以电机铭牌上的型号名取得认证。
●注 :"-A" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。
● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.
● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

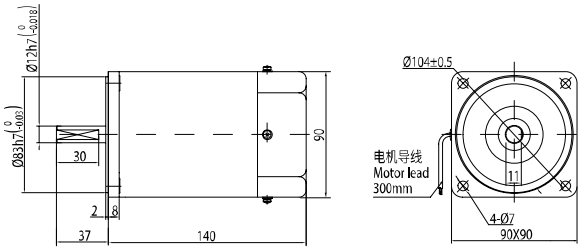
减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	1.563	1.88	2.60	3.125	3.91	4.69	5.2	5.86	7.03	8.44	8.8	10.55	12.66	15.19	16.88	20	20	20	20	20	20	20	20	20
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	1.29	1.55	2.15	2.58	3.22	3.86	4.3	4.83	5.80	6.96	7.3	8.69	10.43	12.52	13.91	17.39	20	20	20	20	20	20	20	20

●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中 色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 20N·M。
● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
● The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
● The maximum allowable torque of the decelerator is 20N·M.

●外形尺寸（单位mm）Dimension (unit mm)

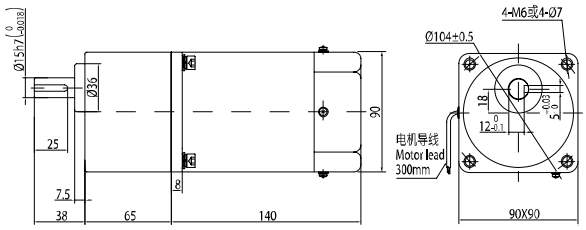
●**圆轴电机**

重量 Weight: 2.7kg



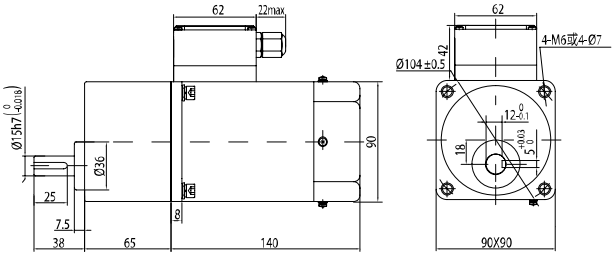
●**组合：**引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 4.2kg



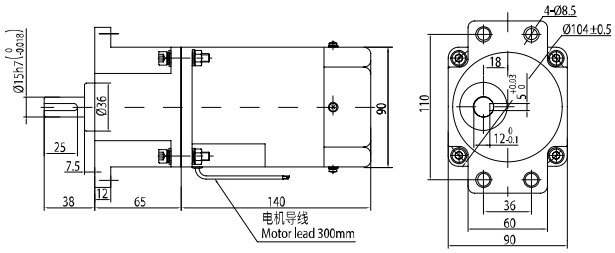
●**组合：**接线盒（可选，详见 P148）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 4.35kg



●**组合：**引线型电机 + 带耳型减速箱（减速比 1:3~200）

重量 Weight: 4.2kg

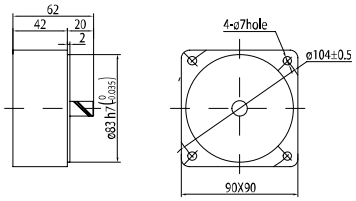


●**中间齿轮箱** Decimal Gearhead

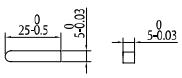
可安装在 GU 齿轮轴型上 Can be connected to GU pinion shafe type

电动机外形与齿轮轴型相同 5GU10XK

重量 Weight：0.7kg



●**键**（减速器附件）



●接线图Wiring Diagram

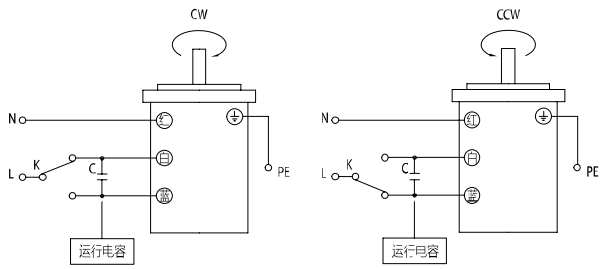
●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

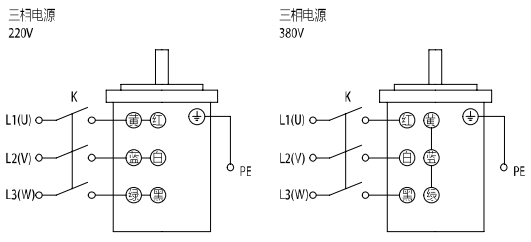
●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

5IK90GU-AF、5IK90GU-CF		5IK90GU-SF、5IK90GU-S3F
顺时针方向 CW	逆时针方向 CCW	顺时针方向 CW





三相电机若对换任意两条电源线顺序，可实现反向运转。

To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

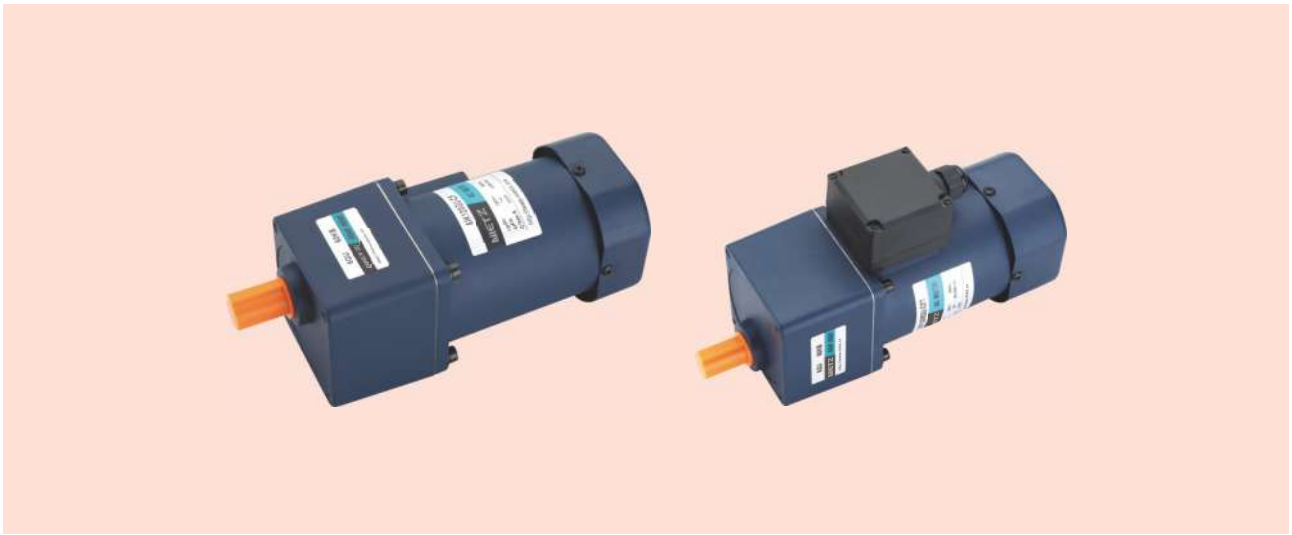
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

感应减速电机
INDUCTION GEAR MOTOR

120W
90mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
5IK120GU-CF	5IK120A-CF	120	1ph220	50	0.87	1350	874	663	6.0/450
				60	0.90	1550	709	655	
5IK120GU-AF	5IK120A-AF	120	1ph110	50	1.79	1350	919	500	25.0/250
				60	1.65	1550	740	524	
5IK120GU-SF	5IK120A-SF	120	3ph220	50	0.60	1350	879	2800	/
				60	0.70	1550	735	2150	
5IK120GU-S3F	5IK120A-S3F	120	3ph380	50	0.42	1350	879	2660	/
				60	0.40	1550	731	2030	

●各种安全规格以电机铭牌上的型号名取得认证。
●注 :"-A" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。
● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.
● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

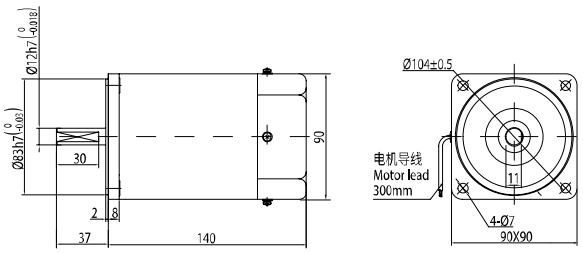
减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	2.12	2.55	3.54	4.25	5.31	6.37	7.08	7.96	9.56	11.47	12	14.36	17.20	20	20	20	20	20	20	20	20	20	20	20
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	1.72	2.07	2.87	3.45	4.31	5.17	5.74	6.46	7.75	9.30	9.9	11.63	13.96	16.75	18.61	20	20	20	20	20	20	20	20	20

●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中 色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 20N·M。
● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
● The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
● The maximum allowable torque of the decelerator is 20N·M.

●外形尺寸（单位mm）Dimension (unit mm)

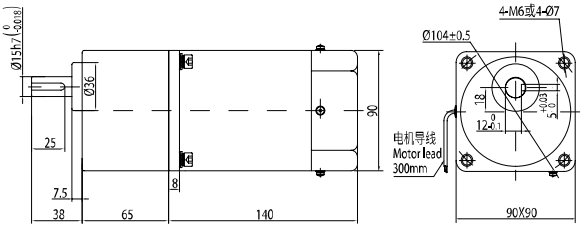
●**圆轴电机**

重量 Weight: 3.4kg



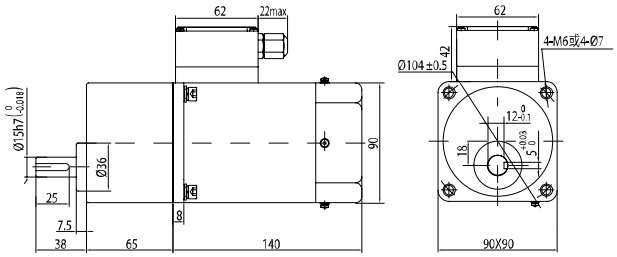
●**组合：**引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 4.9kg



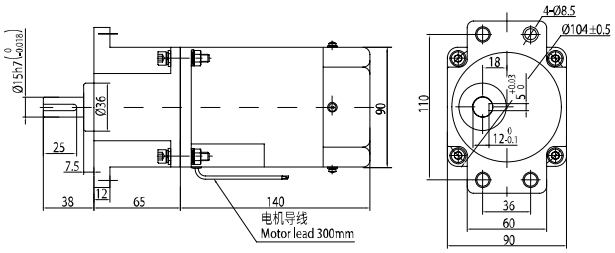
●**组合：**接线盒（可选，详见 P148）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight:5.05kg



●**组合：**引线型电机 + 带耳型减速箱（减速比 1:3~200）

重量 Weight: 4.9kg

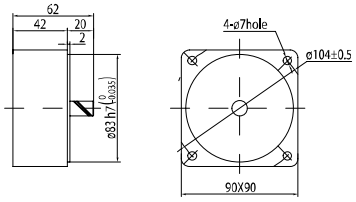


●**中间齿轮箱** Decimal Gearhead

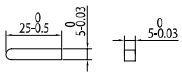
可安装在 GU 齿轮轴型上 Can be connected to GU pinion shafe type

电动机外形与齿轮轴型相同 5GU10XK

重量 Weight：0.7kg



●**键**（减速器附件）



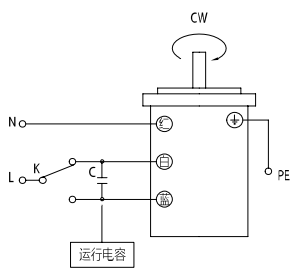
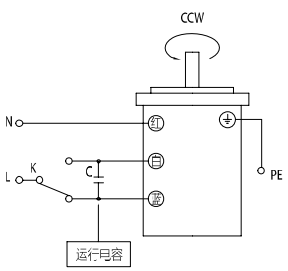
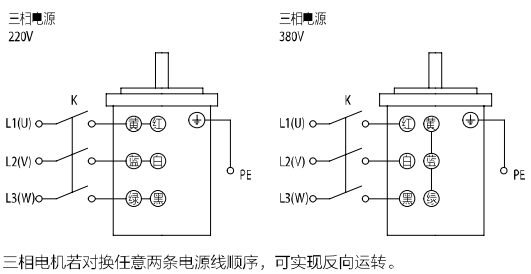
●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

5IK120GU-AF、5IK120GU-CF		5IK120GU-SF、5IK120GU-S3F
顺时针方向 CW	逆时针方向 CCW	顺时针方向 CW
		

三相电机若对换任意两条电源线顺序，可实现反向运转。

To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

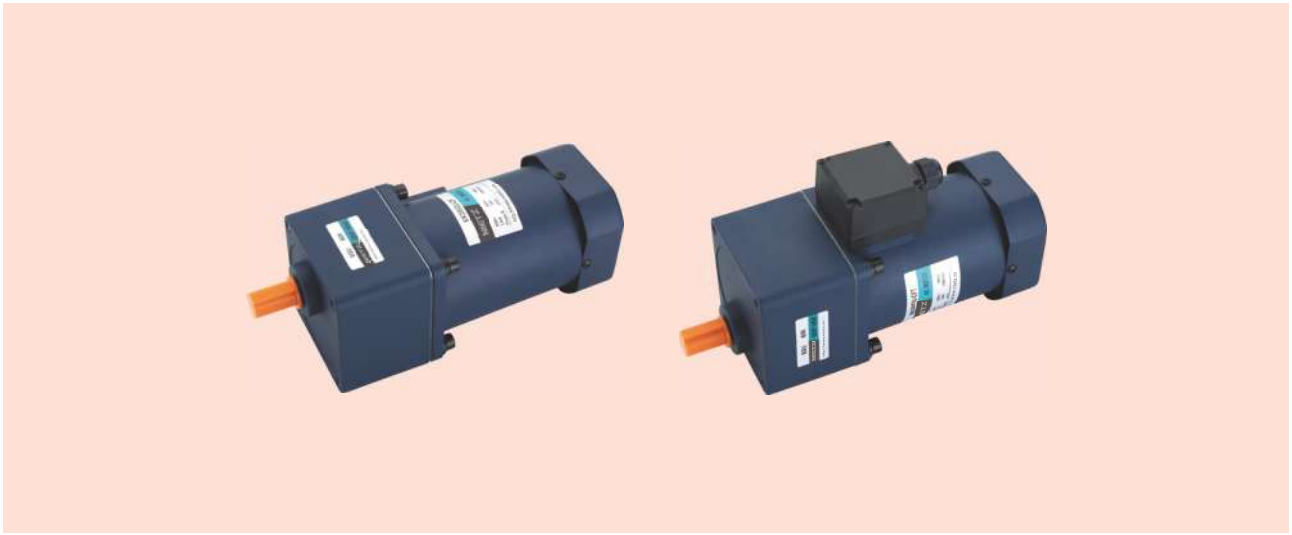
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

感应减速电机
INDUCTION GEAR MOTOR

200W
104mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
6IK200GU-CF	6IK200A-CF	200	1ph220	50	1.30	1350	1414	1050	10.0/450
				60	1.30	1550	1060	900	
6IK200GU-AF	6IK200A-AF	200	1ph110	50	2.60	1350	1310	950	35.0/250
				60	2.70	1550	1090	920	
6IK200GU-SF	6IK200A-SF	200	3ph220	50	1.17	1350	1460	4620	/
				60	0.98	1550	1060	3420	
6IK200GU-S3F	6IK200A-S3F	200	3ph380	50	0.66	1350	1550	4500	/
				60	0.57	1550	1350	3500	

●各种安全规格以电机铭牌上的型号名取得认证。
●注 :"-A" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。
● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.
● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

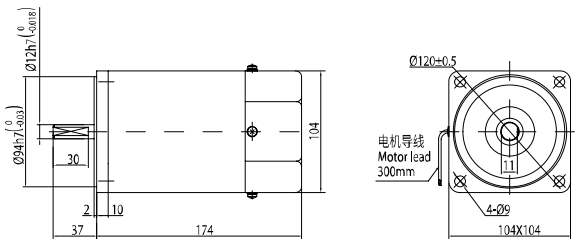
减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	3.11	3.74	5.19	6.23	7.78	9.34	11.45	11.67	14.01	16.81	16.81	21.01	25.21	30.26	33.62	40	40	40	40	40	40	40	40	40
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	2.58	3.09	4.29	5.15	6.44	7.73	8.59	9.66	11.60	13.91	13.91	17.40	20.86	25.05	27.82	34.77	40	40	40	40	40	40	40	40

●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中 色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 40N·M。
● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
● The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
● The maximum allowable torque of the decelerator is 40N·M.

●外形尺寸（单位mm）Dimension (unit mm)

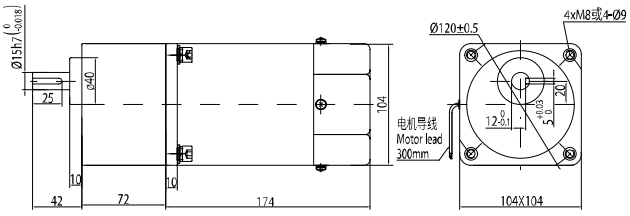
●**组合：**引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 5.0kg



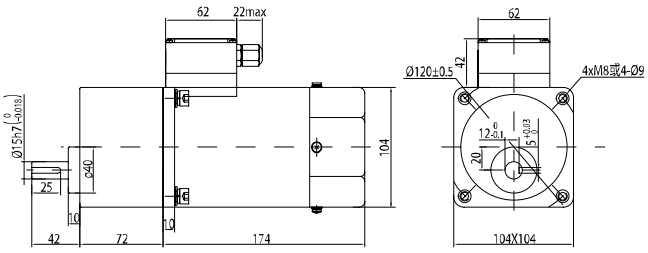
●**组合：**带端子型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 7.1kg

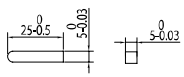


●**组合：**接线盒（可选，详见 P148）型电机 + 带耳型减速箱（减速比 1:3~200）

重量 Weight: 7.25kg



●**键**（减速器附件）



●接线图Wiring Diagram

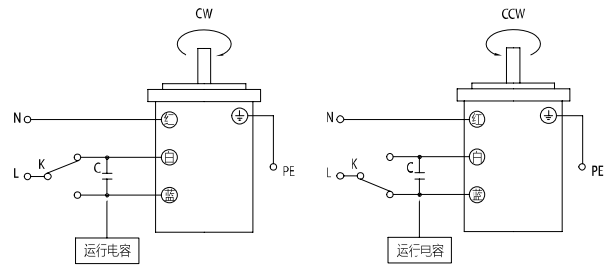
●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

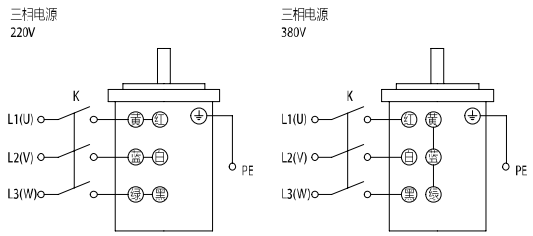
●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

6IK2000GU-AF、6IK200GU-CF		6IK200GU-SF、6IK200GU-S3F
顺时针方向 CW	逆时针方向 CCW	顺时针方向 CW





三相电机若对换任意两条电源线顺序，可实现反向运转。

To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

感应减速电机
INDUCTION GEAR MOTOR

400W
120mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
7IK400GU-SF	7IK400A-SF	400	3ph220V	50	2.2	1350	2700	5900	/
7IK400GU-S3F	7IK400A-S3F	400	3ph380V	50	1.2	1350	2700	5900	/

- ●各种安全规格以电机铭牌上的型号名取得认证。
- ●注 :"-A" 型号中电压为 110V 时 , 配置电容器容量以实际铭牌为准。
- ● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.
- ● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

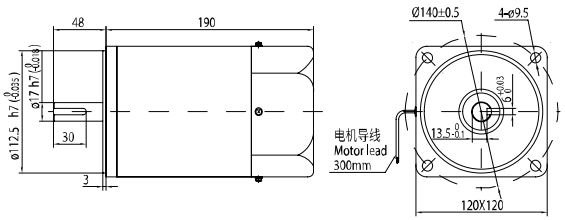
●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	5	7.5	10	12.5	15	18	20	25	30	40	50	60	75	90	100	120	150	180
50Hz	转速 Speed r/min	450	270	180	135	108	90	75	67.5	54	45	33.7	27	22.5	18	15	13.5	11	9	7.5
	转矩 Torque N.m	6.5	10.9	16.4	21.8	24.5	29.5	35.4	39.3	49.2	59.0	78.7	88.5	100	100	100	100	100	100	100

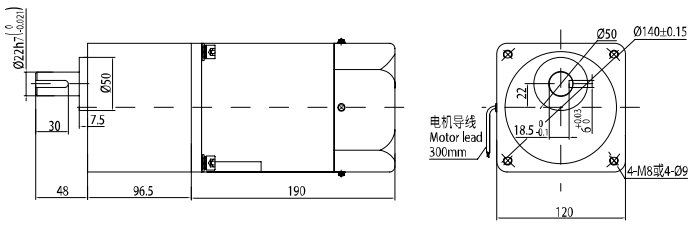
- ●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
- ●表中 色框表示输出轴的旋转方向与电机旋转方向相反。
- ●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
- ●减速箱的最大容许转矩为 200N·M。
- ● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- ● The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- ● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- ● The maximum allowable torque of the decelerator is 200N·M.

●外形尺寸（单位mm）Dimension (unit mm)

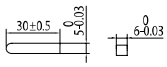
●圆轴电机



●**组合：**引线型电机 + 标准减速箱（减速比 1:3~200）



●**键**（减速器附件）



●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

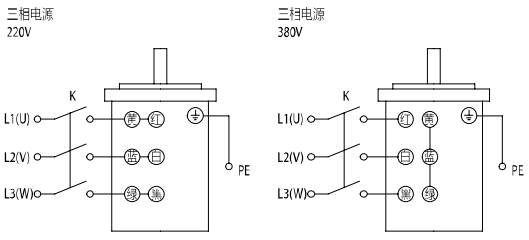
●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

7IK400GU-SF、7IK400GU-S3F

顺时针方向 CW



三相电机若对换任意两条电源线顺序，可实现反向运转。

To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

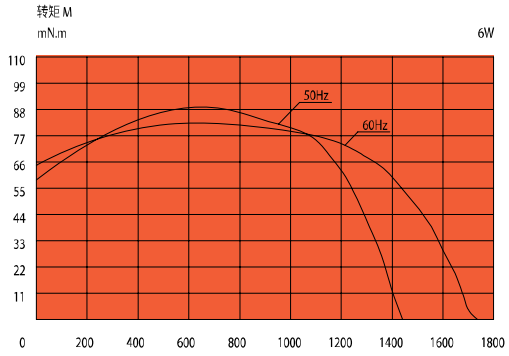
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

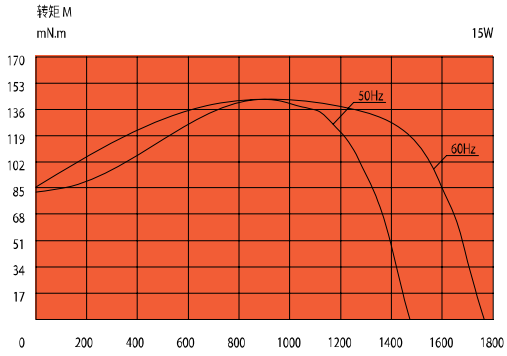
Change the direction of single-phase motor rotation only after bring the motor to a stop.

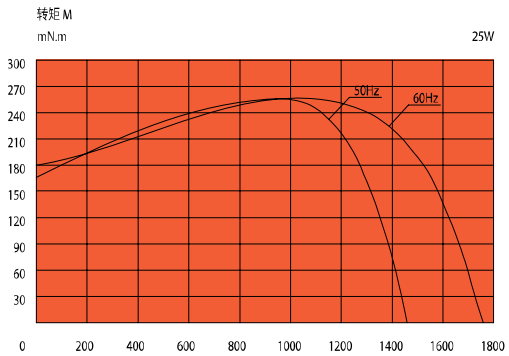
If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

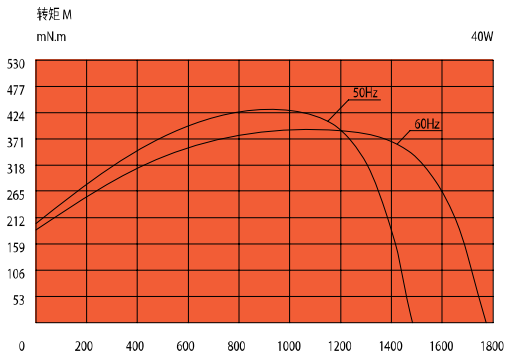
转速–转矩曲线
COMMON SPECIFICATIONS

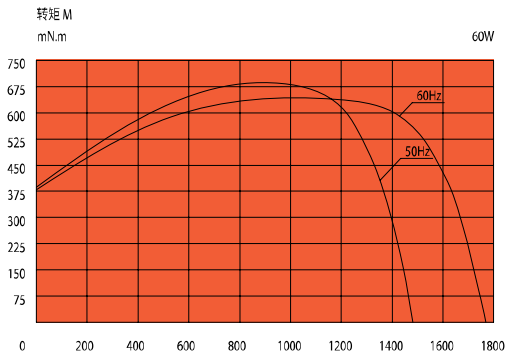
● 单相电机 Single phase motor

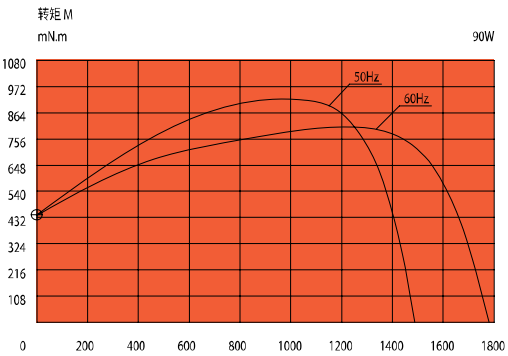


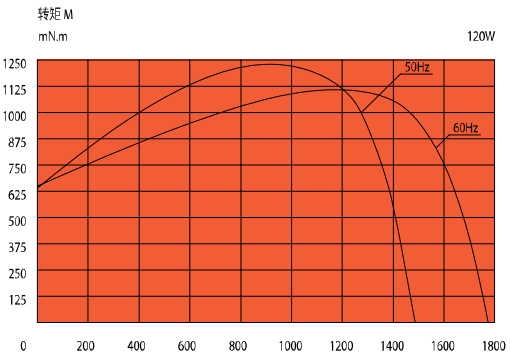


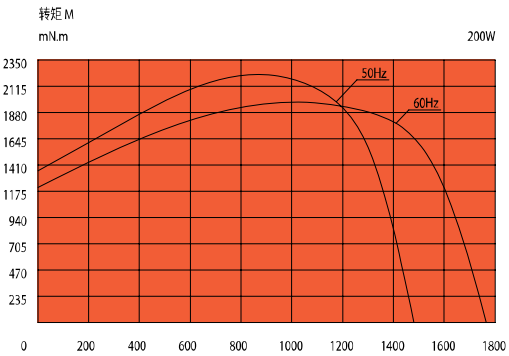






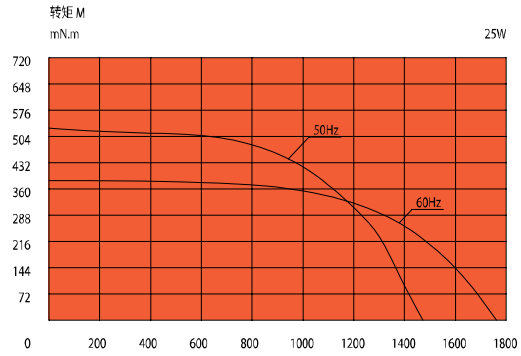


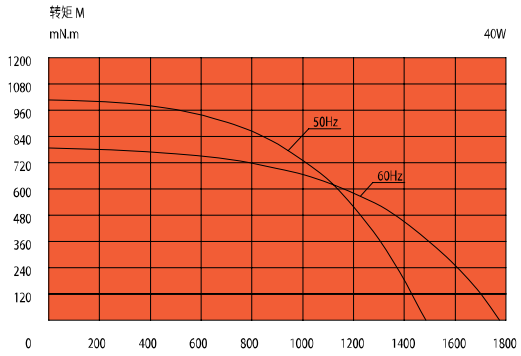


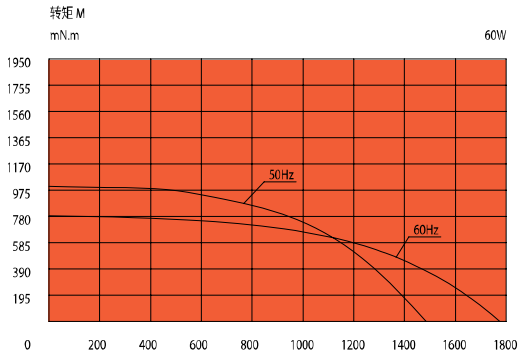


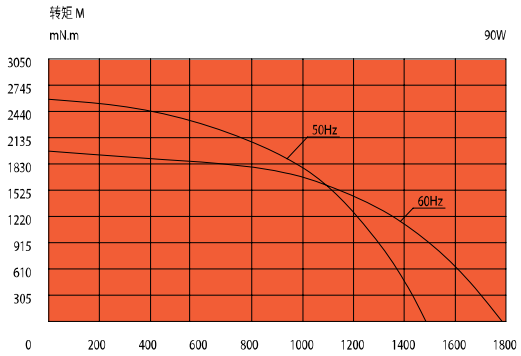
转速–转矩曲线
ROTATOINAL SPEED - TORQUE CURVE

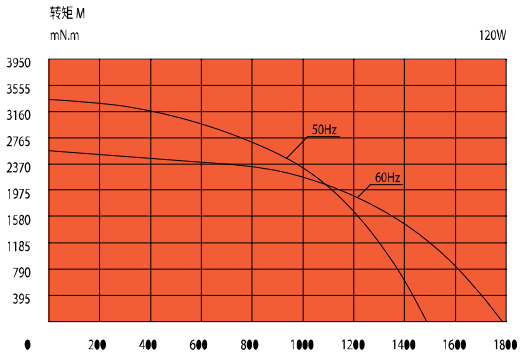
●三相电机 Three phase motor

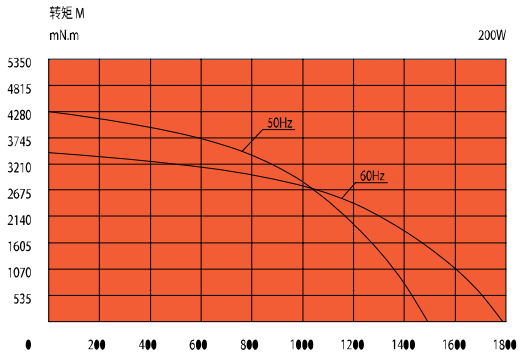












调速减速电机
SPEED CONTROL GEAR MOTOR

6W
60mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	转速范围 Speed Range	额定转矩 Rated Torque		启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	90r/min	1200r/min	mN.m	μF/VAC
							mN.m			
2IK6RGN-C	2IK6RA-C	6	1ph220	50	0.13	90~1350	19	45	38	0.8/450
				60	0.12	90~1550	20	36	40	
2IK6RGN-A	2IK6RA-A	6	1ph110	50	0.24	90~1350	19	45	38	3.0/250
				60	0.21	90~1550	20	36	40	

●从调速电机转矩/转速曲线可知，虽然调速电机的调速范围为:50Hz...90~1350转/分钟;60Hz…90-1550转/分钟。但由于低速时(≤400转/分钟)，电机转矩下降较多，易发生过载，且电机直连风扇冷却效果差，易发热，因此必须预留足够的功率余量，并且不要经常工作在低速区。因此电机最佳调速范围为:50Hz…900~1350转/分钟;60Hz…900~1550转/分钟。

●各种安全规格以电机铭牌上的型号名取得认证。

●注:-A"型号中电压为110V时，配置电容器容量以实际铭牌为准。

● It can be seen from the torque/speed curve of the speed-regulating motor, although the speed range of the speed-regulating motor is :50Hz... 90~1350 RPM; 60 hz... 90-1550 revolutions per minute. But due to the low speed (400 RPM) or less, when the motor torque drop more, prone to overload, and poor motor directly connected the fan cooling effect, easy to heat, so must set aside enough power margin, and don't often work in low speed zone. Therefore, the optimal speed range of the motor is :50Hz... 900~1350 revolutions per minute; 60 hz... 900~1550 RPM.

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	0.11	0.13	0.18	0.21	0.27	0.32	0.36	0.45	0.54	0.64	0.7	0.80	0.97	1.16	1.29	1.61	1.74	2.17	2.60	2.89	3	3	3	3
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	0.09	0.11	0.15	0.18	0.23	0.27	0.30	0.38	0.45	0.54	0.6	0.68	0.821	0.98	1.09	1.36	1.47	1.84	2.20	2.45	2.94	3	3	3

●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。

●表中■色框表示输出轴的旋转方向与电机旋转方向相反。

●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。

●减速箱的最大容许转矩为 3N·M。

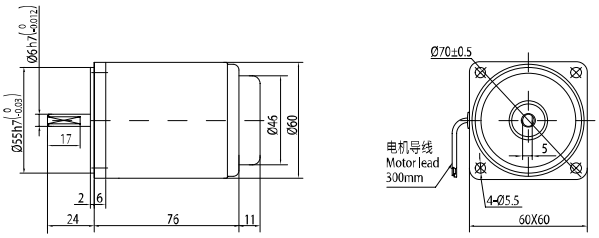
● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.

- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 3N·M.

●外形尺寸（单位mm）Dimension (unit mm)

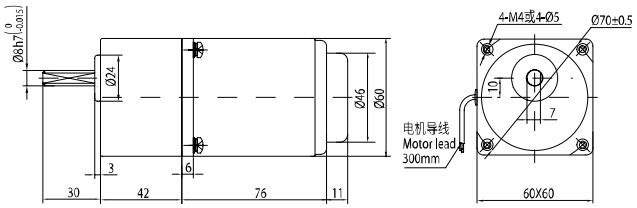
●圆轴电机

重量 Weight: 1.1kg



●组合：引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 1.6kg



●短箱体Short Gear Box

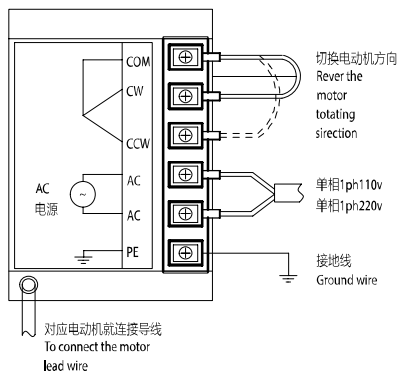
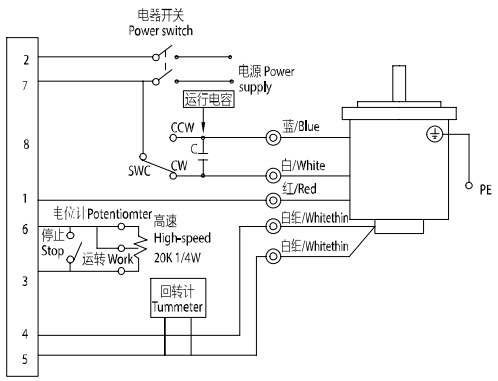
●其中速比 3~18 可以做成短型减速箱，高度为 32mm。Gear ratio 3~18, short case is possible， Height of 32 mm.

●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●表中所记型号为齿轮轴型，圆轴型亦同。

- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

US 型 /US Type	SS 型 /SS Type
	

调速减速电机
SPEED CONTROL GEAR MOTOR

15W
70mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	转速范围 Speed Range	额定转矩 Rated Torque		启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	90r/min	1200r/min	mN.m	μF/VAC
							mN.m			
3IK15RGN-C	3IK15RA-C	15	1ph220	50	0.17	90~1350	40	110	80	1.2/450
				60	0.17	90~1550	37	90	75	
3IK15RGN-A	3IK15RA-A	15	1ph110	50	0.34	90~1350	40	110	80	5.0/250
				60	0.35	90~1550	20	37	75	

●从调速电机转矩/转速曲线可知，虽然调速电机的调速范围为:50Hz...90~1350转/分钟;60Hz...90-1550转/分钟。但由于低速时(≤400转/分钟)，电机转矩下降较多，易发生过载，且电机直连风扇冷却效果差，易发热，因此必须预留足够的功率余量，并且不要经常工作在低速区。因此电机最佳调速范围为:50Hz...900~1350转/分钟;60Hz...900~1550转/分钟。

●各种安全规格以电机铭牌上的型号名取得认证。

●注:-A"" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。

● It can be seen from the torque/speed curve of the speed-regulating motor, although the speed range of the speed-regulating motor is :50Hz... 90~1350 RPM; 60 hz... 90-1550 revolutions per minute. But due to the low speed (400 RPM) or less, when the motor torque drop more, prone to overload, and poor motor directly connected the fan cooling effect, easy to heat, so must set aside enough power margin, and don't often work in low speed zone. Therefore, the optimal speed range of the motor is :50Hz... 900~1350 revolutions per minute; 60 hz... 900~1550 RPM.

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	0.30	0.36	0.51	0.61	0.76	0.91	1.01	1.261	1.511	1.64	1.82	2.27	2.73	3.27	3.63	4.54	4.91	5	5	5	5	5	5	5
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	0.22	0.27	0.37	0.45	0.56	0.67	0.74	0.93	1.11	1.20	1.34	1.67	2.01	2.41	2.67	3.34	3.11	4.11	5	5	5	5	5	5

●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。

●表中 色框表示输出轴的旋转方向与电机旋转方向相反。

●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。

●减速箱的最大容许转矩为 5N·M。

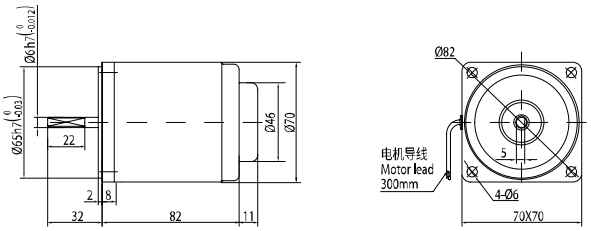
● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.

- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 5N·M.

外形尺寸（单位mm）Dimension (unit mm)

圆轴电机

重量 Weight: 1.45kg

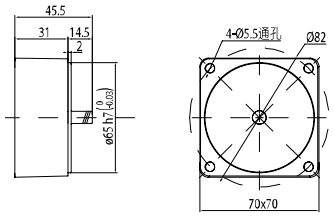


中间齿轮箱 Decimal Gearhead

可安装在齿轮轴型上 Can be connected to GN pinion shafe type

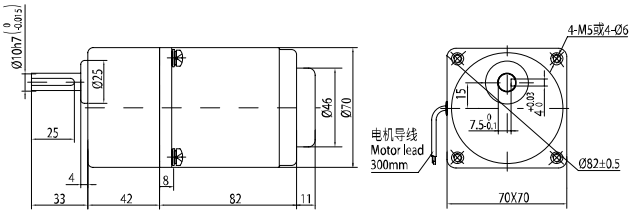
电动机外形与齿轮轴型相同 3GN10XK

重量 Weight：0.35kg

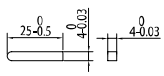


组合：引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 1.95kg



键（减速器附件）

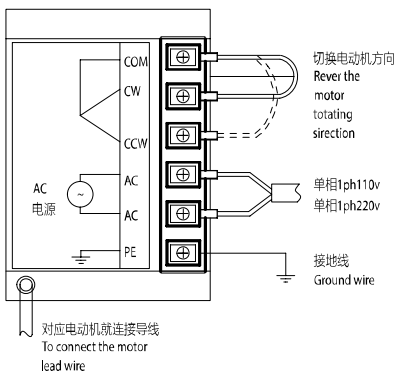
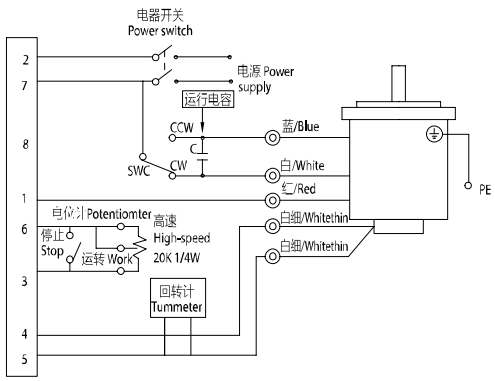


短箱体Short Gear Box

- 其中速比 3~15 可以做成短型减速箱，高度为 32mm。Gear ratio 3~15, short case is possible， Height of 32 mm.

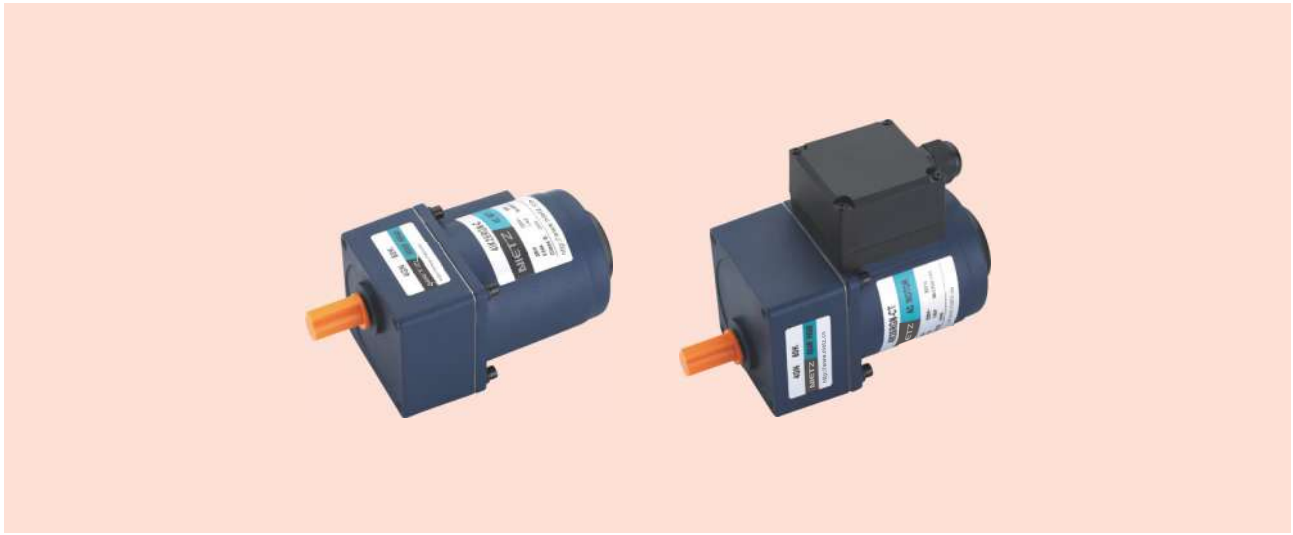
接线图Wiring Diagram

- 运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。
- 表中所记型号为齿轮轴型，圆轴型亦同。
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

US 型 /US Type	SS 型 /SS Type
	

调速减速电机
SPEED CONTROL GEAR MOTOR

25W
80mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	转速范围 Speed Range	额定转矩 Rated Torque		启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	90r/min	1200r/min	mN.m	μF/VAC
							mN.m			
4IK25RGN-C	4IK25RA-C	25	1ph220	50	0.24	90~1350	70	190	80	1.8/450
				60	0.24	90~1550	60	153	75	
4IK25RGN-A	4IK25RA-A	25	1ph110	50	0.54	90~1350	70	190	80	7.0/250
				60	0.50	90~1550	60	153	75	

●从调速电机转矩/转速曲线可知，虽然调速电机的调速范围为 :50Hz...90~1350 转 / 分钟 ;60Hz…90-1550 转 / 分钟。但由于低速时 (≤400 转 / 分钟), 电机转矩下降较多，易发生过载，且电机直连风扇冷却效果差，易发热，因此必须预留足够的功率余量，并且不要经常工作在低速区。因此电机最佳调速范围为 :50Hz…900~1350 转 / 分钟 ;60Hz…900~1550 转 / 分钟。

●各种安全规格以电机铭牌上的型号名取得认证。

●注 :-A"" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。

● It can be seen from the torque/speed curve of the speed-regulating motor, although the speed range of the speed-regulating motor is :50Hz... 90~1350 RPM; 60 hz... 90-1550 revolutions per minute. But due to the low speed (400 RPM) or less, when the motor torque drop more, prone to overload, and poor motor directly connected the fan cooling effect, easy to heat, so must set aside enough power margin, and don't often work in low speed zone. Therefore, the optimal speed range of the motor is :50Hz... 900~1350 revolutions per minute; 60 hz... 900~1550 RPM.

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	0.45	0.54	0.75	0.90	1.12	1.35	1.50	1.87	2.25	2.69	2.99	3.37	4.04	4.85	5.39	6.74	7.28	8	8	8	8	8	8	8
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	0.36	0.437	0.61	0.73	0.91	1.09	1.21	1.52	1.82	2.18	2.43	2.73	3.27	3.93	4.37	5.46	6.55	8	8	8	8	8	8	8

●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。

●表中 色框表示输出轴的旋转方向与电机旋转方向相反。

●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。

●减速箱的最大容许转矩为 8N·M。

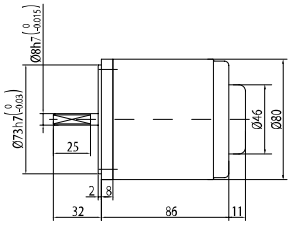
● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.

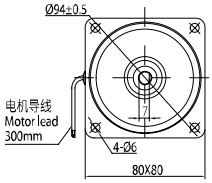
- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 8N·M.

外形尺寸（单位mm）Dimension (unit mm)

圆轴电机

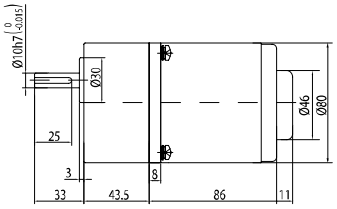
重量 Weight: 1.95kg

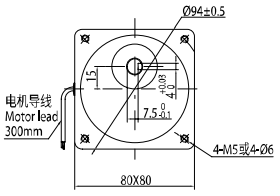




组合：引线型电机 + 标准减速箱（减速比 1:3~200）

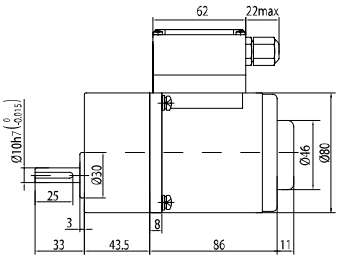
重量 Weight: 2.85kg

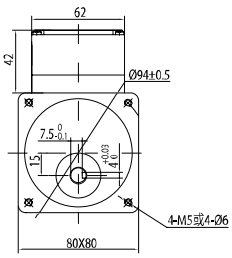




组合：接线盒（可选，详见 P150）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 2.65kg



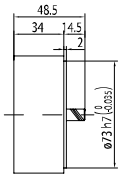


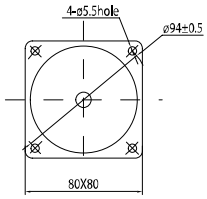
中间齿轮箱 Decimal Gearhead

可安装在齿轮轴型上 Can be connected to GN pinion shafe type

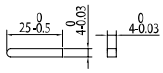
电动机外形与齿轮轴型相同 4GN10XK

重量 Weight：0.41kg





键（减速器附件）



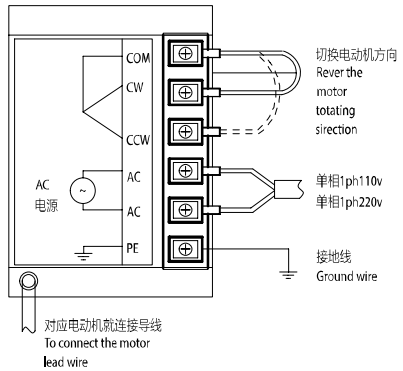
短箱体Short Gear Box

其中速比 3~20 可以做成短型减速箱，高度为 32mm。Gear ratio 3~20, short case is possible，Height of 32 mm.

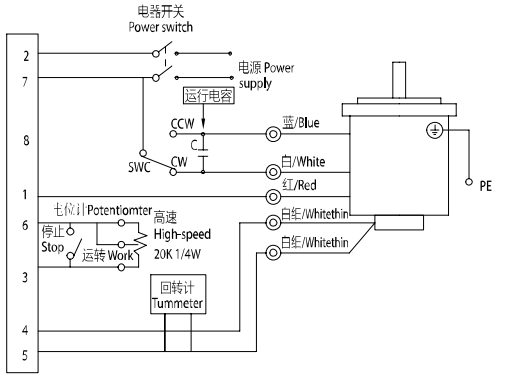
接线图Wiring Diagram

- 运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。
- 表中所记型号为齿轮轴型，圆轴型亦同。
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

US 型 /US Type

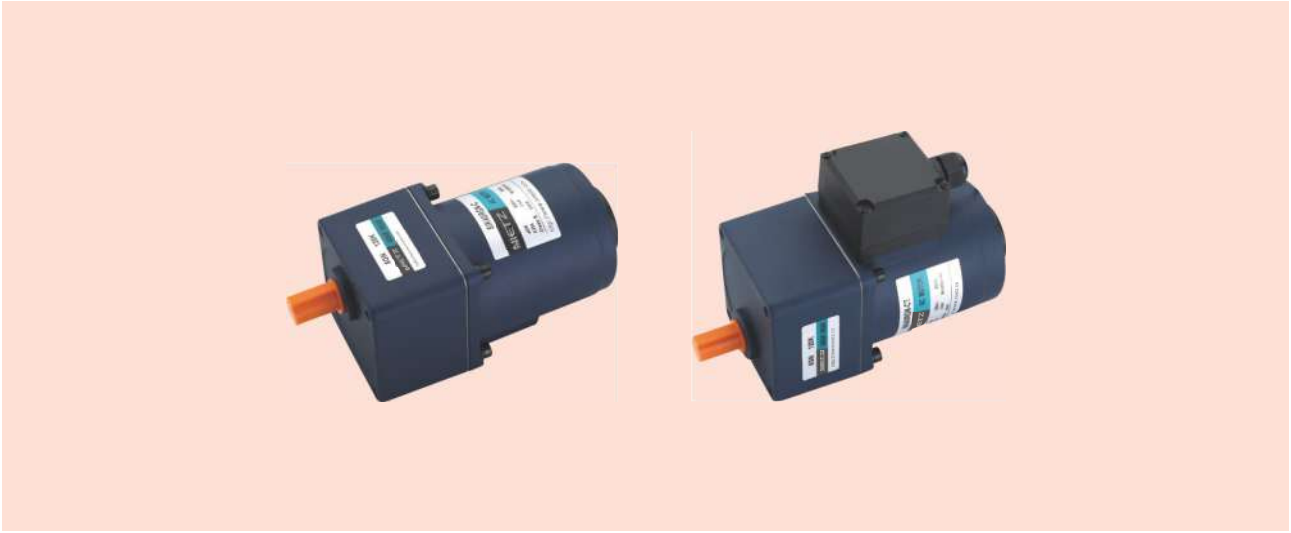


SS 型 /SS Type



调速减速电机
SPEED CONTROL GEAR MOTOR

40W
90mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	转速范围 Speed Range	额定转矩 Rated Torque		启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	90r/min	1200r/min	mN.m	μF/VAC
							mN.m			
5IK40RGN-C	5IK40RA-C	40	1ph220	50	0.35	90~1350	110	320	220	2.5/450
				60	0.35	90~1550	110	230	220	
5IK40RGN-A	5IK40RA-A	40	1ph110	50	0.64	90~1350	110	300	220	10.0/250
				60	0.66	90~1550	110	230	220	

●从调速电机转矩/转速曲线可知，虽然调速电机的调速范围为 :50Hz...90~1350 转 / 分钟 ;60Hz…90-1550 转 / 分钟。但由于低速时 (≤400 转 / 分钟), 电机转矩下降较多，易发生过载，且电机直连风扇冷却效果差，易发热，因此必须预留足够的功率余量，并且不要经常工作在低速区。因此电机最佳调速范围为 :50Hz…900~1350 转 / 分钟 ;60Hz…900~1550 转 / 分钟。

●各种安全规格以电机铭牌上的型号名取得认证。

●注 :-A"" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。

● It can be seen from the torque/speed curve of the speed-regulating motor, although the speed range of the speed-regulating motor is :50Hz... 90~1350 RPM; 60 hz... 90-1550 revolutions per minute. But due to the low speed (400 RPM) or less, when the motor torque drop more, prone to overload, and poor motor directly connected the fan cooling effect, easy to heat, so must set aside enough power margin, and don't often work in low speed zone. Therefore, the optimal speed range of the motor is :50Hz... 900~1350 revolutions per minute; 60 hz... 900~1550 RPM.

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	0.71	0.86	1.19	1.43	1.79	2.14	2.38	2.98	3.57	3.86	4.29	5.36	6.43	7.72	7.72	9.65	10	10	10	10	10	10	10	10
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	0.56	0.68	0.94	1.13	1.41	1.69	1.88	2.35	2.82	3.04	3.38	4.23	5.07	6.09	6.09	7.61	9.13	10	10	10	10	10	10	10

●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。

●表中 色框表示输出轴的旋转方向与电机旋转方向相反。

●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。

●减速箱的最大容许转矩为 10N·M。

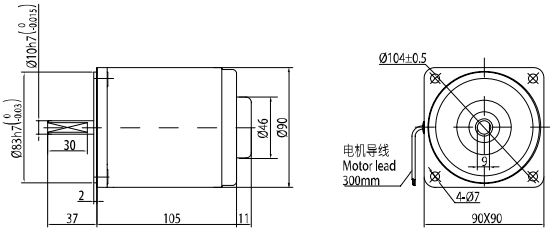
● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.

- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 10N·M.

外形尺寸（单位mm）Dimension (unit mm)

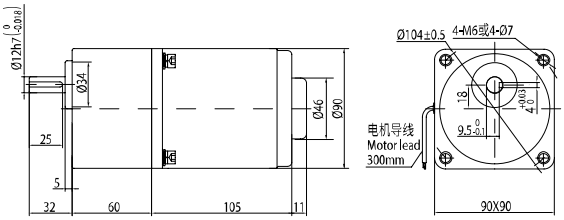
圆轴电机

重量 Weight: 2.15kg



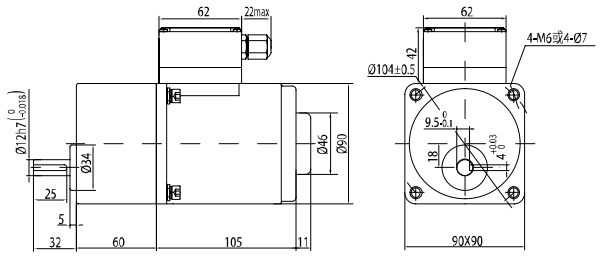
组合：引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 3.85kg



组合：接线盒（可选，详见 P150）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 4.0kg

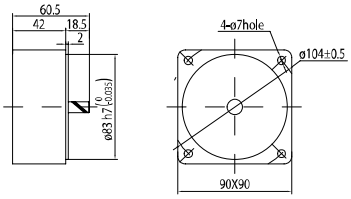


中间齿轮箱 Decimal Gearhead

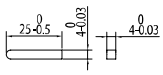
可安装在齿轮轴型上 Can be connected to GN pinion shafe type

电动机外形与齿轮轴型相同 5GN10XK

重量 Weight：0.6kg



键（减速器附件）



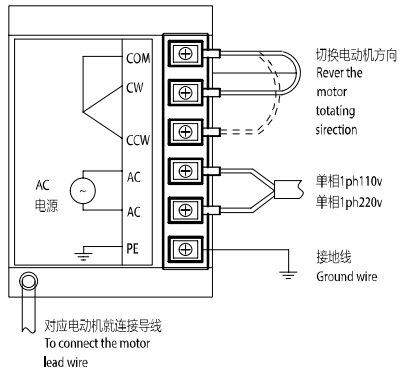
短箱体Short Gear Box

其中速比 3~18 可以做成短型减速箱，高度为 42mm。Gear ratio 3~18, short case is possible，Height of 42 mm.

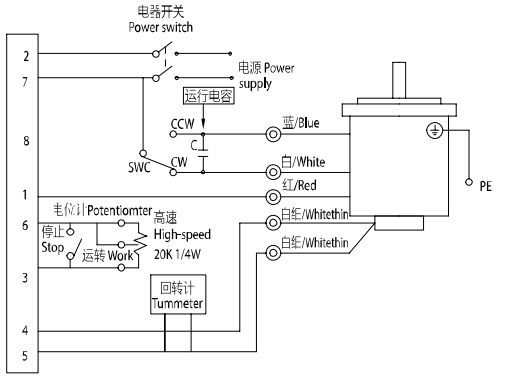
接线图Wiring Diagram

- 运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。
- 表中所记型号为齿轮轴型，圆轴型亦同。
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

US 型 /US Type

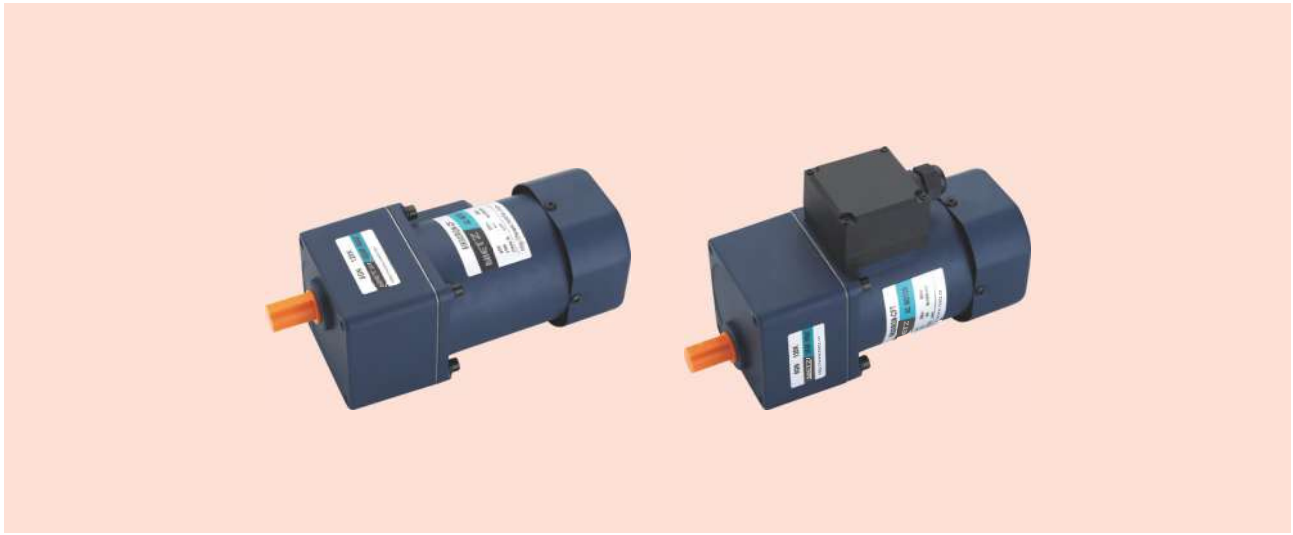


SS 型 /SS Type



调速减速电机
SPEED CONTROL GEAR MOTOR

60W
90mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	转速范围 Speed Range	额定转矩 Rated Torque		启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	90r/min	1200r/min	mN.m	μF/VAC
							mN.m			
5IK60RGN-CF	5IK60RA-CF	60	1ph220	50	0.50	90~1350	175	450	350	4.0/450
				60	0.54	90~1550	175	360	350	
5IK60RGN-AF	5IK60RA-AF	60	1ph110	50	0.91	90~1350	175	450	350	15.0/250
				60	1.01	90~1550	175	360	350	

●从调速电机转矩/转速曲线可知，虽然调速电机的调速范围为 :50Hz...90~1350 转 / 分钟 ;60Hz…90-1550 转 / 分钟。但由于低速时 (≤400 转 / 分钟), 电机转矩下降较多，易发生过载，且电机直连风扇冷却效果差，易发热，因此必须预留足够的功率余量，并且不要经常工作在低速区。因此电机最佳调速范围为 :50Hz…900~1350 转 / 分钟 ;60Hz…900~1550 转 / 分钟。

●各种安全规格以电机铭牌上的型号名取得认证。

●注 :-A"" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。

● It can be seen from the torque/speed curve of the speed-regulating motor, although the speed range of the speed-regulating motor is :50Hz... 90~1350 RPM; 60 hz... 90-1550 revolutions per minute. But due to the low speed (400 RPM) or less, when the motor torque drop more, prone to overload, and poor motor directly connected the fan cooling effect, easy to heat, so must set aside enough power margin, and don't often work in low speed zone. Therefore, the optimal speed range of the motor is :50Hz... 900~1350 revolutions per minute; 60 hz... 900~1550 RPM.

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	0.99	1.18	1.64	1.97	2.47	2.96	3.29	4.11	4.93	5.33	5.92	7.40	8.88	10	10	10	10	10	10	10	10	10	10	10
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	0.86	1.03	1.43	1.72	2.15	2.57	2.86	3.57	4.29	4.63	5.15	6.43	7.72	9.26	9.5	10	10	10	10	10	10	10	10	10

●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。

●表中 色框表示输出轴的旋转方向与电机旋转方向相反。

●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。

●减速箱的最大容许转矩为 10N·M。

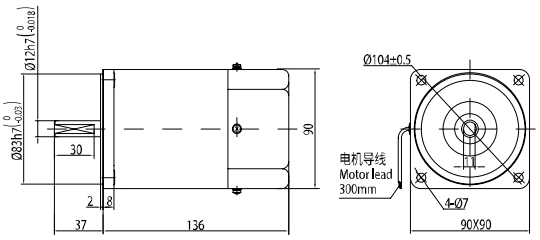
● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.

- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 10N·M.

●外形尺寸（单位mm）Dimension (unit mm)

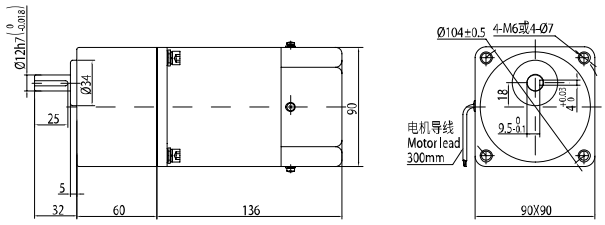
●**圆轴电机**

重量 Weight: 2.8kg



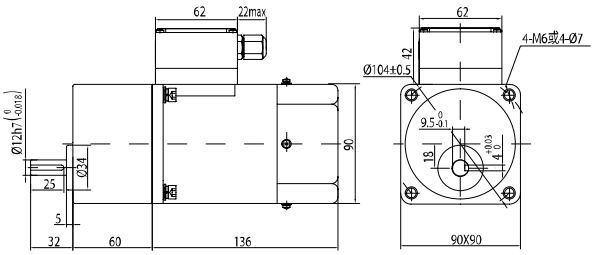
●**组合：**引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 4.15kg



●**组合：**接线盒（可选，详见 P150）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 4.3kg

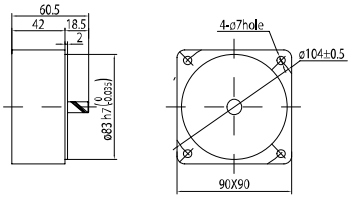


●**中间齿轮箱** Decimal Gearhead

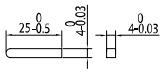
可安装在 GN 齿轮轴型上 Can be connected to GN pinion shafe type

电动机外形与齿轮轴型相同 5GN10XK

重量 Weight：0.6kg



●**键**（减速器附件）



●短箱体Short Gear Box

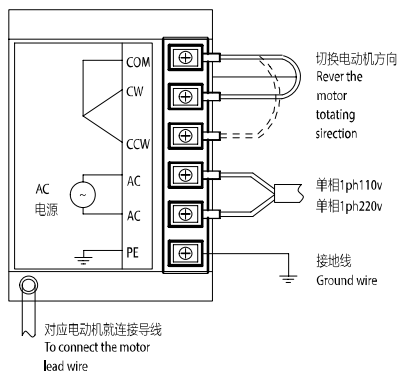
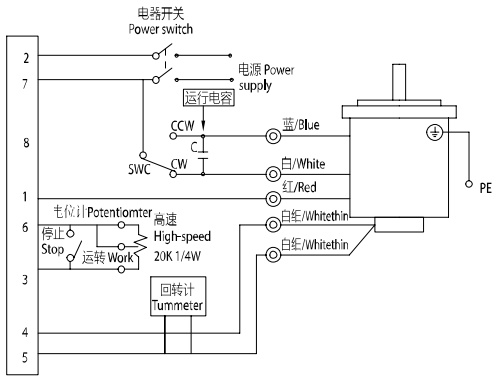
●其中速比 3~18 可以做成短型减速箱，高度为 42mm。Gear ratio 3~18, short case is possible，Height of 42 mm.

●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

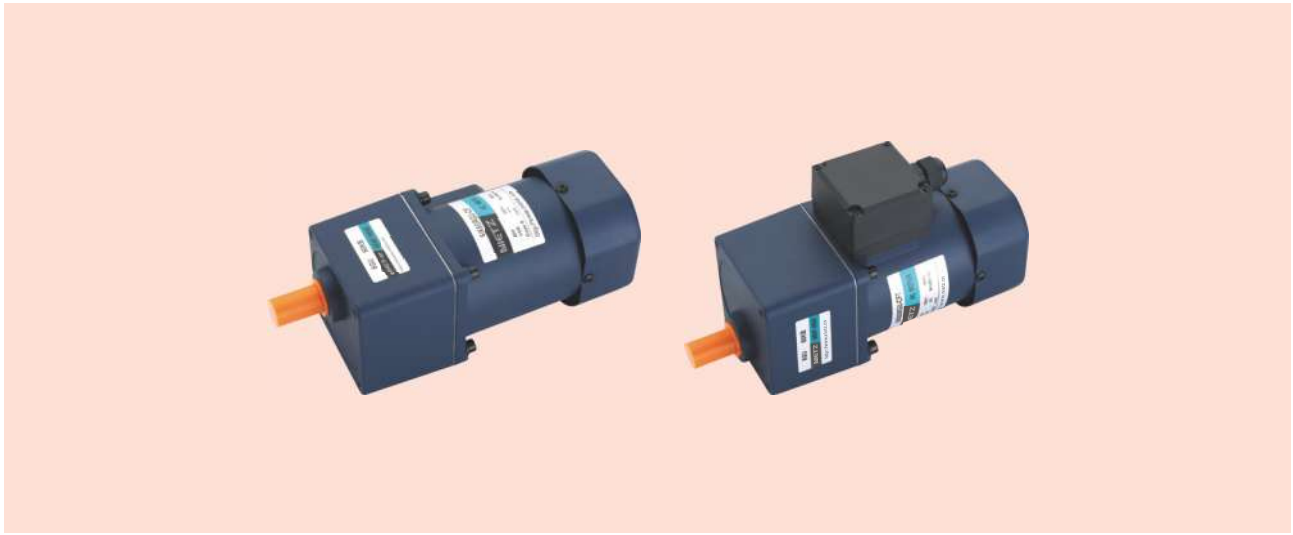
●表中所记型号为齿轮轴型，圆轴型亦同。

- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

US 型 /US Type	SS 型 /SS Type
	

调速减速电机
SPEED CONTROL GEAR MOTOR

60W
90mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	转速范围 Speed Range	额定转矩 Rated Torque		启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	90r/min	1200r/min	mN.m	μF/VAC
							mN.m			
5IK60RGU-CF	5IK60RA-CF	60	1ph220	50	0.50	90~1350	175	450	350	4.0/450
				60	0.54	90~1550	175	360	350	
5IK60RGU-AF	5IK60RA-AF	60	1ph110	50	0.91	90~1350	175	450	350	15.0/250
				60	1.01	90~1550	175	360	350	

●从调速电机转矩/转速曲线可知，虽然调速电机的调速范围为 :50Hz...90~1350 转 / 分钟 ;60Hz…90-1550 转 / 分钟。但由于低速时 (≤400 转 / 分钟), 电机转矩下降较多，易发生过载，且电机直连风扇冷却效果差，易发热，因此必须预留足够的功率余量，并且不要经常工作在低速区。因此电机最佳调速范围为 :50Hz…900~1350 转 / 分钟 ;60Hz…900~1550 转 / 分钟。

●各种安全规格以电机铭牌上的型号名取得认证。

●注 :-A"" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。

● It can be seen from the torque/speed curve of the speed-regulating motor, although the speed range of the speed-regulating motor is :50Hz... 90~1350 RPM; 60 hz... 90-1550 revolutions per minute. But due to the low speed (400 RPM) or less, when the motor torque drop more, prone to overload, and poor motor directly connected the fan cooling effect, easy to heat, so must set aside enough power margin, and don't often work in low speed zone. Therefore, the optimal speed range of the motor is :50Hz... 900~1350 revolutions per minute; 60 hz... 900~1550 RPM.

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	0.99	1.19	1.64	1.97	2.47	2.96	3.65	3.70	4.44	5.33	5.33	6.66	7.99	9.59	10.66	13.32	15.98	19.98	20	20	20	20	20	20
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	0.86	1.03	1.43	1.72	2.15	2.57	2.92	3.22	3.86	4.63	5.01	5.79	6.95	8.34	9.26	11.58	13.90	17.37	18.76	20	20	20	20	20

●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。

●表中 色框表示输出轴的旋转方向与电机旋转方向相反。

●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。

●减速箱的最大容许转矩为 20N·M。

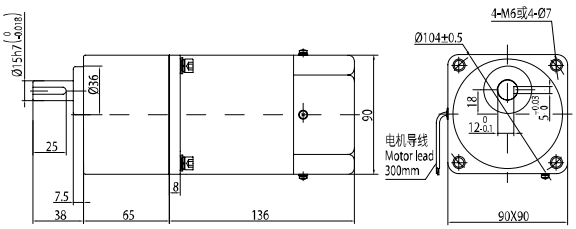
● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.

- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 20N·M.

●外形尺寸（单位mm）Dimension (unit mm)

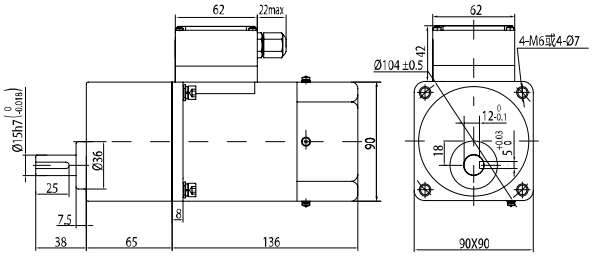
●**组合：**引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 2.8kg



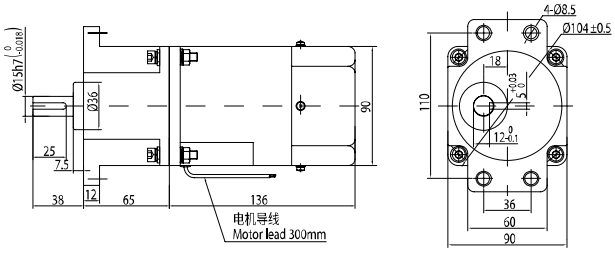
●**组合：**接线盒（可选，详见 P150）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 4.3kg



●**组合：**引线型电机 + 带耳型减速箱（减速比 1:3~200）

重量 Weight: 4.45kg

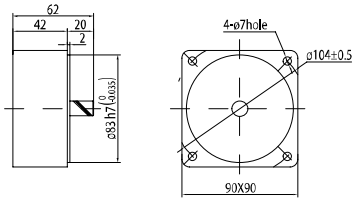


●**中间齿轮箱** Decimal Gearhead

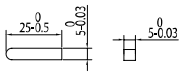
可安装在 GU 齿轮轴型上 Can be connected to GU pinion shafe type

电动机外形与齿轮轴型相同 5GU10XK

重量 Weight：0.7kg



●**键**（减速器附件）

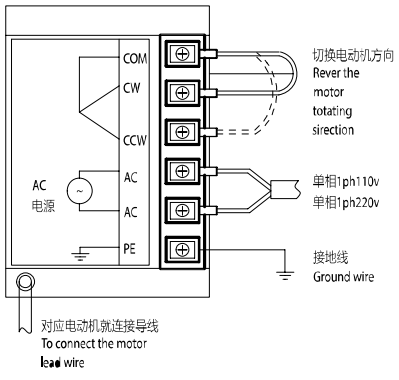
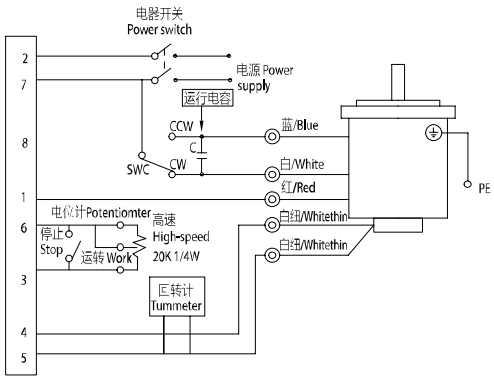


●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●表中所记型号为齿轮轴型，圆轴型亦同。

- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

US 型 /US Type	SS 型 /SS Type
	

调速减速电机
SPEED CONTROL GEAR MOTOR

90W
90mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	转速范围 Speed Range	额定转矩 Rated Torque		启动转矩 Starting Torque	运行 Capa
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	90r/min	1200r/min	mN.m	μF
							mN.m			
5IK90RGU-CF	5IK90RA-CF	90	1ph220	50	0.64	90~1350	240	675	480	5.
				60	0.71	90~1550	210	540	420	
5IK90RGU-AF	5IK90RA-AF	90	1ph110	50	1.26	90~1350	240	675	480	20
				60	1.40	90~1550	210	540	420	

●从调速电机转矩 / 转速曲线可知，虽然调速电机的调速范围为 :50Hz...90~1350 转 / 分钟 ;60Hz…90-1550 转 / 分钟。但由于低速时 (≤400 转 / 分钟),电机转矩易发生过载，且电机直连风扇冷却效果差，易发热，因此必须预留足够的功率余量，并且不要经常工作在低速区。因此电机最佳调速范围为 :50Hz…900 分钟 ;60Hz…900~1550 转 / 分钟。

●各种安全规格以电机铭牌上的型号名取得认证。

●注 :-A'" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。

● It can be seen from the torque/speed curve of the speed-regulating motor, although the speed range of the speed-regulating motor is :50Hz... 90~1350 RPM; 60 hz... 90-1550 per minute. But due to the low speed (400 RPM) or less, when the motor torque drop more, prone to overload, and poor motor directly connected the fan cooling effect, easy to h set aside enough power margin, and don't often work in low speed zone. Therefore, the optimal speed range of the motor is :50Hz... 900~1350 revolutions per minute; 60 hz... 900

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	1
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7
	转矩 Torque N.m	1.56	1.88	2.60	3.13	3.91	4.69	5.47	5.86	7.03	8.44	8.8	10.55	12.66	15.19	16.88	20	20	20	20	20	20	20	
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8
	转矩 Torque N.m	1.29	1.55	2.15	2.58	3.22	3.86	4.37	4.83	5.80	6.96	7.3	8.69	10.43	12.52	13.91	17.39	20	20	20	20	20	20	

●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。

●表中■色框表示输出轴的旋转方向与电机旋转方向相反。

●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。

●减速箱的最大容许转矩为 20N·M。

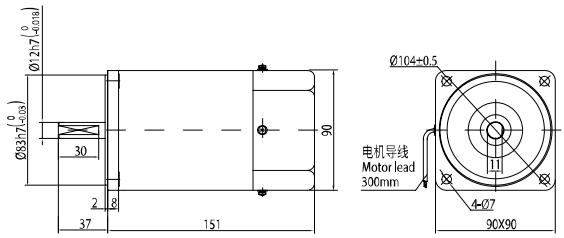
● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 2

- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 20N·M.

●外形尺寸（单位mm）Dimension (unit mm)

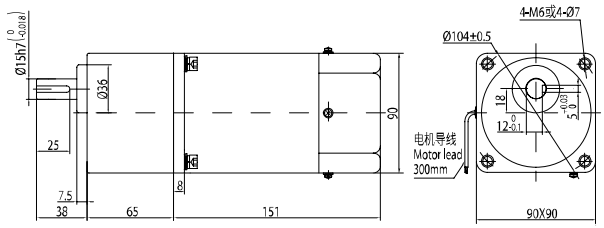
●圆轴电机

重量 Weight: 3.3kg



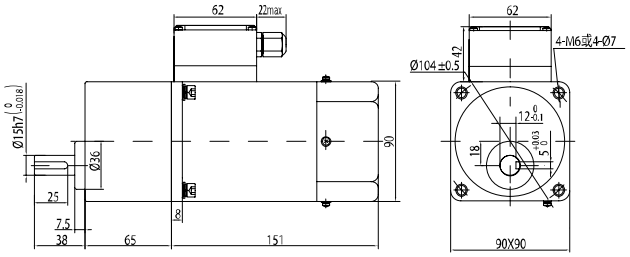
●组合：引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 4.8kg



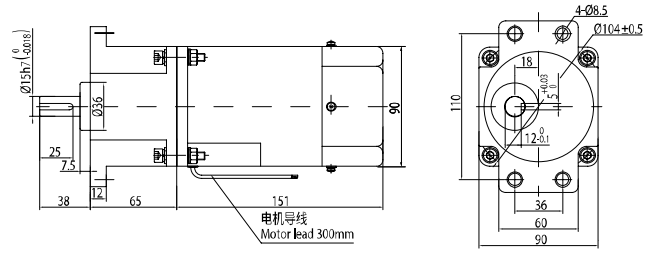
●组合：接线盒（可选，详见 P150）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight:4.95kg



●组合：引线型电机 + 带耳型减速箱（减速比 1:3~200）

重量 Weight: 4.8kg

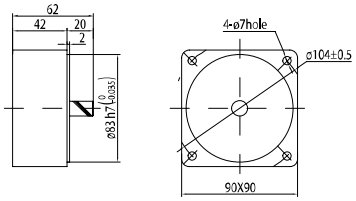


●中间齿轮箱 Decimal Gearhead

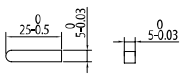
可安装在 GU 齿轮轴型上 Can be connected to GU pinion shafe type

电动机外形与齿轮轴型相同 5GU10XK

重量 Weight：0.7kg

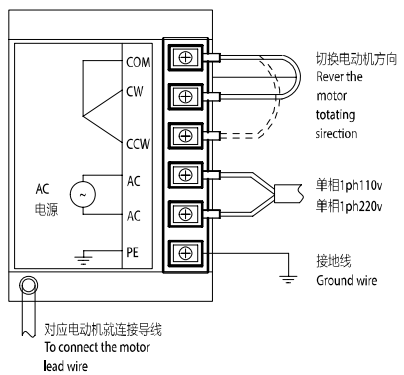
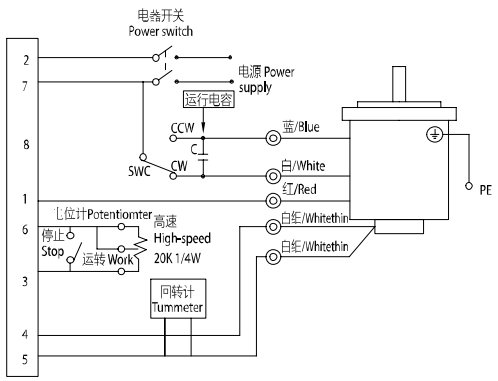


●键（减速器附件）



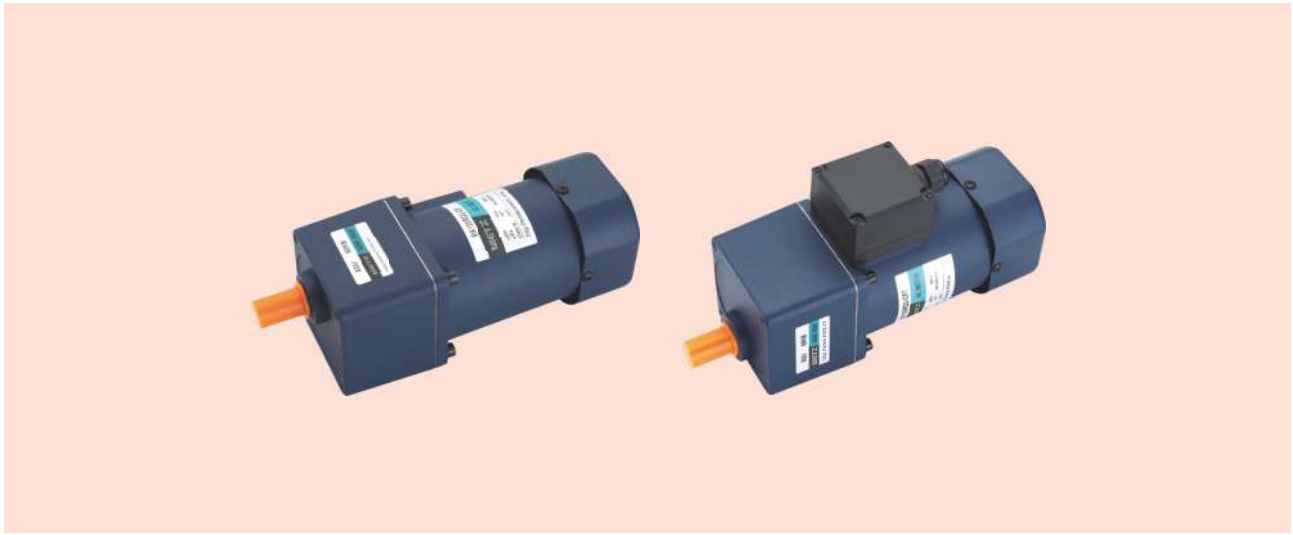
●接线图Wiring Diagram

- ●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。
- ●表中所记型号为齿轮轴型，圆轴型亦同。
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

US 型 /US Type	SS 型 /SS Type
	

调速减速电机
SPEED CONTROL GEAR MOTOR

120W
90mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	转速范围 Speed Range	额定转矩 Rated Torque		启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	90r/min	1200r/min	mN.m	μF/VAC
							mN.m			
5IK120RGU-CF	5IK120RA-CF	120	1ph220	50	0.87	90~1350	320	900	620	6.0/450
				60	0.90	90~1550	280	720	540	
5IK120RGU-AF	5IK120RA-AF	120	1ph110	50	1.79	90~1350	320	900	620	25.0/250
				60	1.65	90~1550	280	720	540	

●从调速电机转矩/转速曲线可知，虽然调速电机的调速范围为 :50Hz...90~1350 转 / 分钟 ;60Hz…90-1550 转 / 分钟。但由于低速时 (≤400 转 / 分钟), 电机转矩下降较多，易发生过载，且电机直连风扇冷却效果差，易发热，因此必须预留足够的功率余量，并且不要经常工作在低速区。因此电机最佳调速范围为 :50Hz…900~1350 转 / 分钟 ;60Hz…900~1550 转 / 分钟。

●各种安全规格以电机铭牌上的型号名取得认证。

●注 :-A'" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。

● It can be seen from the torque/speed curve of the speed-regulating motor, although the speed range of the speed-regulating motor is :50Hz... 90~1350 RPM; 60 hz... 90-1550 revolutions per minute. But due to the low speed (400 RPM) or less, when the motor torque drop more, prone to overload, and poor motor directly connected the fan cooling effect, easy to heat, so must set aside enough power margin, and don't often work in low speed zone. Therefore, the optimal speed range of the motor is :50Hz... 900~1350 revolutions per minute; 60 hz... 900~1550 RPM.

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	2.12	2.55	3.54	4.25	5.31	6.37	7.29	7.96	9.56	11.47	12	14.36	17.20	20	20	20	20	20	20	20	20	20	20	20
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	1.72	2.07	2.87	3.45	4.31	5.17	5.83	6.46	7.75	9.30	9.9	11.63	13.96	16.75	18.61	20	20	20	20	20	20	20	20	20

●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。

●表中 色框表示输出轴的旋转方向与电机旋转方向相反。

●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。

●减速箱的最大容许转矩为 20N·M。

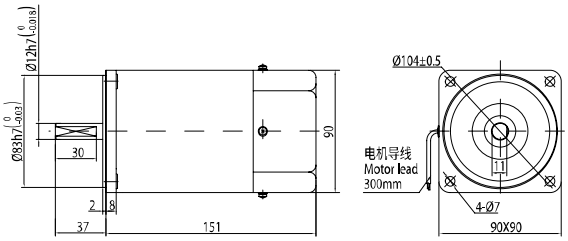
● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.

- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 20N·M.

●外形尺寸（单位mm）Dimension (unit mm)

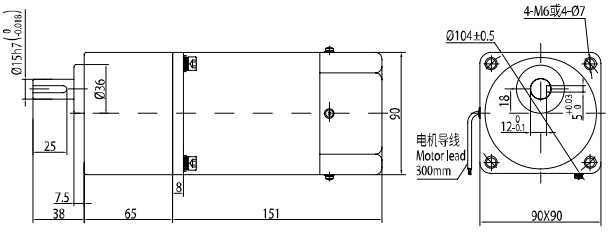
●圆轴电机

重量 Weight: 3.5kg



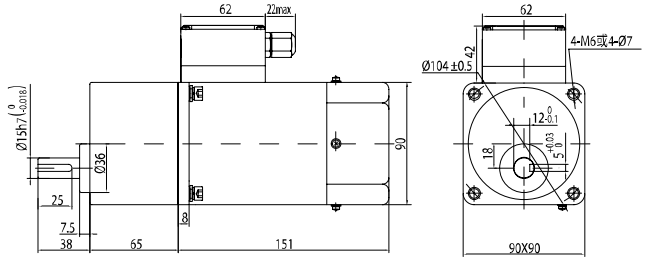
●组合：引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 5.0kg



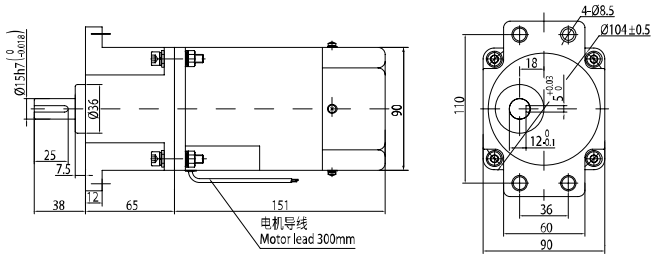
●组合：接线盒（可选，详见 P150）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 5.15kg



●组合：引线型电机 + 带耳型减速箱（减速比 1:3~200）

重量 Weight: 5.0kg

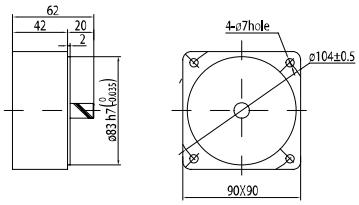


●中间齿轮箱 Decimal Gearhead

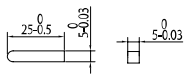
可安装在 GU 齿轮轴型上 Can be connected to GU pinion shafe type

电动机外形与齿轮轴型相同 5GU10XK

重量 Weight：0.7kg

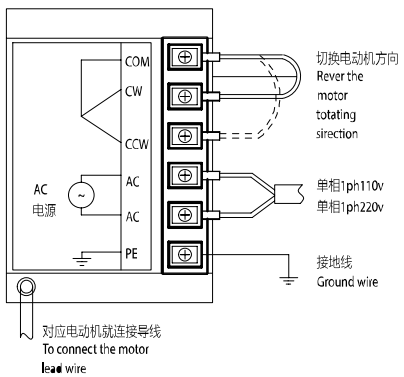
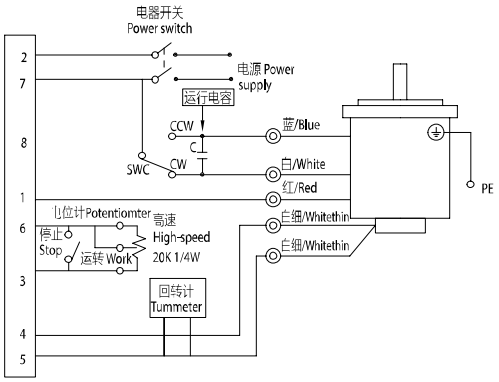


●键（减速器附件）



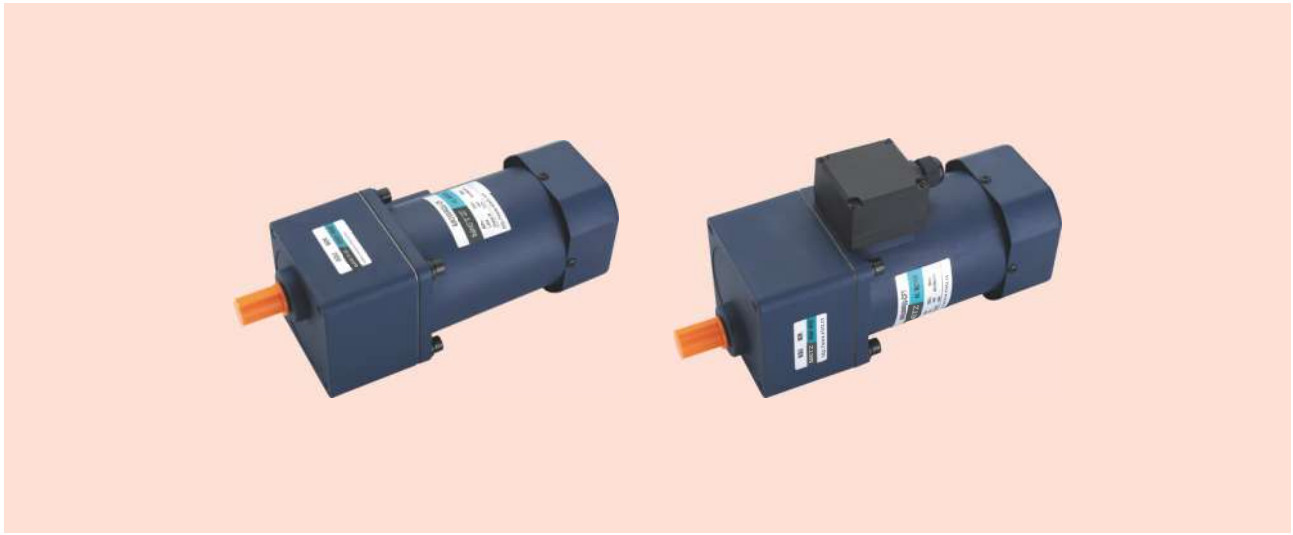
●接线图Wiring Diagram

- 运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。
- 表中所记型号为齿轮轴型，圆轴型亦同。
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

US 型 /US Type	SS 型 /SS Type
	

调速减速电机
SPEED CONTROL GEAR MOTOR

200W
104mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	转速范围 Speed Range	额定转矩 Rated Torque		启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	90r/min	1200r/min	mN.m	μF/VAC
							mN.m			
6IK200RGU-CF	6IK200RA-CF	200	1ph220	50	1.30	90~1350	500	1450	1050	10.0/450
				60	1.30	90~1550	450	1200	900	
6IK200RGU-AF	6IK200RA-AF	200	1ph110	50	2.60	90~1350	500	1450	950	35.0/250
				60	2.70	90~1550	450	1200	920	

●从调速电机转矩/转速曲线可知，虽然调速电机的调速范围为 :50Hz...90~1350 转 / 分钟 ;60Hz…90-1550 转 / 分钟。但由于低速时 (≤400 转 / 分钟), 电机转矩下降较多，易发生过载，且电机直连风扇冷却效果差，易发热，因此必须预留足够的功率余量，并且不要经常工作在低速区。因此电机最佳调速范围为 :50Hz…900~1350 转 / 分钟 ;60Hz…900~1550 转 / 分钟。

●各种安全规格以电机铭牌上的型号名取得认证。

●注 :-A"" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。

● It can be seen from the torque/speed curve of the speed-regulating motor, although the speed range of the speed-regulating motor is :50Hz... 90~1350 RPM; 60 hz... 90-1550 revolutions per minute. But due to the low speed (400 RPM) or less, when the motor torque drop more, prone to overload, and poor motor directly connected the fan cooling effect, easy to heat, so must set aside enough power margin, and don't often work in low speed zone. Therefore, the optimal speed range of the motor is :50Hz... 900~1350 revolutions per minute; 60 hz... 900~1550 RPM.

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	3.11	3.74	5.19	6.23	7.78	9.34	11.75	11.67	14.01	16.81	16.81	21.01	25.21	30.26	33.62	40	40	40	40	40	40	40	40	40
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	2.58	3.09	4.29	5.15	6.44	7.73	9.72	9.66	11.59	13.91	13.91	17.39	20.86	25.04	27.82	34.77	40	40	40	40	40	40	40	40

●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。

●表中 色框表示输出轴的旋转方向与电机旋转方向相反。

●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。

●减速箱的最大容许转矩为 40N·M。

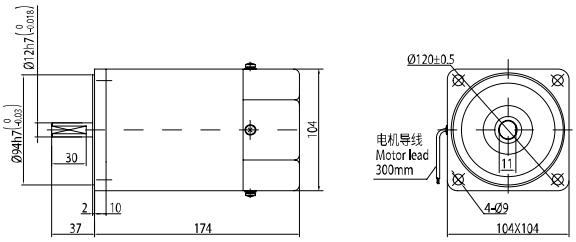
● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.

- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 40N·M.

●外形尺寸（单位mm）Dimension (unit mm)

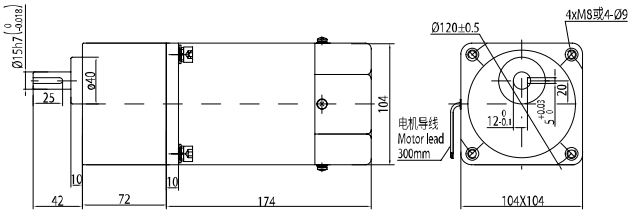
●**圆轴电机**

重量 Weight: 5.1kg



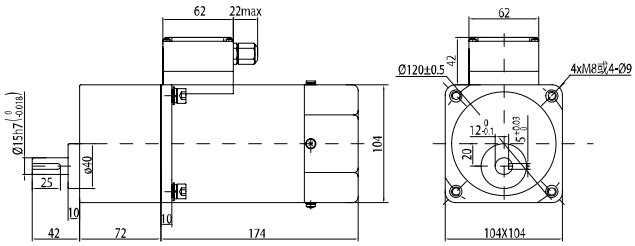
●**组合：**引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 7.2kg

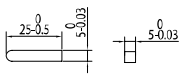


●**组合：**接线盒（可选，详见 P150）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 7.35kg



●**键**（减速器附件）



●短箱体Short Gear Box

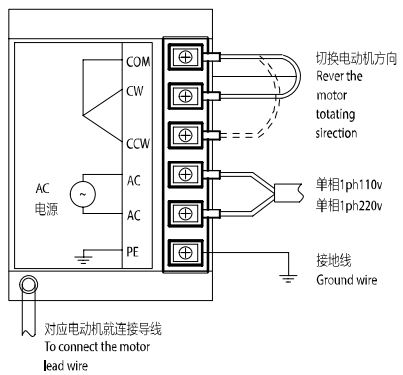
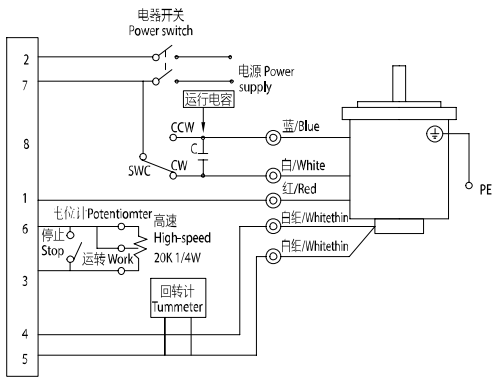
●其中速比 3~40 可以做成短型减速箱，高度为 65mm。Gear ratio 3~40, short case is possible，Height of 65 mm.

●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

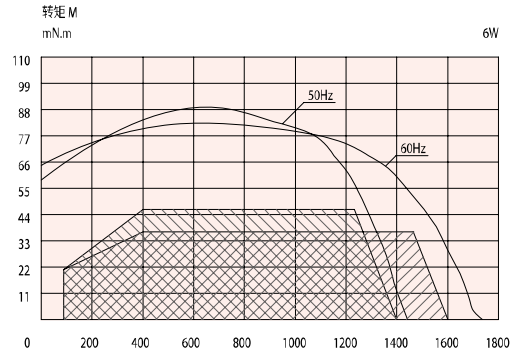
●表中所记型号为齿轮轴型，圆轴型亦同。

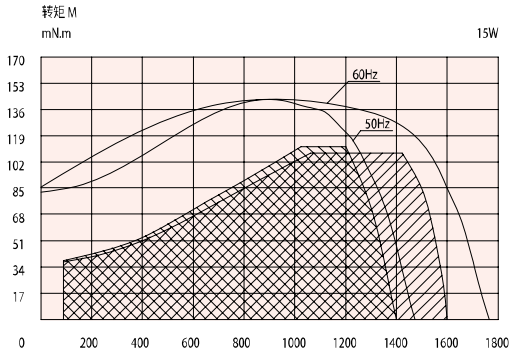
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

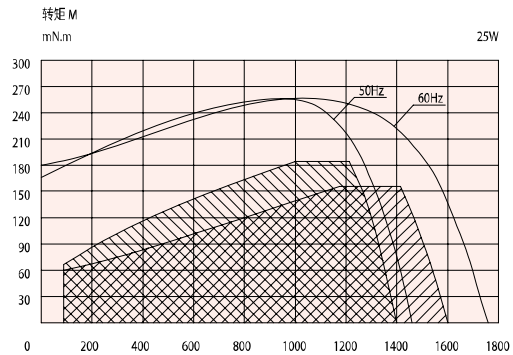
US 型 /US Type	SS 型 /SS Type
	

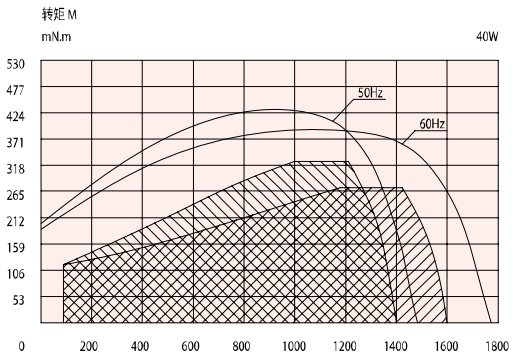
转速–转矩曲线
ROTATOINAL SPEED - TORQUE CURVE

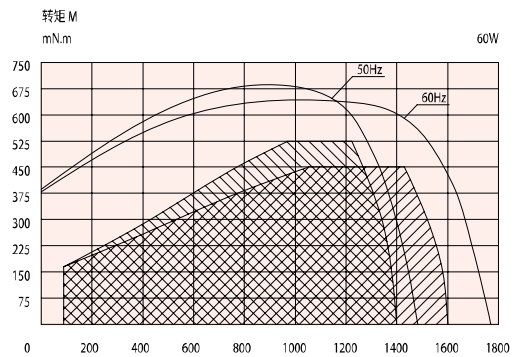
● 单相电机 Single phase motor

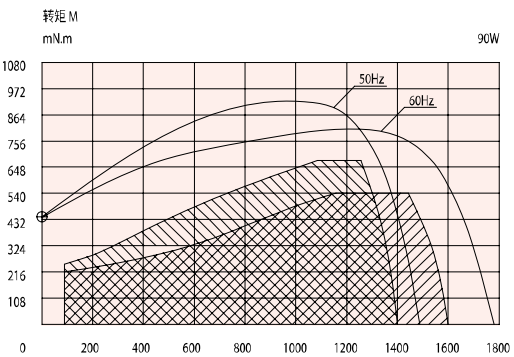


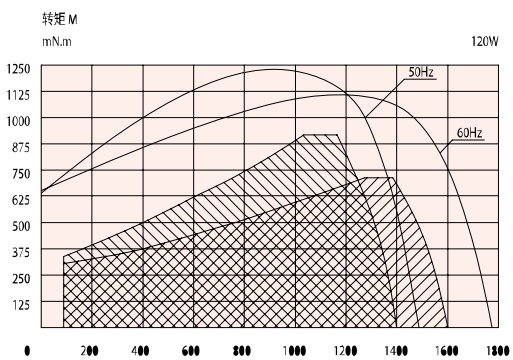


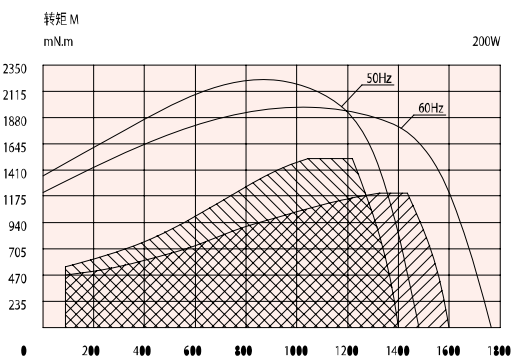












电磁制动减速电机
BRAKE GEAR MOTOR

15W
70mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
3IK15GN-CM	3IK15A-CM	15	1ph220	50	0.17	1250	125	84	1.2/450
				60	0.17	1550	92	86	
3IK15GN-AM	3IK15A-AM	15	1ph110	50	0.34	1250	127	109	5.0/250
				60	0.35	1550	94	120	
3IK15GN-SM	3IK15A-SM	15	3ph220	50	0.12	1250	108	183	/
				60	0.12	1550	88	132	
3IK15GN-S3M	3IK15A-S3M	15	3ph380	50	0.07	1250	108	183	/
				60	0.07	1550	88	132	

●各种安全规格以电机铭牌上的型号取得认定。
●内藏热保护装置（自动复位型）。在电机因某种原因过热时会自行起动使电机停止。
●电机温度下降后会自动恢复运行，故在进行检查作业时请务必事先切断电源。
●注："-A" 型号中电压为 110v 时，配置电容器容量以实际铭牌为准。
● When the motor is approved under varous safety standards, the model name on the nameplate is the approved model name.
● Contains a built-in thermal protectorlautomatic retum If a motor overheats for any reason, the thermal protector is opened and the motor stops.
● When the motor temperature drops, the thermal protector doses and the motor restarts. Be sure to turn the motor off before inspecting.
● Note:"-A"it means the voltage 110V, the assembly capacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	0.30	0.36	0.51	0.61	0.76	0.91	1.01	1.26	1.51	1.64	1.82	2.27	2.732	3.27	3.63	4.54	4.91	5	5	5	5	5	5	5
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	0.22	0.27	0.37	0.45	0.56	0.67	0.74	0.93	1.11	1.20	1.34	1.67	2.01	2.41	2.67	3.34	3.11	4.11	5	5	5	5	5	5

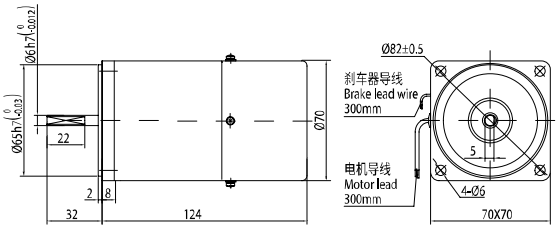
●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中■色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 5N·M。

- In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- The ▢ box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 5N-M.

●外形尺寸（单位mm）Dimension (unit mm)

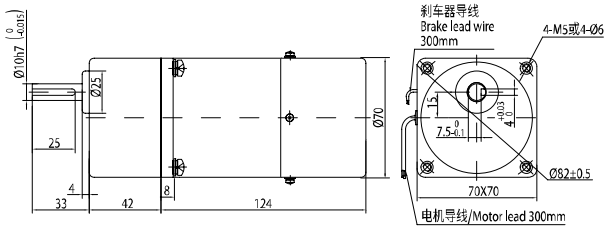
●**圆轴电机**

重量 Weight: 1.8kg

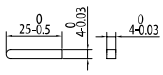


●**组合：**引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 2.3kg



●**键**（减速器附件）



●短箱体Short Gear Box

●其中速比 3~15 可以做成短型减速箱，高度为 32mm。Gear ratio 3~15, short case is possible， Height of 32 mm.

●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●表中所记型号为齿轮轴型，圆轴型亦同。

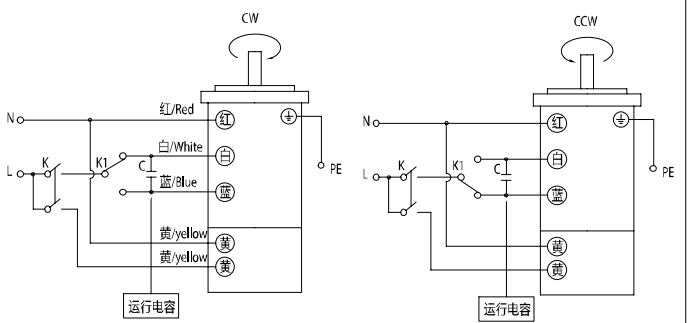
● B1B2 请按图示由联动开关 K 控制，请勿直接并联于电机主绕组上，因为电机停止过程中，主绕组会短时间发电，继续供电给 B1B2, 造成制动器断电延时，电机制动时间将延长 150 毫秒以上。

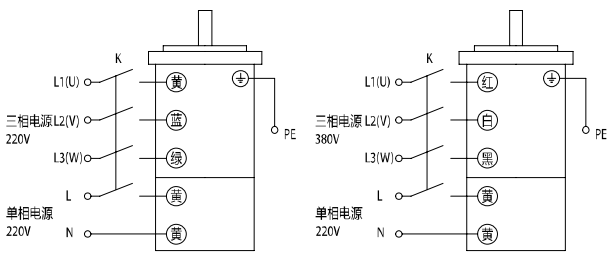
●请勿使用固态继电器控制电机和制动器，因为电机和制动器的工作电流很小，易造成固态继电器压降过大，制动器 B1B2 电压偏低，制动器无法正常吸合，造成制动器无法脱开、松闸。

- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.
- B1B2 please click here is controlled by linkage switch K, please do not directly on the main motor windings in parallel, in the process of motor stops, the primary winding can short time power, continue to power supply for B1B2, knocked out power delay, brake motor braking time will extend more than 150 milliseconds.
- Do not use solid state relay control motor and brake, because motor and brake working current is small, easy to cause the pressure drop of the solid state relay is too large, the brake B1B2 voltage on the low side, the brake is not normal and, causing brake release, loose brake.

3IK15GN-AM、3IK15GN-CM	3IK15GN-SM、3IK15GN-S3M

顺时针方向 CW　　逆时针方向 CCW





三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

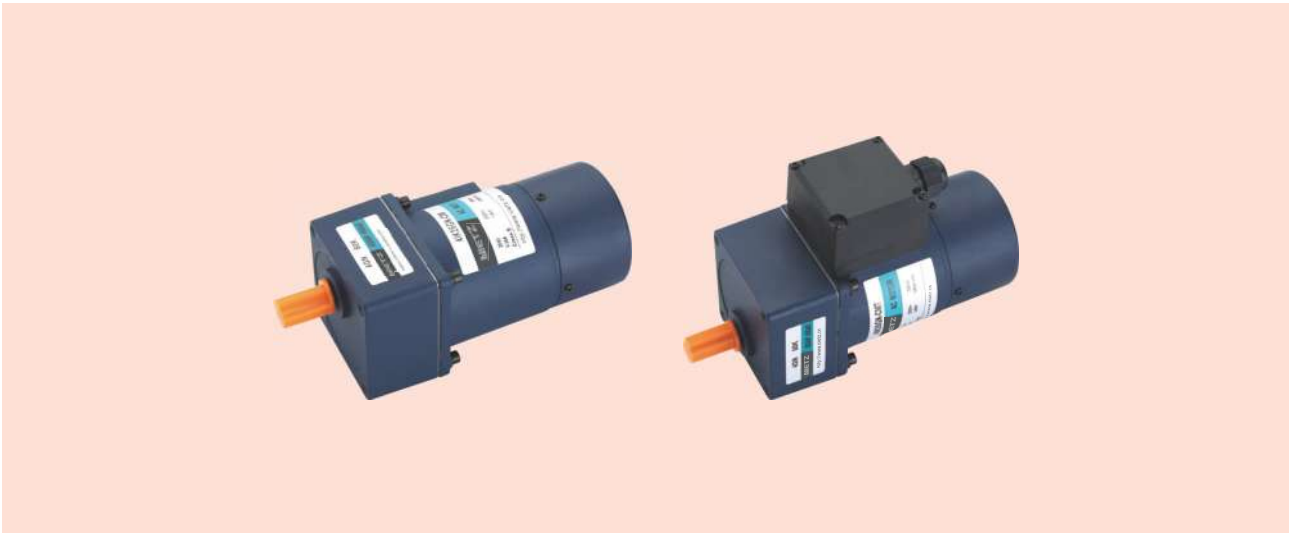
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

电磁制动减速电机
BRAKE GEAR MOTOR

25W
80mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
4IK25GN-CM	4IK25A-CM	25	1ph220	50	0.24	1250	184	165	1.8/450
				60	0.24	1550	149	168	
4IK25GN-AM	4IK25A-AM	25	1ph110	50	0.54	1250	201	144	7.0/250
				60	0.50	1550	152	154	
4IK25GN-SM	4IK25A-SM	25	3ph220	50	0.26	1250	181	543	/
				60	0.21	1550	150	389	
4IK25GN-S3M	4IK25A-S3M	25	3ph380	50	0.15	1250	182	556	/
				60	0.12	1550	149	400	

- ●各种安全规格以电机铭牌上的型号取得认定。
- ●内藏热保护装置（自动复位型）。在电机因某种原因过热时会自行起动使电机停止。
- ●电机温度下降后会自动恢复运行，故在进行检查作业时请务必事先切断电源。
- ●注："-A" 型号中电压为 110v 时，配置电容器容量以实际铭牌为准。
- ● When the motor is approved under varous safety standards, the model name on the nameplate is the approved model name.
- ● Contains a built-in thermal protectorlautomatic retum If a motor overheats for any reason, the thermal protector is opened and the motor stops.
- ● When the motor temperature drops, the thermal protector doses and the motor restarts. Be sure to turn the motor off before inspecting.
- ● Note:"-A"it means the voltage 110V, the assembly capacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	0.45	0.54	0.75	0.90	1.12	1.35	1.50	1.87	2.25	2.69	2.99	3.37	4.04	4.85	5.39	6.74	7.28	8	8	8	8	8	8	8
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	0.36	0.44	0.60	0.73	0.91	1.09	1.21	1.52	1.82	2.18	2.43	2.73	3.27	3.93	4.37	5.46	6.55	8	8	8	8	8	8	8

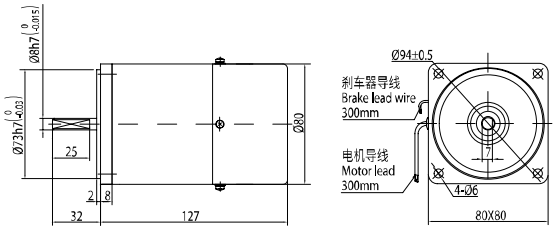
- ●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
- ●表中■色框表示输出轴的旋转方向与电机旋转方向相反。
- ●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
- ●减速箱的最大容许转矩为 8N·M。

- In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 8N·M.

●外形尺寸（单位mm）Dimension (unit mm)

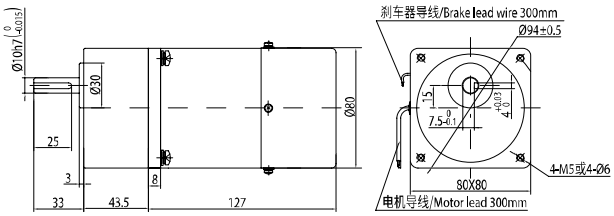
●圆轴电机

重量 Weight: 2.15kg



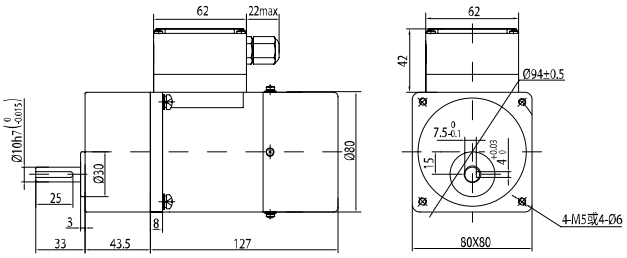
●组合：引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 2.95kg



●组合：接线盒（可选，详见 P150）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 3.1kg

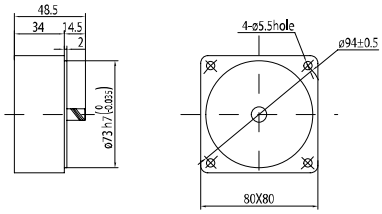


●中间齿轮箱 Decimal Gearhead

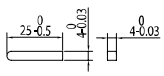
可安装在齿轮轴型上 Can be connected to GN pinion shafe type

电动机外形与齿轮轴型相同 4GN10XK

重量 Weight：0.41kg



●键（减速器附件）



●短箱体Short Gear Box

●其中速比 3~20 可以做成短型减速箱，高度为 32mm。Gear ratio 3~20, short case is possible， Height of 32 mm.

●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●三相电机若对换任意两条电源线顺序，可实现反向运转。

●表中所记型号为齿轮轴型，圆轴型亦同。

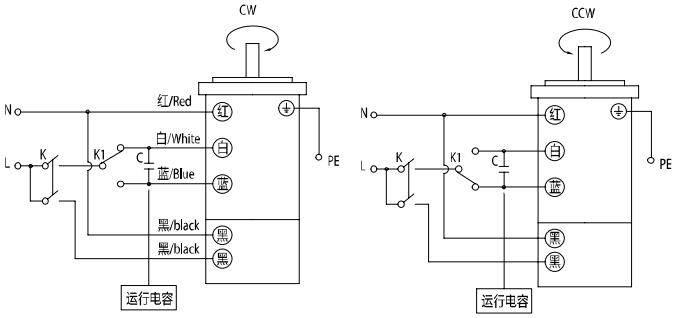
●制动器请按图示由联动开关 K 控制，请勿直接并联于电机主绕组上，因为电机停止过程中，主绕组会短时间发电，继续供电给制动器，造成制动器断电延时，电机制动时间将延长 150 毫秒以上。

●请勿使用固态继电器控制电机和制动器，因为电机和制动器的工作电流很小，易造成固态继电器压降过大，制动器电压偏低，制动器无法正常吸合，造成制动器无法脱开、松闸。

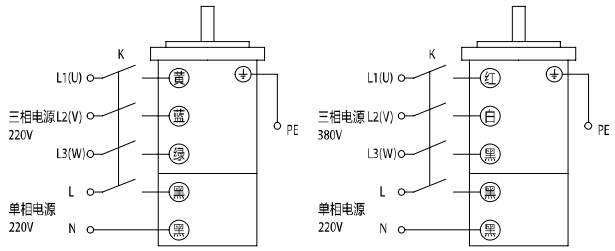
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- To change the rotation direction change any twoconnections among.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.
- Brake please click here is controlled by linkage switch K, please do not directly on the main motor windings in parallel, in the process of motor stops, the primary winding can short time power, continue to power supply for Brake, knocked out power delay, brake motor braking time will extend more than 150 milliseconds.
- Do not use solid state relay control motor and brake, because motor and brake working current is small, easy to cause the pressure drop of the solid state relay is too large, the brake voltage on the low side, the brake is not normal and, causing brake release, loose brake.

4IK25GN-AMT、4IK25GN-CMT

顺时针方向 CW　　逆时针方向 CCW



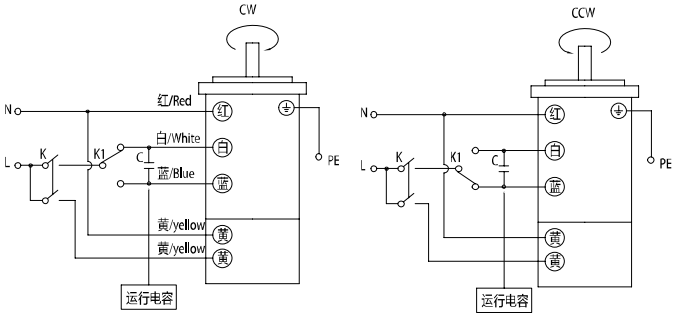
4IK25GN-SMT、4IK25GN-S3MT



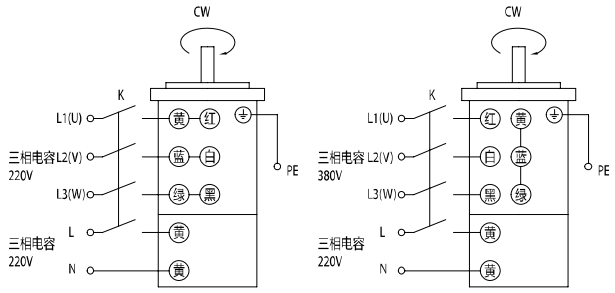
三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

4IK25GN-AM、4IK25GN-CM

顺时针方向 CW　　逆时针方向 CCW



4IK25GN-SM、4IK25GN-S3M



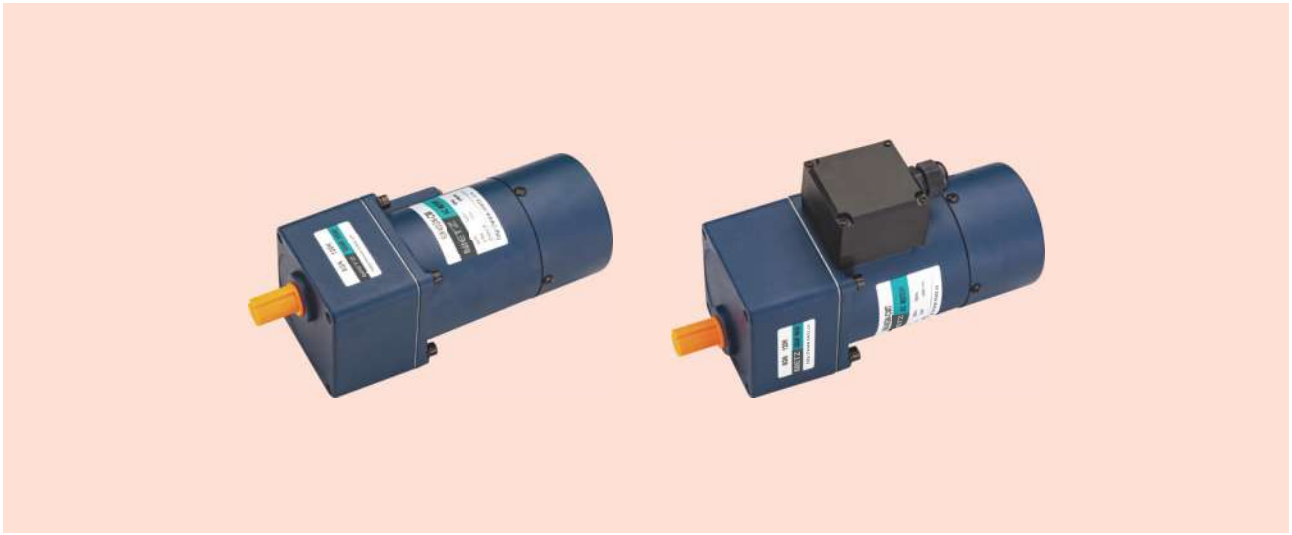
三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。
Change the direction of single-phase motor rotation only after bring the motor to a stop.
If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

电磁制动减速电机
BRAKE GEAR MOTOR

40W
90mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
5IK40GN-CM	5IK40A-CM	40	1ph220	50	0.35	1350	294	194	2.5/450
				60	0.35	1550	232	199	
5IK40GN-AM	5IRK40A-AM	40	1ph110	50	0.64	1350	286	226	10.0/250
				60	0.66	1550	234	231	
5IK40GN-SM	5IK40A-SM	40	3ph220	50	0.32	1350	284	1130	/
				60	0.28	1550	241	846	
5IK40GN-S3M	5IK40A-S3M	40	3ph380	50	0.18	1350	284	1086	/
				60	0.16	1550	241	837	

●各种安全规格以电机铭牌上的型号取得认定。
●内藏热保护装置（自动复位型）。在电机因某种原因过热时会自行起动使电机停止。
●电机温度下降后会自动恢复运行，故在进行检查作业时请务必事先切断电源。
●注："-A" 型号中电压为 110v 时，配置电容器容量以实际铭牌为准。
● When the motor is approved under varous safety standards, the model name on the nameplate is the approved model name.
● Contains a built-in thermal protectorlautomatic retum If a motor overheats for any reason, the thermal protector is opened and the motor stops.
● When the motor temperature drops, the thermal protector doses and the motor restarts. Be sure to turn the motor off before inspecting.
● Note:"-A"it means the voltage 110V, the assembly capacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	0.71	0.86	1.20	1.43	1.79	2.14	2.38	2.98	3.57	3.86	4.29	5.36	6.44	7.72	7.72	9.65	10	10	10	10	10	10	10	10
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	0.56	0.68	0.94	1.13	1.41	1.69	1.88	2.35	2.82	3.04	3.38	4.23	5.07	6.09	6.09	7.61	9.13	10	10	10	10	10	10	10

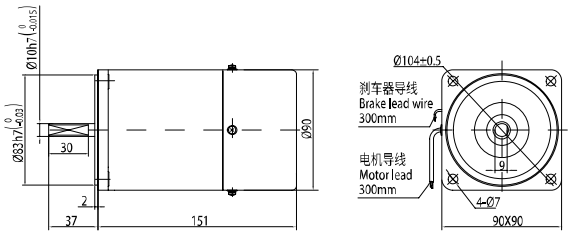
●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中■色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 10N·M。

- In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 10N·M.

●外形尺寸（单位mm）Dimension (unit mm)

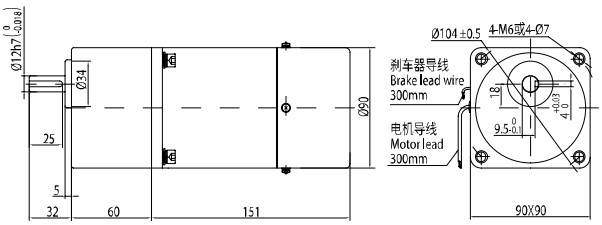
●圆轴电机

重量 Weight: 3.1kg



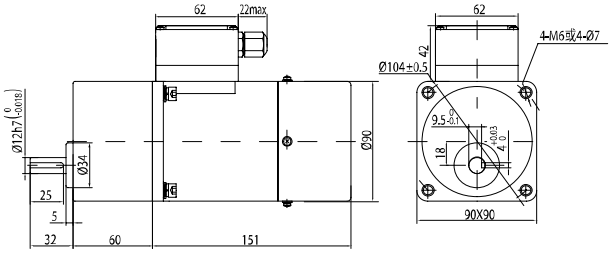
●组合：引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 4.45kg



●组合：接线盒（可选，详见 P150）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 4.6kg

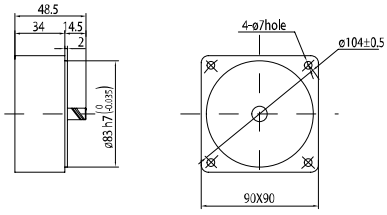


●中间齿轮箱 Decimal Gearhead

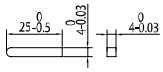
可安装在齿轮轴型上 Can be connected to GN pinion shafe type

电动机外形与齿轮轴型相同 4GN10XK

重量 Weight：0.41kg



●键（减速器附件）



●短箱体Short Gear Box

●其中速比 3~18 可以做成短型减速箱，高度为 42mm。Gear ratio 3~18, short case is possible， Height of 42 mm.

●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●三相电机若对换任意两条电源线顺序，可实现反向运转。

●表中所记型号为齿轮轴型，圆轴型亦同。

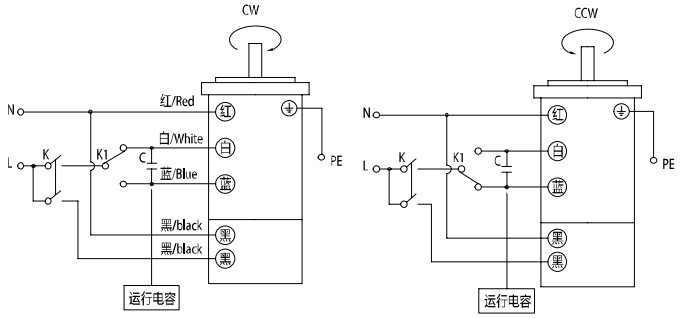
●制动器请按图示由联动开关 K 控制，请勿直接并联于电机主绕组上，因为电机停止过程中，主绕组会短时间发电，继续供电给制动器，造成制动器断电延时，电机制动时间将延长 150 毫秒以上。

●请勿使用固态继电器控制电机和制动器，因为电机和制动器的工作电流很小，易造成固态继电器压降过大，制动器电压偏低，制动器无法正常吸合，造成制动器无法脱开、松闸。

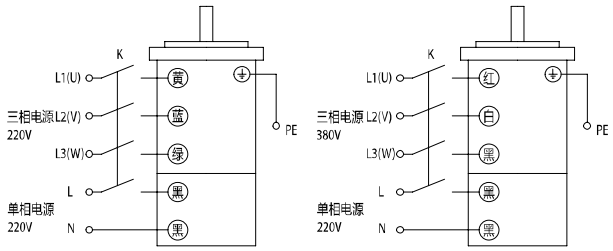
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- To change the rotation direction change any twoconnections among.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.
- Brake please click here is controlled by linkage switch K, please do not directly on the main motor windings in parallel, in the process of motor stops, the primary winding can short time power, continue to power supply for Brake, knocked out power delay, brake motor braking time will extend more than 150 milliseconds.
- Do not use solid state relay control motor and brake, because motor and brake working current is small, easy to cause the pressure drop of the solid state relay is too large, the brake voltage on the low side, the brake is not normal and, causing brake release, loose brake.

5IK40GN-AMT、5IK40GN-CMT

顺时针方向 CW　　逆时针方向 CCW



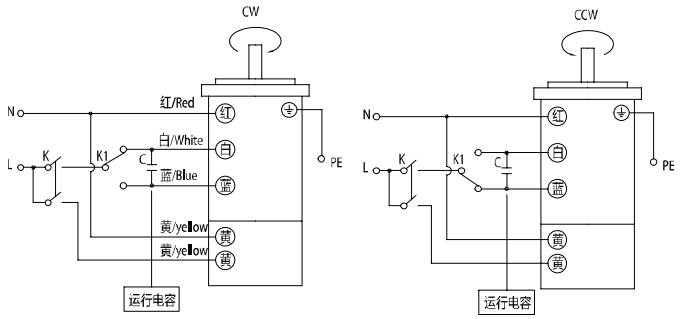
5IK40GN-SMT、5IK40GN-S3MT



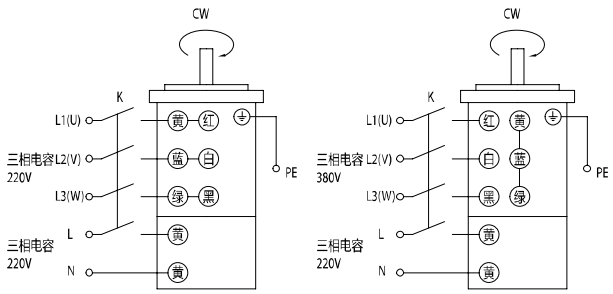
三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

5IK40GN-AM、5IK40GN-CM

顺时针方向 CW　　逆时针方向 CCW



5IK40GN-SM、5IK40GN-S3M



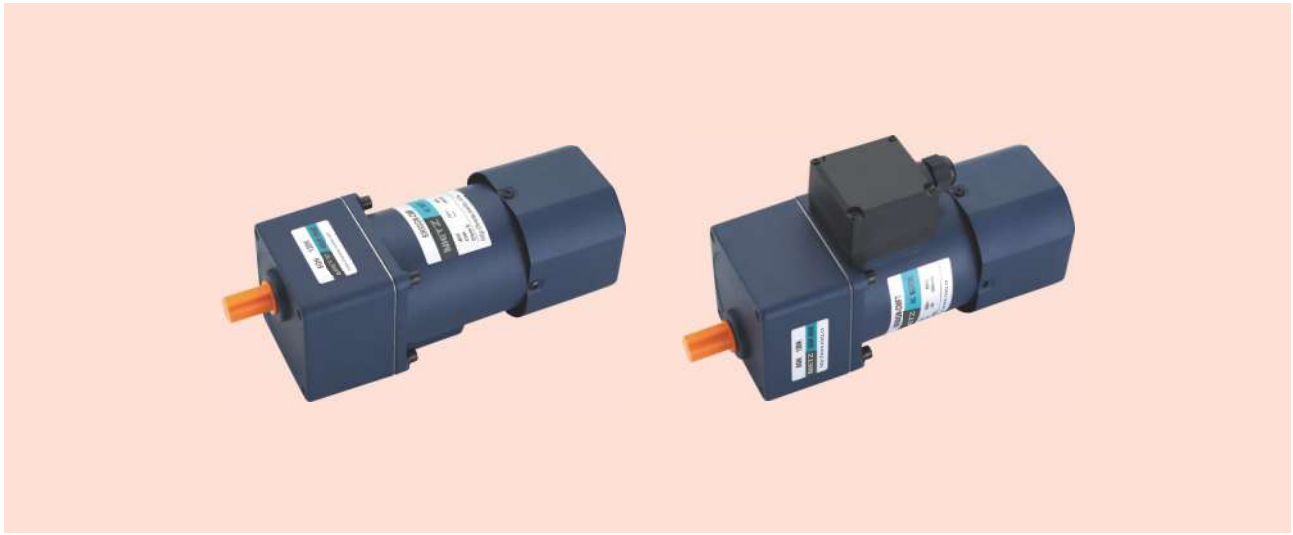
三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。
Change the direction of single-phase motor rotation only after bring the motor to a stop.
If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

电磁制动减速电机
BRAKE GEAR MOTOR

60W
90mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
5IK60GN-CMF	5IK60A-CMF	60	1ph220	50	0.50	1350	427	384	4.0/450
				60	0.54	1550	353	384	
5IK60GN-AMF	5IK60A-AMF	60	1ph110	50	0.91	1350	431	349	15.0/250
				60	1.01	1550	355	360	
5IK60GN-SMF	5IK60A-SMF	60	3ph220	50	0.38	1350	465	1110	/
				60	0.35	1550	390	840	
5IK60GN-S3MF	5IK60A-S3MF	60	3ph380	50	0.22	1350	464	1080	/
				60	0.20	1550	390	837	

- ●各种安全规格以电机铭牌上的型号取得认定。
- ●内藏热保护装置（自动复位型）。在电机因某种原因过热时会自行起动使电机停止。
- ●电机温度下降后会自动恢复运行，故在进行检查作业时请务必事先切断电源。
- ●注："-A" 型号中电压为 110v 时，配置电容器容量以实际铭牌为准。
- ● When the motor is approved under varous safety standards, the model name on the nameplate is the approved model name.
- ● Contains a built-in thermal protectorlautomatic retum If a motor overheats for any reason, the thermal protector is opened and the motor stops.
- ● When the motor temperature drops, the thermal protector doses and the motor restarts. Be sure to turn the motor off before inspecting.
- ● Note:"-A"it means the voltage 110V, the assembly capacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	0.97	1.18	1.64	1.97	2.47	2.96	3.29	4.11	4.93	5.33	5.92	7.40	8.88	10	10	10	10	10	10	10	10	10	10	10
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	0.86	1.03	1.43	1.72	2.15	2.57	2.86	3.57	4.29	4.63	5.15	6.43	7.72	9.26	9.5	10	10	10	10	10	10	10	10	10

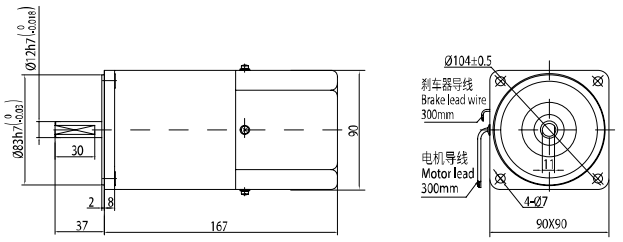
- ●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
- ●表中■色框表示输出轴的旋转方向与电机旋转方向相反。
- ●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
- ●减速箱的最大容许转矩为 10N·M。

- In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 10N·M.

外形尺寸（单位mm）Dimension (unit mm)

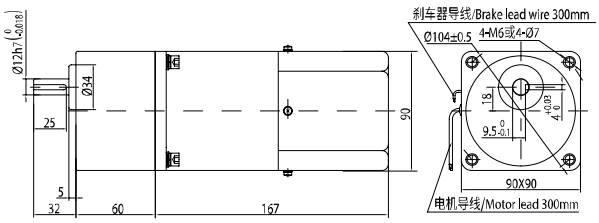
圆轴电机

重量 Weight: 3.55kg



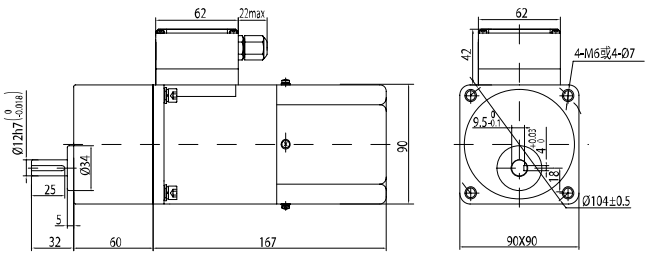
组合：引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 4.9kg



组合：接线盒（可选，详见 P150）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 5.05kg

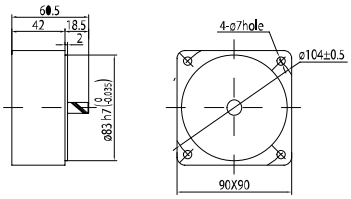


中间齿轮箱 Decimal Gearhead

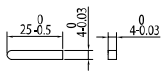
可安装在 GN 齿轮轴型上 Can be connected to GN pinion shafe type

电动机外形与齿轮轴型相同 5GN10XK

重量 Weight：0.6kg



键（减速器附件）



短箱体Short Gear Box

其中速比 3~18 可以做成短型减速箱，高度为 42mm。Gear ratio 3~18, short case is possible， Height of 42 mm.

接线图Wiring Diagram

运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

三相电机若对换任意两条电源线顺序，可实现反向运转。

表中所记型号为齿轮轴型，圆轴型亦同。

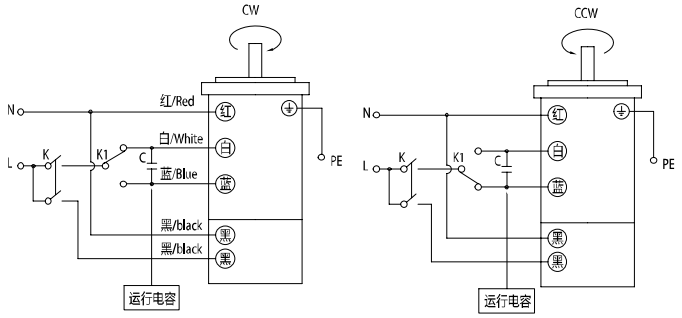
制动器请按图示由联动开关 K 控制，请勿直接并联于电机主绕组上，因为电机停止过程中，主绕组会短时间发电，继续供电给制动器，造成制动器断电延时，电机制动时间将延长 150 毫秒以上。

请勿使用固态继电器控制电机和制动器，因为电机和制动器的工作电流很小，易造成固态继电器压降过大，制动器电压偏低，制动器无法正常吸合，造成制动器无法脱开、松闸。

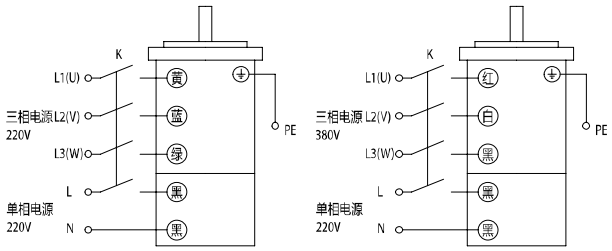
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- To change the rotation direction change any twoconnections among.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.
- Brake please click here is controlled by linkage switch K, please do not directly on the main motor windings in parallel, in the process of motor stops, the primary winding can short time power, continue to power supply for Brake, knocked out power delay, brake motor braking time will extend more than 150 milliseconds.
- Do not use solid state relay control motor and brake, because motor and brake working current is small, easy to cause the pressure drop of the solid state relay is too large, the brake voltage on the low side, the brake is not normal and, causing brake release, loose brake.

5IK60GN-AMFT、5IK40GN-CMFT

顺时针方向 CW　　逆时针方向 CCW



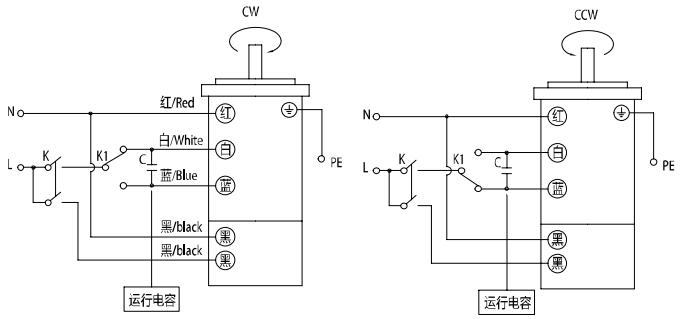
5IK60GN-SMFT、5IK60GN-S3MFT



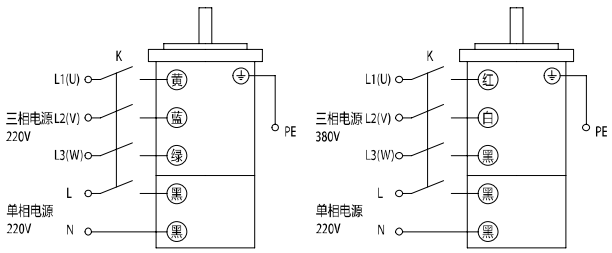
三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

5IK60GN-AMF、5IK40GN-CMF

顺时针方向 CW　　逆时针方向 CCW



5IK60GN-SMF、5IK60GN-S3MF



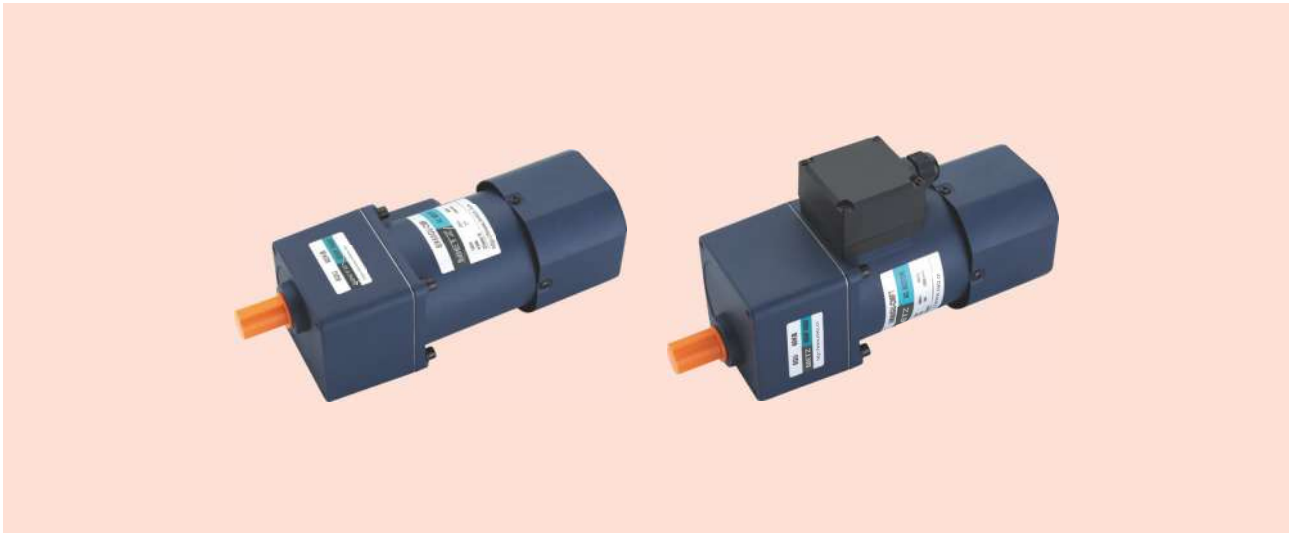
三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。
Change the direction of single-phase motor rotation only after bring the motor to a stop.
If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

电磁制动减速电机
BRAKE GEAR MOTOR

60W
90mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
5IK60GU-CMF	5IK60A-CMF	60	1ph220	50	0.50	1350	427	384	4.0/450
				60	0.54	1550	353	384	
5IK60GU-AMF	5IK60A-AMF	60	1ph110	50	0.91	1350	431	349	15.0/250
				60	1.01	1550	355	360	
5IK60GU-SMF	5IK60A-SMF	60	3ph220	50	0.38	1350	465	1110	/
				60	0.35	1550	390	840	
5IK60GU-S3MF	5IK60A-S3MF	60	3ph380	50	0.22	1350	464	1080	/
				60	0.20	1550	390	837	

●各种安全规格以电机铭牌上的型号取得认定。
●内藏热保护装置（自动复位型）。在电机因某种原因过热时会自行起动使电机停止。
●电机温度下降后会自动恢复运行，故在进行检查作业时请务必事先切断电源。
●注："-A" 型号中电压为 110v 时，配置电容器容量以实际铭牌为准。
● When the motor is approved under varous safety standards, the model name on the nameplate is the approved model name.
● Contains a built-in thermal protectorlautomatic retum If a motor overheats for any reason, the thermal protector is opened and the motor stops.
● When the motor temperature drops, the thermal protector doses and the motor restarts. Be sure to turn the motor off before inspecting.
● Note:"-A"it means the voltage 110V, the assembly capacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	0.97	1.18	1.64	1.97	2.47	2.96	3.46	3.70	4.44	5.33	5.33	6.66	7.99	9.59	10.66	13.32	15.98	19.98	20	20	20	20	20	20
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	0.86	1.03	1.43	1.72	2.15	2.57	2.86	3.22	3.86	4.63	5.01	5.79	6.95	8.34	9.26	11.58	13.90	17.37	18.76	20	20	20	20	20

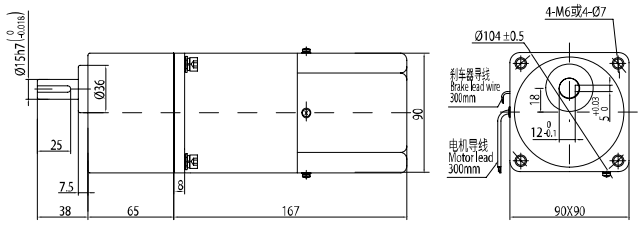
●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中■色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 20N·M。

- In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 20N-M.

●外形尺寸（单位mm）Dimension (unit mm)

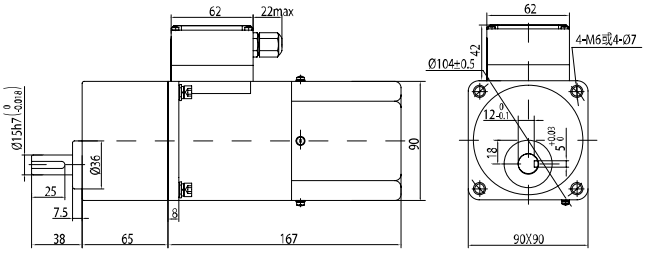
●**组合：**引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 3.55kg



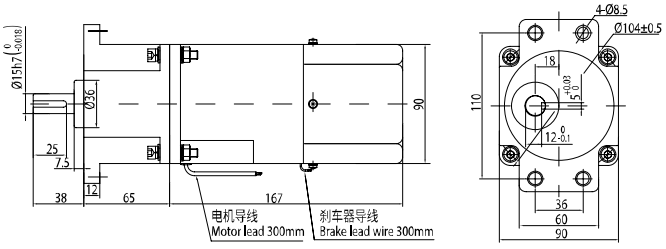
●**组合：**接线盒（可选，详见 P150）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 5.05kg



●**组合：**引线型电机 + 带耳型减速箱（减速比 1:3~200）

重量 Weight: 5.2kg

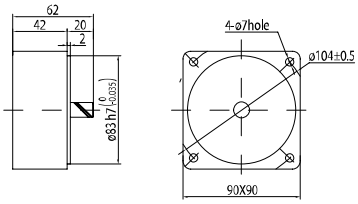


●**中间齿轮箱** Decimal Gearhead

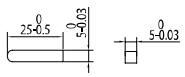
可安装在 GU 齿轮轴型上 Can be connected to GU pinion shafe type

电动机外形与齿轮轴型相同 5GU10XK

重量 Weight：0.7kg



●**键**（减速器附件）



●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●三相电机若对换任意两条电源线顺序，可实现反向运转。

●表中所记型号为齿轮轴型，圆轴型亦同。

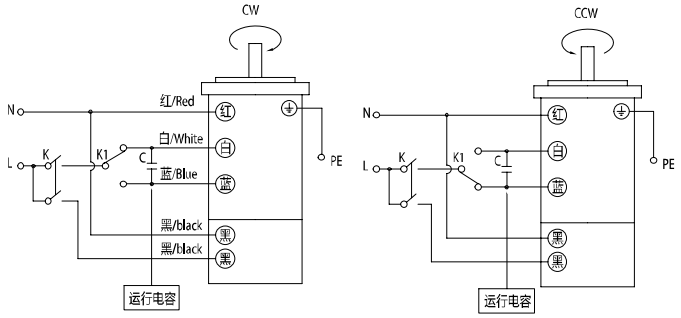
●制动器请按图示由联动开关 K 控制，请勿直接并联于电机主绕组上，因为电机停止过程中，主绕组会短时间发电，继续供电给制动器，造成制动器断电延时，电机制动时间将延长 150 毫秒以上。

●请勿使用固态继电器控制电机和制动器，因为电机和制动器的工作电流很小，易造成固态继电器压降过大，制动器电压偏低，制动器无法正常吸合，造成制动器无法脱开、松闸。

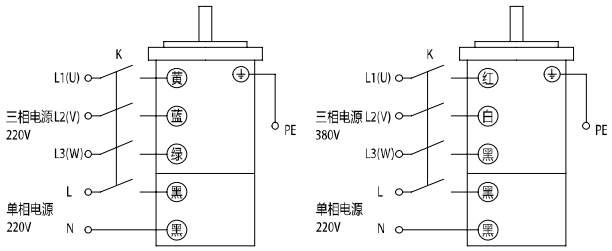
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- To change the rotation direction change any twoconnections among.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.
- Brake please click here is controlled by linkage switch K, please do not directly on the main motor windings in parallel, in the process of motor stops, the primary winding can short time power, continue to power supply for Brake, knocked out power delay, brake motor braking time will extend more than 150 milliseconds.
- Do not use solid state relay control motor and brake, because motor and brake working current is small, easy to cause the pressure drop of the solid state relay is too large, the brake voltage on the low side, the brake is not normal and, causing brake release, loose brake.

5IK60GU-AMFT、5IK60GU-CMFT

顺时针方向 CW　　逆时针方向 CCW



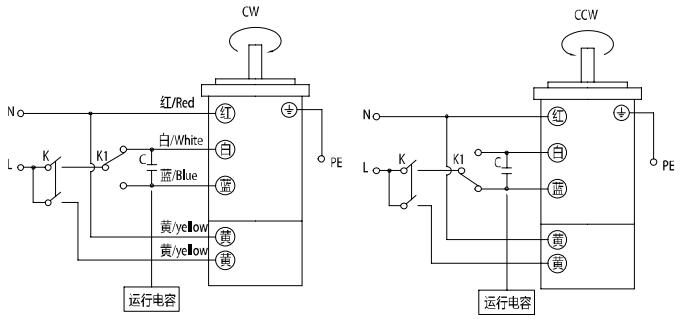
5IK60GU-SMFT、5IK60GU-S3MFT



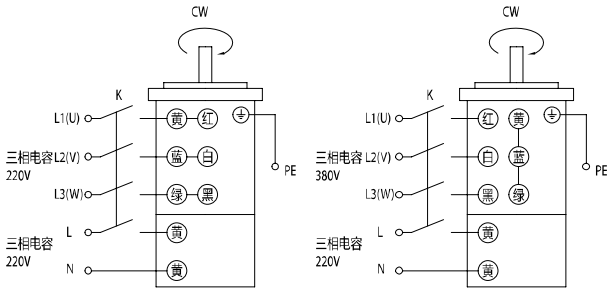
三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

5IK60GU-AMF、5IK60GU-CMF

顺时针方向 CW　　逆时针方向 CCW



5IK60GU-SMF、5IK60GU-S3MF



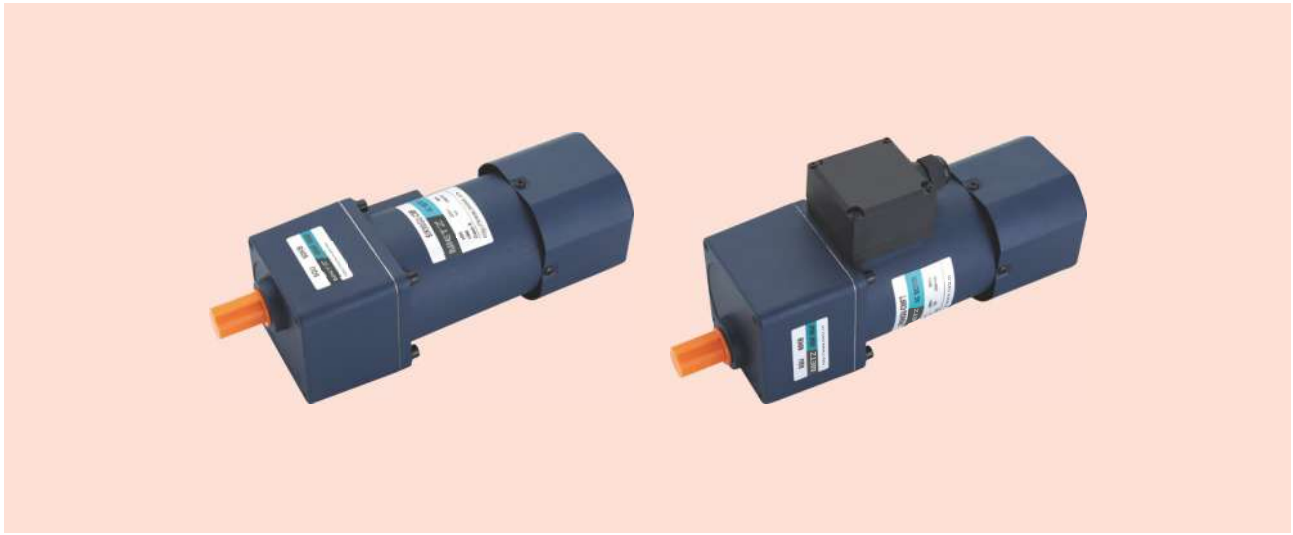
三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。
Change the direction of single-phase motor rotation only after bring the motor to a stop.
If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

电磁制动减速电机
BRAKE GEAR MOTOR

90W
90mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
5IK90GU-CMF	5IK90A-CMF	90	1ph220	50	0.64	1350	643	459	5.0/450
				60	0.71	1550	530	450	
5IK90GU-AMF	5IK90A-AMF	90	1ph110	50	1.26	1350	646	475	20.0/250
				60	1.40	1550	525	489	
5IK90GU-SMF	5IK90A-SMF	90	3ph220	50	0.53	1350	625	2800	/
				60	0.61	1550	527	2150	
5IK90GU-S3MF	5IK90A-S3MF	90	3ph380	50	0.37	1350	625	2660	/
				60	035	1550	519	2030	

●各种安全规格以电机铭牌上的型号取得认定。
●内藏热保护装置（自动复位型）。在电机因某种原因过热时会自行起动使电机停止。
●电机温度下降后会自动恢复运行，故在进行检查作业时请务必事先切断电源。
●注："-A" 型号中电压为 110v 时，配置电容器容量以实际铭牌为准。
● When the motor is approved under varous safety standards, the model name on the nameplate is the approved model name.
● Contains a built-in thermal protectorlautomatic retum If a motor overheats for any reason, the thermal protector is opened and the motor stops.
● When the motor temperature drops, the thermal protector doses and the motor restarts. Be sure to turn the motor off before inspecting.
● Note:"-A"it means the voltage 110V, the assembly capacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	1.56	1.88	2.60	3.13	3.91	4.69	5.2	5.86	7.03	8.44	8.8	10.55	12.66	15.19	16.88	20	20	20	20	20	20	20	20	20
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	1.29	1.55	2.15	2.58	3.22	3.86	4.29	4.83	5.80	6.96	7.3	8.69	10.43	12.52	13.91	17.39	20	20	20	20	20	20	20	20

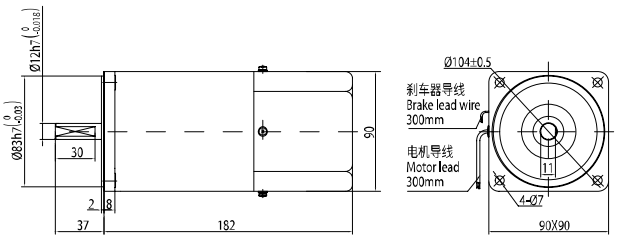
●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中■色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 20N·M。

- In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 20N·M.

●外形尺寸（单位mm）Dimension (unit mm)

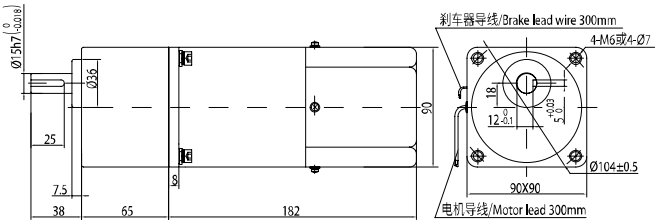
●圆轴电机

重量 Weight: 4.3kg



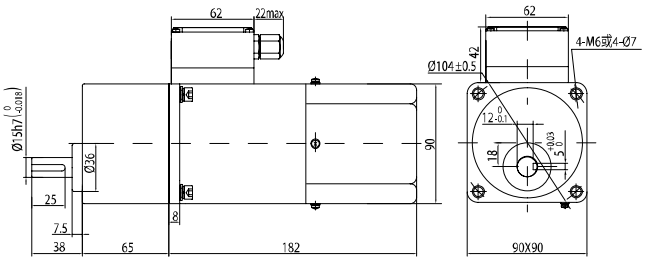
●组合：引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 5.8kg



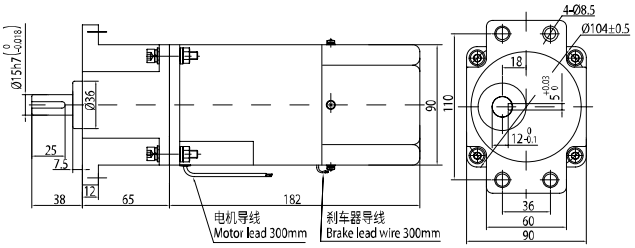
●组合：接线盒（可选，详见 P150）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 5.95kg



●组合：引线型电机 + 带耳型减速箱（减速比 1:3~200）

重量 Weight: 5.8kg

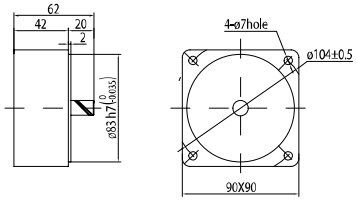


●中间齿轮箱 Decimal Gearhead

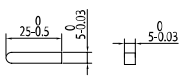
可安装在 GU 齿轮轴型上 Can be connected to GU pinion shafe type

电动机外形与齿轮轴型相同 5GU10XK

重量 Weight：0.7kg



●键（减速器附件）



●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●三相电机若对换任意两条电源线顺序，可实现反向运转。

●表中所记型号为齿轮轴型，圆轴型亦同。

●制动器请按图示由联动开关 K 控制，请勿直接并联于电机主绕组上，因为电机停止过程中，主绕组会短时间发电，继续供电给制动器，造成制动器断电延时，电机制动时间将延长 150 毫秒以上。

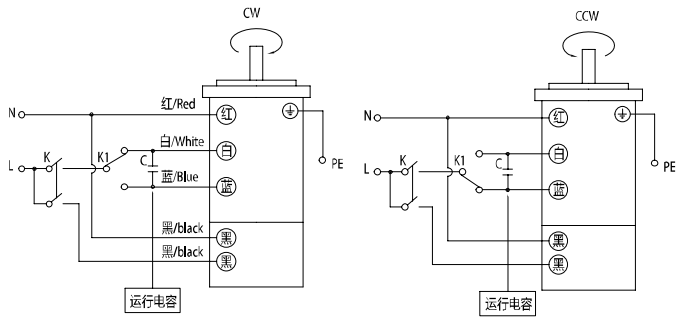
●请勿使用固态继电器控制电机和制动器，因为电机和制动器的工作电流很小，易造成固态继电器压降过大，制动器电压偏低，制动器无法正常吸合，造成制动器无法脱开、松闸。

- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- To change the rotation direction change any twoconnections among.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.
- Brake please click here is controlled by linkage switch K, please do not directly on the main motor windings in parallel, in the process of motor stops, the primary winding can short time power, continue to power supply for Brake, knocked out power delay, brake motor braking time will extend more than 150 milliseconds.

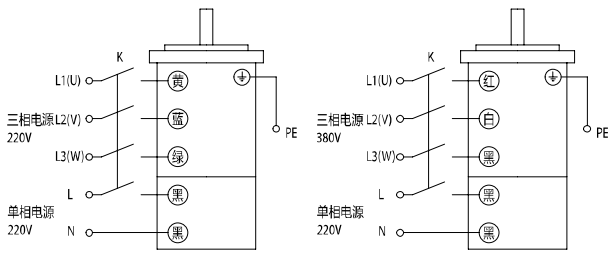
● Do not use solid state relay control motor and brake, because motor and brake working current is small, easy to cause the pressure drop of the solid state relay is too large, the brake voltage on the low side, the brake is not normal and, causing brake release, loose brake.

5IK90GU-AMFT、5IK90GU-CMFT

顺时针方向 CW　　逆时针方向 CCW



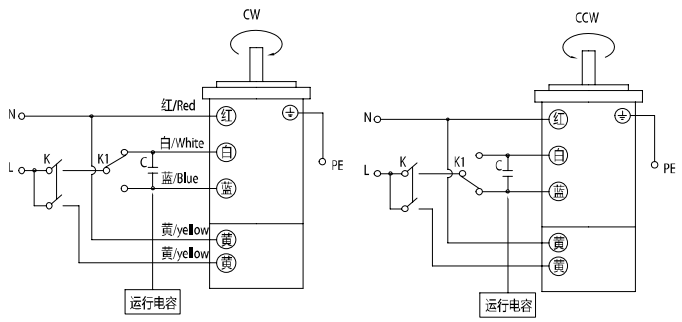
5IK90GU-SMFT、5IK90GU-S3MFT



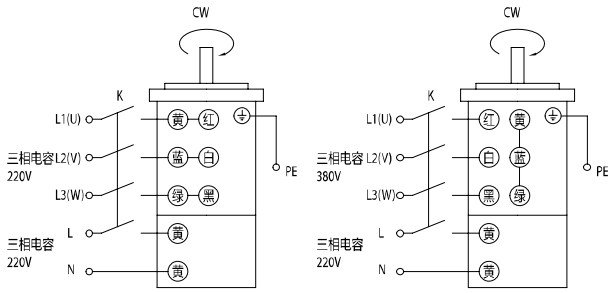
三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

5IK90GU-AMF、5IK90GU-CMF

顺时针方向 CW　　逆时针方向 CCW



5IK90GU-SMF、5IK90GU-S3MF



三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。
Change the direction of single-phase motor rotation only after bring the motor to a stop.
If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

电磁制动减速电机
BRAKE GEAR MOTOR

120W
90mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
5IK120GU-CMF	5IK120A-CMF	120	1ph220	50	0.87	1350	874	663	6.0/450
				60	0.90	1550	709	655	
5IK120GU-AMF	5IK120A-AMF	120	1ph110	50	1.79	1350	919	500	25.0/250
				60	1.65	1550	740	524	
5IK120GU-SMF	5IK120A-SMF	120	3ph220	50	0.60	1350	879	2800	/
				60	0.70	1550	735	2150	
5IK120GU-S3MF	5IK120A-S3MF	120	3ph380	50	0.42	1350	879	2660	/
				60	0.40	1550	731	2030	

●各种安全规格以电机铭牌上的型号取得认定。
●内藏热保护装置（自动复位型）。在电机因某种原因过热时会自行起动使电机停止。
●电机温度下降后会自动恢复运行，故在进行检查作业时请务必事先切断电源。
●注："-A" 型号中电压为 110v 时，配置电容器容量以实际铭牌为准。
● When the motor is approved under varous safety standards, the model name on the nameplate is the approved model name.
● Contains a built-in thermal protectorlautomatic retum If a motor overheats for any reason, the thermal protector is opened and the motor stops.
● When the motor temperature drops, the thermal protector doses and the motor restarts. Be sure to turn the motor off before inspecting.
● Note:"-A"it means the voltage 110V, the assembly capacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	2.12	2.55	3.54	4.25	5.31	6.37	7.08	7.96	9.56	11.47	12	14.34	17.20	20	20	20	20	20	20	20	20	20	20	20
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	1.72	2.07	2.87	3.45	4.31	5.17	5.74	6.46	7.75	9.30	9.9	11.63	13.96	16.75	18.61	20	20	20	20	20	20	20	20	20

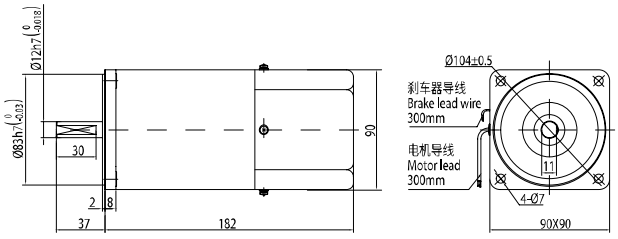
●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中■色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 20N·M。

- In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 20N·M.

●外形尺寸（单位mm）Dimension (unit mm)

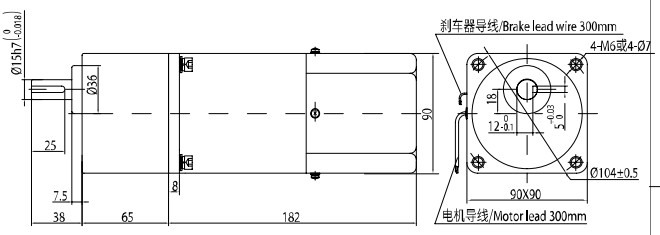
●圆轴电机

重量 Weight: 4.5kg



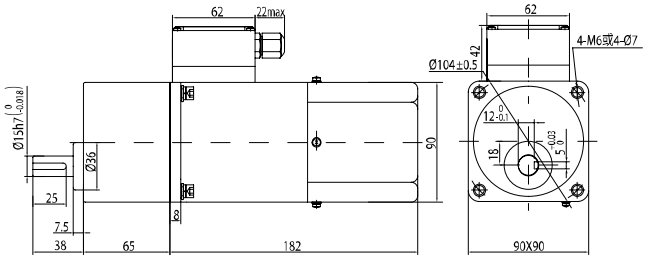
●组合：引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 6.0kg



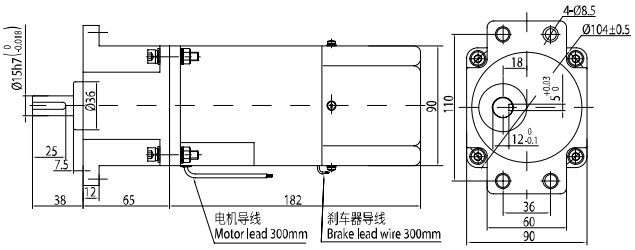
●组合：接线盒（可选，详见 P150）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 6.05kg



●组合：引线型电机 + 带耳型减速箱（减速比 1:3~200）

重量 Weight: 6.0kg

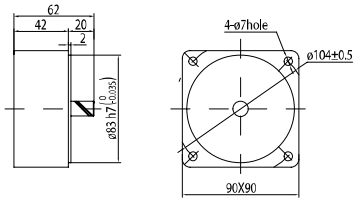


●中间齿轮箱 Decimal Gearhead

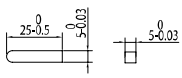
可安装在 GU 齿轮轴型上 Can be connected to GU pinion shafe type

电动机外形与齿轮轴型相同 5GU10XK

重量 Weight：0.7kg



●键 · 键槽（减速器附件）



●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●三相电机若对换任意两条电源线顺序，可实现反向运转。

●表中所记型号为齿轮轴型，圆轴型亦同。

●制动器请按图示由联动开关 K 控制，请勿直接并联于电机主绕组上，因为电机停止过程中，主绕组会短时间发电，继续供电给制动器，造成制动器断电延时，电机制动时间将延长 150 毫秒以上。

●请勿使用固态继电器控制电机和制动器，因为电机和制动器的工作电流很小，易造成固态继电器压降过大，制动器电压偏低，制动器无法正常吸合，造成制动器无法脱开、松闸。

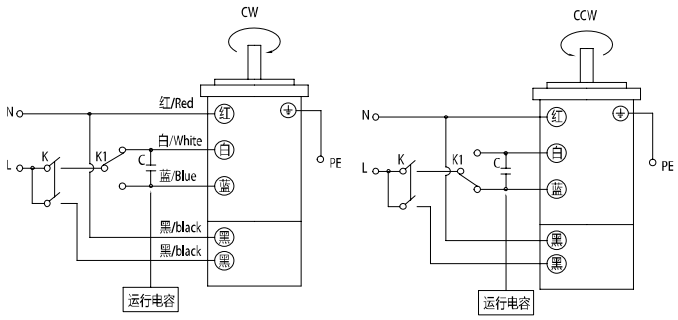
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- To change the rotation direction change any twoconnections among.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.
- Brake please click here is controlled by linkage switch K, please do not directly on the main motor windings in parallel, in the process of motor stops, the primary winding can short time

power, continue to power supply for Brake, knocked out power delay, brake motor braking time will extend more than 150 milliseconds.

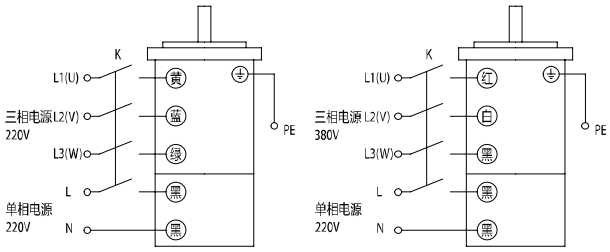
● Do not use solid state relay control motor and brake, because motor and brake working current is small, easy to cause the pressure drop of the solid state relay is too large, the brake voltage on the low side, the brake is not normal and, causing brake release, loose brake.

5IK120GU-AMFT、5IK120GU-CMFT

顺时针方向 CW　　逆时针方向 CCW



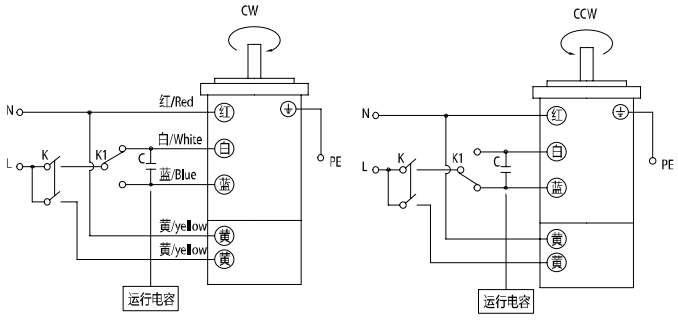
5IK120GU-SMFT、5IK120GU-S3MFT



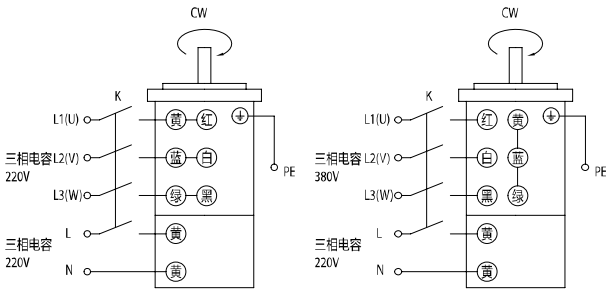
三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

5IK120GU-AMF、5IK120GU-CMF

顺时针方向 CW　　逆时针方向 CCW



5IK120GU-SMF、5IK120GU-S3MF



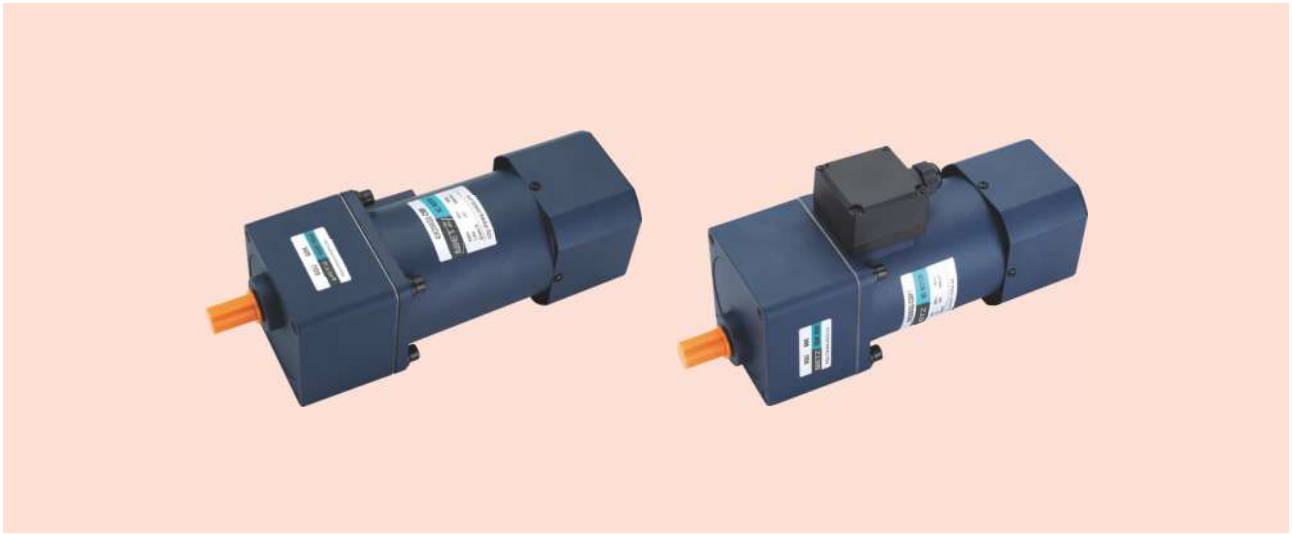
三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。
Change the direction of single-phase motor rotation only after bring the motor to a stop.
If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

电磁制动减速电机
BRAKE GEAR MOTOR

200W
104mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
6IK200GU-CMF	6IK200A-CMF	200	1ph220	50	1.30	1350	1414	1050	10.0/450
				60	1.30	1550	1060	900	
6IK200GU-AMF	6IK200A-AMF	200	1ph110	50	2.60	1350	1310	950	35.0/250
				60	2.70	1550	1090	920	
6IK200GU-SMF	6IK200A-SMF	200	3ph220	50	1.17	1350	1460	4620	/
				60	0.98	1550	1060	3420	
6IK200GU-S3MF	6IK200A-S3MF	200	3ph380	50	0.66	1350	1550	4500	/
				60	0.57	1550	1350	3500	

- ●各种安全规格以电机铭牌上的型号取得认定。
- ●内藏热保护装置（自动复位型）。在电机因某种原因过热时会自行起动使电机停止。
- ●电机温度下降后会自动恢复运行，故在进行检查作业时请务必事先切断电源。
- ●注："-A" 型号中电压为 110v 时，配置电容器容量以实际铭牌为准。
- ● When the motor is approved under varous safety standards, the model name on the nameplate is the approved model name.
- ● Contains a built-in thermal protectorlautomatic retum If a motor overheats for any reason, the thermal protector is opened and the motor stops.
- ● When the motor temperature drops, the thermal protector doses and the motor restarts. Be sure to turn the motor off before inspecting.
- ● Note:"-A"it means the voltage 110V, the assembly capacitor vaule it is according the labe.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	450	375	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.7	27	22.5	18	15	13.5	11	9	7.5	6.75
	转矩 Torque N.m	3.11	3.74	5.19	6.23	7.78	9.34	11.45	11.67	14.01	16.81	16.81	21.01	25.21	30.26	33.62	40	40	40	40	40	40	40	40	40
60Hz	转速 Speed r/min	516	430	310	258	206	172	155	124	103	86	77.5	62	51.6	43	38.75	31	25.8	20.6	17.2	15.5	12.9	10.3	8.6	7.75
	转矩 Torque N.m	2.58	3.09	4.29	5.15	6.44	7.73	8.59	9.66	11.59	13.91	13.91	17.39	20.86	25.04	27.82	34.77	40	40	40	40	40	40	40	40

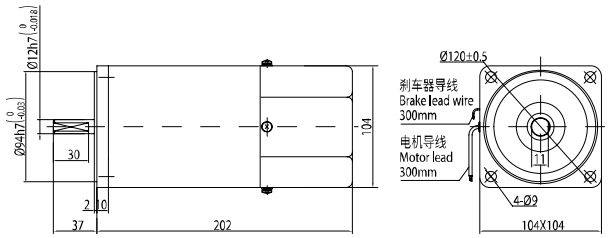
- ●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
- ●表中■色框表示输出轴的旋转方向与电机旋转方向相反。
- ●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
- ●减速箱的最大容许转矩为 40N·M。

- In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 40N·M.

●外形尺寸（单位mm）Dimension (unit mm)

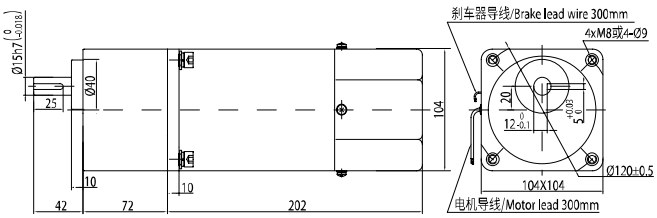
●**圆轴电机**

重量 Weight: 5.9kg



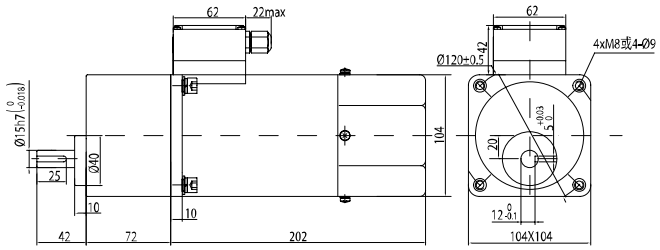
●**组合：**引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 13kg

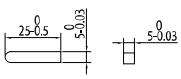


●**组合：**接线盒（可选，详见 P150）型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 13.15kg



●**键**（减速器附件）



●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●三相电机若对换任意两条电源线顺序，可实现反向运转。

●表中所记型号为齿轮轴型，圆轴型亦同。

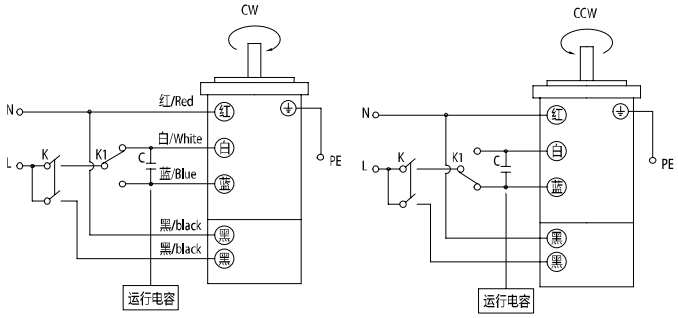
●制动器请按图示由联动开关 K 控制，请勿直接并联于电机主绕组上，因为电机停止过程中，主绕组会短时间发电，继续供电给制动器，造成制动器断电延时，电机制动时间将延长 150 毫秒以上。

●请勿使用固态继电器控制电机和制动器，因为电机和制动器的工作电流很小，易造成固态继电器压降过大，制动器电压偏低，制动器无法正常吸合，造成制动器无法脱开、松闸。

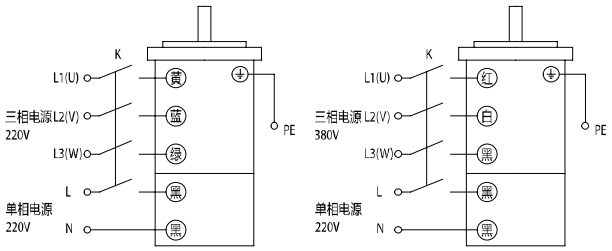
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- To change the rotation direction change any twoconnections among.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.
- Brake please click here is controlled by linkage switch K, please do not directly on the main motor windings in parallel, in the process of motor stops, the primary winding can short time power, continue to power supply for Brake, knocked out power delay, brake motor braking time will extend more than 150 milliseconds.
- Do not use solid state relay control motor and brake, because motor and brake working current is small, easy to cause the pressure drop of the solid state relay is too large, the brake voltage on the low side, the brake is not normal and, causing brake release, loose brake.

6IK200GU-AMFT、6IK200GU-CMFT

顺时针方向 CW　　逆时针方向 CCW



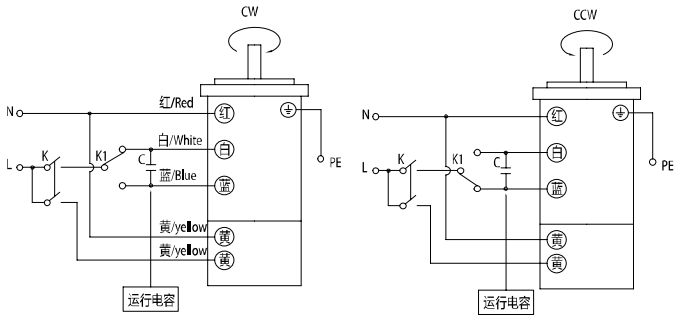
6IK200GU-SMFT、6IK200GU-S3MFT



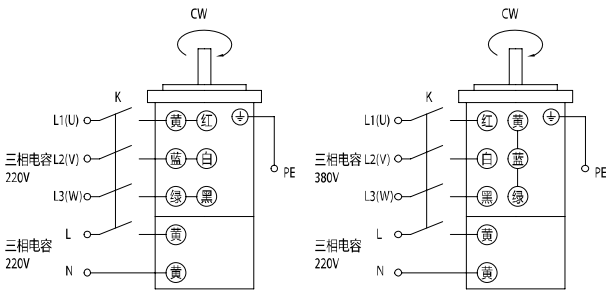
三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

6IK200GU-AMF、6IK200GU-CMF

顺时针方向 CW　　逆时针方向 CCW



6IK200GU-SMF、6IK200GU-S3MF



三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

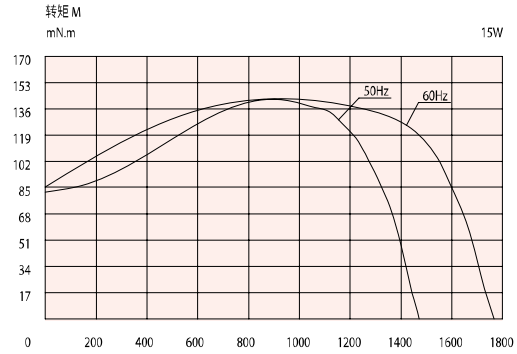
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

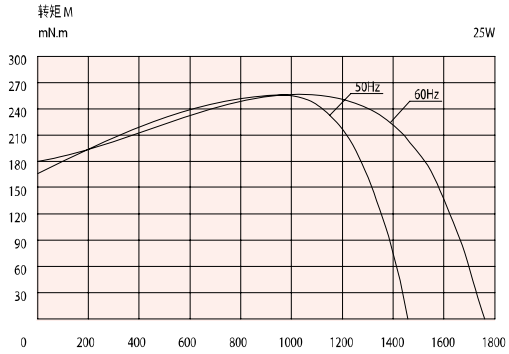
Change the direction of single-phase motor rotation only after bring the motor to a stop.

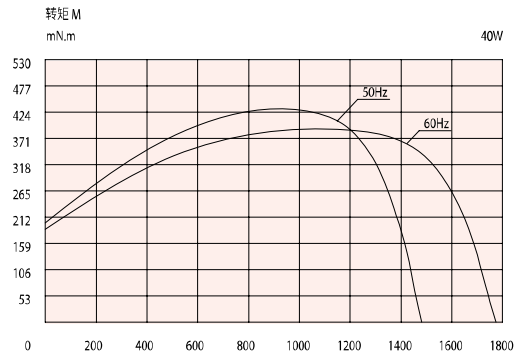
If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

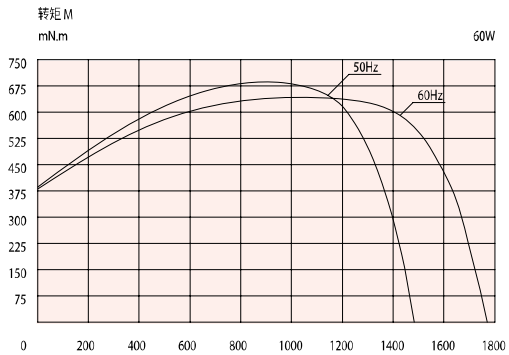
转速–转矩曲线
COMMON SPECIFICATIONS

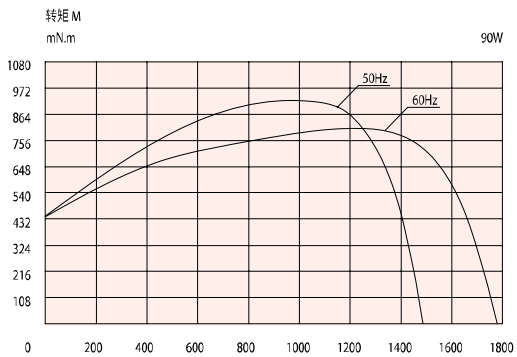
● 单相电机 Single phase motor

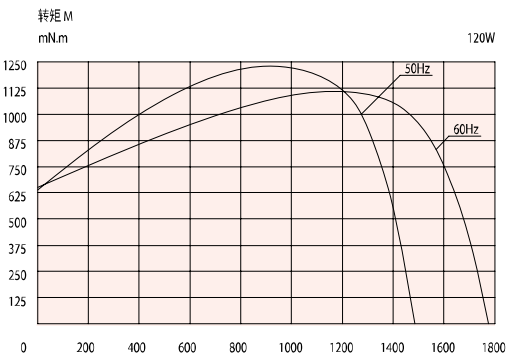


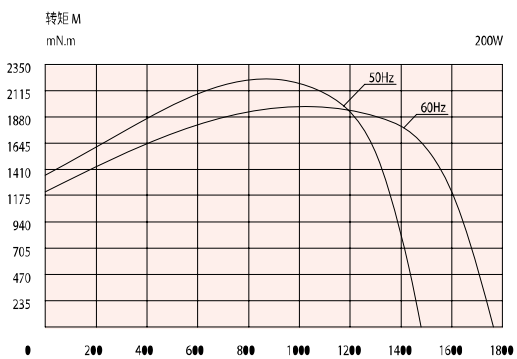






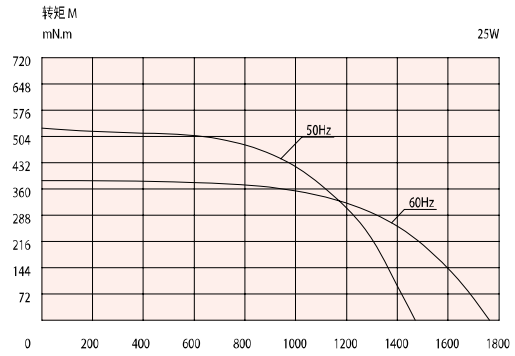


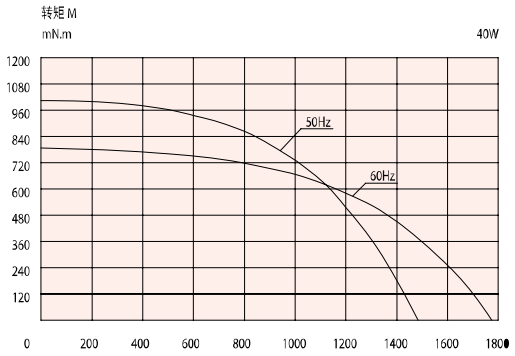


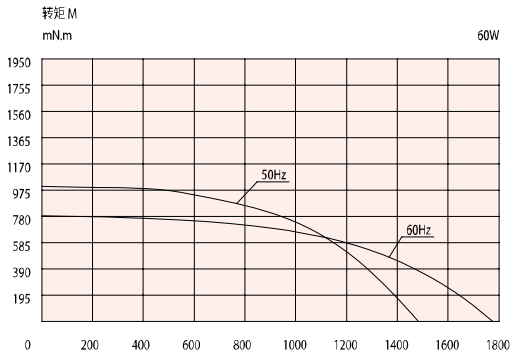


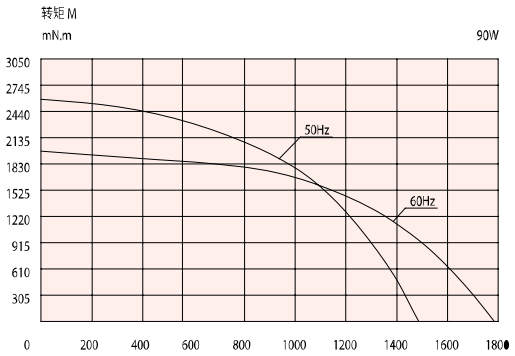
转速–转矩曲线
ROTATOINAL SPEED - TORQUE CURVE

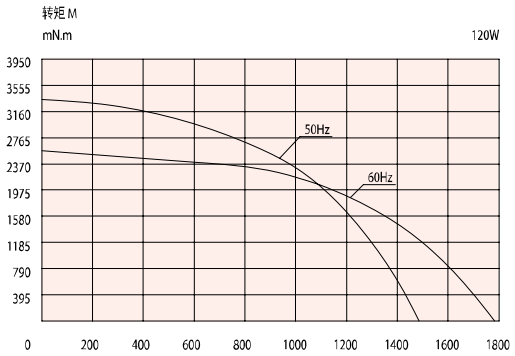
●三相电机 Single phase motor

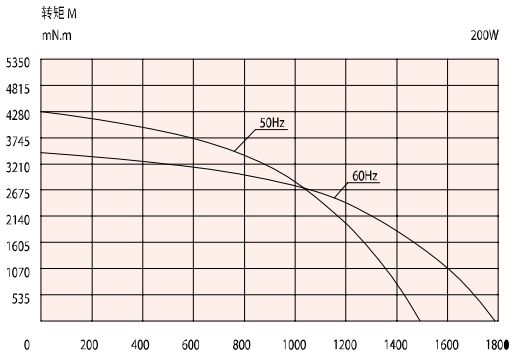












力矩减速电机
TORQUE GEAR MOTOR

●特征 Feature

●具有垂下特征，可调速范国宽大。

力矩电机由于起动转矩大，具有垂下的特征，因此，能够通过改变电压进行调速。（电机的转矩与电压的平方成正比）

●适用于卷取作业

以固定的张力连续卷取定速运转的物体时，若卷轴机直径增大至 2 倍，则电动机的输出转矩亦增大至倍，而电动机转速则减半。作业时须保持这一比例关系。

●可作为制动使用

电机在转速 - 转矩特性的制动领域，可作为制动来使用。此外，也可以通过直流励磁进行固定张力控制。

● The Speed Can Vary Widely, Depending on the Sloping Characteristics.

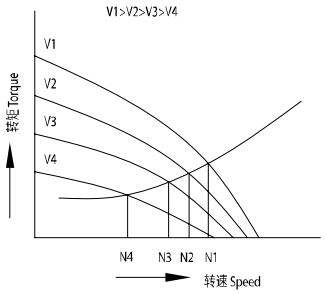
Torque motors have a high starting torque and Torque motors have a high starting torque and sloping characteristics, allowing easy speedcontrol simply by changing the volgeof the power supply.（The motor torque changes approximately proportion to the square of the voltage）

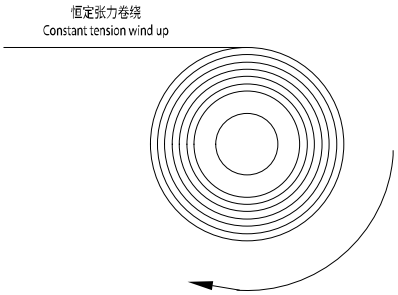
● Suitable For Winding Applications

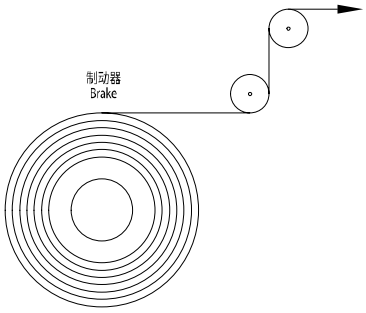
In an application where an object is released continuously at a constant speed and wound upwith constant tension, the torque must be doubled and the speed must be halved if the diameter of thewinding spool is doubled.

● Use As A Brake

By using the motor in the braking region of the speed-torque characteristics, it can serve as abrake Constant tension operation can be achieved by applying a DC voltage.







●转速一转矩特性图的读方法 How To Read Speed- Torque Characteristics

●转矩电动机的转矩几乎与电变化。通过改变电动机通电电压，就能够得到各电压下分别具有垂下性速 - 转矩特性曲线。

●负载转矩时程压调整为 100V、80V、60V 的话，电动机会分别以 N1、N2N3 转退施转专期述，通过改变电压，能够很简单地改变转速。

●使用转矩电动机时，请了解必需的转矩和转速，根据是连续使用还是短时间使用，参照转速转矩特性作出选择。在堵转状态下使用时，选择暮准只考虑转矩。

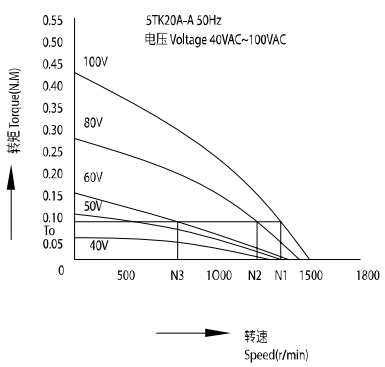
●用于连续运转等会造成温度上升问题的场合时，可通过选用较大输出功率的产品以调整电压方式控制转速、转矩。

● The motor torque chargios'approxineiately proportion to the square of the voltage. When thevoltage supplied to the notors: changed speed-torque curves with a sloping characteristics (torqueis highest at zero speed and decreases steadily with increasing speed) shifts to that of thecorresponding voltage.

● When the voltage is changed to 100V, 80V and 60v while the load torque is TO, the motor rotatesat the speeds N1, N2 and N3 respectively. Thus, the speed can be changed easily by varying the voltage.

● When choosing a torque motor, first determine the required torque and speed Then select amotor using the speed- torque characteristics curves to determine whether the motor should beoperated under continuous duty or limited duty. When used under locked rotor conditions, only thetorque factor is considered.

● The temperature rise of the motor may cause a problem during continuous operation. In thiscase, choose a motor with an output power large enough for continuous operation and adjust theoltage to control the torque and speed.



●力矩电机电压控制方法 Oltage control of torque motors

电压控制的一般方法是，使用双向可控硅中等的相位控制方式。是一种如图所示，通过改变触发双向可空硅的相位角 α，使输入电压像斜线部分那样变化的控制方法。

The method most commonly used to control voltage is by phase control using a triac. As shownin Fig. 1, by changing the phase angle a at which the triac switches, the input voltage is controlled asrepresented by the phase angle areas of the graph.

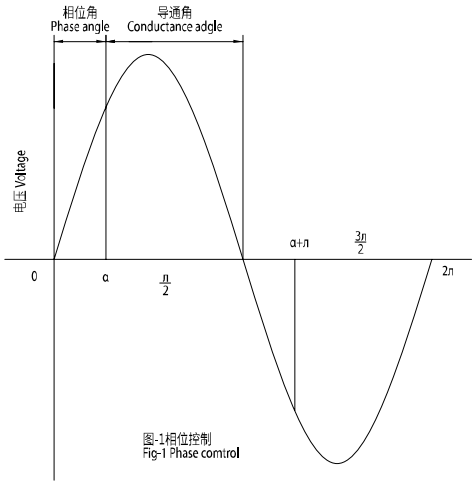


图-1相位控制
Fig-1 Phase comtrol

●装有减速器时的输出转矩 Gear motor- torque table

由于具有垂下特性，因此，力矩电机可以实现从停止状态到最高转速之间的任一转速。装有减速器中间减速器时的容许转矩，请参照转速转矩特性曲线图，根据所使用的转速和转矩，按照下面的公式算出：

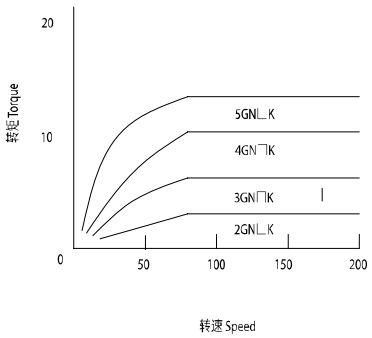
减速器翰出轴转速 NG= 电机转速 x1/ 减咸速器减速比
减速器输出轴转矩 TG= 电机转矩 x 减速器减速比 x 减速器传动效率

Due to the sloping characteristics, torque motors can be operated over a wide speed range, from locked rotor condition to the maximum speed. The permissible torque when agearhead and a decimal gearhead are directly connected can be calculated according to the following formula, using the speed and torque determined from the speed-torquecharacteristics.

Peed of gearhead output shaft NG=Motor speed x 1/gearhead gear ratio
Output torque of gearhead TG=Motor torque x gearhead gear ratio x gearhead efficiency

●请注意,减速器的输出轴转矩不可大于减速器的最大容许转矩

Please note, the output torque of the gearhead must be lower than the maximum permissible torque



减速器型号 Gearhead Model	减速器速比 Gearhead Gear Rario	减速器传动效率 Gearhead Efficiency
2GN □ K	3~18	81%
3GN □ K	25~36	73%
4GN □ K		
5GN □ K	50~200	66%

- ●减速器、中间减速器另售。
- ●减速器型号的口中为减速比的数值。
- ● Gearheads and decimal gearheads are sold separatel.
- ● Enter the gear ratio in the box (□) within the model name.

型号的阅读方法
PRODUCT NUMBER CODE

●电动机 Motor

5	TK	20	GN	-	C	F	P
①	②	③	④		⑤	⑥	⑦

①	电机的尺寸 Motor frame size	2 :60mm 3 :70mm 4 :80mm 5 :90mm 6 :104mm
②	机型名称 Motor type	TK：力矩电机 Turque motor
③	输出功率 Output (W)	例（Example）20:20W
④	转轴形状 Motor shaft type	GN: GN 型齿轮轴 GN type pinion shaft GU: GU 型齿轮轴 GU type pinion shat A: 圆轴型 Round shaft A1: 键槽型 Keyway
⑤	电源电压 · 极数 Voltage-poles	A: 单相 Single- phase 110V 50/60Hz 4P C: 单相 Single- phase 220V 50/60Hz 4P
⑥	T：带接线盒型 Terminal box type F：带自冷风扇 Since the cool fan FF：强制风扇 W/Fan	
⑦	P：带热保器 Thermal protector	

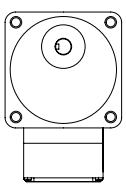
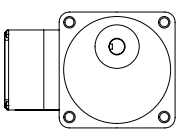
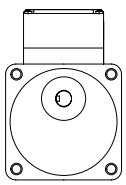
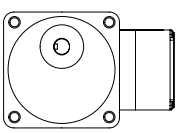
●减速机Reducer

5	GN	60	K	-	T
①	②	③	④		⑤

①	减速器的尺寸 Reducer frame size	2 :60mm 3 :70mm 4 :80mm 5 :90mm 6 :104mm
②	类型 type of pinion	GN:GN 型齿轮轴 GN type pinion shaft GU:GU 型齿轮轴 GU type pinion shaft
③	减速比 Gear ratio	例（Example）1: 60
④	输出轴类型 Type of output shaft	K: 滚珠轴承（对 5GU 方型箱体标注为 KB）Bearing（make KB for type GU square case) RC: 弧锥齿空心轴输出 Spiral bevel hollow shaft RT: 弧锥齿实心轴输出 Spiral bevel output shaft
⑤	安装孔类型 Mounting hole type	T: 箱体通孔，无则表示箱体螺纹孔和弧锥齿箱体 If not, it represents the threaded hole of box body and the box body of arc cone teeth

备注：选择 90 弧锥齿箱体时需要选择 GU 型齿轮轴

●接线盒方向的选定 Selection of junction box direction

T- 常规 Standard	T1- 左方向 Left	T2- 上方向 Up	T3- 右方向 Right
			

力矩减速电机
TORQUE GEAR MOTOR

3W
60mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		使用额定（堵转）Rating At Lock Rotor	电压 Voltage	频率 Frequency	启动转矩 Frequency	最大输出功率 Max.Output Power	最大输出功率时转速 Speed Max. Output Power	最大输出功率时的转矩 Torque At Aax. Output Power	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	mN.m	mN.m	r/min	mN.m	μF/VAC
2TK3GN-CP	2TK3A-CP	5min	220	50	69	3.2	750	41	1.5/450
		CONT	140		25	1.2		16	
2TK3GN-CP	2TK3A-CP	5min	220	60	69	3.2	900	34	1.2/250
		CONT	140		25	1.2		13	
2TK3GN-AP	2TK3A-AP	5min	110	50	69	3.2	750	41	7.0/450
		CONT	60		25	1.2		16	
2TK3GN-AP	2TK3A-AP	5min	110	60	69	3.2	900	34	6.0/250
		CONT	60		25	1.2		13	

●由于力矩电机设计工作在力矩模式，因此电机工作效率低，若电机连续工作在较高电压下，电机温升较高，甚至触发内部热保护器，造成电机无法正常运转。设计、造型、使用时请注意。
●力矩电机内部装有自动复位型热保护器，若电机运转过热，热保护器将切断电机电源，电机将停止运转；当电机温度下降后，热保护器讲自动复位供电，电机重新运转。故在进行操作检查时，必须先切断电源，防止发生事故。
●自动复位型热保护，动作温度：120℃ -125℃，复位温度：80-85℃。
● Since the torque motor is designed to work in torque mode, the efficiency of the motor is not very high. If the motor is continuously operated at a higher voltage, the temperature rise of the motor is higher, and even the internal thermal protector is triggered.Cause the motor can not run normally. Please pay attention when designing, modeling and using.
● The torque motor is equipped with an automatic reset type thermal protector. If the motor runs too hot, the thermal protector will cut off the motor power and the motor will stop. When the temperature of the motor drops, the thermal protector will automatically reset the power supply and the motor will run again. Therefore, when performing operation inspection, the power supply must be cut off to prevent accidents.
● Automatic reset type thermal protection, operating temperature: 120℃ -125℃ , reset temperature: 80-85℃ .

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

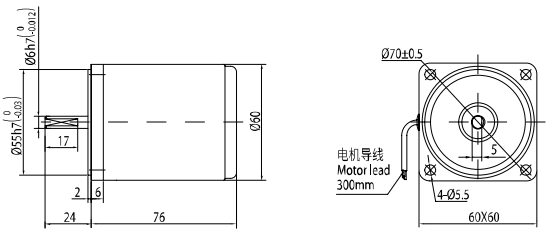
减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	250	208	150	125	100	83	75	60	50	42	37.5	30	25	21	18.75	15	12.5	10	8.33	7.5	6.25	5	4.17	3.75
	转矩 Torque N.m	0.10	0.12	0.17	0.20	0.25	0.30	0.33	0.42	0.50	0.60	0.60	0.75	0.90	1.08	1.20	1.49	1.74	2.17	2.60	2.90	3	3	3	3
60Hz	转速 Speed r/min	300	250	180	150	120	100	90	72	60	50	45	36	30	25	22.5	18	15	12	10	9	7.5	6	5	4.5
	转矩 Torque N.m	0.08	0.10	0.14	0.17	0.21	0.25	0.28	0.34	0.41	0.50	0.50	0.62	0.74	0.89	0.99	1.24	1.34	1.67	2.01	2.23	2.68	3	3	3

- 表中转速是以电机的平均转速（50Hz：750r/min、60Hz：900r/min）为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
- 表中 色框表示输出轴的旋转方向与电机旋转方向相反。
- 表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
- 减速箱的最大容许转矩为 3N·M。
- In the table, the speed is calculated from the base of the motor's average speed (50Hz: 750r/min, 60Hz: 900r/min) divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 3N·M.

●外形尺寸（单位mm）Dimension (unit mm)

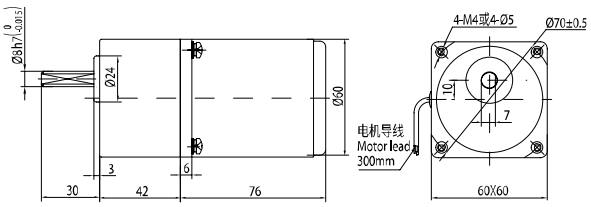
●圆轴电机

重量 Weight: 0.75kg



●组合：引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 1.15kg



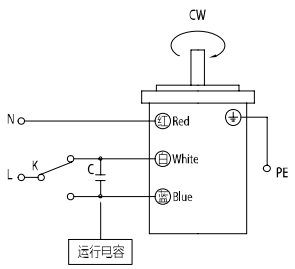
●短箱体Short Gear Box

●其中速比 3~18 可以做成短型减速箱，高度为 32mm。Gear ratio 3~18, short case is possible，Height of 32 mm。

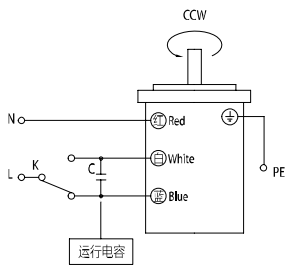
●接线图Wiring Diagram

- 运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。
- 表中所记型号为齿轮轴型，圆轴型亦同。
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type

顺时针方向 CW



逆时针方向 CCW



●请注意Note

单相电机运转方向的转换应在电机停止后进行。

若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

力矩减速电机
TORQUE GEAR MOTOR

6W
70mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		使用额定（堵转）Rating At Lock Rotor	电压 Voltage	频率 Frequency	启动转矩 Frequency	最大输出功率 Max.Output Power	最大输出功率时转速 Speed Max. Output Power	最大输出功率时的转矩 Torque At Aax. Output Power	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	mN.m	mN.m	r/min	mN.m	μF/VAC
3TK6GN-CP	3TK6A-CP	5min	220	50	134	6	750	76	2.0/450
		CONT	140		68	2.5		32	
3TK6GN-CP	3TK6A-CP	5min	220	60	134	6.5	900	69	1.5/250
		CONT	140		68	2.8		30	
3TK6GN-AP	3TK6A-AP	5min	110	50	134	6	750	76	8.0/450
		CONT	60		68	2.8		32	
3TK6GN-AP	3TK6A-AP	5min	110	60	134	6.5	900	69	7.0/250
		CONT	60		68	2.8		30	

●由于力矩电机设计工作在力矩模式，因此电机工作效率低，若电机连续工作在较高电压下，电机温升较高，甚至触发内部热保护器，造成电机无法正常运转。设计、造型、使用时请注意。
●力矩电机内部装有自动复位型热保护器，若电机运转过热，热保护器将切断电机电源，电机将停止运转；当电机温度下降后，热保护器讲自动复位供电，电机重新运转。故在进行操作检查时，必须先切断电源，防止发生事故。
●自动复位型热保护，动作温度：120℃ -125℃，复位温度：80-85℃。
● Since the torque motor is designed to work in torque mode, the efficiency of the motor is not very high. If the motor is continuously operated at a higher voltage, the temperature rise of the motor is higher, and even the internal thermal protector is triggered.Cause the motor can not run normally. Please pay attention when designing, modeling and using.
● The torque motor is equipped with an automatic reset type thermal protector. If the motor runs too hot, the thermal protector will cut off the motor power and the motor will stop. When the temperature of the motor drops, the thermal protector will automatically reset the power supply and the motor will run again. Therefore, when performing operation inspection, the power supply must be cut off to prevent accidents.
● Automatic reset type thermal protection, operating temperature: 120℃ -125℃ , reset temperature: 80-85℃ .

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

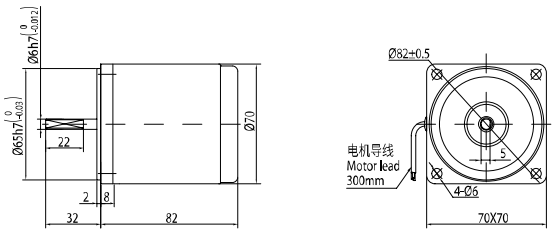
减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	250	208	150	125	100	83	75	60	50	42	37.5	30	25	20.8	18.75	15	12.5	10	8.3	7.5	6.25	5	4.2	3.75
	转矩 Torque N.m	0.20	0.22	0.31	0.37	0.46	0.55	0.62	0.77	0.92	1.00	1.11	1.39	1.66	1.99	2.22	2.77	2.99	3.74	4.49	5	5	5	5	5
60Hz	转速 Speed r/min	300	250	180	150	120	100	90	72	60	50	45	36	30	25	22.5	18	15	12	10	9	7.5	6	5	4.5
	转矩 Torque N.m	0.17	0.20	0.28	0.34	0.42	0.50	0.56	0.70	0.84	0.91	1.01	1.26	1.51	1.81	2.01	2.52	2.72	3.40	4.07	4.53	5	5	5	5

- 表中转速是以电机的平均转速（50Hz：750r/min、60Hz：900r/min）为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
- 表中 色框表示输出轴的旋转方向与电机旋转方向相反。
- 表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
- 减速箱的最大容许转矩为 3N·M。
- In the table, the speed is calculated from the base of the motor's average speed (50Hz: 750r/min, 60Hz: 900r/min) divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 3N·M.

外形尺寸（单位mm）Dimension (unit mm)

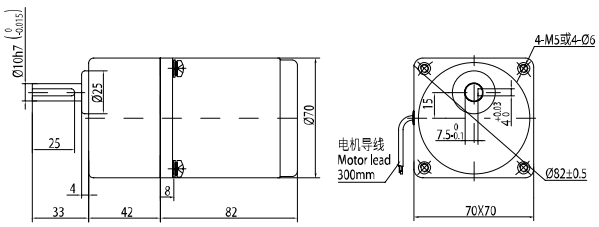
圆轴电机

重量 Weight: 1.1kg

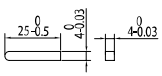


组合：引线型电机 + 标准减速箱（减速比 1:3~200）

重量 Weight: 1.6kg



键（减速器附件）



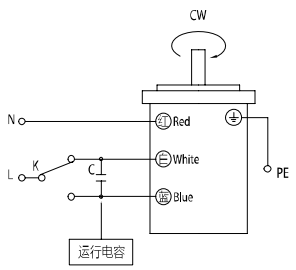
短箱体Short Gear Box

- 其中速比 3~18 可以做成短型减速箱，高度为 32mm。Gear ratio 3~18, short case is possible，Height of 32 mm。

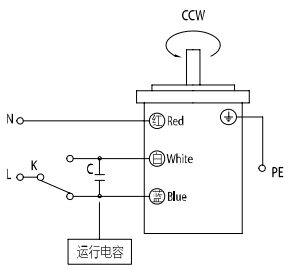
接线图Wiring Diagram

- 运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。
- 表中所记型号为齿轮轴型，圆轴型亦同。
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type

顺时针方向 CW



逆时针方向 CCW



请注意Note

单相电机运转方向的转换应在电机停止后进行。

若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

力矩减速电机
TORQUE GEAR MOTOR

10W
80mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		使用额定（堵转）Rating At Lock Rotor	电压 Voltage	频率 Frequency	启动转矩 Frequency	最大输出功率 Max.Output Power	最大输出功率时转速 Speed Max. Output Power	最大输出功率时的转矩 Torque At Aax. Output Power	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	mN.m	mN.m	r/min	mN.m	μF/VAC
4TK10GN-CP	4TK10A-CP	5min	220	50	265	10	750	127	2.5/450
		CONT	140		98	3.5		46	
4TK10GN-CP	4TK10A-CP	5min	220	60	225	10	900	106	2.0/250
		CONT	140		90	3.5		38	
4TK10GN-AP	4TK10A-AP	5min	110	50	235	10	750	127	10.0/450
		CONT	60		74	3.5		46	
4TK10GN-AP	4TK10A-AP	5min	110	60	200	10	900	106	8.0/250
		CONT	60		80	3.5		38	

●由于力矩电机设计工作在力矩模式，因此电机工作效率低，若电机连续工作在较高电压下，电机温升较高，甚至触发内部热保护器，造成电机无法正常运转。设计、造型、使用时请注意。
●力矩电机内部装有自动复位型热保护器，若电机运转过热，热保护器将切断电机电源，电机将停止运转；当电机温度下降后，热保护器讲自动复位供电，电机重新运转。故在进行操作检查时，必须先切断电源，防止发生事故。
●自动复位型热保护，动作温度：120℃ -125℃，复位温度：80-85℃。
● Since the torque motor is designed to work in torque mode, the efficiency of the motor is not very high. If the motor is continuously operated at a higher voltage, the temperature rise of the motor is higher, and even the internal thermal protector is triggered.Cause the motor can not run normally. Please pay attention when designing, modeling and using.
● The torque motor is equipped with an automatic reset type thermal protector. If the motor runs too hot, the thermal protector will cut off the motor power and the motor will stop. When the temperature of the motor drops, the thermal protector will automatically reset the power supply and the motor will run again. Therefore, when performing operation inspection, the power supply must be cut off to prevent accidents.
● Automatic reset type thermal protection, operating temperature: 120℃ -125℃ , reset temperature: 80-85℃ .

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

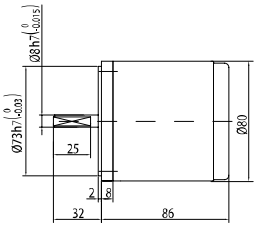
减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	250	208	150	125	100	83.3	75	336	50	41.7	37.5	30	25	20.8	18.75	15	12.5	10	8.33	7.5	6.25	5	4.17	3.75
	转矩 Torque N.m	0.31	0.37	0.51	0.62	0.77	0.93	1.03	1.29	1.54	1.85	2.06	2.31	2.78	3.33	3.70	4.63	5.00	6.5	7.50	8	8	8	8	8
60Hz	转速 Speed r/min	300	250	180	150	120	100	90	72	60	50	45	36	30	25	22.5	18	15	12	10	9	7.5	6	5	4.5
	转矩 Torque N.m	0.26	0.31	0.43	0.2	0.64	0.77	0.86	1.07	1.29	1.55	1.72	1.93	2.32	2.78	3.09	3.86	4.17	5.22	6.26	6.95	8	8	8	8

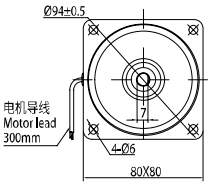
●表中转速是以电机的平均转速（50Hz：750r/min、60Hz：900r/min）为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中 色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 3N·M。
● In the table, the speed is calculated from the base of the motor's average speed (50Hz: 750r/min, 60Hz: 900r/min) divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
● The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
● The maximum allowable torque of the decelerator is 3N·M.

●外形尺寸（单位mm）Dimension (unit mm)

●圆轴电机

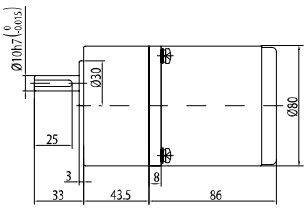
重量 Weight: 1.6kg

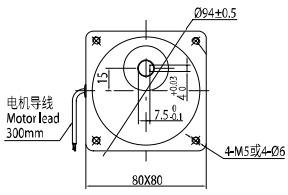




●组合：引线型电机 + 标准减速箱（减速比 1:3~200）

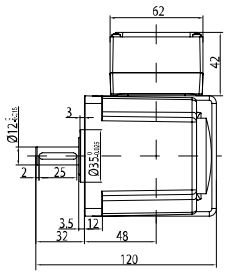
重量 Weight: 2.4kg

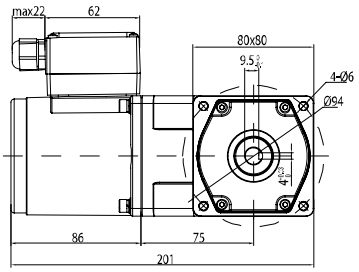




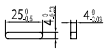
●弧锥齿实心轴（接线盒可选，详见 P150）

重量 Weight: 3.5kg



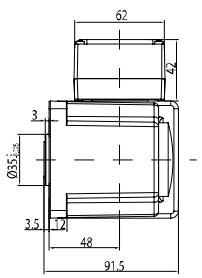


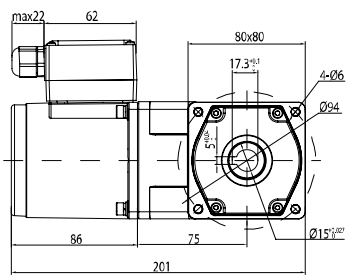
●键（减速器附件）

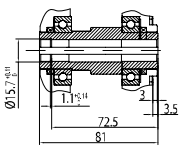


●弧锥齿空心轴（接线盒可选，详见 P148）

重量 Weight: 3.3kg







●短箱体Short Gear Box

●其中速比 3~18 可以做成短型减速箱，高度为 42mm。Gear ratio 3~18, short case is possible，Height of 42 mm。

●接线图Wiring Diagram

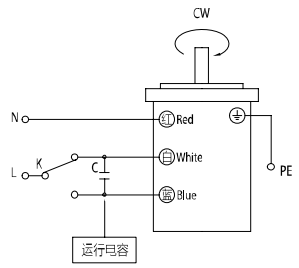
●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●表中所记型号为齿轮轴型，圆轴型亦同。

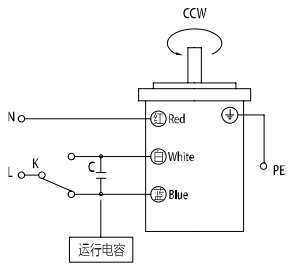
● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type

顺时针方向 CW



逆时针方向 CCW



●请注意Note

单相电机运转方向的转换应在电机停止后进行。

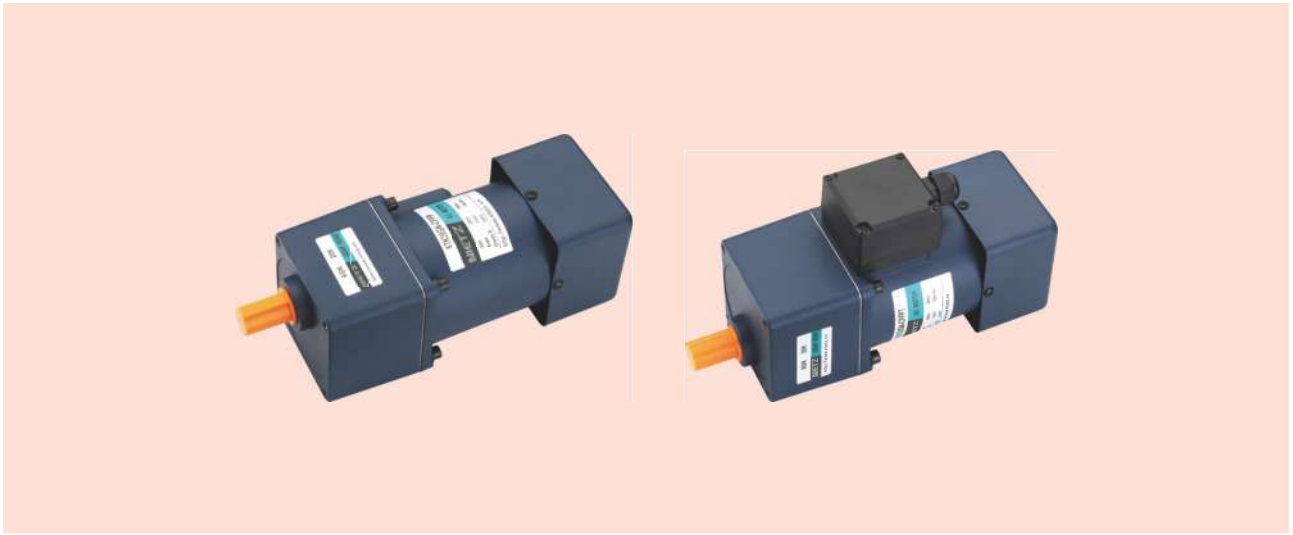
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

力矩减速电机
TORQUE GEAR MOTOR

20W
90mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		使用额定（堵转）Rating At Lock Rotor	电压 Voltage	频率 Frequency	启动转矩 Frequency	最大输出功率 Max.Output Power	最大输出功率时转速 Speed Max. Output Power	最大输出功率时的转矩 Torque At Aax. Output Power	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	mN.m	mN.m	r/min	mN.m	μF/VAC
5TK20GN-CP	5TK20A-CP	5min	220	50	363	20	750	254	3.5/450
		CONT	140		137	6		76	
5TK20GN-CP	5TK20A-CP	5min	220	60	294	20	900	216	3.0/250
		CONT	140		108	6		64	
5TK20GN-AP	5TK20GN-AP	5min	110	50	363	20	750	254	15.0/450
		CONT	60		137	6		76	
5TK20GN-AP	5TK20GN-AP	5min	110	60	294	20	900	216	12.0/250
		CONT	60		108	6		64	

●由于力矩电机设计工作在力矩模式，因此电机工作效率低，若电机连续工作在较高电压下，电机温升较高，甚至触发内部热保护器，造成电机无法正常运转。设计、造型、使用时请注意。
●力矩电机内部装有自动复位型热保护器，若电机运转过热，热保护器将切断电机电源，电机将停止运转；当电机温度下降后，热保护器讲自动复位供电，电机重新运转。故在进行操作检查时，必须先切断电源，防止发生事故。
●自动复位型热保护，动作温度：120℃ -125℃，复位温度：80-85℃。
● Since the torque motor is designed to work in torque mode, the efficiency of the motor is not very high. If the motor is continuously operated at a higher voltage, the temperature rise of the motor is higher, and even the internal thermal protector is triggered.Cause the motor can not run normally. Please pay attention when designing, modeling and using.
● The torque motor is equipped with an automatic reset type thermal protector. If the motor runs too hot, the thermal protector will cut off the motor power and the motor will stop. When the temperature of the motor drops, the thermal protector will automatically reset the power supply and the motor will run again. Therefore, when performing operation inspection, the power supply must be cut off to prevent accidents.
● Automatic reset type thermal protection, operating temperature: 120℃ -125℃ , reset temperature: 80-85℃ .

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

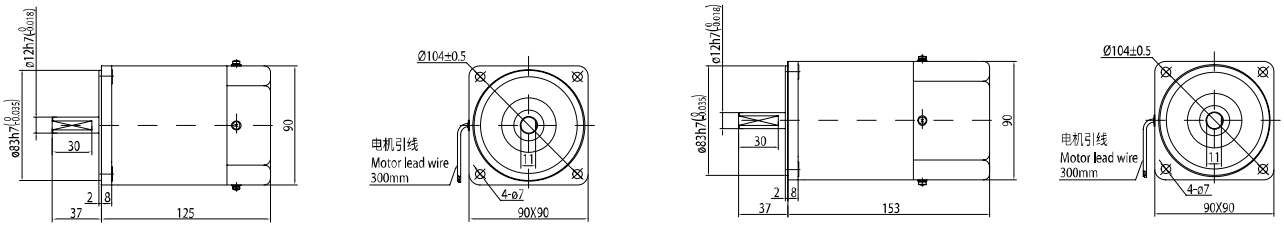
减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	250	208	150	125	100	83	75	60	50	42	37.5	30	25	20.8	18.75	15	12.5	10	8.3	7.5	6.25	5	4.17	3.75
	转矩 Torque N.m	0.62	0.74	1.03	1.23	1.54	1.85	2.06	2.57	3.09	3.33	3.70	4.63	5.55	6.67	6.67	8.33	10	10	10	10	10	10	10	10
60Hz	转速 Speed r/min	300	250	180	150	120	100	90	72	60	50	45	36	30	25	22.5	18	15	12	10	9	7.5	6	5	4.5
	转矩 Torque N.m	0.52	0.63	0.87	1.05	1.31	1.57	1.75	2.19	2.62	2.83	3.15	3.94	4.72	5.67	5.67	7.09	8.50	10	10	10	10	10	10	10

●表中转速是以电机的平均转速（50Hz：750r/min、60Hz：900r/min）为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中 色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 3N·M。
● In the table, the speed is calculated from the base of the motor's average speed (50Hz: 750r/min, 60Hz: 900r/min) divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
● The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
● The maximum allowable torque of the decelerator is 3N·M.

●外形尺寸（单位mm）Dimension (unit mm)

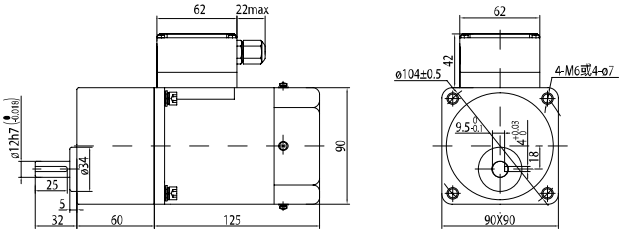
●圆轴电机

重量 Weight: 2.7kg



●组合：接线盒（可选，详见 P150） 型电机 + 标准减速箱

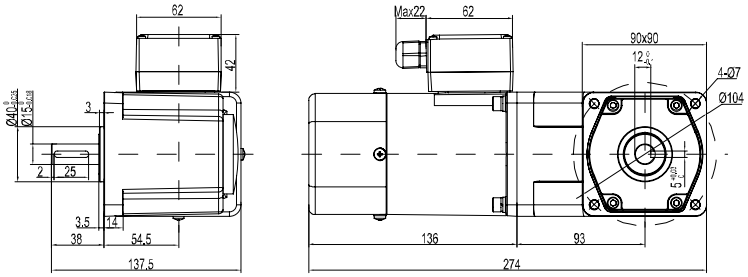
重量 Weight: 4.2kg



●键（减速器附件）

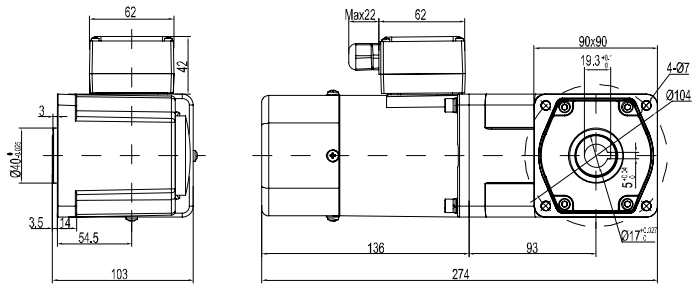
●弧锥齿实心轴（接线盒可选，详见 P150）

重量 Weight: 5.7kg



●弧锥齿空心轴（接线盒可选，详见 P150）

重量 Weight: 5.35kg



●短箱体Short Gear Box

●其中速比 3~18 可以做成短型减速箱，高度为 42mm。Gear ratio 3~18, short case is possible， Height of 42 mm。

●接线图Wiring Diagram

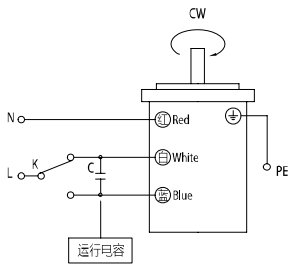
●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●表中所记型号为齿轮轴型，圆轴型亦同。

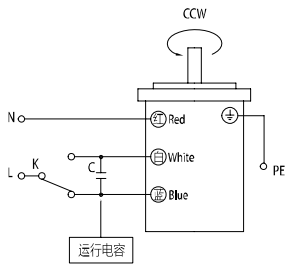
● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type

顺时针方向 CW



逆时针方向 CCW



●请注意Note

单相电机运转方向的转换应在电机停止后进行。

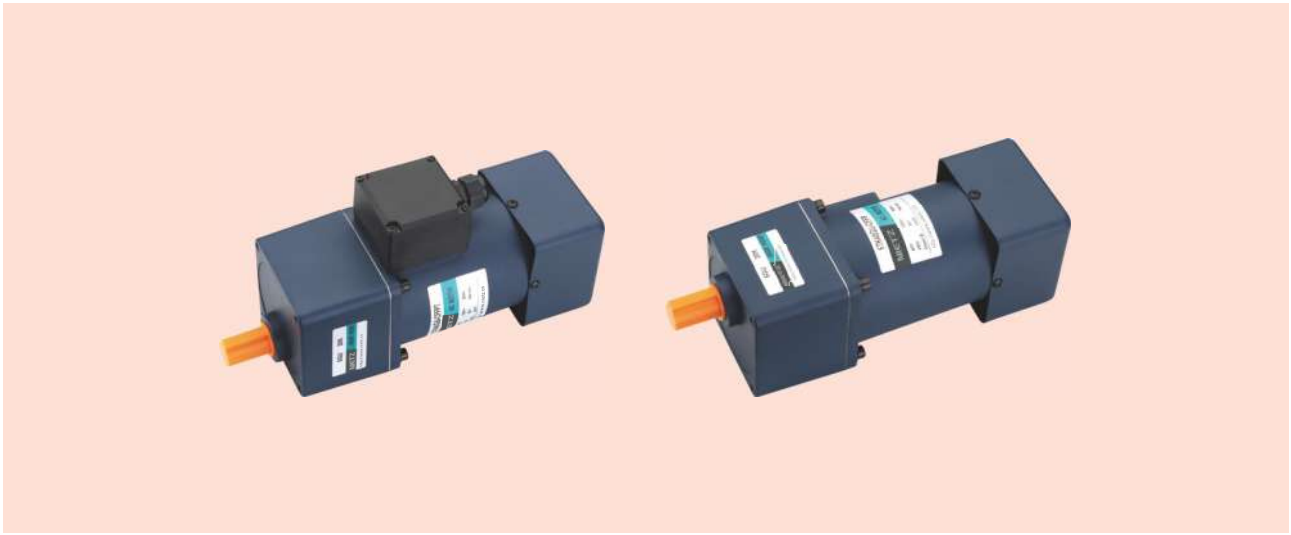
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

力矩减速电机
TORQUE GEAR MOTOR

40W
90mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		使用额定（堵转）Rating At Lock Rotor	电压 Voltage	频率 Frequency	启动转矩 Frequency	最大输出功率 Max.Output Power	最大输出功率时转速 Speed Max. Output Power	最大输出功率时的转矩 Torque At Aax. Output Power	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	mN.m	mN.m	r/min	mN.m	μF/VAC
5TK40GU-CFFP	5TK40A-CFFP	5min	220	50	765	40	750	510	6.0/450
		CONT	140		325	15.5		197	
5TK40GU-CFFP	5TK40A-CFFP	5min	220	60	640	40	900	425	5.0/250
		CONT	140		280	15		160	

●由于力矩电机设计工作在力矩模式，因此电机工作效率低，若电机连续工作在较高电压下，电机温升较高，甚至触发内部热保护器，造成电机无法正常运转。设计、造型、使用时请注意。

●力矩电机内部装有自动复位型热保护器，若电机运转过热，热保护器将切断电机电源，电机将停止运转；当电机温度下降后，热保护器讲自动复位供电，电机重新运转。故在进行操作检查时，必须先切断电源，防止发生事故。

●自动复位型热保护，动作温度：120℃ -125℃，复位温度：80-85℃。

● Since the torque motor is designed to work in torque mode, the efficiency of the motor is not very high. If the motor is continuously operated at a higher voltage, the temperature rise of the motor is higher, and even the internal thermal protector is triggered.Cause the motor can not run normally. Please pay attention when designing, modeling and using.

● The torque motor is equipped with an automatic reset type thermal protector. If the motor runs too hot, the thermal protector will cut off the motor power and the motor will stop. When the temperature of the motor drops, the thermal protector will automatically reset the power supply and the motor will run again. Therefore, when performing operation inspection, the power supply must be cut off to prevent accidents.

● Automatic reset type thermal protection, operating temperature: 120℃ -125℃ , reset temperature: 80-85℃ .

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

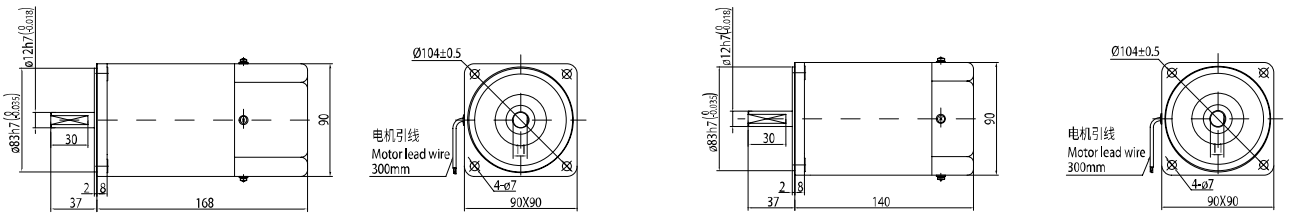
减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	250	208	150	125	100	83	75	60	50	42	37.5	30	25	21	18.75	15	12.5	10	8.33	7.5	6.25	5	4.17	3.75
	转矩 Torque N.m	1.24	1.49	2.07	2.48	3.10	3.72	4.13	4.65	5.58	6.69	6.7	8.4	10	12	13.4	16.7	20	20	20	20	20	20	20	20
60Hz	转速 Speed r/min	300	250	180	150	120	100	90	72	60	50	45	36	30	25	22.5	18	15	12	10	9	8	6	5	4.5
	转矩 Torque N.m	1.03	1.24	1.72	2.07	2.58	3.10	3.44	3.87	4.65	5.58	5.58	6.97	8.37	10.04	11.15	13.94	16.73	20	20	20	20	20	20	20

- 表中转速是以电机的平均转速（50Hz：750r/min、60Hz：900r/min）为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
- 表中 色框表示输出轴的旋转方向与电机旋转方向相反。
- 表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
- 减速箱的最大容许转矩为 3N·M。
- In the table, the speed is calculated from the base of the motor's average speed (50Hz: 750r/min, 60Hz: 900r/min) divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 3N·M.

外形尺寸（单位mm）Dimension (unit mm)

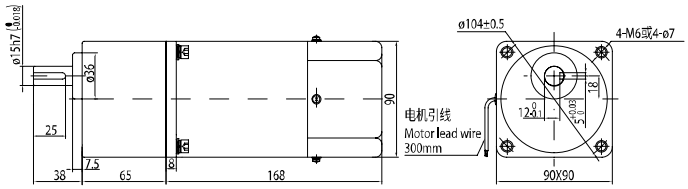
圆轴电机

重量 Weight: 2.9kg

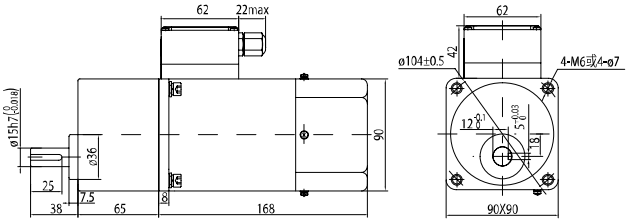


组合：引线型电机 + 标准减速箱

重量 Weight: 4.3kg

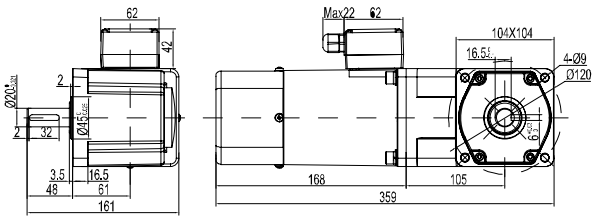


组合：接线盒（可选，详见 P150） 型电机 + 标准减速箱



弧锥齿实心轴（接线盒可选，详见 P150）

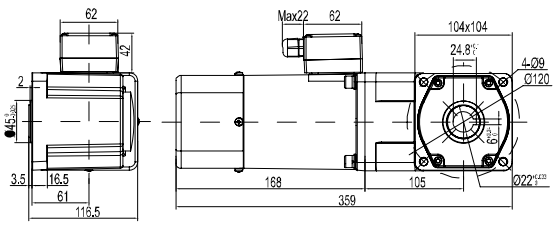
重量 Weight: 6.0kg

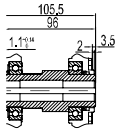


键（减速器附件）

弧锥齿空心轴（接线盒可选，详见 P150）

重量 Weight: 5.65kg





●短箱体Short Gear Box

●其中速比 3~18 可以做成短型减速箱，高度为 42mm。Gear ratio 3~18, short case is possible，Height of 42 mm。

●接线图Wiring Diagram

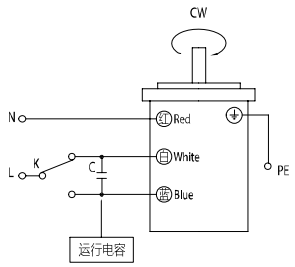
●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●表中所记型号为齿轮轴型，圆轴型亦同。

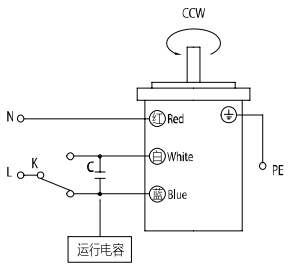
● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type

顺时针方向 CW



逆时针方向 CCW



●请注意Note

单相电机运转方向的转换应在电机停止后进行。

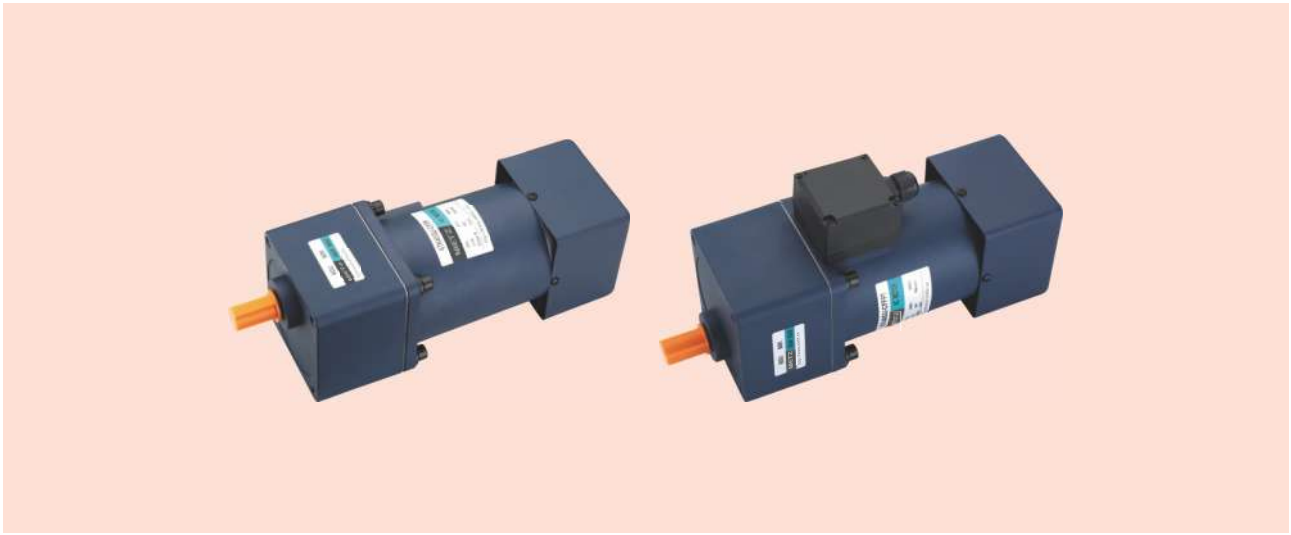
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

力矩减速电机
TORQUE GEAR MOTOR

40W
104mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		使用额定（堵转）Rating At Lock Rotor	电压 Voltage	频率 Frequency	启动转矩 Frequency	最大输出功率 Max.Output Power	最大输出功率时转速 Speed Max. Output Power	最大输出功率时的转矩 Torque At Aax. Output Power	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	mN.m	mN.m	r/min	mN.m	μF/VAC
6TK40GU-CPFF	6TK40A-CPFF	5min	220	50	1056	63	750	800	8.0/450
		CONT	140		522	27		350	
6TK40GU-CPFF	6TK40A-CPFF	5min	220	60	980	70	900	750	7.0/250
		CONT	140		490	31		331	

●由于力矩电机设计工作在力矩模式，因此电机工作效率低，若电机连续工作在较高电压下，电机温升较高，甚至触发内部热保护器，造成电机无法正常运转。设计、造型、使用时请注意。
●力矩电机内部装有自动复位型热保护器，若电机运转过热，热保护器将切断电机电源，电机将停止运转；当电机温度下降后，热保护器讲自动复位供电，电机重新运转。故在进行操作检查时，必须先切断电源，防止发生事故。
●自动复位型热保护，动作温度：120℃ -125℃，复位温度：80-85℃。
● Since the torque motor is designed to work in torque mode, the efficiency of the motor is not very high. If the motor is continuously operated at a higher voltage, the temperature rise of the motor is higher, and even the internal thermal protector is triggered.Cause the motor can not run normally. Please pay attention when designing, modeling and using.
● The torque motor is equipped with an automatic reset type thermal protector. If the motor runs too hot, the thermal protector will cut off the motor power and the motor will stop. When the temperature of the motor drops, the thermal protector will automatically reset the power supply and the motor will run again. Therefore, when performing operation inspection, the power supply must be cut off to prevent accidents.
● Automatic reset type thermal protection, operating temperature: 120℃ -125℃ , reset temperature: 80-85℃ .

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

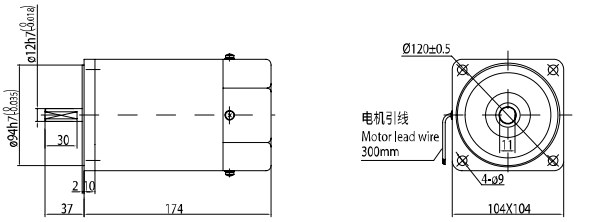
减速比 Gear Ratio		3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200
50Hz	转速 Speed r/min	250	208	150	125	100	83	75	60	50	42	37.5	30	25	21	18.75	15	12.5	10	8.33	7.5	6.25	5	4.17	3.75
	转矩 Torque N.m	1.94	2.33	3.24	3.89	4.86	5.83	6.48	7.29	8.75	10.5	10.5	13.12	15.75	18.9	21	6.24	31.49	39.37	40	40	40	40	40	40
60Hz	转速 Speed r/min	300	250	180	150	120	100	90	72	60	50	45	36	30	25	23	18	15	12	10	9	7.5	6	5	4.5
	转矩 Torque N.m	1.82	2.19	3.04	3.65	4.56	5.47	6.08	6.83	8.20	9.84	9.84	12.30	14.76	17.71	19.68	24.60	29.52	36.91	40	40	40	40	40	40

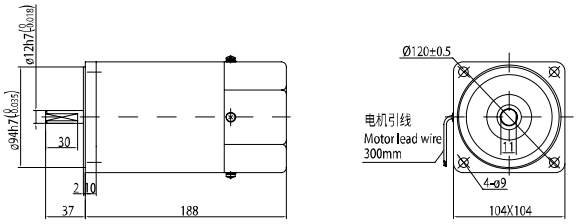
●表中转速是以电机的平均转速（50Hz：750r/min、60Hz：900r/min）为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中 色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 3N·M。
● In the table, the speed is calculated from the base of the motor's average speed (50Hz: 750r/min, 60Hz: 900r/min) divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
● The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
● The maximum allowable torque of the decelerator is 3N·M.

●外形尺寸（单位mm）Dimension (unit mm)

●圆轴电机

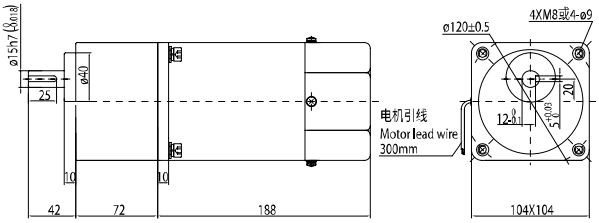
重量 Weight: 5.0kg



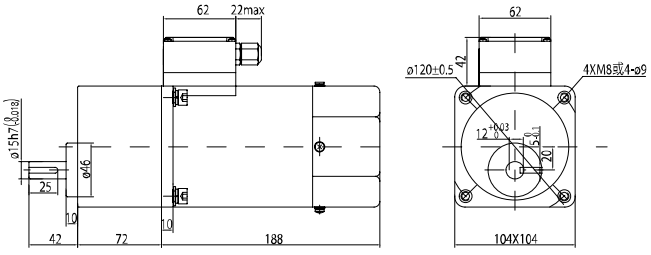


●**组合：**引线型电机 + 标准减速箱

重量 Weight: 7.1kg

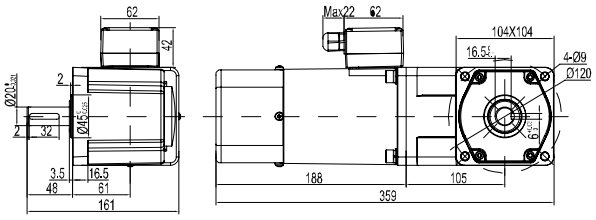


●**组合：**接线盒（可选，详见 P150） 型电机 + 标准减速箱

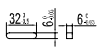


●弧锥齿实心轴（接线盒可选，详见 P150）

重量 Weight: 9.5kg

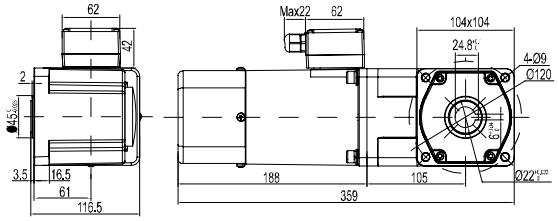


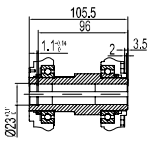
●**键**（减速器附件）



●弧锥齿空心轴（接线盒可选，详见 P150）

重量 Weight: 9.25kg

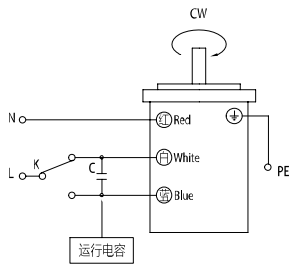




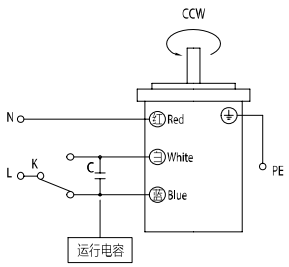
●接线图Wiring Diagram

- 运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。
- 表中所记型号为齿轮轴型，圆轴型亦同。
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type

顺时针方向 CW



逆时针方向 CCW



●请注意Note

单相电机运转方向的转换应在电机停止后进行。

若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

阻尼减速电机
REVERSIBLE GEAR MOTOR

●规格 Specifications

● 6W、15W、25W、40W、60W、90W、120W

型号 / 类型 / 导线型 Model/Type/Lead Wire Type		输出功率 Output Power	电压 Voltage	频率 Frequency	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor/Ve
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
2RK6GN-C	2RK6A-C	6	1ph220V	50	0.14	1200	50	40	1.0μF/450VAC
				60	0.13	1450	40	43	
2RK6GN-A	2RK6A-A	6	1ph110V	50	0.31	1200	50	40	3.5μF/250VAC
				60	0.26	1450	40	43	
3RK15GN-C	3RK15A-C	15	1ph220V	50	0.21	1250	125	86	1.5μF/450VAC
				60	0.19	1500	100	81	
3RK15GN-A	3RK15A-A	15	1ph110V	50	0.42	1250	125	86	6.0μF/250VAC
				60	0.36	1500	100	81	
4RK25GN-C	4RK25A-C	25	1ph220V	50	0.3	1250	210	163	2.0μF/450VAC
				60	0.3	1550	170	140	
4RK25GN-A	4RK25A-A	25	1ph110V	50	0.57	1250	210	163	8.0μF/250VAC
				60	0.54	1550	170	140	
5RK40GN-C	5RK40A-C	40	1ph220V	50	0.43	1350	260	200	3.0μF/450VAC
				60	0.52	1550	220	200	
5RK40GN-A	5RK40A-A	40	1ph110V	50	0.92	1350	260	200	12.0μF/250VAC
				60	0.92	1550	220	200	
5RK60GN-CF	5RK60A-CF	60	1ph220V	50	0.62	1350	500	490	4.5μF/450VAC
				60	0.66	1550	405	490	
5RK60GU-AF	5RK60A-AF	60	1ph110V	50	1.22	1350	500	490	18.0μF/250VAC
				60	1.24	1350	405	490	
5RK90GU-CF	5RK90A-CF	90	1ph220V	50	0.83	1350	750	559	6.0μF/450VAC
				60	0.99	1550	600	481	
5RK90GU-AF	5RK90A-AF	90	1ph110V	50	1.64	1350	750	559	20.0μF/250VAC
				60	1.77	1550	600	481	
5RK120GU-CF	5RK120A-CF	90	1ph220V	50	1.03	1350	1000	638	7.0μF/450VAC
				60	1.23	1550	800	556	
5RK120GU-AF	5RK120A-AF	90	1ph110V	50	2.05	1350	1000	638	25.0μF/250VAC
				60	2.2	1550	800	556	

●各种安全规格以电机铭牌上的型号取得认证。

hen the motor is approved under varus safety standards, the model name on the nameplate is the approved model name.

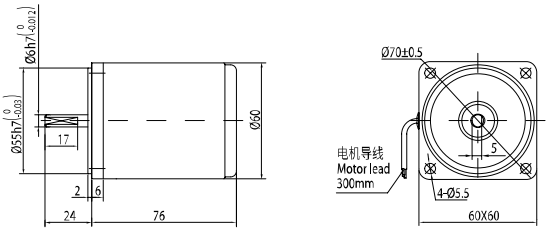
●减速箱减速比对照表 Gear reduction ratio comparison

减速比 Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	200

●外形尺寸（单位mm）Dimension (unit mm)

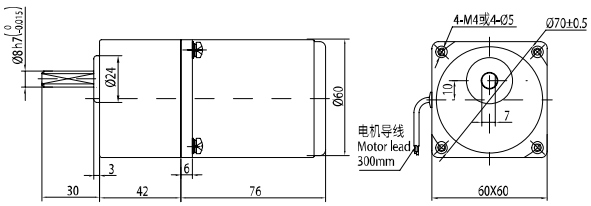
●**型号 Model:** 2RK6A-C, 2RK6A-A

重量 Weight: 0.75kg



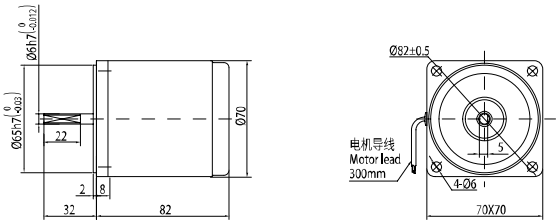
●**型号 Model:** 2RK6GN-C/2GN □ K, 2RK6GN-A/2GN □ K

重量 Weight: 1.15kg



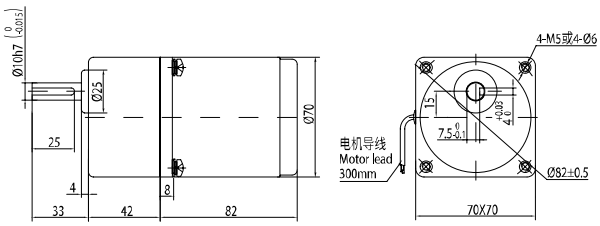
●**型号 Model:** 3RK15A-C, 3RK15A-A

重量 Weight: 1.10kg



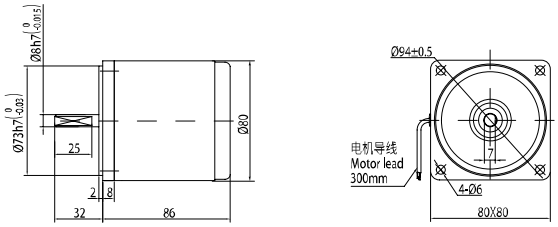
●**型号 Model:** 3RK15GN-C/3GN □ K, 3RK15GN-A/3GN □ K

重量 Weight: 1.60kg



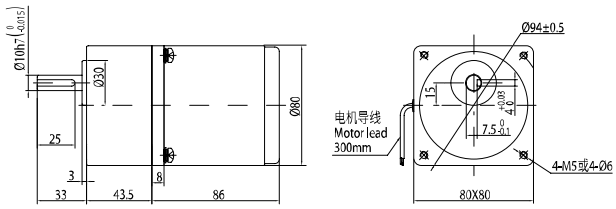
●**型号 Model:** 4RK25A-C, 4RK25A-A

重量 Weight: 1.60kg



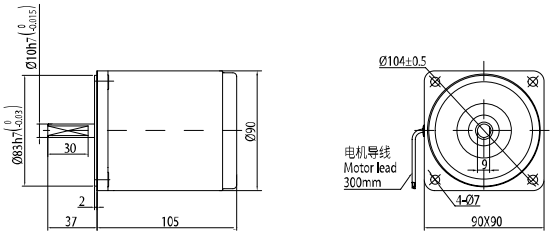
●**型号 Model:** 4RK25GN-C/4GN □ K, 4RK25GN-A/4GN □ K

重量 Weight: 2.55kg



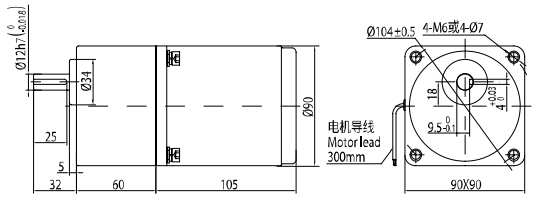
●**型号 Model:** 5RK40A-C, 5RK40A-A

重量 Weight: 2.40kg



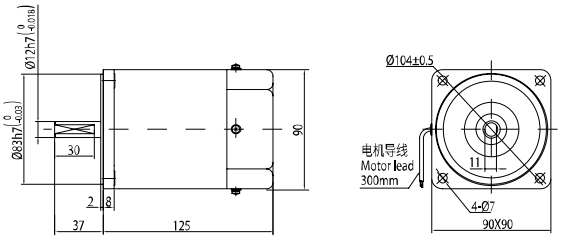
●**型号 Model:** 5RK40GN-C/5GN □ K, 5RK40GN-A/5GN □ K

重量 Weight: 3.75kg



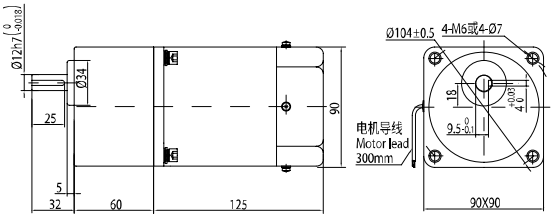
●**型号 Model:** 5RK60A-CF, 5RK60A-AF

重量 Weight: 2.70kg



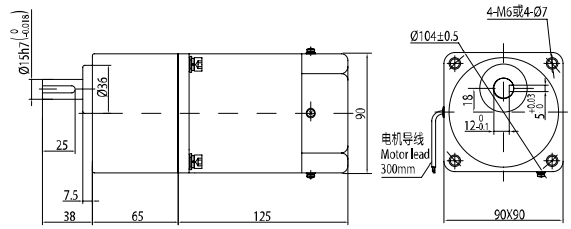
●**型号 Model:** 5RK60GN-CF/5GN □ K, 5RK60GN-AF/5GN □ K

重量 Weight: 4.05kg



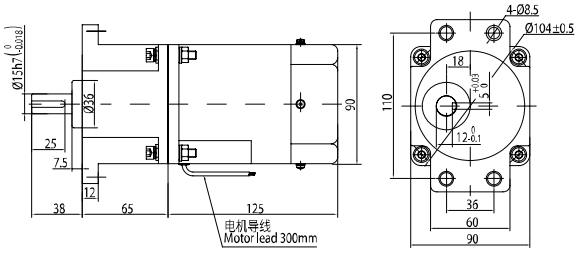
●**型号 Model:** 5RK60GU-CF/5GU □ KB, 5RK60GU-AF/5GU □ KB

重量 Weight: 4.15kg



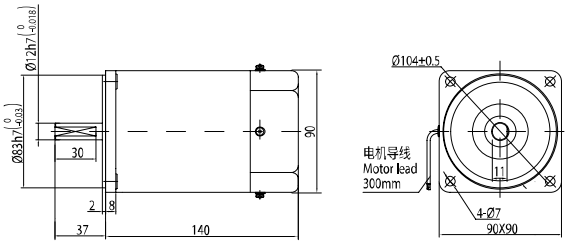
●**型号 Model:** 5RK60GU-CF/5GU □ K, 5RK60GU-AF/5GU □ K

重量 Weight: 4.35kg



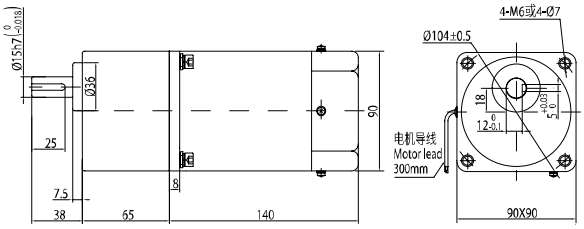
●**型号 Model:** 5RK90GU-CF, 5RK90GU-AF

重量 Weight: 2.90kg



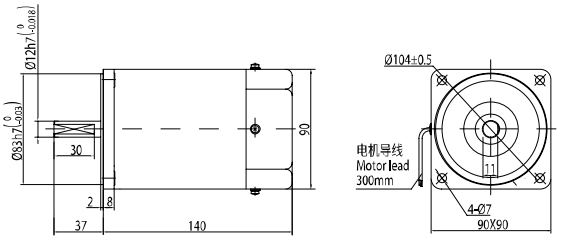
●**型号 Model:** 5RK90GU-CF/5GU □ KB, 5RK90GU-AF/5GU □ KB

重量 Weight: 4.35kg



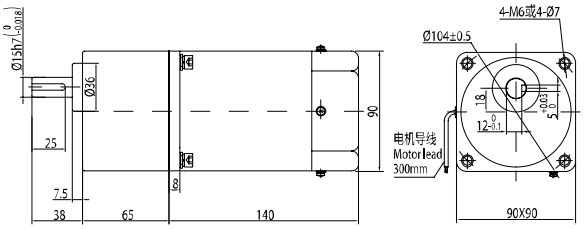
●●**型号 Model:** 5RK120A-CF, 5RK120A-AF

重量 Weight: 2.90kg



●**型号 Model:** 5RK120A-CF/5GU □ KB, 5RK120A-AF/5GU □ KB

重量 Weight: 4.35kg



●**键**（减速器附件）

●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

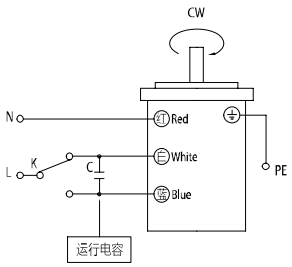
●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, while CCW represents the counterdockwise direction.

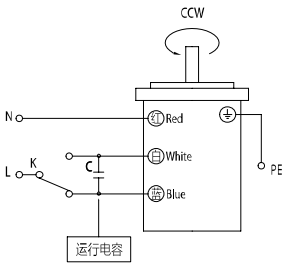
● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type

5RK120GU-AF、5RK120U-CF

顺时针方向 CW



逆时针方向 CCW



●请注意Note

单相电动机运转方向的转换应在电动机停止后进行。

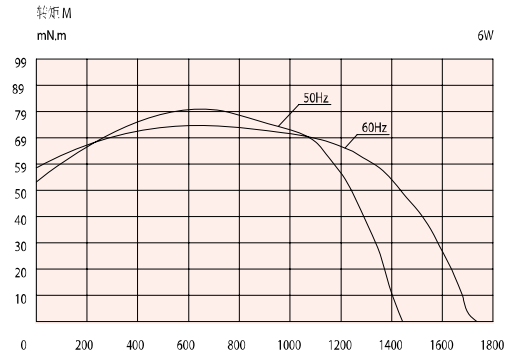
若在电动机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

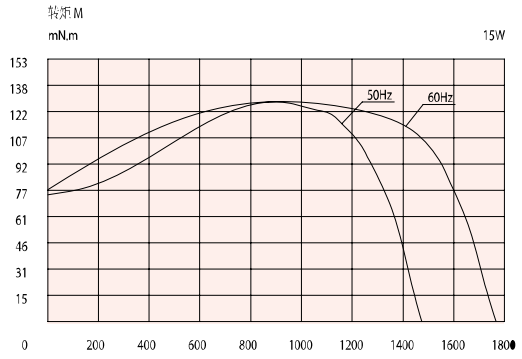
Change the direction of single-phase motor rotation only after bring the motor to a stop.

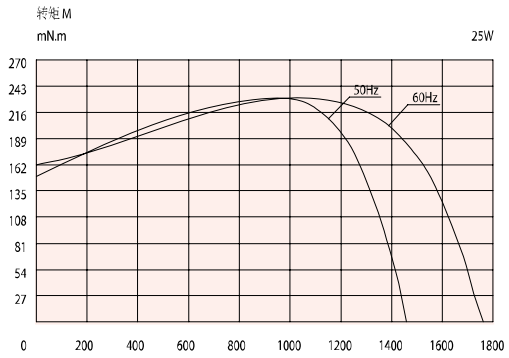
If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

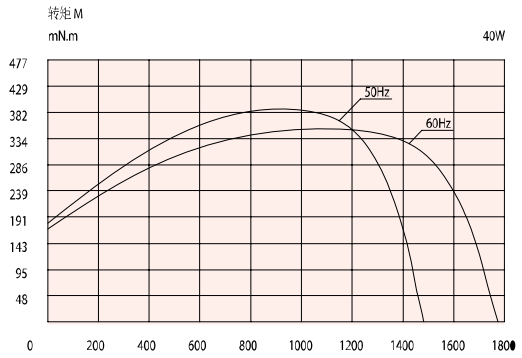
转速–转矩曲线
ROTATOINAL SPEED - TORQUE CURVE

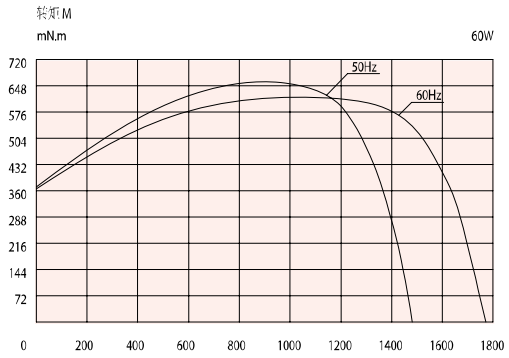
●单相电机 Single phase motor

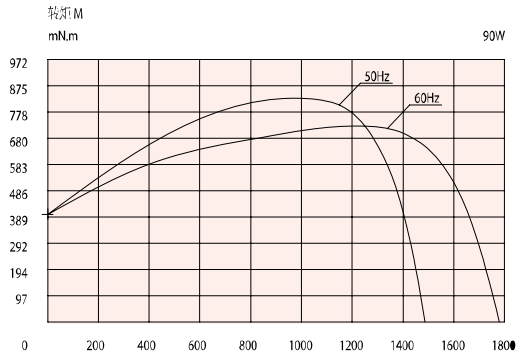


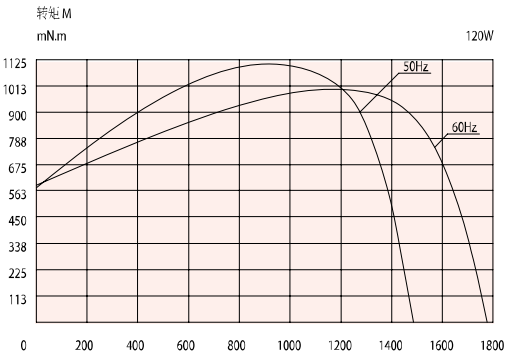












调速电磁制动减速电机
SPEED CONTROL BRAKE GEAR MOTOR

●规格 Specifications

● 25W、40W、60W、90W、120W、200W

型号 / 类型 / 导线型 Model/Type/Lead Wire Type		输出功率 Output Power	电压 Voltage	频率 Frequency	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque		启动转矩 Starting Torque	运行电容 Capacitor/Ve
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft						90r/m	1200r/m		
		W	V	Hz	A	r/min	mN.m		mN.m	μF/VAC
4IK25RGN-CM	4IK25RA-CM	25	1ph220V	50	0.22	90~1350	70	190	40	1.8μF/450VAC
				60	0.22	90~1350	60	133	43	
4IK25RGN-AM	4IK25RA-AM	25	1ph110V	50	0.43	90~1350	70	190	40	7μF/250VAC
				60	0.41	90~1350	60	153	43	
5IK40RGN-CM	5IK40RA-CM	40	1ph220V	50	0.32	90~1350	110	320	220	2.5μF/450VAC
				60	0.19	90~1350	110	230	220	
5IK40RGN-AM	5IK40RA-AM	40	1ph110V	50	0.42	90~1350	110	300	220	10μF/250VAC
				60	0.36	90~1350	110	220	220	
5IK60RGN-CMF	5IK60RA-CMF	60	1ph220V	50	0.47	90~1350	175	450	350	4μF/450VAC
				60	0.50	90~1350	175	360	350	
5IK60RGN-AMF	5IK60RA-AMF	60	1ph110V	50	0.92	90~1350	175	350	350	15μF/250VAC
				60	0.93	90~1350	175	350	350	
5IK90RGU-CMF	5IK90RA-CMF	90	1ph220V	50	0.65	90~1350	240	675	480	5μF/450VAC
				60	0.78	90~1350	210	540	420	
5IK90RGU-AMF	5IK90RA-AMF	90	1ph110V	50	1.30	90~1350	240	675	480	20μF/250VAC
				60	1.40	90~1350	210	540	420	
5IK120RGU-CMF	5IK120RA-CMF	120	1ph220V	50	1.24	90~1350	320	900	620	6μF/450VAC
				60	1.12	90~1350	280	540	540	
5IK120RGU-AMF	5IK120RA-AMF	120	1ph110V	50	1.70	90~1350	320	620	620	25μF/250VAC
				60	1.82	90~1350	280	540	540	
6IK200RGU-CMF	6IK200RA-CMF	200	1ph220V	50	1.45	90~1350	500	1450	1000	10μF/450VAC
				60	1.50	90~1350	450	1200	900	
6IK200RGU-AMF	6IK200RA-AMF	200	1ph110V	50	2.90	90~1350	500	1450	1000	35μF/250VAC
				60	3.0	90~1350	450	1200	900	

●从调速电机转矩 / 转速曲线可知，虽然调速电机的调速范围为 :50Hz...90~1400 转分钟 ;60Hz…90-1600 转 / 分钟。但由于低速时 (≤400 转 / 分钟)，电机转矩下降较多，易发生过载，且电机直连风扇冷却效果差，易发热，因此必须预留足够的功率余量，并且不要经常工作在低速区。因此电机最佳调速范围为 :50Hz…400~1400 转 / 分钟 ;60Hz…400~1600 转 / 分钟。

●各种安全规格以电动机铭牌上的型号名取得认证。

●注 :-A"" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。

● It can be seen from the torque/speed curve of the speed-regulating motor, although the speed range of the speed-regulating motor is :50Hz... 90~1400 RPM; 60 hz... 90-1600 revolutions per minute. But due to the low speed (400 RPM) or less, when the motor torque drop more, prone to overload, and poor motor directly connected the fan cooling effect, easy to heat, so must set aside enough power margin, and don't often work in low speed zone. Therefore, the optimal speed range of the motor is :50Hz... 400~1400 revolutions per minute; 60 hz... 400~1600 RPM.

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name.

● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe.

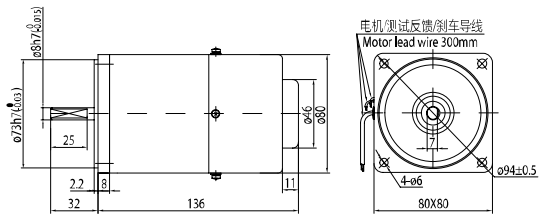
●减速箱减速比对照表 Gear reduction ratio comparison

减速比 Gear Ratio	3	3.6	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	200

●外形尺寸（单位mm）Dimension (unit mm)

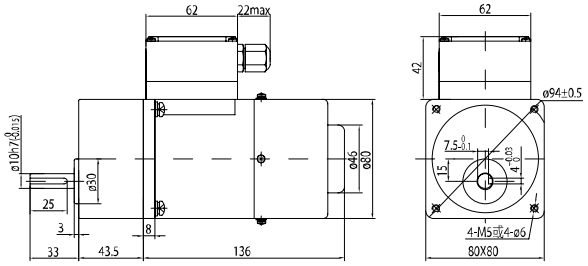
●**型号 Model:** 4IK25RA-CM, 4IK25RA-AM

重量 Weight: 2.25kg



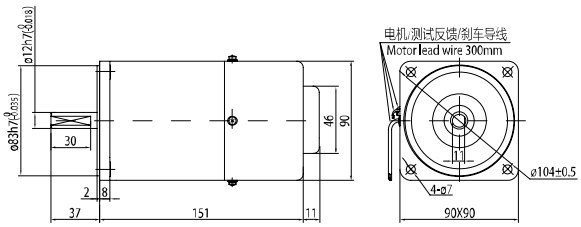
●**型号 Model:** 4IK25RGN-CM/4GN □ K, 4IK25RGN-AM/4GN □ K

重量 Weight: 3.20kg



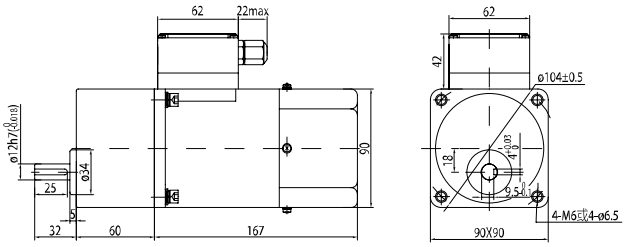
●**型号 Model:** 5IK40RA-CM, 5IK40RA-AM

重量 Weight: 3.20kg



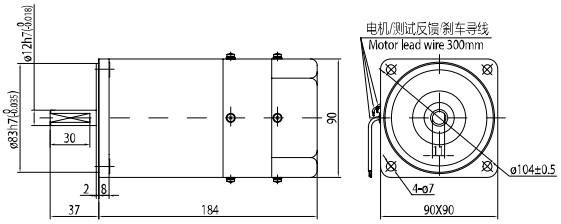
●**型号 Model:** 5IK40RGN-CM/5GN □ K, 5IK40RGN-AM /5GN □ K

重量 Weight: 4.70kg



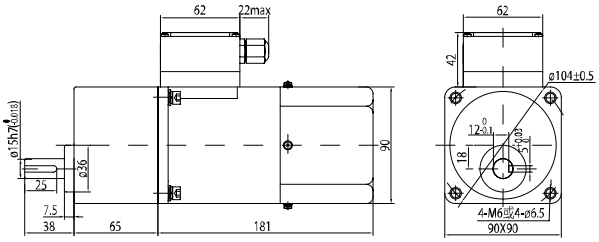
●**型号 Model:** 5IK60RA-CMF, 5IK60RA-AMF

重量 Weight: 3.65kg



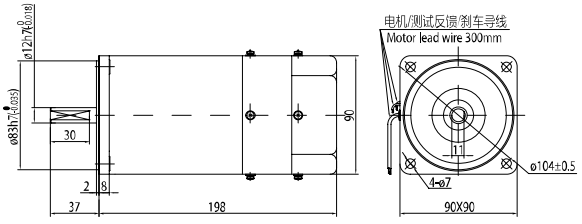
●**型号 Model:** 5IK60RGU-CMF/5GU □ KB, 5IK60RGU-AMF/5GU □ KB

重量 Weight: 5.15kg



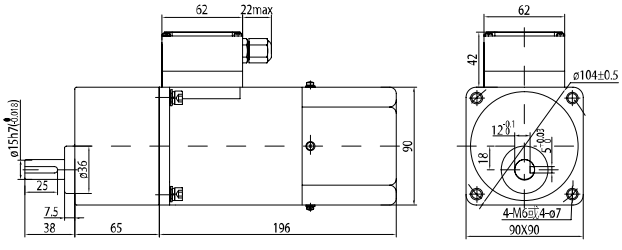
●**型号 Model:** 5IK90RA-CMF, 5IK90RA-AMF

重量 Weight: 4.40kg



●**型号 Model:** 5IK90RGU-CMF/5GU □ KB, 5IK90RGU-AMF/5GU □ KB

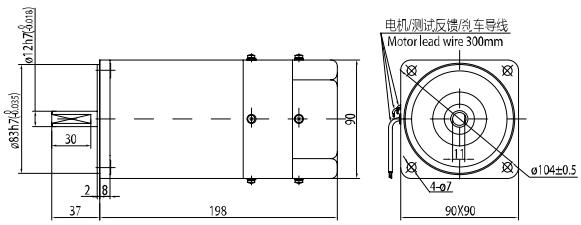
重量 Weight: 6.05kg



注：接线盒（可选），详见 P148。

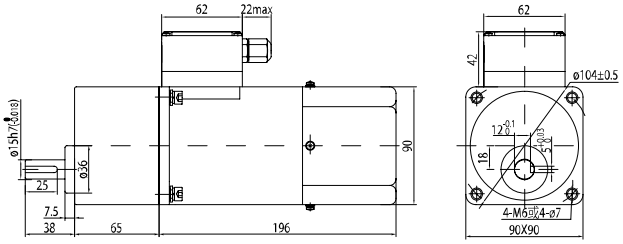
● **型号 Model:** 5IK120RA-CMF, 5IK120RA-AMF

重量 Weight: 4.40kg



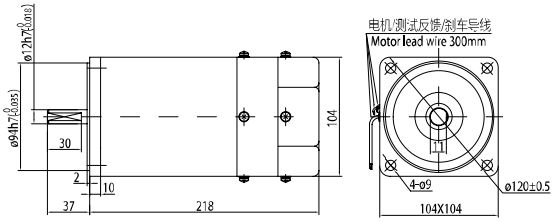
● **型号 Model:** 5IK120RGU-CMF/5GU □ KB, 5IK120RGU-AMF/5GU □ KB

重量 Weight: 6.05kg



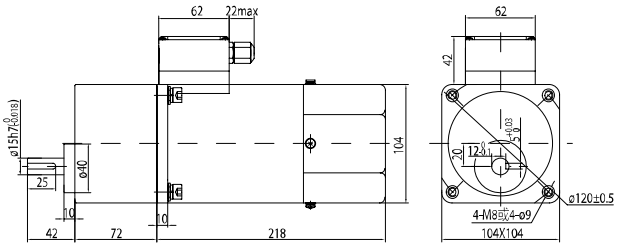
● **型号 Model:** 6IK200RA-CMF, 6IK200RA-AMF

重量 Weight: 6.00kg



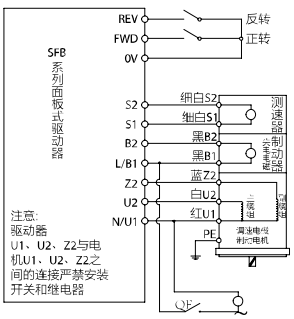
● **型号 Modell:** 6IK200RGU-CMF/6GU □ K, 6IK200RGU-AMF/6GU □ K

重量 Weight: 13.20kg



● **键**（减速器附件）

● 接线图Wiring Diagram



注：接线盒（可选），详见 P148。

单相调速器
SINGLE-PHASE GOVERNOR

●特点Characteristics

●采用数字微处理器控制技术，先进的的 PID 控制技术，功能丰富，性能优异；
●内置运行电容；
●可进行 PID 参数设定，满足不同场合电机平稳运行；
●可实现电机启动，停止加减速设定；
●带有堵转保护功能，防止电机；调速器因堵转烧毁；
（该功能只能保护堵转过载，不能保护非堵转过载）

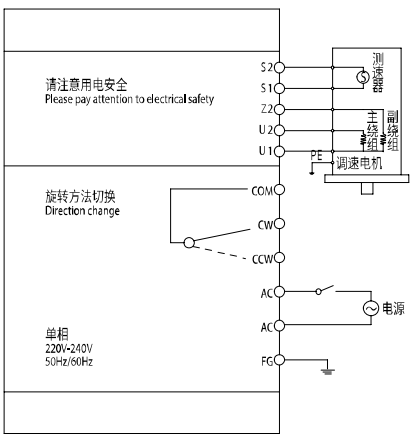
● Using digital microprocessor control technology, advanced PID control technology, rich in functions and excellent performance.
● Built-in operating capacitor.
● PID parameters can be set to meet the smooth running of motors in different occasions.
● The motor can be started and the acceleration/deceleration setting can be stopped.
● With blocking protection function to prevent the motor and governor from burning due to blockage.
(This function can only protect the stall overload, can not protect the non-blocking overload)

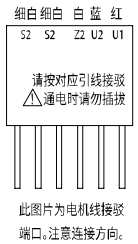
●型号类别Model category

FS □□ **C**
① ② ③

①	名称代号 Name code	FS（面板式）FS(panel type)
②	适用调速电机功率代号 Applicable speed motor Power code(W)	6W~250W
③	电压代号 Voltage code	C(单相 single phase220V) A(单相 single phase110V)

●产品接线图Product wiring diagram



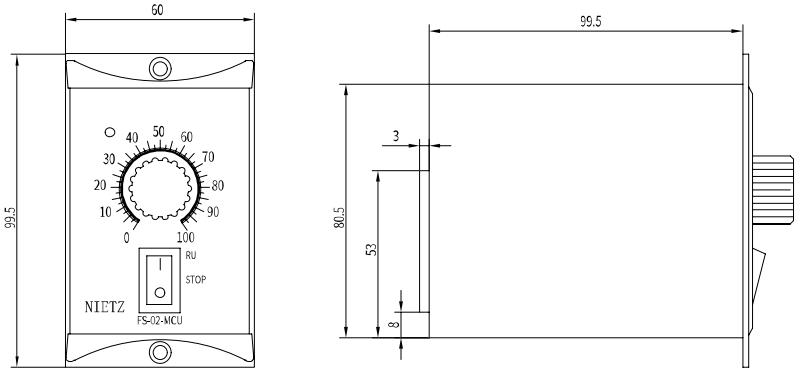


此图片为电机线接驳端口，注意连接方向。

1. AC 电源输入接口
2. COM 为公共接口
3. CW、CCW 为正向反向切换端口
4. FG 为地线接口
5. U1 为电机主线
6. U2、Z2 为启动电容接线（电机启动绕组）
7. S1、S2 为电机反馈信号输入端口

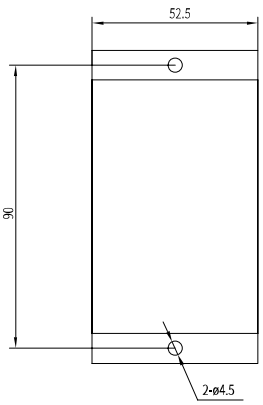
1. "AC" "AC" power input interface
2. "COM" is a public interface
3. "CW" and "CCW" are forward and reverse switching ports.
4. FG is the ground interface
5. "U1" is the main motor line
6. "U2" "Z2" is the starting capacitor wiring (motor starting winding)
7. "S1" "S2" is the motor feedback signal input port

●FS系列调速器安装图FS series governor installation diagram



1. 开关“I”关闭为“run”运行。
2. 开关“O”闭合为“STOP”停止。
3. 刻度盘 0-100 表示电机运行 120rpm-1350rpm
4. 指示灯为双色灯，红灯表示停止，绿灯表示运行。

1. Switch "I" is turned off to "run" operation.
2. The switch "O" is closed to "STOP" to stop.
3. the dial 0-100 indicates that the motor runs 120rpm-1350rpm
4. The indicator light is a two-color light, the red light means stop, and the green light means run.



●安全注意事项

Safety precautions

这里提示的注意事项，其目的是为了使您能安全，正确的使用本产品，并防患于未然，以免对您和他人造成危险和损伤．请您在对其内容充分理解以后再使用本产品。
在操作时违反本警告事项所示的内容要求，可能会导致人员的死亡或负重伤。在操作时违反注意事项所示的内容要求，可能会导致人员负伤或物品损坏。为了使您能正确使用产品，在正文的相关使用项目中请用户务必遵 守的事项。

The precautions here are intended to enable you to use this product safely and correctly, and to prevent it from causing danger and damage to you and others. Please use this product after you fully understand its contents. .
Violation of the content requirements shown in this warning during operation may result in death or serious injury. Failure to observe the contents of the precautions during operation may result in personal injury or damage to the item. In order for you to use it properly. The product, please be sure to observe the matter in the relevant use items of the text.

●警告warning

- 使用马达，速度控制器（调速器）时，请勿超过其规格值，否则有可能引起触电，致伤，或造成设备损坏；
- 请安装漏电保护器，否则有可能引起火灾；
- 出现异常时，请立即停止运转，切断速度控制器（调速器）电源，否则有可能引 起火灾，触电或致伤；
- 接通电源之前，请将速度控制器（调速器）面板电位器，旋转至最低值．否则马 达有可能启动，致伤或造成设备损坏。
- 请勿在爆炸性环境，可燃性气体环境，腐蚀性环境，容易沾水的场所以及可燃 物附近使用本产品；
- 安装，连接，运转操作，检查，故障诊断等作业时，请由具备适当资格的人来实 施，否则有可能引起火灾，触电或致伤；
- 请勿在通电状态下进行移动，安装，接线和检查作业．请切断电源后再进行作 业，否则有可能引起触电；
- 马达的过热保护装置（Thermal Protector）动作时，请切断电源，否则过热 保护装置自动恢复后马达会突然启动，有可能致伤或造成设备损坏。

- When using the motor and speed controller (speed governor), please do not exceed the specification value, otherwise it may cause electric shock, injury, or equipment damage.
- Please install the leakage protector, otherwise it may cause fire.
- When an abnormality occurs, stop the operation immediately and turn off the power of the speed controller (speed governor). Otherwise, it may cause fire, electric shock or injury.
- Before turning on the power, please rotate the speed controller (speed governor) panel potentiometer to the lowest value. Otherwise, the motor may start, cause injury or cause equipment damage.
- Do not use this product in an explosive environment, a flammable gas environment, a corrosive environment, a place that is prone to water, or a flammable material.
- Installation, connection, operation, inspection, troubleshooting, etc., should be carried out by suitably qualified persons, otherwise it may cause fire, electric shock or injury.
- Do not move, install, wire or check the power while it is powered on. Please turn off the power before proceeding, otherwise it may cause electric shock.
- When the motor's thermal protector (Thermal Protector) is activated, please turn off the power. Otherwise, the motor will suddenly start after the overheat protection device is automatically restored, which may cause injury or equipment damage.

●保养检查Maintenance check

在切断电源后的短时间内（10 秒钟内），请勿触摸数显调速器，电机接线端子，否则有可能因残留电压引起触电。
Do not touch the digital display governor or the motor terminal within a short time (within 10 seconds) after the power is turned off. Otherwise, electric shock may occur due to residual voltage.

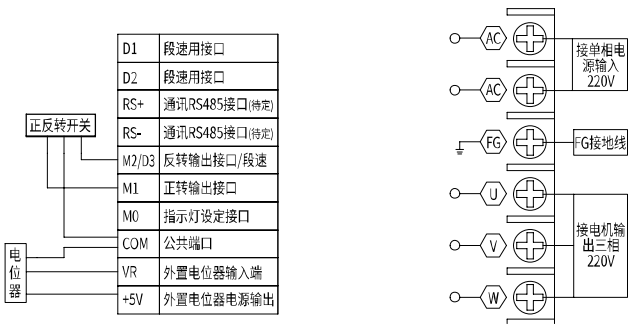
单相电源三相电机驱动器-T13
SINGLE PHASE POWER THREE PHASE MOTOR DRIVER-T13

●特点Characteristics

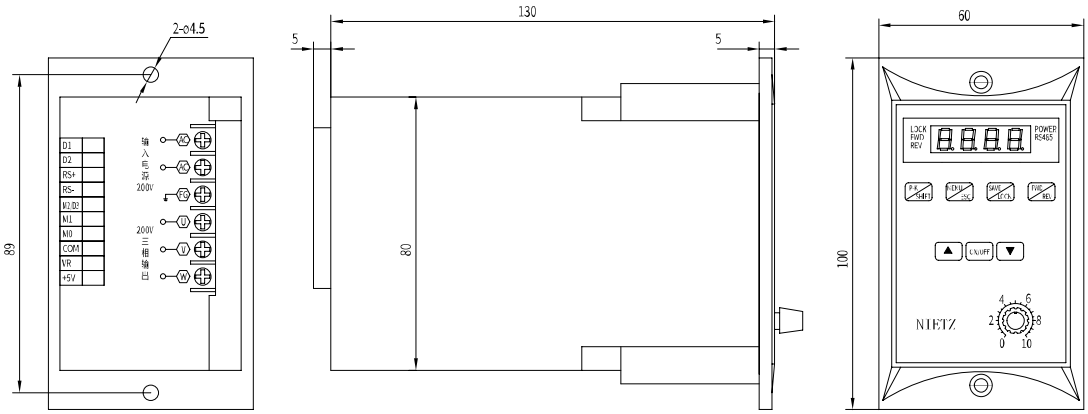
该变频器为单相 220V 电压输入，驱动三相电机（务必把接法转换成三角形）。频率输出 1.0-99.0Hz, 为了提高输出电压，本产 品使用的是 SVPWM 调制方式，载波频率 8.0KHz。适用于 750W 以下电机，最大输出功率为 1100W。该变频器可以通过设定 V/F 补偿频率，以及设定该频率下的电压比率，任意更改 V/F 曲线。通过设定 V/F 曲线的最高值，根据负载情况，最大化的提高电能的使用效率，降低电机的发热，延长电机及变频器的使用寿命。

The frequency converter is a single-phase 220V voltage input and drives a three-phase motor (be sure to convert the connection method to a triangle). The frequency output is 1.0-99.0Hz. In order to increase the output voltage, this product uses the SVPWM modulation method, and the carrier frequency is 8.0KHz. Suitable for motors below 750W, the maximum output power is 1100W. The inverter can arbitrarily change the V/F curve by setting the V/F compensation frequency and the voltage ratio at this frequency. By setting the maximum value of the V/F curve, according to the load, the efficiency of the electrical energy is maximized, the heat of the motor is reduced, and the service life of the motor and the inverter is extended.

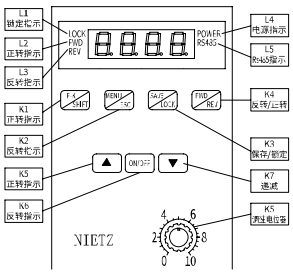
若您在接线或者使用时遇到问题,请联络经销商或本公司业务人员



●单相电源三相电机驱动器外形及安装图 Single phase power three phase motor driver Outline and installation drawing



显示界面说明 Display interface description



K1 查看 / 位移：功能数显示参数按键 (P-K/SHIFT)。P-K 按键可查询 IPM 模块温度、母线电流、 母线电压、电机运行速度、电机运行频率。SHIFT 键在设定时可以进行移位选择设定。

K2 菜单 / 退出 : 设定进入键 (MENUZ/ESC)， MENU 键为功能进入键， ESC 键为退出键。

K3 保存 / 锁定 : 保存 / 锁定按键 (SAVE/LOCK) SAVE: 保存，LOCK: 锁定。长按锁定或解锁 K2、K3、K4 键。运行 3 分钟界面无操作，自动锁定。

K4 反转 / 正转 : 正反转切换按键 (FWD/REV).

K5 递增 : 调速加按键 / 数据设定加 (↑)o

K6 启动 / 停止 : 启动 / 停止按键 / 数据设定确认键 (RUM/STOP/OK)。

K7 递减 : 调速减按键 / 数据设定减 (↓),

VR 面板调速电位器 : 当设定按键调速、Rs485 通讯操作时无效。

K1 view/displacement: function number display parameter button (P-K/SHIFT). The P-K button can query the IPM module temperature, busbar current, busbar voltage, motor operating speed, and motor operating frequency. SHIFT key can be used to set shift selection.

K2 menu/exit: set the enter key (MENUZ/ESC), MENU key is the function enter key, ESC key is the exit key.

K3 save/lock: save/lock button (SAVE/LOCK) SAVE: save, LOCK: lock. Long press to lock or unlock the K2, K3, K4 keys. The interface is locked after 3 minutes of without operation.

K4 reverse/forward: forward/reverse switching button (FWD/REV).

K5 increment: speed adjust plus button/data setting plus (↑)o

K6 start/stop: start/stop button/data setting confirmation button (RUM/STOP/OK).

K7 Decrease: Decrease speed control button/decrease data setting (↓),

VR panel speed adjustment potentiometer: when setting button speed adjustment and Rs485 communication operation invalid .

使用须知 usage notice

- 在变频器断电后，在主板上的红色充电指示灯未熄灭前，请勿触摸线路板。
- 不可在送电过程中实施配线，变频器处于运行状态时请勿检查线路板。
- 请勿自行拆装更改变频器内部连接线或线路，零件。
- 变频器接地端子请务必正确接地。200V 级第三种接地，400V 级特种接地。
- 此产品的销售须根据 EN61800-3 的规定，在家庭使用时，此产品可能会引起电磁干扰，在此情况下使用者可能必须采取适当的量测。
- 变频器安装于 600KW (含) 以上的大电力供应系统或电源侧加装了进相电容 器时，可能会引起一极大峰值的电流流经电源至输入端，导致其发生故障。 为预防此情况发生；建议于变频器电源输入端加装交流电抗器来抑制突波 电流保护变频器，如此也可改善电源供应端的功率因素。
- 请勿对变频器内部的组件进行耐压测试，半导体零件易受高电压击穿损坏。
- 绝不可将变频器输出端子 T1(U)，T2(V)，T3(W) 连接至 AC 电源。
- 变频器主电路板 CMOS 集成电路易受静电影响及破话，请勿接触主电路板。
- After the inverter is powered off, do not touch the circuit board until the red charging indicator on the main board does not go out.
- Do not implement wiring during power transmission. Do not check the circuit board while the inverter is in operation.
- Do not disassemble and modify the internal connecting wires, lines and parts of the inverter by yourself.
- Be sure to ground the terminal of inverter correctly. The third type of grounding is 200V, and the special grounding is 400V.
- The sale of this product must be in accordance with the provisions of EN61800-3. When used at home, this product may cause electromagnetic interference. In this case, the user may have to take appropriate measurements.
- When the inverter is installed in a large power supply system of more than 600KW (inclusive) or a phase advance capacitor is installed on the power supply side, it may cause a peak current to flow through the power supply to the input terminal, causing it to malfunction. In order to prevent this from happening, it is recommended to install an AC reactor at the input end of the inverter power supply to suppress the surge current and protect the inverter, which can also improve the power factor at the power supply end.
- Do not perform withstand voltage test on the components inside the inverter, semiconductor parts are easily damaged by high voltage breakdown.
- Never connect the inverter output terminals T1(U), T2(V), T3(W) to AC power.
- The CMOS integrated circuit of the inverter's main circuit board is easily affected by static electricity and broken words. Please do not touch the main circuit board.

SF系列面板式调速器
SF series panel drive

●特点Characteristics

●采用 MCU 数字控制技术，功能丰富，性能优异。
●采用数显菜单式选项，修改设定方便快捷。
●可根据用户显示需要设定显示倍率，自动换算显示目标值。
●可实现缓慢加速、缓慢减速。
●可面板操作、外接开关控制。
●面板旋钮自动匹配最高转速，调速控制方便、安全。
●内置运行电容。
●堵转保护功能，防止电机、调速器因堵转烧坏。
（此功能可保护堵转过载，但无法保护非堵转过载。）

● With MCU digital control technology, it has rich functions and excellent performance.
● Easy to change settings with digital menu options
● The display magnification can be set according to the user's requirement, and the display target value can be automatically converted.
● Slow acceleration and slow deceleration are possible.
● Panel operation, external switch control.
● The panel knob automatically matches the maximum speed, and the speed control is convenient and safe.
● Built-in capacitor.
● The stall protection function prevents the motor and drive from being burnt out due to blockage.
(This function protects against stalled overload but does not protect against non-blocking overload.)

●型号阵列表Model array table

类别 category	SF 系列面板式调速器 SF series panel drive		SK 系列内置式调速器 SK Series built-in drive	
电机功率 Power / 电源电压 voltage	220V	110V	220V	110V
6W	SF06E	SF06A	SK200E	SK200A
15W	SF15E	SF15A		
25W	SF25E	SF25A		
40W	SF40E	SF40A		
60W	SF60E	SF60A		
90W	SF90E	SF90A		
120W	SF120E	SF120A		
200W	SF200E	SF200A		

●型号命名方法Model naming method

●面板式 panel type

SF □□ **E** □
① ② ③ ④

①	名称代号 Name code	面板式调速 panel drive
②	适用调速电机功率代号 Applicable speed motorPower code	6W ～ 200W
③	电源电压 Voltage	E(单相 single phase 220V) A(单相 single phase110V)
④	派升代号 Promotion code	

●内置式 built-in

SK **200** **E** □
① ② ③ ④

①	名称代号 Name code	面板式调速 panel drive
②	适用调速电机功率代号 Applicable speed motorPower code	6W ～ 200W
③	电源电压 Voltage	E(单相 single phase 220V) A(单相 single phase110V)
④	派升代号 Promotion code	

●性能参数表Performance parameter table

型号 Model	SF □□ E	SF □□ A	SK200E	SK200A
安装方式 Install method	面板式 panel type		内置式 built-in	
电源电压 Voltage	单相 single phase 220V	单相 single phase 110V	单相 single phase 220V	单相 single phase 110V
电源频率 Power frequency	50/60HZ			
适用电机类型 Motor type	YT 系列调速电机 YT Series speed motor			
运行电容 Capacitor	内置式（内置于调速器内）built-in		外置（放置于调速电机包装内，需用户自行连接）External (placed in the speed motor package, users need to connect themselves)	
运动控制功能 Motion control function	面板或外接开关运转控制，调速，缓慢加速，缓慢减速 Panel or external switch operation control, speed control, Slow acceleration, slow deceleration		外接开关运转控制，调速，缓慢加速，缓慢减速，快速停止，4 段速 External switch operation control, speed control, Slow acceleration, slow deceleration, fast stop, 4 speed stage	
速度调节方式 Speed adjustment method	面板“▲”“▼”键；panel key 面板旋钮 panel knob		面板“▲”“▼”键；panel key 面板旋钮 panel knob；0 ~ 10V 模拟量 Analog quantity	
调速范围 Speed range	90-3000r/min。（用户可根据电机极数、电源频率、使用需要设定）Users can set according to the number of motor poles, power frequency, and usage requirements)			
适用环境 Applicable environment	环境温度 Ambient temperature：−10℃ ~ +45℃（无结冰 No icing） 环境湿度 Ambient humidity：85%以下（无结露）No condensation			

●SF系列面板式驱动器接线图SF series panel drive diagram

●操作面板按钮控制电机运转

1）无需安装 K1、K2 开关。

2）菜单设置：运转控制方式 F−03 选择 "1" 或 "4" 操作面板按钮控制。

调速电机的功率必须与调速器适用电机功率一致。

电源电压必须与调速器电源电压规格一致。OF 为断路器，在发生短路时保护调速器和调速电机。

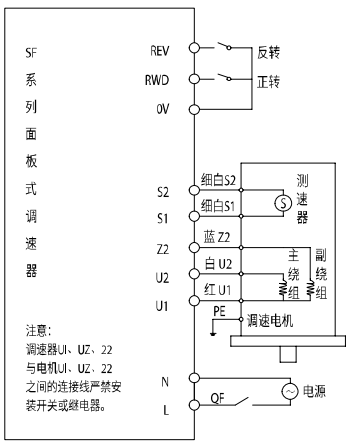
Operator panel buttons control motor operation

1）no need to install the K1 and K2 switches.

2）Menu Settings: Operation control mode F-03 select "1" or "4"operator panel button control.

The power of the adjustable speed motor must be the same as motor power of the drive.

The power supply voltage must match the drive supply voltage specifications. OF is a circuit breaker that protects the drive and the speed control motor in the event of a short circuit.



●外接开关 K1、K2 控制电机运转

1）必须安装 KI、KZ 开关。

2）菜单设置：运转控制方式 F−03 选择 "2" 或 "3" 外接开关控制。

请注意核对调速器型号标签功率是否与电机功率一致。

External switches K1, K2 control motor operation

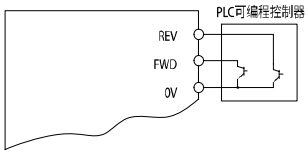
1）install the K1 and K2 switches

2）Menu Settings: Operation control mode F-03 select "2"Or "3" external switch control.

Please check that the drive model label power is consistent with the motor power.

● QF 断路器电流规格表 QF breaker current specification table:

电源电压 Voltage	电机功率 power	QF 电流规格 QF current specification
220V	6 ~ 90W	1A
220V	120 ~ 200W	2A
110V	6 ~ 90W	2A
110V	120 ~ 200W	4A



● FWO、REV 采用 pLC 可编程控制器控制

PLC 输出方式：NPN 或漏型晶体管输出。

FWO、REV with pLc Program with controller to control

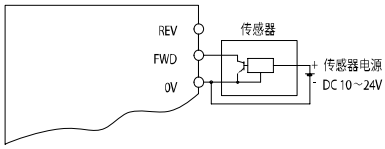
plc output method :NPN or Sink transistor output

●菜单设置

运转控制方式 F-03 选择 "2" 或 "3" 外接开关控制。

Menu Settings

Run control mode F3 select "2"or "3" external switch control.



● FWO、REV 采用接近开关、光电开关等传感器控制

开关输出方式：三线式 NPN 晶体管输出。

FWO, REV use proximity sensor, photoelectric switch and other sensor control.

Switch output mode:Three-wire NPN transistor output.

●菜单设置

运转控制方式 F-03 选择 "2" 或 "3" 外接开关控制。

Menu Settings

Run control mode F3 select "2"or "3" external switch control.

SF系列面板式调速器菜单 SF series panel governor menu

菜单修改 Menu modification

注意：为保证安全，F-05、F-29 参数修改必须在电机停止状态下进行，否则无法设置，屏幕显示 Err。

Note: In order to ensure safety, the parameters of F-05 and F-29 must be modified while the motor is stopped. Otherwise, it cannot be set. The screen displays Err.

任意 RANDOM → ▷电机停止状态 Motor stop state

C100 → ▷长按 MODE 3 秒屏幕显示 C100 Long press MODE3 seconds screen displayC100

C123 → ▷按△、▽输入密码 Press △，▽ to enter the password

F-01 → ▷按 ENTER 键进入，参数修改 Press ENTER to enter, Parameter modification

F-03 → ▷按△、▽选择参数码 Press △，▽ to select Parameter code

1 → ▷按 ENTER 键显示当前设定值 Press ENTER to display Current set value

2 → ▷△、▽修改设定值，按 ENTER 键确认 △、▽ Modify the set value, Press ENTER to confirm

END → ▷参数正确，短暂显示 End 后，进入下一参数码。若参数错误，显示 Err，重新输入 Correct parameters, short display. After End, enter the next parameter.

F-04 → ▷按△、▽输入密码，下一参数码 Press △，▽ to enter the password. Next parameter code

选择 →

1 → ▷按 ENTER 键显示当前设定值 Press ENTER to display Current set value

2 → ▷重复此前步骤设定参数 Repeat the previous steps Setting parameters

任意 RANDOM → ▷设定完成按 MODE 键退出 Setting completed Press the MODE button to exit

SF 系列面板式驱动器菜单清单 SF Series Panel Drive Menu List

参数码 Parameter code	参数功能 Parameter function	设定范围 setting area	功能说明 Function Description	出厂设定值 Factory setting	用户设定值 User setting
F-01	显示内容 Display content	1. 电机转速设定值 2. 倍率转速设定值 1. Motor speed setting 2. Rate of rotation setting	倍率转速设定值 = 电机转速设定值 + 倍率 Multiplying speed setting value = motor speed setting value + magnification	1	
F-02	倍率设定 Magnification setting	1.0 ～ 999.9	根据显示直观性需要设定，显示目值。 The target value is displayed according to the display intuitiveness setting.	1	
F-03	运转控制方式 Operation control method	1. 操作面板按钮控制、无记忆 2. 外接开关控制，面板 STOP 键无效 3. 外接开关控制，面板 STOP 键有效 4. 操作面板按钮控制、有记忆 1. Operation panel button control, no memory. 2. External switch control. Panel STOP button is invalid. 3. External switch control, panel STOP button is valid. 4. Operation panel button control, with memory.	选择 "1" 由面板按钮控制电机，关闭调速器电源后再次打开电源，调速器不记忆关电前的运转状态．重新上电电机为停止状态。 选择 "4" 调速器记忆关电前的运转状态，重新上电后电机为上次关电前的状态，例如：关电前电机正转，再次上电电机立即正转。选择此功能．请注意安全！ 选择外接开关控制时．由 FWD、REV 外接开关 KI、K2 控制电机。 Select "1" to control the motor by the panel button, turn off the power of the governor and turn it on again. The governor does not remember the operating state before the power is turned off. The power-on motor is stopped. Select the "4" governor to remember the operating state before the power is turned off. After the power is turned back on, the motor is in the state before the last power-off. For example, the motor rotates forward before the power is turned off, and the motor immediately turns forward again. Select this feature. Please be careful! When selecting an external switch control. By FWD, REV external switch. KI, K2 control the motor.	1	
F-04	旋转方式 Rotation mode	1. 允许正反转 2. 允许正转，禁止反转 3. 允许反转，禁止正转 1. Allow positive and negative reversal. 2. Allow forward rotation, prohibit reverse rotation. 3. Allow reverse, prohibit forward rotation.	限制电机旋转方向．防止设备故障或事故。 Limit the direction of motor rotation. Prevent equipment failure or accidents.	1	
F-05	旋转方向 rotation direction	1. 不取反；2. 取反 1,Don't reverse; 2. Invert	无需改变电机接线，轻而易举改变电机转向，使之与习惯成要求一致。 easy to change the motor steering without changing the motor wiring. Make it consistent with the customary requirements.	1	

参数码 Parameter code	参数功能 Parameter function	设定范围 setting area	功能说明 Function Description	出厂设定值 Factory setting	用户设定值 User setting
F-06	速度调整方式 Speed adjustment method	1. 面板▲▼按键 Panel ▲▼ button	按▼▲按钮在最低至最高转速范围内，调整电机转速面板旋钮自动匹配 0 ~ 最高转速。 Press the ▼ ▲ button to the lowest to maximum speed range. Adjust the motor speed panel knob to automatically match 0 to the maximum speed.	1	
F-07	最高转速 Maximum speed	500 ~ 3000	限制电机最高转速，可防止超速，发生损坏或事故。50Hz 电源最高转速 1400,60Hz 电源最高转速 1600。若最高转速超过以上值，电机将发热、振动。 Limit the maximum speed of the motor to prevent overspeed. Damage or accident has occurred. The maximum speed of the 50Hz power supply is 1400, and the maximum speed of the 60Hz power supply is 1600. If the maximum speed exceeds the above value. The motor will generate heat and vibration.	1400	
F-08	最低转速 Minimum speed	90-1000	限制电机最低转速，可防止电机由于运行于低速导致速度不稳定，过热、过载。 Limiting the minimum motor speed can prevent the motor from being unstable due to running at low speed and overheating. overload.	90	
F-09	正转启动加速时间 Forward rotation acceleration time	0.1 ~ 10.0 秒 seconds	时间长，电机起动平级，起动时间长；时间短，电机起动快猛，起动时间短。 Long time, motor starting level, long starting time.The time is short, the motor starts fast and the starting time is short.	1.0	
F-10	正转停止方式 Forward stop mode	1. 自由减速停止 2. 缓慢减速停止 1. Free deceleration stop 2. Slowly slow down and stop	当选择自由减速停止时，若电机停止较快，可选择级慢减速停止，改变 F-14 设定值，可改变缓慢减速停止的快慢。 When choosing free deceleration to stop. If the motor stops faster, you can select the stage slow deceleration stop and change the F-14 set value to change the speed of the slow deceleration stop.	1	
F-11	正转停止时缓慢减速时间 When the forward stop Slow deceleration time	0.1 ~ 10.0 秒 seconds	F-10 选择 2 时，菜单有效。 When F-10 selects 2, the menu is valid.	1	
F-12	反转启动加速时间 Reverse start acceleration time	0.1 ~ 10.0 秒 seconds	时间长，电机起动平级，起动时间长；时间短，电机起动快猛，起动时间短。 Long time, motor starting level, long starting time. The time is short, the motor starts fast and the starting time is short.	1	
F-13	反转停止方式 Reverse stop mode	1. 自由减速停止 2. 缓慢减速停止 1,Free deceleration stop 2. Slowly slow down and stop	当选择自由减速停止时，若电机停止较快，可选择级慢减速停止，改变 F-14 设定值，可改变缓慢减速停止的快慢。 When choosing free deceleration to stop. If the motor stops faster, you can select the stage slow deceleration stop and change the F-14 set value to change the speed of the slow deceleration stop.	1	
F-14	反转停止时缓慢减速时间 Reverse stop Slow deceleration time	0.1 ~ 10.0 秒 seconds	F-13 选择 2 时，菜单有效 When F-13 selects 2, the menu is valid.	1	
F-29	恢复出厂设定 Restore factory settings	1. 不恢复；2. 恢复出厂设置 1,Not recovering 2. Restore factory settings		1	
F-30	程序版本 Program Version	代码 + 版本 Code + version		0.1++	

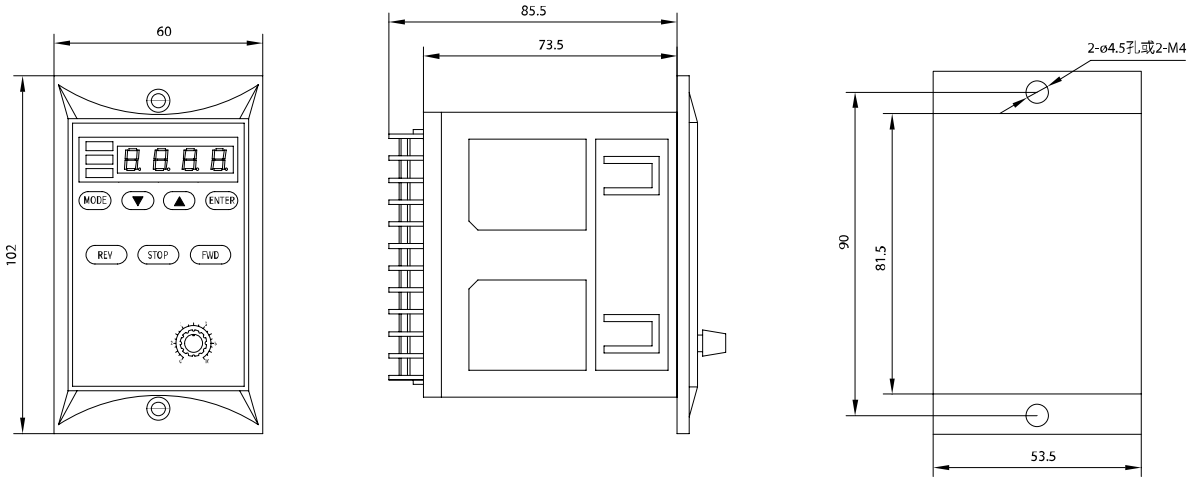
故障报警 Er-1：1) 过载堵转。
2) 调速器与电机或运行电容的连接异常。

故障处理方式：1) 检查、排除故障。
2) 重新上电解除报警。

Fault alarm Er-1: 1) Overload blocked.
2) The connection between the governor and the motor or running capacitor is abnormal.

Troubleshooting: 1) Check and troubleshoot.
2)Re-power on to cancel the alarm.

SF 系列面板式调速器外形及安装图 SF series panel governor shape and installation diagram



使用须知 Terms and Conditions

- 请勿在爆炸性环境、易姗性气体环境、腐蚀性环境以及容易沾上水的场所或可烘物周围使用。
- 邀免连续振动. 过度冲击。
- 电机在正常运转状态下，有时电机外壳表面的温度可能会超过 70℃，因此在可能触及电机的使用环境下请加贴右圈所示的普告标志。
- 请务必将接地端子接地。
- 安装、连接、检查等作业须由专业技术人员进行。

- Do not use in a fragile environment, an easy-to-existing gas environment, a corrosive environment, or a place where it is easy to get water or a bakeable object.
- Avoid continuous vibration. Excessive impact.
- When the motor is in normal operation, sometimes the temperature of the motor casing surface may exceed 70 ℃.
- Therefore, please put the general sign shown on the right circle in the environment where the motor may be touched.
- Be sure to ground the ground terminal.
- Installation, connection, inspection, etc. must be carried out by professional technicians.

SFB系列面板式驱动器
SFB series panel drive

●特点Characteristics

●采用 MCU 数字控制技术，功能丰富，性能优异。
●采用数显菜单式选项，修改设定方便快捷。
●可根据用户显示需要设定显示倍率，自动换算显示目标值。
●可实现缓慢加速、缓慢减速、失电电磁制动停止等复杂运动控制。
●可面板操作、外接开关控制。
●面板旋钮自动匹配最高转速，调速控制方便、安全。
●内置运行电容。
●堵转保护功能，防止电机、调速器因堵转烧坏。
（此功能可保护堵转过载，但无法保护非堵转过载）

● With MCU digital control technology, it has rich functions and excellent performance.
● Easy to change settings with digital menu options.
● The display magnification can be set according to the user's requirement, and the display target value can be automatically converted.
● Slow acceleration and slow deceleration are possible.
● Panel operation, external switch control.
● The panel knob automatically matches the maximum speed, and the speed control is convenient and safe.
● Built-in capacitor.
● The stall protection function prevents the motor and drive from being burnt out due to blockage. (This function protects against stalled overload but does not protect against non-blocking overload)

●型号阵列表Model array table

类别 category	SFB 系列面板式调速器 SF series panel drive		SKB 系列内置式调速器 SKB Series built-in drive	
电机功率 Power / 电源电压 voltage	220V	110V	220V	110V
15W	SFB15E	SFB15A	SKB200E	SKB200A
25W	SFB25E	SFB25A		
40W	SFB40E	SFB40A		
60W	SFB60E	SFB60A		
90W	SFB90E	SFB90A		
120W	SFB120E	SFB120A		
200W	SFB200E	SFB200A		

●型号命名方法Model naming method

●面板式 panel type

SFB □□ **E** □
① ② ③ ④

①	名称代号 Name code	面板式调速 panel drive
②	适用调速电机功率代号 Applicable speed motorPower code	6W ~ 200W
③	电源电压 Voltage	E(单相 single phase 220V) A(单相 single phase110V)
④	派升代号 Promotion code	

●内置式 built-in

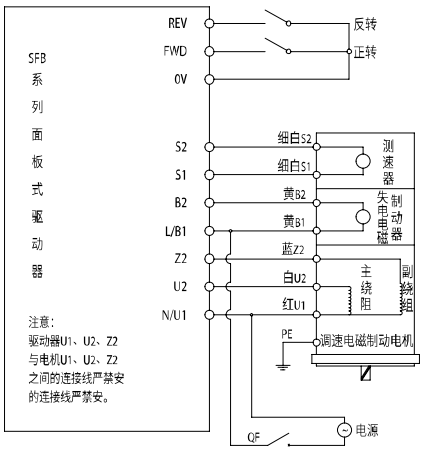
SKB **200** **E** □
① ② ③ ④

①	名称代号 Name code	面板式调速 panel drive
②	适用调速电机功率代号 Applicable speed motorPower code	6W ~ 200W
③	电源电压 Voltage	E(单相 single phase 220V) A(单相 single phase110V)
④	派升代号 Promotion code	

●性能参数表Performance parameter table

型号 Model	SFB □□ E	SFB □□ A	SKB200E	SKB200A
安装方式 Install method	面板式 panel type		内置式 built-in	
电源电压 Voltage	单相 single phase 220V	单相 single phase 110V	单相 single phase 220V	单相 single phase 110V
电源频率 Power frequency	50/60HZ			
适用电机类型 Motor type	调速电磁制动电机 Speed regulation electromagnetic brake motor			
运行电容 Capacitor	内置（内置于驱动器内）built-in		外置（放置于电机外包装内，需用户自行连接）External (placed in the speed motor package, users need to connect themselves)	
运动控制功能 Motion control function	面板或外接开关运转控制、调速、缓慢加速、缓慢减速、失电电磁制动停止。Panel or external switch operation control, speed regulation, slow accceleration, slow decceleration, power failure electromagnetic brake stop		外接开关运转控制、调速、缓慢加速、缓慢减速、4段速、失电电磁制动停止。External switch operation control, speed regulation, slow acceleration, slow deceleration, 4-speed, power-off electromagnetic brake stop	
速度调节方式 Speed adjustment method	面板“▲”“▼”键；panel key 面板旋钮 panel knob		面板“▲”“▼”键；panel key 面板旋钮 panel knob；0~10V 模拟量 Analog quantity	
调速范围 Speed range	90-3000r/min。（用户可根据电机极数、电源频率、使用需要设定）Users can set according to the number of motor poles, power frequency, and usage requirements)			
适用环境 Applicable environment	环境温度 Ambient temperature：−10℃ ~ +45℃（无结冰 No icing） 环境湿度 Ambient humidity：85%以下（无结露）No condensation			

●SFB系列面板式驱动器接线图SFB series panel drive diagram



●操作面板按钮控制电机运转

1）无需安装 K1、K2 开关。

2）菜单设置：运转控制方式 F−03 选择 "1" 或 "4" 操作面板按钮控制。

调速电机的功率必须与调速器适用电机功率一致。

电源电压必须与调速器电源电压规格一致。OF 为断路器，在发生短路时保护调速器和调速电机。

Operator panel buttons control motor operation

1）no need to install the K1 and K2 switches.

2）Menu Settings: Operation control mode F-03 select "1" or "4"operator panel button control.

The power of the adjustable speed motor must be the same as motor power of the drive.

The power supply voltage must match the drive supply voltage specifications. OF is a circuit breaker that protects the drive and the speed control motor in the event of a short circuit.

●外接开关 K1、K2 控制电机运转

1）必须安装 KI、KZ 开关。

2）菜单设置：运转控制方式 F−03 选择 "2" 或 "3" 外接开关控制。

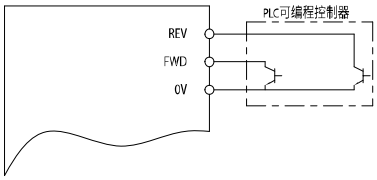
请注意核对调速器型号标签功率是否与电机功率一致。

External switches K1, K2 control motor operation

1）install the K1 and K2 switches

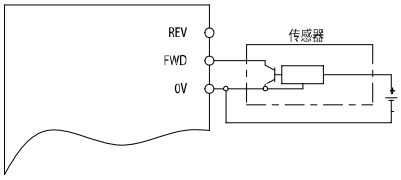
2）Menu Settings: Operation control mode F-03 select "2"Or "3" external switch control.

Please check that the drive model label power is consistent with the motor power.



● QF 断路器电流规格表 QF breaker current specification table:

电源电压 Voltage	电机功率 power	QF 电流规格 QF current specification
220V	6 ~ 90W	1A
220V	120 ~ 200W	2A
110V	6 ~ 90W	2A
110V	120 ~ 200W	4A



● FWO、REV 采用 pLC 可编程控制器控制

PLC 输出方式：NPN 或漏型晶体管输出。

FWO、REV with pLc Program with controller to control

plc output method :NPN or Sink transistor output

●菜单设置

运转控制方式 F-03 选择 "2" 或 "3" 外接开关控制。

Menu Settings

Run control mode F3 select "2"or "3" external switch control.

● FWO、REV 采用接近开关、光电开关等传感器控制

开关输出方式：三线式 NPN 晶体管输出。

FWO, REV use proximity sensor, photoelectric switch and other sensor control.

Switch output mode:Three-wire NPN transistor output.

●菜单设置

运转控制方式 F-03 选择 "2" 或 "3" 外接开关控制。

Menu Settings

Run control mode F3 select "2"or "3" external switch control.

SFB系列面板式调速器菜单 SFB series panel governor menu

菜单修改 Menu modification

注意：为保证安全，F-05、F-29 参数修改必须在电机停止状态下进行，否则无法设置，屏幕显示 Err。

Note: In order to ensure safety, the parameters of F-05 and F-29 must be modified while the motor is stopped. Otherwise, it cannot be set. The screen displays Err.

任意 RANDOM → C100 → C123 → F-01 → F-03 → 1

▷电机停止状态 Motor stop state

▷长按 MODE 3 秒屏幕显示 C100 Long press MODE3 seconds screen displayC100

▷按△、▽输入密码 Press △，▽ to enter the password

▷按 ENTER 键进入，参数修改 Press ENTER to enter, Parameter modification

▷按△、▽选择参数码 Press △，▽ to select Parameter code

▷按 ENTER 键显示当前设定值 Press ENTER to display Current set value

2 → END → F-04 → 选择 → 1 → 2 → 任意 RANDOM

▷△、▽修改设定值，按 ENTER 键确认 △、▽ Modify the set value, Press ENTER to confirm

▷参数正确，短暂显示 End 后，进入下一参数码。若参数错误，显示 Err，重新输入 Correct parameters, short display. After End, enter the next parameter.

▷按△、▽输入密码，下一参数码 Press △，▽ to enter the password. Next parameter code

▷按 ENTER 键显示当前设定值 Press ENTER to display Current set value

▷重复此前步骤设定参数 Repeat the previous steps Setting parameters

▷设定完成按 MODE 键退出 Setting completed Press the MODE button to exit

SFB 系列面板式驱动器菜单清单

参数码 Parameter code	参数功能 Parameter function	设定范围 setting area	功能说明 Function Description	出厂设定值 Factory setting	用户设定值 User setting
F-01	显示内容 Display content	1. 电机转速设定值 2. 倍率转速设定值 1. Motor speed setting 2. Rate of rotation setting	倍率转速设定值 = 电机转速设定值 + 倍率 Multiplying speed setting value = motor speed setting value + magnification	1	
F-02	倍率设定 Magnification setting	1.0 ~ 999.9	根据显示直观性需要设定，显示目值。 The target value is displayed according to the display intuitiveness setting.	1	
F-03	运转控制方式 Operation control method	1. 操作面板按钮控制、无记忆 2. 外接开关控制，面板 STOP 键无效 3. 外接开关控制，面板 STOP 键有效 4. 操作面板按钮控制、有记忆 1. Operation panel button control, no memory. 2. External switch control. Panel STOP button is invalid. 3. External switch control, panel STOP button is valid. 4. Operation panel button control, with memory.	选择 "1" 由面板按钮控制电机，关闭调速器电源后再次打开电源，调速器不记忆关电前的运转状态．重新上电电机为停止状态。 选择 "4" 调速器记忆关电前的运转状态，重新上电后电机为上次关电前的状态，例如：关电前电机正转，再次上电电机立即正转。选择此功能．请注意安全！ 选择外接开关控制时．由 FWD、REV 外接开关 KI、K2 控制电机。 Select "1" to control the motor by the panel button, turn off the power of the governor and turn it on again. The governor does not remember the operating state before the power is turned off. The power-on motor is stopped. Select the "4" governor to remember the operating state before the power is turned off. After the power is turned back on, the motor is in the state before the last power-off. For example, the motor rotates forward before the power is turned off, and the motor immediately turns forward again. Select this feature. Please be careful! When selecting an external switch control. By FWD, REV external switch. KI, K2 control the motor.	1	
F-04	旋转方式 Rotation mode	1. 允许正反转 2. 允许正转，禁止反转 3. 允许反转，禁止正转 1. Allow positive and negative reversal. 2. Allow forward rotation, prohibit reverse rotation. 3. Allow reverse, prohibit forward rotation.	限制电机旋转方向．防止设备故障或事故。 Limit the direction of motor rotation. Prevent equipment failure or accidents.	1	
F-05	旋转方向 rotation direction	1. 不取反；2. 取反 1,Don't reverse; 2. Invert	无需改变电机接线，轻而易举改变电机转向，使之与习惯成要求一致。 easy to change the motor steering without changing the motor wiring. Make it consistent with the customary requirements.	1	

参数码 Parameter code	参数功能 Parameter function	设定范围 setting area	功能说明 Function Description	出厂设定值 Factory setting	用户设定值 User setting
F-06	速度调整方式 Speed adjustment method	1. 面板▲▼按键 Panel ▲▼ button	按▼▲按钮在最低至最高转速范围内，调整电机转速面板旋钮自动匹配 0 ~ 最高转速。 Press the ▼ ▲ button to the lowest to maximum speed range. Adjust the motor speed panel knob to automatically match 0 to the maximum speed.	1	
F-07	最高转速 Maximum speed	500 ~ 3000	限制电机最高转速，可防止超速，发生损坏或事故。50Hz 电源最高转速 1400,60Hz 电源最高转速 1600。若最高转速超过以上值，电机将发热、振动。 Limit the maximum speed of the motor to prevent overspeed. Damage or accident has occurred. The maximum speed of the 50Hz power supply is 1400, and the maximum speed of the 60Hz power supply is 1600. If the maximum speed exceeds the above value. The motor will generate heat and vibration.	1400	
F-08	最低转速 Minimum speed	90-1000	限制电机最低转速，可防止电机由于运行于低速导致速度不稳定，过热、过载。 Limiting the minimum motor speed can prevent the motor from being unstable due to running at low speed and overheating. overload.	90	
F-09	正转起动是解除失电电磁制动器后电机延迟起动时间 Forward rotation start is the motor delay start time after the de-energized electromagnetic brake is released.	0.0 ~ 2.0 秒 seconds	若电机起动时速度过冲，可微调加大至 0.1 秒 If the speed is overshooted when the motor starts, the fine adjustment can be increased to 0.1 second.	0.0	
F-10	正转启动 加速时间 Forward rotation acceleration time	0.1 ~ 10.0 秒 seconds	时间长，电机起动平级，起动时间长. 时间短，电机起动快猛，起动时间短。 Long time, motor starting level, long starting time. The time is short, the motor starts fast and the starting time is short.	1.0	
F-11	正转停止方式 Forward stop mode	1. 自由减速停止 2. 缓慢减速停止 1. Free deceleration stop 2. Slowly slow down and stop	当选择失电电磁制动停止时，电机将迅速停止并制动。若选择自由减速停止时，电机停止太快，可选择缓慢减速停止 When the de-energized electromagnetic brake is selected to stop, the motor will quickly stop and brake. If you choose free deceleration stop, the motor stops too fast, you can choose slow deceleration stop	1	
F-12	正转停止时失电电磁制动器制动延时时间 De-powered electromagnetic braker delay time when forward rotation stops	0.1 ~ 10.0 秒 seconds	F-11 选择 1 时，菜单有效，电机停止时，在此设定时间内，先以自由减速方式减速后再制动。 When F-11 selects 3, the menu is valid., When the motor stops, within the setting time, be decelerated in free deceleration mode then brake .	0.0	
F-13	正转停止时 缓慢减速时间 When the forward stop Slow deceleration time	0.1 ~ 10.0 秒 seconds	F-11 选择 3 时，菜单有效。When F-11 selects 3, the menu is valid.	1.0	
F-14	正转起动时解除失电电磁制动器后电机延迟起动时间 Relieve de-powered electromagnetic braker delay time when forward rotation start	0.0 ~ 2.0 秒 seconds	若电机起动时速度过冲，可微调加大至 0.1 秒 If the speed is overshooted when the motor starts, the fine adjustment can be increased to 0.1 second.	0.0	
F-15	反转启动 加速时间 Reverse start acceleration time	0.1 ~ 10.0 秒 seconds	时间长，电机起动平级，起动时间长. 时间短，电机起动快猛，起动时间短。 Long time, motor starting level, long starting time. The time is short, the motor starts fast and the starting time is short. 。	1.0	
F-16	反转停止方式 Reverse stop mode	1. 失电电磁制动停止 2. 自由减速停止 3. 缓慢减速停止 1. Power failure electromagnetic brake stops 2. Free deceleration stop 3. Slowly slow down and stop	当选择失电电磁制动停止时，电机将迅速停止并制动。若选择自由减速停止时，电机停止太快，可选择缓慢减速停止 When the de-energized electromagnetic brake is selected to stop, the motor will quickly stop and brake. If you choose free deceleration stop, the motor stops too fast, you can choose slow deceleration stop	1	
F-17	反转停止时失电电磁制动器制动延时时间 De-energized electromagnetic brake brake delay time	0.0 ~ 5.0 秒 seconds	F-16 选择 1 时，菜单有效，电机停止时，在此设定时间内，先以自由减速方式减速后再制动。When F-16 is selected 1, the menu is valid. When the motor stops, during this set time, first decelerate in the free deceleration mode and then brake.	0.0	

参数码 Parameter code	参数功能 Parameter function	设定范围 setting area	功能说明 Function Description	出厂设定值 Factory setting	用户设定值 User setting
F-18	反转停止时缓慢减速时间 Slow deceleration time when reverse rotation stops	0.1 ~ 10.0 秒 seconds	F-16 选择 3 时，菜单有效。 When F-16 selects 3, the menu is valid.	1	
F-29	恢复出厂设定 Restore factory settings	1. 不恢复 2. 恢复出厂设置 1.Not recovering 2. Restore factory settings		1	
F-30	程序版本 Program Version	代码 + 版本 Code + version		0.3**	

故障报警 Er-1: 1) 过载堵转。

2) 调速器与电机或运行电容的连接异常。

故障处理方式 : 1) 检查、排除故障。

2) 重新上电解除报警。

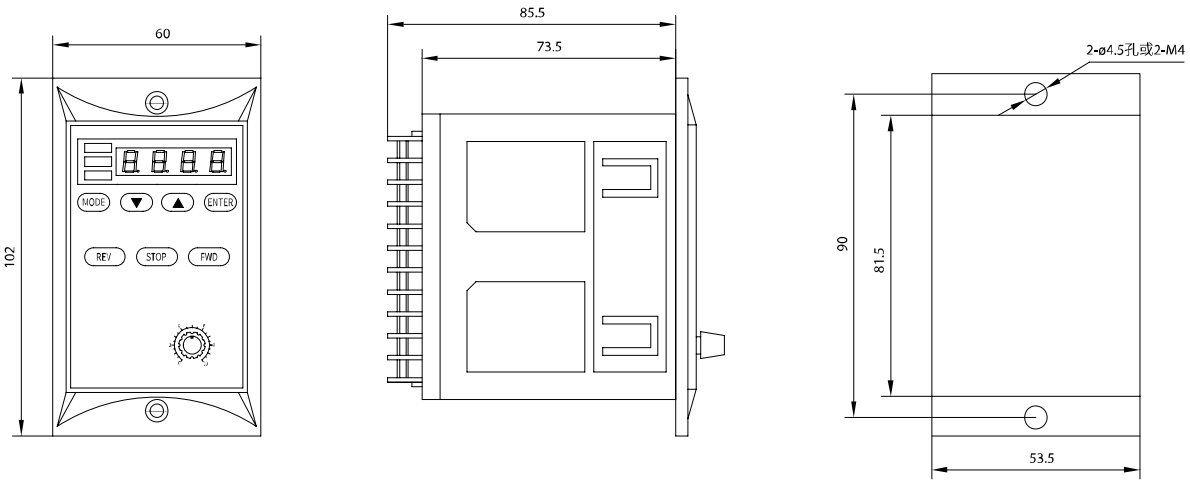
Fault alarm Er-1: 1) Overload blocked.

2) The connection between the governor and the motor or running capacitor is abnormal.

Troubleshooting: 1) Check and troubleshoot.

2)Re-power on to cancel the alarm.

●SFB系列面板式调速器外形及安装图SF series panel governor shape and installation diagram



使用须知

- 请勿在娜炸性环境、易姗性气体环境、腐蚀性环境以及容易沾上水的场所或可烘物周围使用。
- 邀免连续振动. 过度冲击。
- 电机在正常运转状态下，有时电机外壳表面的温度可能会超过 70℃，因此在可能触及电机的使用环境下请加贴右圈所示的普告标志。
- 请务必将接地端子接地。
- 安装、连接、检查等作业须由专业技术人员进行。

- Terms and Conditions
- Do not use in a fragile environment, an easy-to-existing gas environment, a corrosive environment, or a place where it is easy to get water or a bakeable object.
- Avoid continuous vibration. Excessive impact.
- When the motor is in normal operation, sometimes the temperature of the motor casing surface may exceed 70 ℃.
- Therefore, please put the general sign shown on the right circle in the environment where the motor may be touched.
- Be sure to ground the ground terminal.
- Installation, connection, inspection, etc. must be carried out by professional technicians.

SK系列内置式调速器
SK SERIES BUILT-IN SPEED CONTROLLER

●特点Characteristics

- 采用 MCU 数字控制技术，功能丰富，性能优异。
- 采用数显菜单式选项，修改设定方便快捷。
- 可根据用户显示需要设定显示倍率，自动换算显示目标值。
- 可实现缓慢加速、缓慢减速、快速停止、4 段速等复杂运动控制。
- 可外接开关控制、0~10V 模拟量控制。
- 模拟量控制可自动匹配最高转速，调节控制方便、安全。
- 堵转保护功能，防止电机、调速器因堵转烧坏。

（此功能可保护堵转过载，但无法保护非堵转过载）

- With MCU digital control technology, it has rich functions and excellent performance.
- Easy to change settings with digital menu options.
- The display magnification can be set according to the user's requirement, and the display target value can be automatically converted.
- Realize complex motion control such as slow acceleration, slow deceleration, fast stop, and 4-speed.
- External switch control, 0~10V analog control.
- The analog control can automatically match the maximum speed, and the control is convenient and safe.
- The stall protection function prevents the motor and drive from being burnt out due to blockage.

(This function protects against stalled overload but does not protect against non-blocking overload)

●型号阵列表Model array table

类别 category	SF 系列面板式调速器 SF series panel drive		SK 系列内置式调速器 SK Series built-in drive	
电源电压 voltage / 电机功率 Power	220V	110V	220V	110V
6W	SF06E	SF06A	SK200E	SK200A
15W	SF15E	SF15A		
25W	SF25E	SF25A		
40W	SF40E	SF40A		
60W	SF60E	SF60A		
90W	SF90E	SF90A		
120W	SF120E	SF120A		
200W	SF200E	SF200A		

●型号命名方法Model naming method

●面板式 panel type

SF □□ **E** □

① ② ③ ④

①	名称代号 Name code	面板式调速器 Panel drive
②	适用调速电机功率代号 Applicable speed motor Power code(W)	6W~200W
③	电压代号 Voltage code	E(单相 single phase220V) A(单相 single phase110V)
④	派升代号 Promotion code	

●内置式 built-in

SK **200** **E** □

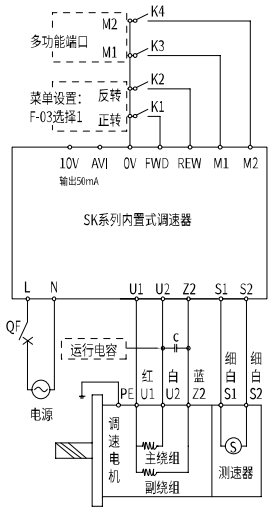
① ② ③ ④

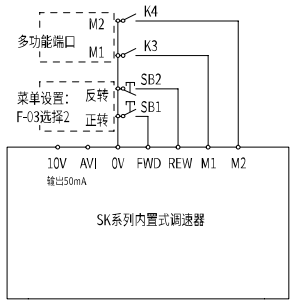
①	名称代号 Name code	面板式调速器 Panel drive
②	适用调速电机功率代号 Applicable speed motor Power code(W)	6W~200W
③	电压代号 Voltage code	E(单相 single phase220V) A(单相 single phase110V)
④	派升代号 Promotion code	

●性能参数表Performance parameter table

型号 Model	SF □□ E	SF □□ A	SK200E	SK200A
安装方式 Install method	面板式 panel type		内置式 built-in	
电源电压 Voltage	单相 single phase 220V	单相 single phase 110V	单相 single phase 220V	单相 single phase 110V
电源频率 Power frequency	50/60HZ			
适用电机类型 Motor type	YT 系列调速电机 YT Series speed motor			
运行电容 Capacitor	内置（内置于驱动器内）built-in		外置（放置于电机外包装内，需用户自行连接）External (placed in the speed motor package, users need to connect themselves)	
运动控制功能 Motion control function	面板或外接开关运转控制、调速、缓慢加速、缓慢减速 Panel or external switch operation control, speed control, Slow acceleration, slow deceleration		外接开关运转控制、调速、缓慢加速、缓慢减速、快速停止、4 段速 External switch operation control, speed control,Slow acceleration, slow deceleration, fast stop, 4 speed stage	
速度调节方式 Speed adjustment method	面板“▲”“▼”键；panel key 面板旋钮 panel knob		面板“▲”“▼”键；panel key 面板旋钮 panel knob；0~10V 模拟量 Analog quantity	
调速范围 Speed range	90-3000r/min。（用户可根据电机极数、电源频率、使用需要设定）Users can set according to the number of motor poles, power frequency, and usage requirements)			
适用环境 Applicable environment	环境温度 Ambient temperature：−10℃ ~ +45℃（无结冰 No icing） 环境湿度 Ambient humidity：85%以下（无结露）No condensation			

●SK系列面板式驱动器接线图SK series panel drive diagram





● QF 断路器电流规格表 QF breaker current specification table

电源电压 Voltage	电机功率 power	QF 电流规格 QF current specification
220V	6 ~ 90W	1A
220V	200W	2A
110V	6 ~ 90W	2A
110V	200W	4A

电源电压必须与调速器电源电压规格一致。QF 为断路器在发生短路时保护调速器和调速电机

The power voltage must match the speed controller's voltage specifications. QF is the circuit breaker which protect the speed controller and motor when a short circuit occurs.

●运行电容 C 规格表 Operating capacitor C specification sheet

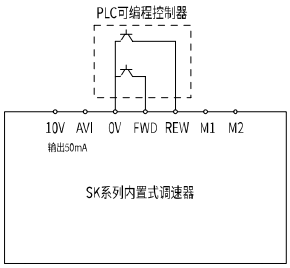
电源电压 Voltage / 电机功率 power	220V	110V
6W	0.7μF/500V	2.5μF/250V
15W	1μF/500V	4μF/250V
25W	1.5μF/500V	6μF/250V
40W	2.5μF/500V	10μF/250V
60W	3μF/500V	14μF/250V
90W	5μF/500V	20μF/250V
120W	6μF/500V	24μF/250V
200W	10μF/500V	40μF/250V

注：运行电容按电机型号配，放置于调速电机包装内。

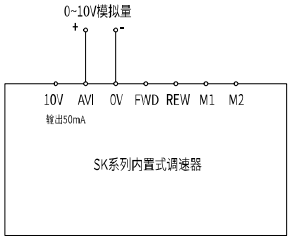
Note: The running capacitor is matched to the motor model and placed in the motor package.

● 10V 端口最大输出电流为 50mA. maximum output current is 50mA to 10V port

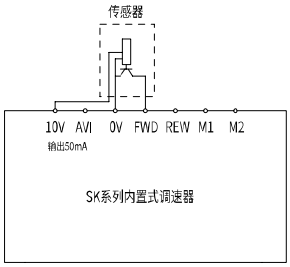
1）FWD、REV、M1、M2 控制端口采用 PLC 可编程控制器控制。
2）PLC 输出方式：NPN 或漏型晶体管输出。
1) FWD, REV, M1, M2 control ports are controlled by PLC programmable controller.
2) PLC output mode: NPN or sink transistor output.



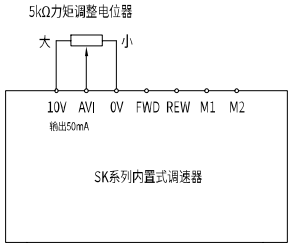
1）采用外部 0~10V 模拟量控制电机速度。
2）菜单设置：F-06 设定值 3，外部 0~10V 模拟量控制。
1) Control the motor speed with an external 0~10V analog quantity.
2) Menu setting: F-06 set value 3, external 0~10V analog quantity control.



1）FWD、REV、M1、M2 控制端口采用接近开关、光电开关等传感器控制。
2）开关输出方式：三线式 NPN 晶体管输出
1) FWD, REV, M1, M2 control ports are controlled by sensors such as proximity switches and photoelectric switches.
2) Switch output mode: 3-wire NPN transistor output



1）采用外部外接调速电位器控制电机速度。
2）菜单设置：F-06 设定值 3，外部 0~10V 模拟量控制。
1) Use external speed potentiometer to control motor speed.
2) Menu setting: F-06 set value 3, external 0~10V analog control.



●SK系列内置式调速器菜单 SK series built-in speed controller menu

●菜单修改 Menu modification

注意：为保证安全，F-03、F-05、F-29 参数修改必须在电机停止状态下进行，否则无法设置，屏幕显示 Err。
Note: In order to ensure safety, the parameters ofF-03, F-05, F-29 must be modified while the motor is stopped. Otherwise, it cannot be set. The screen displays Err.

任意 RANDOM →
▷电机停止状态
Motor stop state

C100 →
▷长按 MODE 3 秒屏幕显示 C100
Long press MODE3 seconds screen displayC100

C123 →
▷按△、▽输入密码
Press △，▽ to enter the password

F-01 →
▷按 ENTER 键进入，参数修改
Press ENTER to enter, Parameter modification

F-03 →
▷按△、▽选择参数码
Press △，▽ to select Parameter code

1 →
▷按 ENTER 键显示当前设定值
Press ENTER to display Current set value

2 →
▷△、▽修改设定值。按 ENTER 键确认
Modify the set value.
Press ENTER to confirm.

END →
▷参数正确，短暂显示 End 后，进入下一参数码。若参数错误，显示 Err，重新输入
Correct parameters, short display. After End, enter the next parameter.

F-04 选择 →
▷按△、▽输入密码，下一参数码
Press △，▽ to enter the password. Next parameter code

1 →
▷按 ENTER 键显示当前设定值
Press ENTER to display Current set value

2 →
▷重复此前步骤设定参数
Repeat the previous steps Setting parameters

任意 RANDOM
▷设定完成按 MODE 键退出
Setting completed Press the MODE button to exit

SFB 系列面板式驱动器菜单清单 SFB series built-in driver menu list

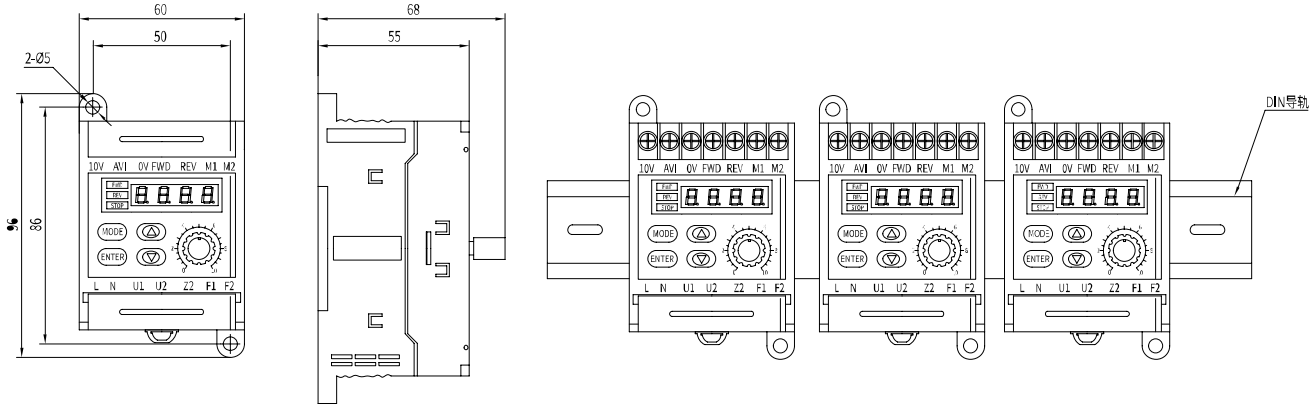
参数码 Parameter code	参数功能 Parameter function	设定范围 setting area	功能说明 Function Description	出厂设定值 Factory setting	用户设定值 User setting
F-01	显示内容 Display content	1. 电机转速设定值 2. 倍率转速设定值 1. Motor speed setting 2. Rate of rotation setting	倍率转速设定值 = 电机转速设定值 ÷ 倍率 Multiplying speed setting value = motor speed setting value ÷ magnification	1	
F-02	倍率设定 Magnification setting	1.0~999.9	根据显示直观性需要设定，显示目标值。 The target value is displayed according to the display intuitiveness setting.	1.0	
F-03	运转控制方式 Operation control method	1. 正转 / 反转 2. 正转 / 停止 1. Forward/reverse 2. Forward / stop	选择正转 / 反转，电机由 K1、K2 开关控制。 选择正转 / 停止，电机由 SB1、SB2 按钮控制。 Select forward/reverse, the motor is controlled by the K1 and K2 switches. Select forward/stop and the motor is controlled by the SB1 and SB2 buttons.	1	
F-04	旋转方式 Rotation mode	1. 允许正反转 2. 允许正转，禁止反转 3. 允许反转，禁止正转 1. Allow positive and negative reversal 2. Allow forward rotation, prohibit reverse rotation 3. Allow reverse, prohibit forward rotation	限制电机旋转方向，防止设备故障或事故。当 F-03 选择 2 时，F-04 自动选择 2 且无法修改，若需改变旋转方向可由 F-05 设定。 Limit the direction of motor rotation to prevent equipment failure or accidents. When F-03 selects 2, F-04 automatically selects 2 and cannot be modified. If you need to change the direction of motor rotation which can be set by F-05.	1	
F-05	旋转方向 Rotation direction	1. 不取反 2. 取反 1. Don't reverse 2. Invert	无需改变电机接线，轻而易举改变电机转向， 使之与习惯成要求一致。 Easy to change the motor steering without changing the motor wiring. Make it consistent with the customary requirements.	1	
F-06	主速调整方式 Main speed adjustment method	1. 面板▲▼按键 2. 面板旋钮 3. 外部 0~10V 模拟量 1.Panel ▲▼ button 2. Panel knob 3. External 0~10V analog	1. 当任意闭合多功能端子 M1、M2 时，电机运行为段速，主速调整无效。2. 面板旋钮、外部 0-10V 模拟量自动匹配 0~ 最高转速。3. 由于外接调速电位器连接于 0-10V 模拟量 AV 输入端故采用外接调速电位器调速时，主速调整方式 F06 应选择 3。 1. When the multi-function terminals M1 and M2 are closed arbitrarily, the motor runs at the segment speed and the main speed adjustment is invalid. 2. Panel knob, external 0-10V analog automatically matches 0~ maximum speed. 3. Since the external speed potentiometer is connected to the 0-10V analog AV input terminal, the main speed adjustment mode F06 should be selected 3 When using external speed potentiometer to adjust speed.	1	
F-07	最高转速 Maximum speed	500~3000	限制电机最高转速，可防止超速，发生损坏或事故。 Limit the maximum speed of the motor to prevent overspeed. Damage or accident has occurred.	1400	
F-08	最低转速 Minimum speed	90 1000 ~	限制电机最低转速，可防止电机由于运行于低速导致速度不稳定，过热，过载。 Limiting the minimum motor speed can prevent the motor from being unstable due to running at low speed and overheating. overload.	90	
F-09	正转启动 加速时间 Forward rotation acceleration time	0.1~10.0 秒 0.1~10.0 seconds	时间长，电机起动平级，起动时间长；时间短，电机起动快猛，起动时间短。 Long time, motor starting level, long starting time. The time is short, the motor starts fast and the starting time is short.	1.0	
F-10	正转停止方式 Forward stop mode	1. 自由减速停止 2. 快速停止 3. 缓慢减速停止 1. Free deceleration stop 2. Quick stop 3. Slowly deceleration stop	1. 若选择自由减速停止，电机停止较慢，可选择快速停止，改变 F-11 设定值，改变快速停止快慢。2. 若选择自由减速停止，电机停止较快，可选择缓慢减速停止，改变 F-12 设定值，改变缓慢减速停止的快慢 1. If you choose free deceleration stop, the motor stops slowly, you can choose to stop quickly, change the F-11 setting value, change the fast stop speed. 2. If you choose free deceleration stop, the motor stops faster, you can choose slow deceleration stop, change the F-12 set value, change the speed of slow deceleration stop.	1	
F-11	正转停止时 快速停止强度 When the forward stop Quick stop strength	1~10	F-10 选择 2 时，菜单有效，数值越大，停止越快。 When F-10 selects 2, the menu is valid. The larger the value, the faster the stop.	5	
F-12	正转停止时 缓慢减速时间 When the forward stop Slow deceleration time	0.1~10.0 秒 0.1~10.0 seconds	F-10 选择 3 时，菜单有效，数值越大，停止越慢	1.0	
F-13	反转启动 加速时间 Reverse start acceleration time	0.1~10.0 秒 0.1~10.0 seconds	时间长，电机起动平级，起动时间长。 时间短，电机起动快猛，起动时间短。 Long time, motor starting level, long starting time. The time is short, the motor starts fast and the starting time is short.	1.0	
F-14	反转停止方式 Reverse stop mode	1. 自由减速停止 2. 快速停止 3. 缓慢减速停止 1.Free deceleration stop 2. Quick stop 3. Slowly slow down and stop	1. 若选择自由减速停止，电机停止较慢，可选择快速停止，改变 F-15 设定值，改变快速停止快慢。2. 若选择自由减速停止，电机停止较快，可选择缓慢减速停止改变 F-16 设定值，改变缓慢减速停止的快慢。 1. If you choose free deceleration stop, the motor stops slowly, you can choose fast stop, change the F-15 setting value, change the fast stop speed. 2. If free deceleration stop is selected, the motor stops faster. You can select slow deceleration stop to change the F-16 set value and change the speed of slow deceleration stop.	1	

参数码 Parameter code	参数功能 Parameter function	设定范围 setting area	功能说明 Function Description	出厂设定值 Factory setting	用户设定值 User setting
F-15	反转停止时 快速停止强度 Reverse stop Quick stop strength	1~10	F-14 选择 2 时，菜单有效，数值越大，停止越快。 When F-14 selects 2, the menu is valid. The larger the value, the faster the stop.	5	
F-16	反转停止时 缓慢减速时间 Reverse stop Slow deceleration time	0.1 ~ 10.0 秒 seconds	F-14 选择 3 时，菜单有效，数值越大，停止越慢。 When F-14 selects 3, the menu is valid. The larger the value, the slower the stop.	1.0	
F-17	第一段速 First speed	最低转速 ~ 最高转速 Minimum speed ~ maximum speed	闭合 M1, 电机以第一段速运转。 Closing M1, the motor runs at the first speed.	500	
F-18	第二段速 Second speed	最低转速 ~ 最高转速 Minimum speed ~ maximum speed	闭合 M2, 电机以第二段速运转。 When M2 is closed, the motor runs at the second speed.	700	
F-19	第三段速 Third speed	最低转速 ~ 最高转速 Minimum speed ~ maximum speed	闭合 M1+M2, 电机以第三段速运转。 When M1+M2 is closed, the motor runs at the third speed.	900	
F-29	恢复出厂设定 Restore factory settings	1. 不恢复 2. 恢复出厂设置 1. Not recovering 2. Restore factory settings		1	
F-30	程序版本 Program Version	代码 + 版本 Code + version		02.**	

故障报警 Er-1: 1) 过载堵转。
2) 调速器与电机或运行电容的连接异常。
故障处理方式: 1) 检查、排除故障。
2) 重新上电解除报警。

Fault alarm Er-1: 1) Overload blocked.
2) The connection between the governor and the motor or running capacitor is abnormal.
Troubleshooting: 1) Check and troubleshoot.
2)Re-power on to cancel the alarm.

●SK系列内置式调速器外形及安装图 SK series panel governor shape and installation diagram



●使用须知 Terms and Conditions

- 请勿在爆炸性环境、易燃性气体环境、腐蚀性环境以及容易沾上水的场所或可烘物周围使用。
- 邀免连续振动，过度冲击。
- 电机在正常运转状态下，有时电机外壳表面的温度可能会超过 70℃。

因此在可能触及电机的使用环境下请加贴右圈所示的普告标志。

- 请务必将接地端子接地。
- 安装、连接、检查等作业须由专业技术人员进行。
- Do not use in a fragile environment, an easy-to-existing gas environment, a corrosive environment, or a place where it is easy to get water or a bakeable object.
- avoid continuous vibration. Excessive impact.
- When the motor is in normal operation, sometimes the temperature of the motor casing surface may exceed 70 ℃.

Therefore, please put the general sign shown on the right circle in the environment where the motor may be touched.

- Be sure to ground the ground terminal.
- Installation, connection, inspection, etc. must be carried out by professional technicians.

SKB系列内置式驱动器
SKB SERIES BUILT-IN DRIVER

●特点Characteristics

- 采用 MCU 数字控制技术，功能丰富，性能优异。
- 采用数显菜单式选项，修改设定方便快捷。
- 可根据用户显示需要设定显示倍率，自动换算显示目标值。
- 可实现缓慢加速、缓慢减速、4 段速、刹车制动停止等复杂运动控制。
- 可外接开关控制、0~10V 模拟量控制。
- 模拟量控制可自动匹配最高转速，调节控制方便、安全。
- 堵转保护功能，防止电机、调速器因堵转烧坏。

（此功能可保护堵转过载，但无法保护非堵转过载）

- With MCU digital control technology, it has rich functions and excellent performance.
- Easy to change settings with digital menu options
- The display magnification can be set according to the user's requirement, and the display target value can be automatically converted .
- Can realize complex motion control such as slow acceleration, slow deceleration, 4-speed, and brake stop.
- External switch control, 0~10V analog control.
- The analog control can automatically match the maximum speed, and the control is convenient and safe.
- The stall protection function prevents the motor and drive from being burnt out due to blockage.

(This function protects against stalled overload but does not protect against non-blocking overload)

●型号阵列表Model array table

类别 category	SF 系列面板式调速器 SF series panel drive		SK 系列内置式调速器 SK Series built-in drive	
电源电压 voltage / 电机功率 Power	220V	110V	220V	110V
15W	SFB15E	SFB15A	SKB200E	SKB200A
25W	SFB25E	SFB25A		
40W	SFB40E	SFB40A		
60W	SFB60E	SFB60A		
90W	SFB90E	SFB90A		
120W	SFB120E	SFB120A		
200W	SFB200E	SFB200A		

●型号命名方法Model naming method

●面板式 panel type

SFB **□□** **E** **□**

① ② ③ ④

①	名称代号 Name code	面板式调速器 Panel drive
②	适用调速电机功率代号 Applicable speed motor Power code(W)	15W~200W
③	电压代号 Voltage code	E(单相 single phase220V) A(单相 single phase110V)
④	派升代号 Promotion code	

●内置式 built-in

SKB **200** **E** **□**

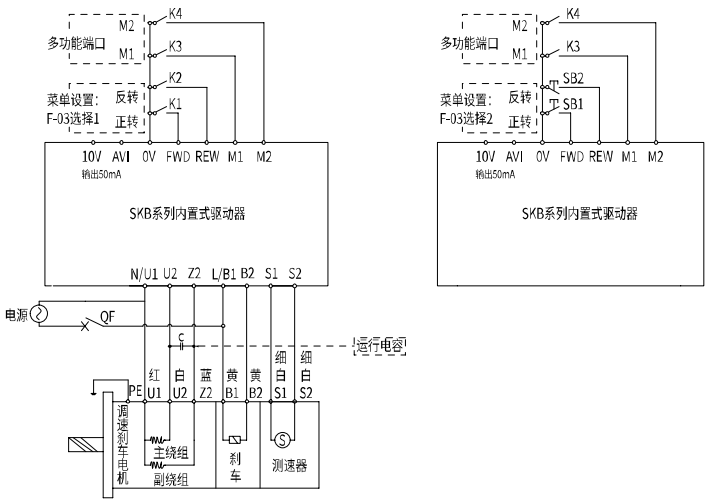
① ② ③ ④

①	名称代号 Name code	面板式调速器 Panel drive
②	适用调速电机功率代号 Applicable speed motor Power code(W)	15W~200W
③	电压代号 Voltage code	E(单相 single phase220V) A(单相 single phase110V)
④	派升代号 Promotion code	

●性能参数表Performance parameter table

型号 Model	SFB □□ E	SFB □□ A	SKB200E	SKB200A
安装方式 Install method	面板式 panel type		内置式 built-in	
电源电压 Voltage	单相 single phase 220V	单相 single phase 110V	单相 single phase 220V	单相 single phase 110V
电源频率 Power frequency	50/60HZ			
适用电机类型 Motor type	YF 系列调速电机 YF Series speed motor			
运行电容 Capacitor	内置（内置于驱动器内）built-in		外置（放置于电机外包装内，需用户自行连接）External (placed in the speed motor package, users need to connect themselves)	
运动控制功能 Motion control function	面板或外接开关运转控制，调速，缓慢加速，缓慢减速 Panel or external switch operation control, speed control, Slow acceleration, slow deceleration		外接开关运转控制，调速，缓慢加速，缓慢减速，快速停止，4 段速 External switch operation control, speed control, slow acceleration, slow deceleration, fast stop, 4 speed stage	
速度调节方式 Speed adjustment method	面板“▲”“▼”键；panel key 面板旋钮 panel knob		面板“▲”“▼”键；panel key 面板旋钮 panel knob；0~10V 模拟量 Analog quantity	
调速范围 Speed range	90-3000r/min。（用户可根据电机极数、电源频率、使用需要设定）Users can set according to the number of motor poles, power frequency, and usage requirements)			
适用环境 Applicable environment	环境温度 Ambient temperature：−10℃ ~ +45℃（无结冰 No icing） 环境湿度 Ambient humidity：85%以下（无结露）No condensation			

●SKB系列面板式驱动器接线图SKB series panel drive diagram



● QF 断路器电流规格表 QF breaker current specification table

电源电压 Voltage	电机功率 power	QF 电流规格 QF current specification
220V	15 ~ 90W	1A
220V	120 ~ 200W	2A
110V	15 ~ 90W	2A
110V	120 ~ 200W	4A

电源电压必须与调速器电源电压规格一致。QF 为断路器在发生短路时保护调速器和调速电机

The power voltage must match the speed controller's voltage specifications. QF is the circuit breaker which protect the speed controller and motor when a short circuit occurs.

●运行电容 C 规格表 Operating capacitor C specification sheet

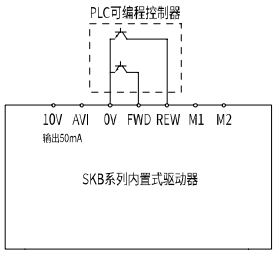
电源电压 Voltage / 电机功率 power	220V	110V
15W	1μF/500V	4μF/250V
25W	1.5μF/500V	6μF/250V
40W	2.5μF/500V	10μF/250V
60W	3.5μF/500V	14μF/250V
90W	5μF/500V	20μF/250V
120W	6μF/500V	24μF/250V
200W	10μF/500V	40μF/250V

注：运行电容按电机型号配，放置于调速电机包装内。

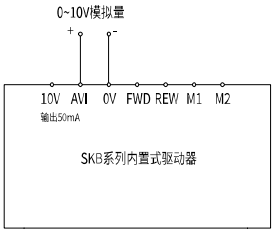
Note: The running capacitor is matched to the motor model and placed in the motor package.

● 10V 端口最大输出电流为 50mA. maximum output current is 50mA to 10V port

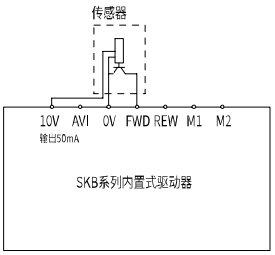
1）FWD、REV、M1、M2 控制端口采用 PLC 可编程控制器控制。
2）PLC 输出方式：NPN 或漏型晶体管输出。
1) FWD, REV, M1, M2 control ports are controlled by PLC programmable controller.
2) PLC output mode: NPN or sink transistor output.



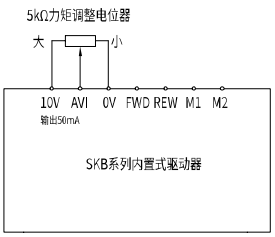
1）采用外部 0~10V 模拟量控制电机速度。
2）菜单设置：F-06 设定值 3，外部 0~10V 模拟量控制。
1) Control the motor speed with an external 0~10V analog quantity.
2) Menu setting: F-06 set value 3, external 0~10V analog quantity control.



1）FWD、REV、M1、M2 控制端口采用接近开关、光电开关等传感器控制。
2）开关输出方式：三线式 NPN 晶体管输出
1) FWD, REV, M1, M2 control ports are controlled by sensors such as proximity switches and photoelectric switches.
2) Switch output mode: 3-wire NPN transistor output



1）采用外部外接调速电位器控制电机速度。
2）菜单设置：F-06 设定值 3，外部 0~10V 模拟量控制。
1) Use external speed potentiometer to control motor speed.
2) Menu setting: F-06 set value 3, external 0~10V analog control.



●SKB系列内置式调速器菜单 SKB series built-in speed controller menu

●菜单修改 Menu modification

注意：为保证安全，F-03、F-05、F-29 参数修改必须在电机停止状态下进行，否则无法设置，屏幕显示 Err。
Note: In order to ensure safety, the parameters ofF-03, F-05, F-29 must be modified while the motor is stopped. Otherwise, it cannot be set. The screen displays Err.

任意 RANDOM →
▷电机停止状态
Motor stop state

C100 →
▷长按 MODE 3 秒屏幕显示 C100
Long press MODE3 seconds screen displayC100

C123 →
▷按△、▽输入密码 123
Press △，▽ to enter the password

F-01 →
▷按 ENTER 键进入，参数修改
Press ENTER to enter, Parameter modification

F-03 →
▷按△、▽选择参数码
Press △，▽ to select Parameter code

1 →
▷按 ENTER 键显示当前设定值
Press ENTER to display Current set value

2 →
▷△、▽修改设定值。按 ENTER 键确认
Modify the set value.
Press ENTER to confirm.

END →
▷参数正确，短暂显示 End 后，进入下一参数码。若参数错误，显示 Err，重新输入
Correct parameters, short display. After End, enter the next parameter.

F-04 选择 →
▷按△、▽输入密码，下一参数码
Press △，▽ to enter the password. Next parameter code

1 →
▷按 ENTER 键显示当前设定值
Press ENTER to display Current set value

2 →
▷重复此前步骤设定参数
Repeat the previous steps Setting parameters

任意 RANDOM
▷设定完成按 MODE 键退出
Setting completed Press the MODE button to exit

SKB 系列面板式驱动器菜单清单 SKB series built-in driver menu list

参数码 Parameter code	参数功能 Parameter function	设定范围 setting area	功能说明 Function Description	出厂设定值 Factory setting	用户设定值 User setting
F-01	显示内容 Display content	1. 电机转速设定值 2. 倍率转速设定值 1. Motor speed setting 2. Rate of rotation setting	倍率转速设定值 = 电机转速设定值 ÷ 倍率 Multiplying speed setting value = motor speed setting value ÷ magnification	1	
F-02	倍率设定 Magnification setting	1.0 ~ 999.9	根据显示直观性需要设定，显示目标值。 The target value is displayed according to the display intuitiveness setting.	1	
F-03	运转控制方式 Operation control method	1. 正转 / 反转 2. 正转 / 停止 1. Forward/reverse 2. Forward / stop	选择正转 / 反转，电机由 K1、K2 开关控制。 选择正转 / 停止，电机由 SB1、SB2 按钮控制。 Select forward/reverse, the motor is controlled by the K1 and K2 switches. Select forward/stop and the motor is controlled by the SB1 and SB2 buttons.	1	
F-04	旋转方式 Rotation mode	1. 允许正反转 2. 允许正转，禁止反转 3. 允许反转，禁止正转 1. Allow positive and negative reversal 2. Allow forward rotation, prohibit reverse rotation 3. Allow reverse, prohibit forward rotation	限制电机旋转方向，防止设备故障或事故。当 F-03 选择 2 时，F-04 自动选择 2 且无法修改，若需改变旋转方向可由 F-05 设定。 Limit the direction of motor rotation to prevent equipment failure or accidents. When F-03 selects 2, F-04 automatically selects 2 and cannot be modified. If you need to change the direction of motor rotation which can be set by F-05.	1	
F-05	旋转方向 Rotation direction	1. 不取反 2. 取反 1.Don't reverse 2. Invert	无需改变电机接线，轻而易举改变电机转向， 使之与习惯成要求一致。 Easy to change the motor steering without changing the motor wiring. Make it consistent with the customary requirements.	1	
F-06	主速调整方式 Main speed adjustment method	1. 面板▲▼按键 2. 面板旋钮 3. 外部 0~10V 模拟量 1.Panel ▲▼ button 2. Panel knob 3. External 0~10V analog	1. 当任意闭合多功能端子 M1、M2 时，电机运行为段速，主速调整无效。2. 面板旋钮、外部 0-10V 模拟量自动匹配 0~ 最高转速。3. 由于外接调速电位器连接于 0-10V 模拟量 AVI 输入端，故采用外接调速电位器调速时，主速调整方式 F06 应选择 3。 1. When the multi-function terminals M1 and M2 are closed arbitrarily, the motor runs at the segment speed and the main speed adjustment is invalid. 2. Panel knob, external 0-10V analog automatically matches 0~ maximum speed. 3. Since the external speed potentiometer is connected to the 0-10V analog AV input terminal, the main speed adjustment mode F06 should be selected 3 When using external speed potentiometer to adjust speed.	1	
F-07	最高转速 Maximum speed	500 ~ 3000	限制电机最高转速，可防止超速，发生损坏或事故。 Limit the maximum speed of the motor to prevent overspeed. Damage or accident has occurred.	1400	
F-08	最低转速 Minimum speed	90 ~ 1000	限制电机最低转速，可防止电机由于运行于低速导致速度不稳定，过热，过载。 Limiting the minimum motor speed can prevent the motor from being unstable due to running at low speed and overheating. overload.	120	
F-09	停止方式控制 Stop mode control	1. 由 F-12、F-17 菜单控制 2. 由 M2 多功能端子控制 1. Controlled by F-12, F-17 menu 2. Controlled by M2 multi-function terminal	F-09 选择 2 时，刹车制动，由 M2 多功能端子控制，菜单 F-12、F-13、F-17、F-18 无效，M2 多功能端子多段速功能无效。电机停止时，若 M2 不闭合，则电机以自由减速方式停止。When F-09 selects 2, the brake is controlled by M2 multi-function terminal, menus F-12, F-13, F-17, F-18 are invalid, and M2 multi-function terminal multi-speed function is invalid. When the motor stops, if M2 does not close, the motor will stop in free deceleration mode.	1	
F-10	正转起动时解除失电电磁制动器后电机延迟起动时间 Forward rotation start is the motor delay start time after the de-energized electromagnetic brake is released.	0.0~2.0 秒 0.0~2.0 seconds	一般该值取 0，仅特殊应用需让电机延后起动才要改变设定值 Generally, the value is 0. Only the special application needs to delay the start of the motor to change the set value.to change the F-16 set value and change the speed of slow deceleration stop.	0.0	
F-11	正转启动 加速时间 Forward rotation acceleration time	0.1~10.0 秒 0.1~10.0 seconds	时间长，电机起动平级，起动时间长。 时间短，电机起动快猛，起动时间短。 Long time, motor starting level, long starting time. The time is short, the motor starts fast and the starting time is short.	1.0	
F-12	正转停止方式 Forward stop mode	1. 刹车制动停止 2. 自由减速停止 3. 缓慢减速停止 1. Brake brake stop 2. Free deceleration stop 3. Slowly slow down and stop	当选择失电电磁制动停止时，电机将迅速停止并制动。若选择自由减速停止时，电机停止太快，可选择缓慢减速停止 When the de-energized electromagnetic brake is selected to stop, the motor will quickly stop and brake. If you choose free deceleration stop, the motor stops too fast, you can choose slow deceleration stop	1	
F-13	正转停止时失电电磁制动器制动延时时间 De-powered electromagnetic braker delay time when forward rotation stops	0.0~5.0 秒 0.0~5.0 seconds	F-12 选择 1 时，菜单有效，电机停止时在此设定时间内，先以自由减速方式减速有再制动。 When F-12 is selected 1, the menu is valid. When the motor stops, within this set time, first decelerate in the free deceleration mode and then brake again.	0.0	

参数码 Parameter code	参数功能 Parameter function	设定范围 setting area	功能说明 Function Description	出厂设定值 Factory setting	用户设定值 User setting
F-14	正转停止时 缓慢减速时间 When the forward stop Slow deceleration time	0.1~10.0 秒 0.1~10.0 seconds	F-12 选择 3 时，菜单有效，数值越大，停止越慢。 When F-12 selects 3, the menu is valid. The larger the value, the slower the stop.	1.0	
F15	反转起动时解除失电电磁制动器后电机延迟起动时间 Delayed start time of the motor after the de-energized electromagnetic brake is released during reverse start	0.0~2.0 秒 0.0~2.0 seconds	一般该值取 0，仅特殊应用需让电机延后起动才要改变设定值 Generally, the value is 0. Only the special application needs to delay the start of the motor to change the set value.	0.0	
F16	反转起动加速时间 Reverse start acceleration time	0.1~10.0 秒 0.1~10.0 seconds	时间长，电机起动平级，起动时间长。 时间短，电机起动快猛，起动时间短。 Long time, motor starting level, long starting time. The time is short, the motor starts fast and the starting time is short.	1.0	
F17	反转停止方式 Reverse stop mode	1. 刹车制动停止 2. 自由减速停止 3. 缓慢减速停止 1. Brake brake stop 2. Free deceleration stop 3. Slowly slow down and stop	当选择失电电磁制动停止时，电机将迅速停止并制动。若选择自由减速停止时，电机停止太快，可选择缓慢减速停止 When the de-energized electromagnetic brake is selected to stop, the motor will quickly stop and brake. If you choose free deceleration stop, the motor stops too fast, you can choose slow deceleration stop	1	
F18	反转停止时失电电磁制动器制动延时时间 power failure electromagnetic brake delay time when reverse rotation	0.1~10.0 秒 0.1~10.0 seconds	F-17 选择 1 时，菜单有效，电机停止时，在此设定时间内，先以自由减速方式减速后再制动。 When F-17 is selected 1, the menu is valid. When the motor stops, during this set time, first decelerate in the free deceleration mode and then brake.	0.0	
F-19	反转停止时 缓慢减速时间 Reverse stop Slow deceleration time	0.1~10.0 秒 0.1~10.0 seconds	F-17 选择 3 时，菜单有效，数值越大，停止越慢。 When F-14 selects 3, the menu is valid. The larger the value, the slower the stop.	1.0	
F-20	第一段速 First speed	最低转速 ~ 最高转速 Minimum speed ~ maximum speed	闭合 M1, 电机以第一段速运转。 Closing M1, the motor runs at the first speed.	500	
F-21	第二段速 Second speed	最低转速 ~ 最高转速 Minimum speed ~ maximum speed	闭合 M2, 电机以第二段速运转，与 F-09 设置有关。 Closing M2, the motor runs at the second speed, which is related to the F-09 setting.	700	
F-22	第三段速 Third speed	最低转速 ~ 最高转速 Minimum speed ~ maximum speed	闭合 M1+M2, 电机以第三段速运转，与 F-09 设置有关。 Close M1+M2, the motor runs at the third speed, which is related to the F-09 setting.	900	
F-29	恢复出厂设定 Restore factory settings	1. 不恢复 2. 恢复出厂设置 1. Not recovering 2. Restore factory settings		1	
F-30	程序版本 Program Version	代码 + 版本 Code + version		04.**	

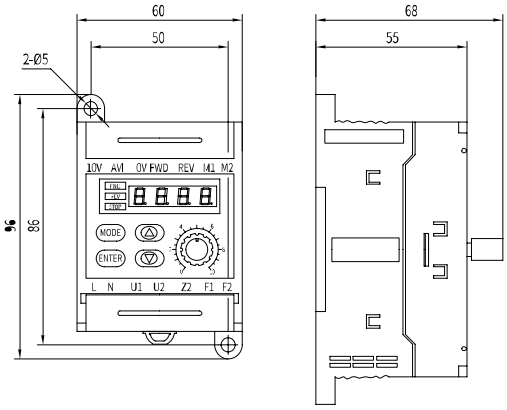
故障报警 Er-1: 1) 过载堵转。
2) 调速器与电机或运行电容的连接异常。

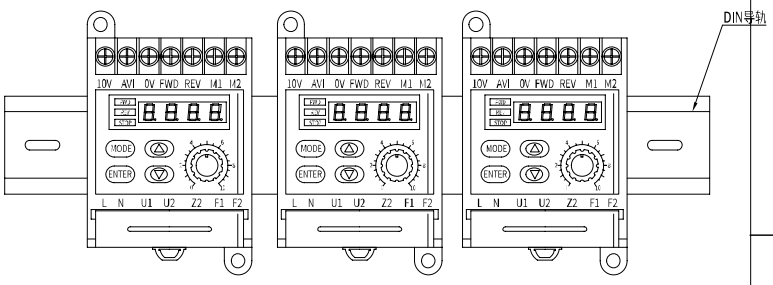
故障处理方式 : 1) 检查、排除故障。
2) 重新上电解除报警。

Fault alarm Er-1: 1) Overload blocked.
2) The connection between the governor and the motor or running capacitor is abnormal.

Troubleshooting: 1) Check and troubleshoot.
2)Re-power on to cancel the alarm.

SK系列内置式调速器外形及安装图 SK series panel governor shape and installation diagram





使用须知 Terms and Conditions

- 请勿在爆炸性环境、易燃性气体环境、腐蚀性环境以及容易沾上水的场所或可烘物周围使用。
- 邀免连续振动. 过度冲击。
- 电机在正常运转状态下，有时电机外壳表面的温度可能会超过 70℃。

因此在可能触及电机的使用环境下请加贴右圈所示的普告标志。

- 请务必将接地端子接地。
- 安装、连接、检查等作业须由专业技术人员进行。
- Do not use in a fragile environment, an easy-to-existing gas environment, a corrosive environment, or a place where it is easy to get water or a bakeable object.
- avoid continuous vibration. Excessive impact.
- When the motor is in normal operation, sometimes the temperature of the motor casing surface may exceed 70 °C.

Therefore, please put the general sign shown on the right circle in the environment where the motor may be touched.

- Be sure to ground the ground terminal.
- Installation, connection, inspection, etc. must be carried out by professional technicians.

TF系列面板式力矩交流驱动器
TF SERIES PANEL TYPE TORQUE AC DRIVER

●特点Characteristics

- 采用 MCU 数字控制技术，功能丰富，性能优异。
- 采用数显菜单式选项，修改设定方便快捷。
- 可实现缓慢加大力矩、缓慢减小力矩。
- 可面板操作、外接开关控制。
- 面板旋钮自动匹配最大力矩，调节控制方便、安全。
- 附电机散热风扇电源接口，方便接线。

- With MCU digital control technology, it has rich functions and excellent performance.
- Easy to change settings with digital menu options
- slowly increase the torque and slowly reduce the torque.
- Panel operation, external switch control.
- The panel knob automatically matches the maximum torque, and the adjustment is convenient and safe.
- With power connector to motor cooling fan for easy wiring.

●型号阵列表Model array table

类别 category	TF 系列面板式调速器 TF series panel drive		TK 系列内置式调速器 TK Series built-in drive	
电源电压 voltage / 电机功率 Power	220V	110V	220V	110V
6~40W	TF100E	TF100A	TK100E	TK100A

●型号命名方法Model naming method

●面板式 panel type

TF	100	E	□
①	②	③	④

①	名称代号 Name code	TF(面板式) TF (panel type) TK(内置式)TK (built-in)
②	适用调速电机功率代号 Applicable speed motor Power code(W)	6W~40W
③	电压代号 Voltage code	E(单相 single phase220V) A(单相 single phase110V)
④	派升代号 Promotion code	

●性能参数表Performance parameter table

型号 Model	TF100E	TF100A	TK100E	TK100A
安装方式 Install method	面板式 panel type		内置式 built-in	
电源电压 Voltage	单相 single phase 220V	单相 single phase 110V	单相 single phase 220V	单相 single phase 110V
电源频率 Power frequency	50/60HZ			
适用电机类型 Motor type	力矩电机 Torque motor			
运行电容 Capacitor	外置（放置于调速电机包装内，需用户自行连接） External (placed in the speed motor package, users need to connect themselves)			
运动控制功能 Motion control function	面板或外接开关运转控制，调速，缓慢加速，缓慢减速 Panel or external switch operation control, speed control, Slow acceleration, slow deceleration		外接开关运转控制，调速，缓慢加速，缓慢减速，快速停止，4 段速 External switch operation control, speed control, slow acceleration, slow deceleration, fast stop, 4 speed stage	
力矩调节方式 Torque adjustment method	面板“▲”“▼”键；panel key 面板旋钮 panel knob		面板“▲”“▼”键；panel key 面板旋钮 panel knob； 0~10V 模拟量 Analog quantity	
力矩调整范围 Torque adjustment range	0~100%			
适用环境 Applicable environment	环境温度 Ambient temperature：−10℃ ~ +45℃（无结冰 No icing） 环境湿度 Ambient humidity：85%以下（无结露）No condensation			

●TF系列面板式力矩交流驱动器接线图TF series panel type torque AC driver wiring diagram

●操作面板按钮控制电机运转

1）无需安装 K1、K2 开关。

2）菜单设置：

运转控制方式 F — 01 选择 "1" 或 "4" 操作面板按钮控制。

Operator panel buttons control motor operation

1）no need to install the K1 and K2 switches.

2）Menu Settings:

Operation control mode F-01 select "1" Or "4" operator panel button control.

●外接开关 K1、K2 控制电机运转

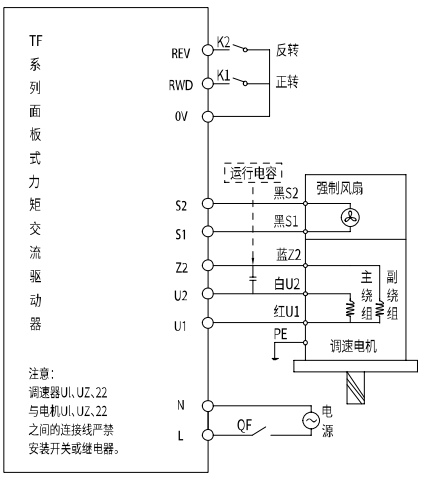
1）必须安装 KI、KZ 开关。

2）菜单设置：运转控制方式 F−03 选择 "2" 或 "3" 外接开关控制。

External switches K1, K2 control motor operation

1）install the K1 and K2 switches

2）Menu Settings: Operation control mode F-03 select "2"Or "3" external switch control.



●运行电容 C 规格表 Operating capacitor C specification sheet

电源电压 Voltage / 电机功率 power	220V	110V
6W	2.5μF/500V	10μF/250V
10W	3μF/500V	12μF/250V
20W	4μF/500V	16μF/250V
40W	8μF/500V	32μF/250V

注：运行电容按电机型号配，放置于调速电机包装内。

Note: The running capacitor is matched to the motor model and placed in the motor package.

● QF 断路器电流规格表 QF breaker current specification table:

电源电压 Voltage	电机功率 power	QF 电流规格 QF current specification
220V	6 ~ 40W	1A
110V	6 ~ 40W	2A

电源电压必须与调速器电源电压规格一致。QF 为断路器在发生短路时保护调速器和调速电机

The power voltage must match the speed controller's voltage specifications. QF is the circuit breaker which protect the speed controller and motor when a short circuit occurs.

●力矩电机内装自动复位型热保护器，若电机运转过热，热保护器将切断电机电源，电机将停止运转：当电机温度下降后，热保护器将自动复位供电，电机重新运转。故在进行检查操作时，请勿必事先切断电源，防止发生事故。

●自动复位型热保护器，动作温度 :120℃ ±5℃，复位温度 :82℃ ±5℃ 。

● The torque motor is equipped with an automatic reset type thermal protector. If the motor runs overheated, the thermal protector will cut off the motor power supply and the motor will stop running: When the motor temperature drops, the thermal protector will automatically reset the power supply and the motor will run again. Therefore, when performing inspection operations, do not cut off the power supply beforehand to prevent accidents.

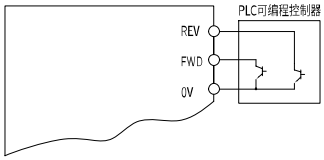
● Automatic reset type thermal protector, operating temperature: 120 ℃ ± 5 ℃, reset temperature: 82 ℃ ± 5 ℃.

● **FWO、REV 采用 pLC 可编程控制器控制**

PLC 输出方式：NPN 或漏型晶体管输出。

FWO、REV with pLc Program with controller to control

plc output method :NPN or Sink transistor output



●菜单设置

运转控制方式 F-01 选择 "2" 或 "3" 外接开关控制。

Menu Settings

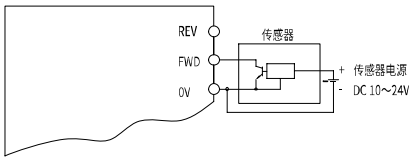
Run control mode F1 select "2"or "3" external switch control.

● **FWO、REV 采用接近开关、光电开关等传感器控制**

开关输出方式：三线式 NPN 晶体管输出。

FWO, REV use proximity sensor, photoelectric switch and other sensor control.

Switch output mode:Three-wire NPN transistor output.



●菜单设置

运转控制方式 F-01 选择 "2" 或 "3" 外接开关控制。

Menu Settings

Run control mode F1 select "2"or "3" external switch control.

●TF系列内置式调速器菜单 TF Series Panel Type Torque AC Driver Menu

●菜单修改 Menu modification

注意：为保证安全，F-03、F-29 参数修改必须在电机停止状态下进行，否则无法设置，屏幕显示 Err。

Note: In order to ensure safety, the parameters ofF-03, F-29 must be modified while the motor is stopped. Otherwise, it cannot be set. The screen displays Err.

任意 RANDOM →
▷电机停止状态
Motor stop state

C100 →
▷长按 MODE 3 秒屏幕显示 C100
Long press MODE3 seconds screen displayC100

C123 →
▷按△、▽输入密码 123
Press △，▽ to enter the password

F-01 →
▷按 ENTER 键进入，参数修改
Press ENTER to enter, Parameter modification

F-03 →
▷按△、▽选择参数码
Press △，▽ to select Parameter code

1
▷按 ENTER 键显示当前设定值
Press ENTER to display Current set value

2 →
▷△、▽修改设定值。按 ENTER 键确认
Modify the set value.
Press ENTER to confirm.

END →
▷参数正确，短暂显示 End 后，进入下一参数码。若参数错误，显示 Err，重新输入
Correct parameters, short display. After End, enter the next parameter.

F-04 选择 →
▷按△、▽输入密码，下一参数码
Press △，▽ to enter the password. Next parameter code

1 →
▷按 ENTER 键显示当前设定值
Press ENTER to display Current set value

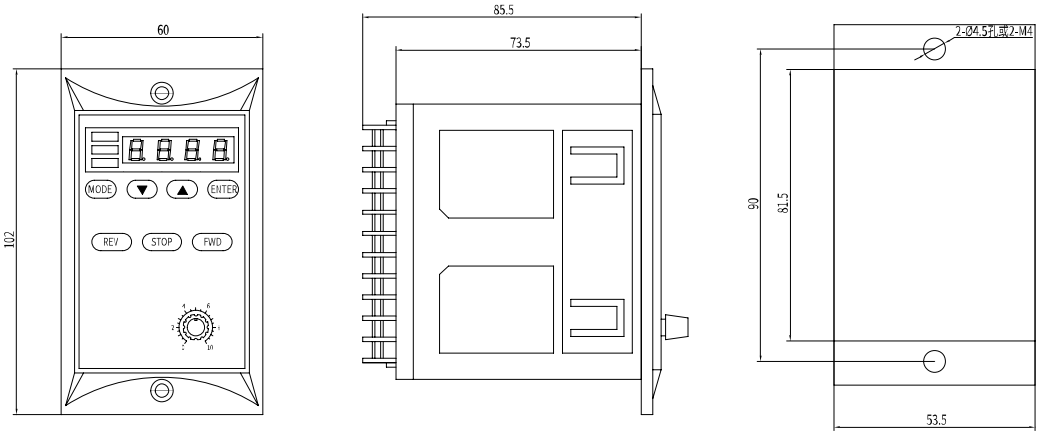
2 →
▷重复此前步骤设定参数
Repeat the previous steps Setting parameters

任意 RANDOM
▷设定完成按 MODE 键退出
Setting completed Press the MODE button to exit

SKB 系列面板式驱动器菜单清单 SKB series built-in driver menu list

参数码 Parameter code	参数功能 Parameter function	设定范围 setting area	功能说明 Function Description	出厂设定值 Factory setting	用户设定值 User setting
F-01	运转控制方式 Operation control method	1. 操作面板按钮控制、无记忆 2. 外接开关控制，面板 STOP 键无效 3. 外接开关控制，面板 STOP 键有效 4. 操作面板按钮控制、有记忆 1. Operation panel button control, no memory 2. External switch control. Panel STOP button is invalid 3. External switch control, panel STOP button is valid 4. Operation panel button control, with memory	选择 "1" 由面板按钮控制电机，关闭调速器电源后再次打开电源，调速器不记忆关电前的运转状态．重新上电电机为停止状态。 选择 "4" 调速器记忆关电前的运转状态，重新上电后电机为上次关电前的状态，例如：关电前电机正转，再次上电电机立即正转。选择此功能．请注意安全！ 选择外接开关控制时．由 FWD、REV 外接开关 KI、K2 控制电机。 Select "1" to control the motor by the panel button, turn off the power of the governor and turn it on again. The governor does not remember the operating state before the power is turned off. The power-on motor is stopped. Select the "4" governor to remember the operating state before the power is turned off. After the power is turned back on, the motor is in the state before the last power-off. For example, the motor rotates forward before the power is turned off, and the motor immediately turns forward again. Select this feature. Please be careful! When selecting an external switch control. By FWD, REV external switch KI, K2 control the motor.	1	
F-02	旋转方式 Rotation mode	1. 允许正反转 2. 允许正转，禁止反转 3. 允许反转，禁止正转 1. Allow positive and negative reversal 2. Allow forward rotation, prohibit reverse rotation 3. Allow reverse, prohibit forward rotation	限制电机旋转方向．防止设备故障或事故。 Limit the direction of motor rotation. Prevent equipment failure or accidents.	1	
F-03	旋转方向 Rotation direction	1. 不取反 2. 取反 1. Don't reverse 2. Invert	无需改变电机接线，轻而易举改变电机转向，使之与习惯成要求一致。 Easy to change the motor steering without changing the motor wiring. Make it consistent with the customary requirements.	1	
F-04	力矩调整方式 Torque adjustment method	面板▲▼按键 Panel ▲▼ button	按▼▲按钮在 0 至最大力矩范围内．调整电机力矩，面板旋钮自动匹配 0 ～最大力矩， Press the ▼▲ button to range from 0 to the maximum torque. Adjust the motor torque, the panel knob automatically matches 0 to the maximum torque.	1	
F-05	最大力矩 Maximum torque	50%~100%	限制电机最大力矩，可防止力矩过大，损坏产品或设备。 Limit the maximum torque of the motor to prevent excessive torque and damage to the product or equipment.	80	
F-06	正转启动时力矩增大至最大值时间 Time when torque increases to maximum during forward rotation	0.1 ～ 10.0 秒 0.1 ～ 10.0 seconds	时间长，电机起动平级，起动时间长。 时间短，电机起动快猛，起动时间短。 Long time, motor starting level, long starting time. Short time, the motor starts fast and short starting time.	1.0	
F-07	正转停止时力矩减小至 0 时间 Time when torque is reduced to 0 as forward rotation stops	0.1 ～ 10.0 秒 0.1 ～ 10.0 seconds	时间长，电机起动平级，停止时间长。 时间短，电机起动快猛，停止时间短。 The time is long, the motor starts to level, and the stop time is long. The time is short, the motor starts fast and the stop time is short.	1.0	
F-08	反转启动时力矩增大至最大值时间 Time when torque increase to maximum during reverse start	0.1 ～ 10.0 秒 0.1 ～ 10.0 seconds	时间长，电机起动平级，起动时间长。 时间短，电机起动快猛，起动时间短。 Long time, motor starting level, long starting time. The time is short, the motor starts fast and the starting time is short.	1.0	
F-09	反转停止时力矩减小至 0 时间 Time when torque is reduced to 0 as reverse rotation stops	0.1 ～ 10.0 秒 0.1 ～ 10.0 seconds	时间长，电机起动平级，停止时间长。 时间短，电机起动快猛，停止时间短。 The time is long, the motor starts to level, and the stop time is long. The time is short, the motor starts fast and the stop time is short.	1.0	
F-29	恢复出厂设定 Restore factory settings	1. 不恢复 2. 恢复出厂设置 1. Not recovering 2. Restore factory settings		1	
F-30	程序版本 Program Version	代码 + 版本 Code + version		06.**	

●TF系列面板式力矩交流驱动器外形及安装图 TF series panel type torque AC driver and installation diagram



●使用须知 Terms and Conditions

- 请勿在爆炸性环境、易燃性气体环境、腐蚀性环境以及容易沾上水的场所或可烘物周围使用。
- 邀免连续振动. 过度冲击。
- 电机在正常运转状态下，有时电机外壳表面的温度可能会超过 70℃。

因此在可能触及电机的使用环境下请加贴右圈所示的普告标志。

- 请务必将接地端子接地。
- 安装、连接、检查等作业须由专业技术人员进行。
- Do not use in a fragile environment, an easy-to-existing gas environment, a corrosive environment, or a place where it is easy to get water or a bakeable object.
- avoid continuous vibration. Excessive impact.
- When the motor is in normal operation, sometimes the temperature of the motor casing surface may exceed 70 ℃.

Therefore, please put the general sign shown on the right circle in the environment where the motor may be touched.

- Be sure to ground the ground terminal.
- Installation, connection, inspection, etc. must be carried out by professional technicians.

TK系列内置式力矩交流驱动器
TK SERIES BUILT-IN TORQUE AC DRIVER

●特点Characteristics

- 采用 MCU 数字控制技术，功能丰富，性能优异。
- 采用数显菜单式选项，修改设定方便快捷。
- 可实现缓慢加大力矩、缓慢减小力矩、4 段力矩等复杂运动控制。
- 可外接开关控制、0~10V 模拟量控制。
- 模拟量控制可自动匹配最大力矩，调节控制方便、安全。
- 附电机散热风扇电源接口，方便接线。

- With MCU digital control technology, it has rich functions and excellent performance.
- Easy to change settings with digital menu options
- can realize complex motion control such as slowly increasing torque, slowly reducing torque, and 4-stage torque.
- External switch control, 0~10V analog control.
- The analog control can automatically match the maximum torque, and the adjustment control is convenient and safe.
- With power connector to motor cooling fan for easy wiring.

●型号阵列表Model array table

类别 category	TF 系列面板式驱动器 TF series panel drive		TK 系列内置式驱动器 TK Series built-in drive	
电源电压 voltage / 电机功率 Power	220V	110V	220V	110V
6~40W	TF100E	TF100A	TK100E	TK100A

●型号命名方法Model naming method

●面板式 panel type

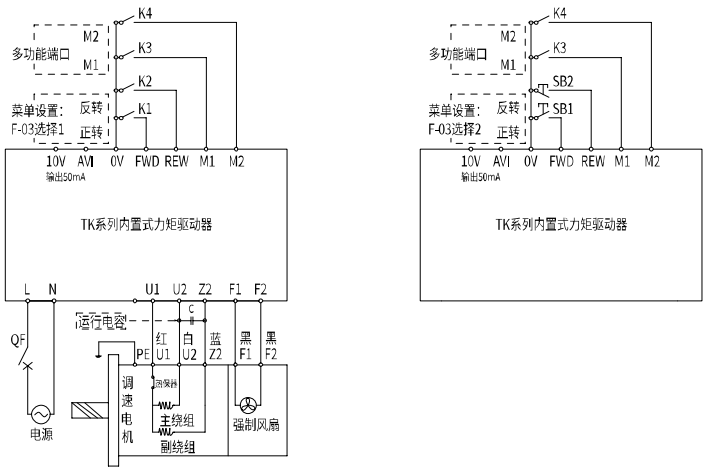
TF ① **100** ② **E** ③ □ ④

①	名称代号 Name code	TF(面板式) TF (panel type) TK(内置式)TK (built-in)
②	适用调速电机功率代号 Applicable speed motor Power code(W)	6W~40W
③	电压代号 Voltage code	E(单相 single phase220V) A(单相 single phase110V)
④	派升代号 Promotion code	

●性能参数表Performance parameter table

型号 Model	TF100E	TF100A	TK100E	TK100A
安装方式 Install method	面板式 panel type		内置式 built-in	
电源电压 Voltage	单相 single phase 220V	单相 single phase 110V	单相 single phase 220V	单相 single phase 110V
电源频率 Power frequency	50/60HZ			
适用电机类型 Motor type	力矩电机 Torque motor			
运行电容 Capacitor	外置（放置于调速电机包装内，需用户自行连接） External (placed in the speed motor package, users need to connect themselves)			
运动控制功能 Motion control function	面板或外接开关运转控制，调速，缓慢加速，缓慢减速 Panel or external switch operation control, speed control, Slow acceleration, slow deceleration		外接开关运转控制，调速，缓慢加速，缓慢减速，快速停止，4 段速 External switch operation control, speed control, Slow acceleration, slow deceleration, fast stop, 4 speed stage	
力矩调节方式 Torque adjustment method	面板“▲”“▼”键；panel key 面板旋钮 panel knob		面板“▲”“▼”键；panel key 面板旋钮 panel knob； 0~10V 模拟量 Analog quantity	
力矩调整范围 Torque adjustment range	0~100%			
适用环境 Applicable environment	环境温度 Ambient temperature：-10℃ ~ +45℃（无结冰 No icing） 环境湿度 Ambient humidity：85%以下（无结露）No condensation			

●TK系列内置力矩交流式驱动器接线图TK series built-in torque AC driver wiring diagram



●力矩电机内装自动复位型热保护器，若电机运转过热，热保护器将切断电机电源，电机将停止运转：当电机温度下降后，热保护器将自动复位供电，电机重新运转。故在进行检查操作时，请勿必事先切断电源，防止发生事故

●自动复位型热保护器，动作温度：120℃ ±5℃，复位温度：82℃ ±5℃

● The torque motor is equipped with an automatic reset type thermal protector. If the motor runs overheated, the thermal protector will cut off the motor power supply and the motor will stop running: When the motor temperature drops, the thermal protector will automatically reset the power supply and the motor will run again. Therefore, when performing inspection operations, do not cut off the power supply beforehand to prevent accidents.

● Automatic reset type thermal protector, operating temperature: 120 ℃ ± 5 ℃, reset temperature: 82 ℃ ± 5 ℃

● QF 断路器电流规格表 QF breaker current specification table

电源电压 Voltage	电机功率 power	QF 电流规格 QF current specification
220V	15 ~ 90W	1A
220V	120 ~ 200W	2A
110V	15 ~ 90W	2A
110V	120 ~ 200W	4A

电源电压必须与调速器电源电压规格一致。QF 为断路器在发生短路时保护调速器和调速电机

The power voltage must match the speed controller's voltage specifications. QF is the circuit breaker which protect the speed controller and motor when a short circuit occurs.

●运行电容 C 规格表 Operating capacitor C specification sheet

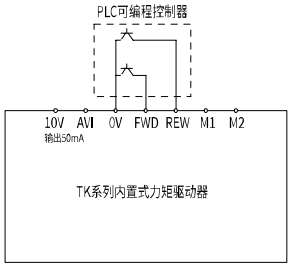
电源电压 Voltage / 电机功率 power	220V	110V
15W	1μF/500V	4μF/250V
25W	1.5μF/500V	6μF/250V
40W	2.5μF/500V	10μF/250V
60W	3.5μF/500V	14μF/250V
90W	5μF/500V	20μF/250V
120W	6μF/500V	24μF/250V
200W	10μF/500V	40μF/250V

注：运行电容按电机型号配，放置于调速电机包装内。

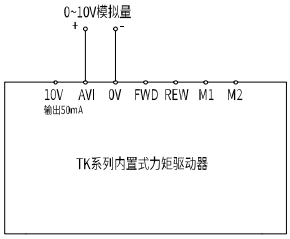
Note: The running capacitor is matched to the motor model and placed in the motor package.

● 10V 端口最大输出电流为 50mA. maximum output current is 50mA to 10V port

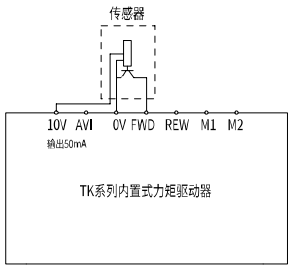
1）FWD、REV、M1、M2 控制端口采用 PLC 可编程控制器控制。
2）PLC 输出方式：NPN 或漏型晶体管输出。
1) FWD, REV, M1, M2 control ports are controlled by PLC programmable controller.
2) PLC output mode: NPN or sink transistor output.



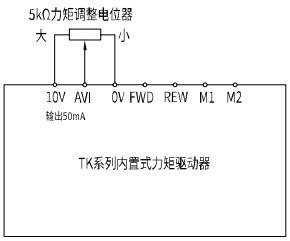
1）采用外部 0~10V 模拟量控制电机速度。
2）菜单设置：F-04 设定值 3，外部 0~10V 模拟量控制。
1）Control the motor speed with an external 0~10V analog quantity.
2）Menu setting: F-04 set value 3, external 0~10V analog quantity control.



1）FWD、REV、M1、M2 控制端口采用接近开关、光电开关等传感器控制。
2）开关输出方式：三线式 NPN 晶体管输出
1) FWD, REV, M1, M2 control ports are controlled by sensors such as proximity switches and photoelectric switches.
2) Switch output mode: 3-wire NPN transistor output



1）采用外部外接调速电位器控制电机速度。
2）菜单设置：F-04 设定值 3，外部 0~10V 模拟量控制。
1) Use external speed potentiometer to control motor speed.
2) Menu setting: F-04 set value 3, external 0~10V analog control.



●TK系列内置力矩交流式驱动器菜单 TK series built-in torque AC driver menu

●菜单修改 Menu modification

注意：为保证安全，F-01、F-03、F-29 参数修改必须在电机停止状态下进行，否则无法设置，屏幕显示 Err。
Note: In order to ensure safety, the parameters off-01, F-03, F-29 must be modified while the motor is stopped. Otherwise, it cannot be set. The screen displays Err.

任意 RANDOM →
▷电机停止状态
Motor stop state

C100 →
▷长按 MODE 3 秒屏幕显示 C100
Long press MODE3 seconds screen displayC100

C123 →
▷按△、▽输入密码 123
Press △，▽ to enter the password

F-01 →
▷按 ENTER 键进入，参数修改
Press ENTER to enter, Parameter modification

F-03 →
▷按△、▽选择参数码
Press △，▽ to select Parameter code

1 →
▷按 ENTER 键显示当前设定值
Press ENTER to display Current set value

2 →
▷△、▽修改设定值。按 ENTER 键确认
Modify the set value.
Press ENTER to confirm.

END →
▷参数正确，短暂显示 End 后，进入下一参数码。若参数错误，显示 Err，重新输入
Correct parameters, short display. After End, enter the next parameter.

F-04 选择 →
▷按△、▽输入密码，下一参数码
Press △，▽ to enter the password. Next parameter code

1 →
▷按 ENTER 键显示当前设定值
Press ENTER to display Current set value

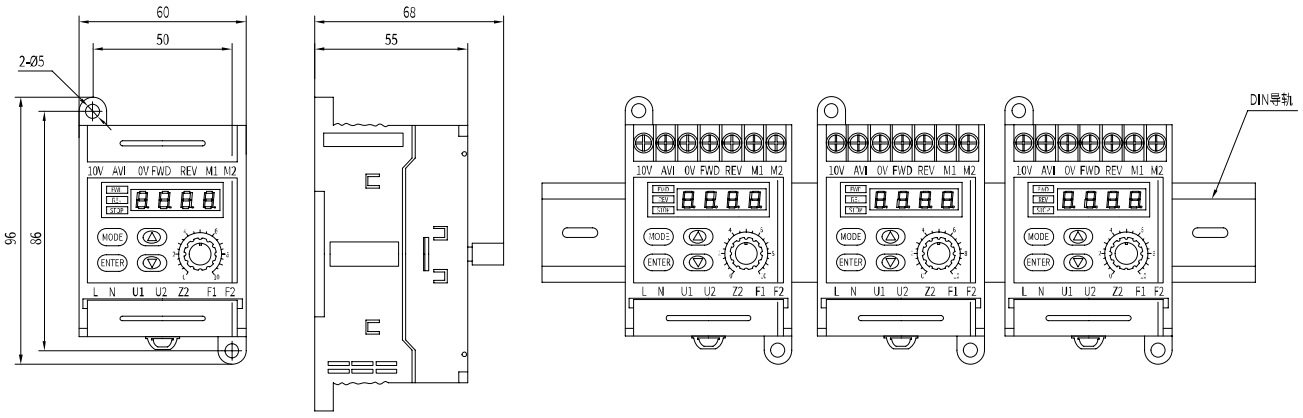
2 →
▷重复此前步骤设定参数
Repeat the previous steps Setting parameters

任意 RANDOM
▷设定完成按 MODE 键退出
Setting completed Press the MODE button to exit

TK 系列内置力矩交流式驱动器菜单清单 TK series built-in torque AC driver menu list

参数码 Parameter code	参数功能 Parameter function	设定范围 setting area	功能说明 Function Description	出厂设定值 Factory setting	用户设定值 User setting
F-01	运转控制方式 Operation control method	1. 正转 / 反转 2. 正转 / 停止 1. Forward/reverse 2. Forward / stop	选择正转 / 反转，电机由 K1、K2 开关控制。 选择正转 / 停止，电机由 SB1、SB2 按钮控制。 Select forward/reverse, the motor is controlled by the K1 and K2 switches. Select forward/stop and the motor is controlled by the SB1 and SB2 buttons.	1	
F-02	旋转方式 Rotation mode	1. 允许正反转 2. 允许正转，禁止反转 3. 允许反转，禁止正转 1. Allow positive and negative reversal 2. Allow forward rotation, prohibit reverse rotation 3. Allow reverse, prohibit forward rotation	限制电机旋转方向，防止设备故障或事故。 当 F-01 选择 2 时，F-02 自动选择 2 且无法修改，若需改变旋转方向可由 F03 设定。 Limit the direction of motor rotation to prevent equipment failure or accidents. When F01 selects 2, F02 automatically selects 2 and cannot be modified. If you need to change the direction of motor rotation which can be set by F03.	1	
F-03	旋转方向 Rotation direction	1. 不取反 2. 取反 1. Don't reverse 2. Invert	无需改变电机接线，轻而易举改变电机转向， 使之与习惯成要求一致。 Easy to change the motor steering without changing the motor wiring. Make it consistent with the customary requirements.	1	
F-04	主速调整方式 Main speed adjustment mcthod	1. 面板▲▼按键 2. 面板旋钮 3. 外部 0~10V 模拟量 1.Panel ▲▼ button 2. Panel knob 3. External 0~10V analog	1. 当任意闭合多功能端子 M1、M2 时，电机运行为段力矩，主力矩调整无效。 2. 面板旋钮、外部 0-10V 模拟量自动匹配 0~ 最大力矩。 3. 由于外接电位器连接于 0-10V 模拟量 AVI 输入端故采用外接电位器调速时，主速调整方式 F04 应选择 3 1. When the multi-function terminals M1 and M2 are closed arbitrarily, the motor runs as a segment torque, and the main torque adjustment is invalid. 2. Panel knob, external 0-10V analog quantity automatically matches 0~maximum torque. 3. Since the external potentiometer is connected to the 0-10V analog AVI input terminal, when the external potentiometer is used for speed regulation, the main speed adjustment mode F04 should be selected 3.	1	
F-05	最大力矩 Maximum torque	50%~100%	限制电机最大力矩，可防止力矩过大，损坏产品或设备。 Limit the maximum torque of the motor to prevent excessive torque and damage to the product or equipment.	80	
F-06	正转启动时力矩增大至最大值时间 Time when Torque increases to maximum during forward rotation	0.1 ~ 10.0 秒 0.1 ~ 10.0 seconds	时间长，电机起动平级，起动时间长。 时间短，电机起动快猛，起动时间短。 Long time, motor starting level, long starting time. The time is short, the motor starts fast and the starting time is short.	1.0	
F-07	正转停止时力矩减小至 0 时间 Time when Torque is reduced to 0 as forward rotation stops	0.1 ~ 10.0 秒 0.1 ~ 10.0 seconds	时间长，电机起动平级，停止时间长。 时间短，电机起动快猛，停止时间短。 The time is long, the motor starts to level, and the stop time is long. The time is short, the motor starts fast and the stop time is short.	1.0	
F-08	反转启动时力矩增大至最大值时间 Time when torque increase to maximum during reverse start	0.1 ~ 10.0 秒 0.1 ~ 10.0 seconds	时间长，电机起动平级，起动时间长。 时间短，电机起动快猛，起动时间短。 Long time, motor starting level, long starting time. The time is short, the motor starts fast and the starting time is short.	1.0	
F-09	反转停止时力矩减小至 0 时间 Time when torque is reduced to 0 when reverse rotation stops	0.1 ~ 10.0 秒 0.1 ~ 10.0 seconds	时间长，电机起动平级，停止时间长。 时间短，电机起动快猛，停止时间短。 The time is long, the motor starts to level, and the stop time is long. The time is short, the motor starts fast and the stop time is short.	1.0	
F-10	第一段力矩 First torque	0~ 最大力矩 0~maximum torque	闭合 M1, 电机以第一段力矩运转。 Closing M1, the motor runs at the first torque.	40	
F-11	第二段力矩 Second torque	0~ 最大力矩 0~maximum torque	闭合 M2, 电机以第二段力矩运转。 Closing M2, the motor runs at the second torque.	50	
F-12	第三段力矩 Third torque	0~ 最大力矩 0~maximum torque	闭合 M1+M2, 电机以第三段力矩运转。 Close M1+M2, the motor runs with the third torque.	60	
F-29	恢复出厂设定 Restore factory settings	1. 不恢复 2. 恢复出厂设置 1. Not recovering 2. Restore factory settings		1	
F-30	程序版本 Program Version	代码 + 版本 Code + version		07.**	

●TK系列面板式力矩交流驱动器外形及安装图 TK series panel type torque AC driver and installation diagram



●使用须知 Terms and Conditions

- 请勿在爆炸性环境、易燃性气体环境、腐蚀性环境以及容易沾上水的场所或可烘物周围使用。
- 邀免连续振动. 过度冲击。
- 电机在正常运转状态下，有时电机外壳表面的温度可能会超过 70℃。

因此在可能触及电机的使用环境下请加贴右圈所示的普告标志。

- 请务必将接地端子接地。
- 安装、连接、检查等作业须由专业技术人员进行。
- Do not use in a fragile environment, an easy-to-existing gas environment, a corrosive environment, or a place where it is easy to get water or a bakeable object.
- avoid continuous vibration. Excessive impact.
- When the motor is in normal operation, sometimes the temperature of the motor casing surface may exceed 70 ℃.

Therefore, please put the general sign shown on the right circle in the environment where the motor may be touched.

- Be sure to ground the ground terminal.
- Installation, connection, inspection, etc. must be carried out by professional technicians.

选购配件
ACCESSORIES

●电机·减速器用安装底座Motor· Gearhead Moumin brackets

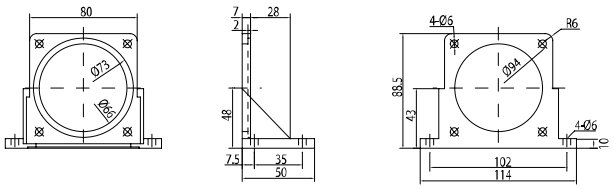
便于安装固定电机、减速器的专用安装底座。为可对应大功率电机、减速器的高强安装底座上钻有螺孔，请用减速器附属的螺丝来组合电机与减速器。安装电机单体时，请另用安装用螺丝。

Mounting Brackets for attaching and securing a motor and gearhead. They are high-strengh type， Which can beused with high power motors/gearheads. These brackets come with tapped holes.To mount the motor and grarhead,simply fasten with screws provided to the gearhead. To mount the motor alone.mouting screws must be provided separately.

●安装尺寸Motor Frame Size: 80mm

型号 Model: FT4M5　重量 Weight:200g　材质 Material: 铝合金 Aluminum　适用产品 Applicable products: 4GN 减速器 4GN Gearhead

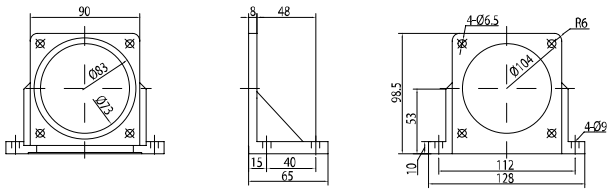
安装尺寸口 80mm 电机 Motor with the frame size of □ 80mm



●安装尺寸Motor Frame Size: 90mm

型号 Model: FT5M6　重量 Weight:270g　材质 Material: 铝合金 Aluminum　适用产品 Applicable products: 5GN、5GU 减速器 5GN、5GU Gearhead

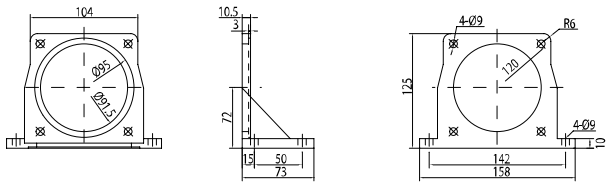
安装尺寸口 90mm 电机 Motor with the frame size of □ 90mm



●安装尺寸Motor Frame Size: 104mm

型号 Model: FT6M8　重量 Weight:340g　材质 Material: 铝合金 Aluminum　适用产品 Applicable products: 6GU 减速器 6GU Gearhead

安装尺寸口 104mm 电机 Motor with the frame size of □ 104mm

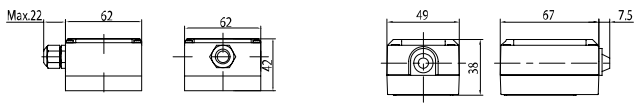


●电机接线盒 Terminal Box For motor

根据客户的需求，可选择以下类型的接线盒。You can select from following types of terminal boxes according to customers request.

型号 Model: FTTX　重量 Weight:10g　材质 Material: 尼龙 Nylon

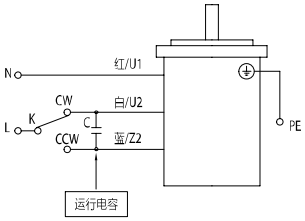
适用产品 Applicable products: 安装尺寸口 80、90、104mm 电机 Mator with the frame size of 口 80、90、104mm



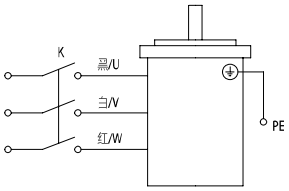
带接线盒接线图
WIRING DIAGRAM WITH JUNCTION BOX

●带接线盒感应电机接线图Wiring diagram of induction motor with junction box

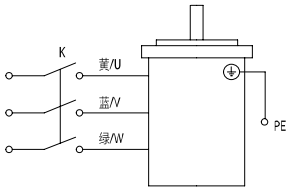
单相电源



三相电源
380V

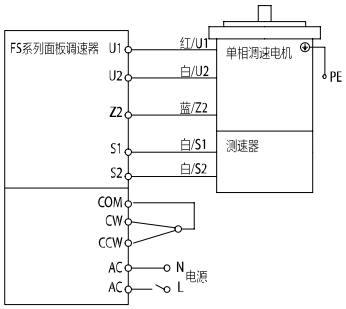


三相电源
220V



- 运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。
- 三相电机若对换任意两条电源线顺序，可实现反向运转。
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- To change the rotation direction change any twoconnections among.

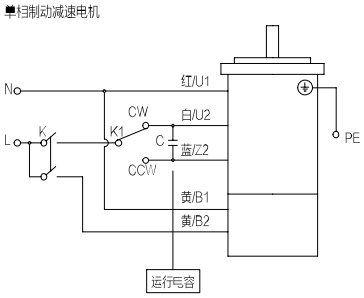
●带接线盒调速电机接线图Wiring diagram of speed regulating motor with junction box



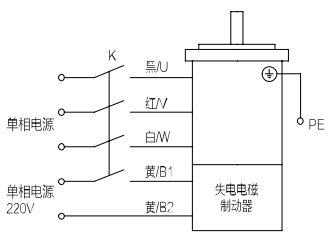
- 运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

●带接线盒电磁减速电机接线图Wiring diagram of electromagnetic reduction motor with junction box

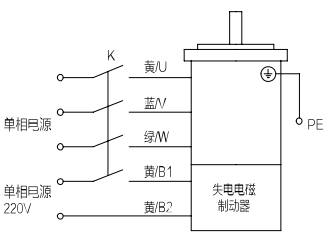
单相制动减速电机



三相电源
380V



三相电源
220V



- 运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。
- 三相电机若对换任意两条电源线顺序，可实现反向运转。
- B1B2 请按图示由联动 开关 K 控制，请勿直接并联于电机主绕组上，因为电机停止过程中，主绕组会短时间发电，继续供电给 B1B2, 造成制动器断电延时，电机制动时间将延长 150 毫秒以上。
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- To change the rotation direction change any twoconnections among.
- B1B2 please click here is controlled by linkage switch K, please do not directly on the main motor windings in parallel, in the process of motor stops, the primary winding can short time power, continue to power supply for B1B2, knocked out power delay, brake motor braking time will extend more than 150 milliseconds.

NIETZ

RIGHT ANGLE GEAR MOTOR

直角减速电机

Select type of Product manuals 2023

匠心制造 · 专注 · 用心

型号的阅读方法
PRODUCT NUMBER CODE

●电动机 Motor

5	I	K	90	R	GU	-	C	T
①	②	③	④	⑤	⑥		⑦	⑧

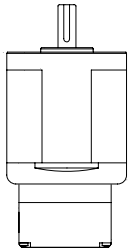
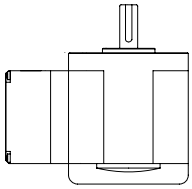
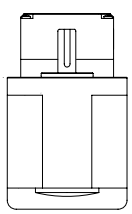
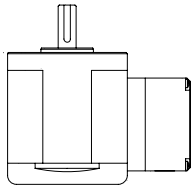
①	电机的尺寸 Motor frame size	2 :60mm 3 :70mm 4 :80mm 5 :90mm 6 :104mm 7 :120mm	
②	机型名称 Motor type	I: 感应电机 Induction Motor R: 阻尼电机 Reversible Motor T: 力矩电机 Torque Motor	
③	系列名称 Series	K: 系列 Series	
④	输出功率 Output (W)	例（Example）90:90W	
⑤	R: 表示带调速电机，无：表示未带 The suffix"-R" after the output power means speed adjustable motor		
⑥	转轴形状 Motor shaft type	GN: GN 型齿轮轴 GN type pinion shaft GU: GU 型齿轮轴 GU type pinion shat A: 圆轴型 Round shaft A1: 键槽型 Keyway	
⑦	电源电压 · 极数 Voltage·poles	A: 单相 Single- phase 110V50Hz B: 单相 Single- phase 110V50Hz C: 单相 Single- phase 220V50Hz D: 单相 Single- phase 220V50Hz E: 单相 Single- phase 110V60Hz H: 单相 Single- phase 220V60Hz S: 三相 Three- phase 220V50Hz S3: 三相 Three- phase 380V50Hz Y: 三相六线 Three- phase 220V/380V50Hz	4P 2P 4P 2P 4P 4P 4P 4P 4P
⑧	T: 带接线盒型及方向 Terminal box type：T 常规、T1 左方向、T2 上方向、T3 右方向 F: 带自冷风扇 Since the cool fan FF: 强制风扇 W/Fan M: 电磁制动电动机 Power off activated electromagnrtic brake motor P: 带热保器 Thermal protector		

●减速机Reducer

5	GU	60	RC
①	②	③	④

①	减速器的尺寸 Reducer frame size	2 :60mm 3 :70mm 4 :80mm 5 :90mm 6 :104mm 7 :120mm	
②	类型 type of pinion	GN:GN 型齿轮轴 GN type pinion shaft GU:GU 型齿轮轴 GU type pinion shaft	
③	减速比 Gear ratio	例（Example）60: 1:60	
④	输出轴类型 Type of output shaft	RC: 弧锥齿空心轴输出 Spiral bevel hollow shaft RT: 弧锥齿实心轴输出 Spiral bevel output shaft	

●接线盒方向的选定 Selection of junction box direction

T- 常规 Standard	T1- 左方向 Left	T2- 上方向 Up	T3- 右方向 Right
			

直角减速电机
RIGHT ANGLE GEAR MOTOR

15W
70mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
3IK15GN-C	3IK15A-C	15	1ph220	50	0.17	1250	125	84	1.2/450
				60	0.17	1550	92	86	
3IK15GN-A	3IK15A-A	15	1ph110	50	0.34	1250	127	109	5.0/250
				60	0.35	1550	94	120	
3IK15GN-S	3IK15A-S	15	3ph220	50	0.12	1250	108	183	/
				60	0.12	1550	88	132	
3IK15GN-S3	3IK15A-S3	15	3ph380	50	0.07	1250	108	183	/
				60	0.07	1550	88	132	

●各种安全规格以电机铭牌上的型号名取得认证。●注 :"-A" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。●如需调速电机参照 p46，电磁制动减速电机参照 p63。

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name. ● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe. ● For speed control gear motor,please refer to page63,for brake gear motor,please refer to page80.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio	3	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180
转速 Speed r/min	450	270	225	180	150	135	108	90	75	67.5	54	45	37.5	27	22.5	18	15	13.5	11	9	7.5
转矩 Torque N.m	0.26	0.50	0.61	0.76	0.91	1.01	1.26	1.5	1.64	1.82	2.27	2.73	3.27	4.54	4.90	5	5	5	5	5	5

●表中转速是以电机的平均转速（50Hz：1350r/min、60Hz：1550r/min）为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中 色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 8N·M。

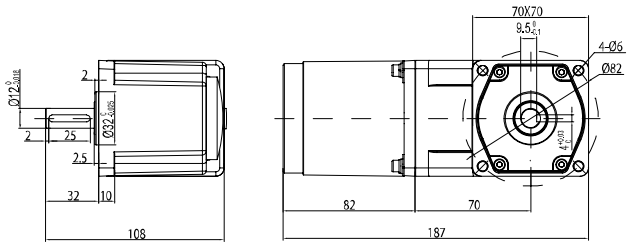
● In the table, the speed is calculated from the base of the motor's average speed (50Hz: 1350r/min, 60Hz: 1550r/min) divided by the deceleration ratio. The actual speed will vary with the load, ranging from 2 % to 20%.
● The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
● The maximum allowable torque of the decelerator is 8N·M.

●外形尺寸（单位mm）Dimension (unit mm)

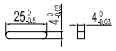
感应、阻尼尺寸图 INDUCTION、REVERSIBLE TYPE DRAWING

●弧锥齿实心轴　3IK15GN-C/3GN □ RT

重量 Weight: 2.41kg

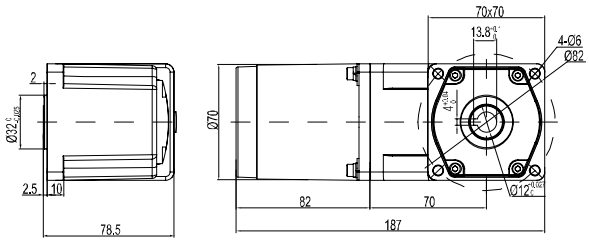


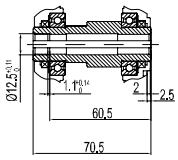
●键（减速器附件）



●弧锥齿空心轴　3IK15GN-C/3GN □ RC

重量 Weight: 2.31kg

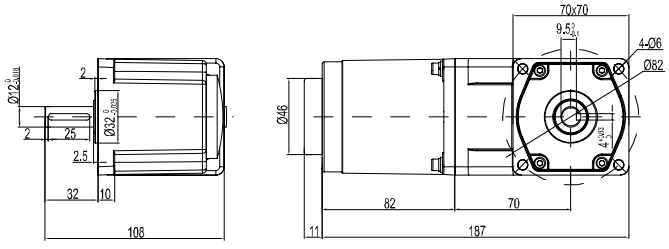




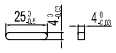
调速尺寸图 SPEED CONTROL TYPE DRAWING

●弧锥齿实心轴　3IK15RGN-C/3GN □ RT

重量 Weight: 2.5kg

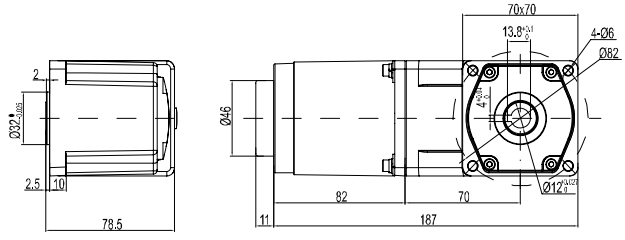


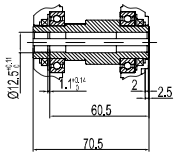
●键（减速器附件）



●弧锥齿空心轴　3IK15RGN-C/3GN □ RC

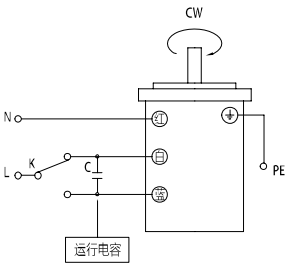
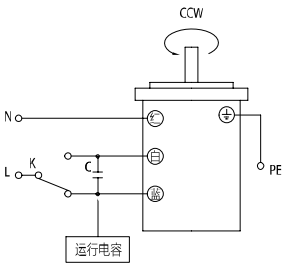
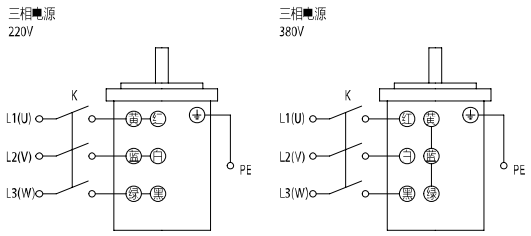
重量 Weight: 2.4kg





●接线图Wiring Diagram

- 运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。
- 表中所记型号为齿轮轴型，圆轴型亦同。
- The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.
- Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

3IK15GN-A、3IK15GN-C		3IK15GN-S、3IK15GN-S3
顺时针方向 CW	逆时针方向 CCW	顺时针方向 CW
		 三相电机若对换任意两条电源线顺序，可实现反向运转。 To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

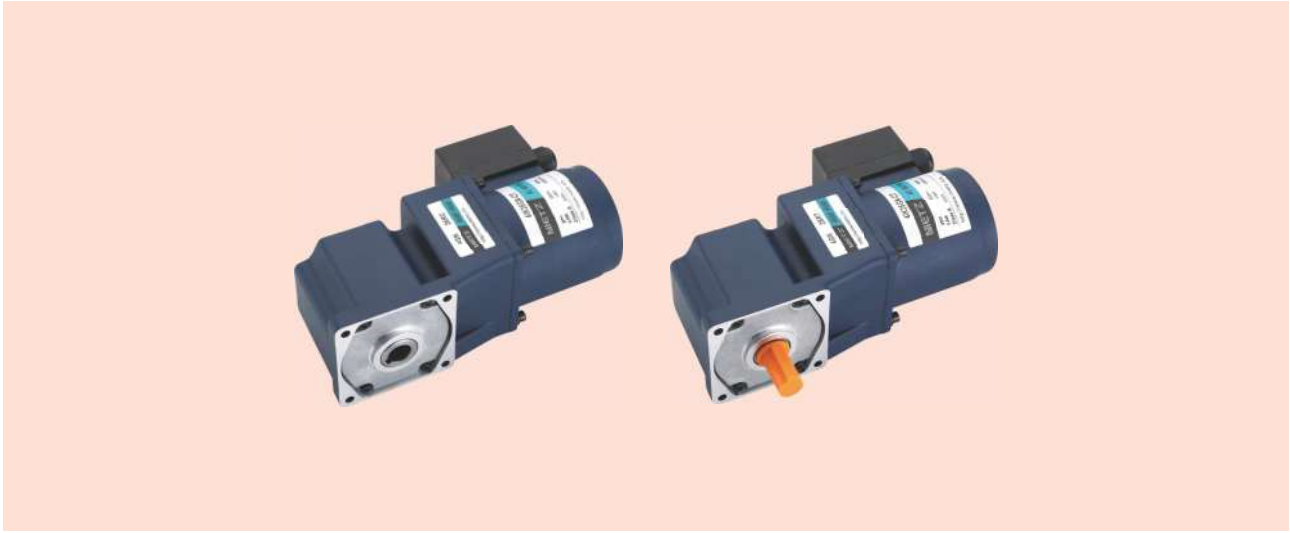
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

直角减速电机
RIGHT ANGLE GEAR MOTOR

25W
80mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
4IK25GN-C	4IK25A-C	25	1ph220	50	0.24	1250	184	165	1.8/450
				60	0.24	1550	149	168	
4IK25GN-A	4IK25A-A	25	1ph110	50	0.54	1250	201	144	7.0/250
				60	0.50	1550	152	154	
4IK25GN-S	4IK25A-S	25	3ph220	50	0.26	1250	181	543	/
				60	0.21	1550	150	389	
4IK25GN-S3	4IK25A-S3	25	3ph380	50	0.15	1250	182	556	/
				60	0.12	1550	149	400	

●各种安全规格以电机铭牌上的型号名取得认证。●注 :"-A" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。●如需调速电机参照 p48, 电磁制动减速电机参照 p65。

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name. ● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe. ● For speed control gear motor,please refer to page63,for brake gear motor,please refer to page80.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio	3	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180
转速 Speed r/min	450	270	225	180	150	135	108	90	75	67.5	54	45	37.5	27	22.5	18	15	13.5	11.25	9	7.5
转矩 Torque N.m	0.35	0.58	0.70	1.0	1.2	1.3	1.6	1.9	2.3	2.6	3.2	3.9	4.6	6.5	7	9	11	12	14	16	16

●表中转速是以电机的平均转速（50Hz：1350r/min、60Hz：1550r/min）为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中 色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 8N·M。

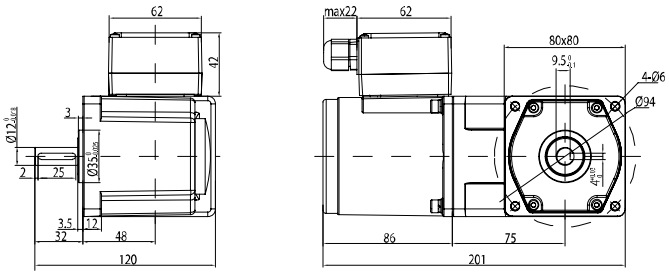
● In the table, the speed is calculated from the base of the motor's average speed (50Hz: 1350r/min, 60Hz: 1550r/min) divided by the deceleration ratio. The actual speed will vary with the load, ranging from 2 % to 20%.
● The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
● The maximum allowable torque of the decelerator is 8N·M.

●外形尺寸（单位mm）Dimension (unit mm)

感应、阻尼尺寸图 INDUCTION、REVERSIBLE TYPE DRAWING

●弧锥齿实心轴　4IK25GN-CT/4GN □ RT

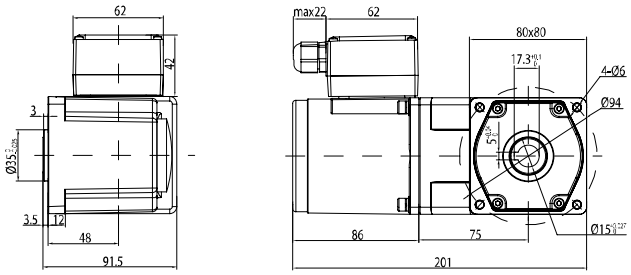
重量 Weight: 3.7kg

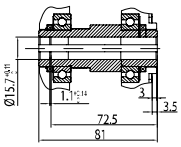


●键（减速器附件）

●弧锥齿空心轴　4IK25GN-CT/4GN □ RC

重量 Weight: 3.6kg

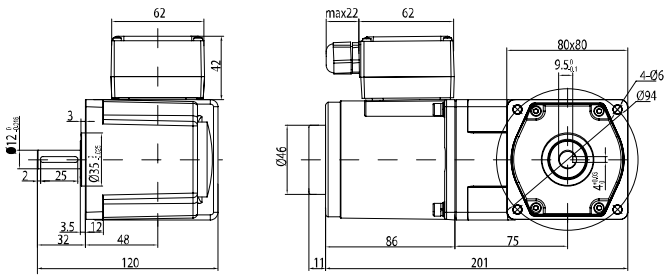




调速尺寸图 SPEED CONTROL TYPE DRAWING

●弧锥齿实心轴　4IK25RGN-CT/4GN □ RT

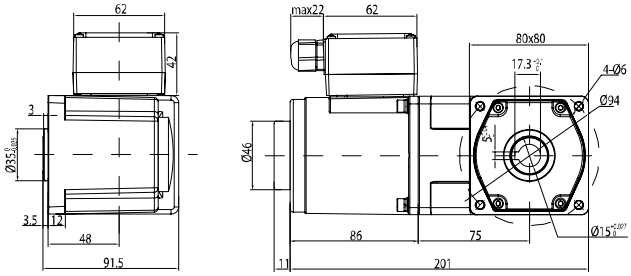
重量 Weight: 3.8kg

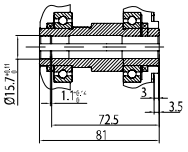


●键（减速器附件）

●弧锥齿空心轴　4IK25RGN-CT/4GN □ RC

重量 Weight: 3.7kg





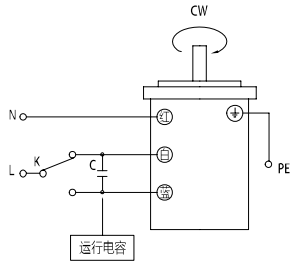
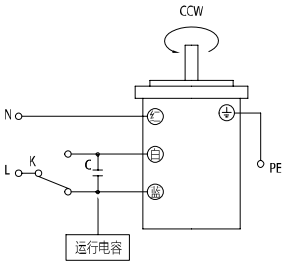
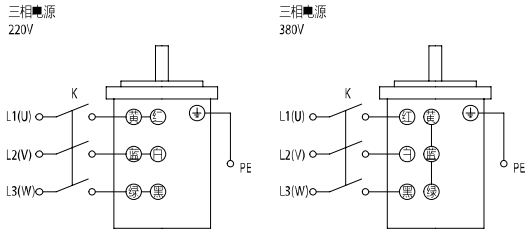
●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

4IK25GN-A、4IK25GN-C		4IK25GN-S、4IK25GN-S3
顺时针方向 CW	逆时针方向 CCW	顺时针方向 CW
		

三相电机若对换任意两条电源线顺序，可实现反向运转。

To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

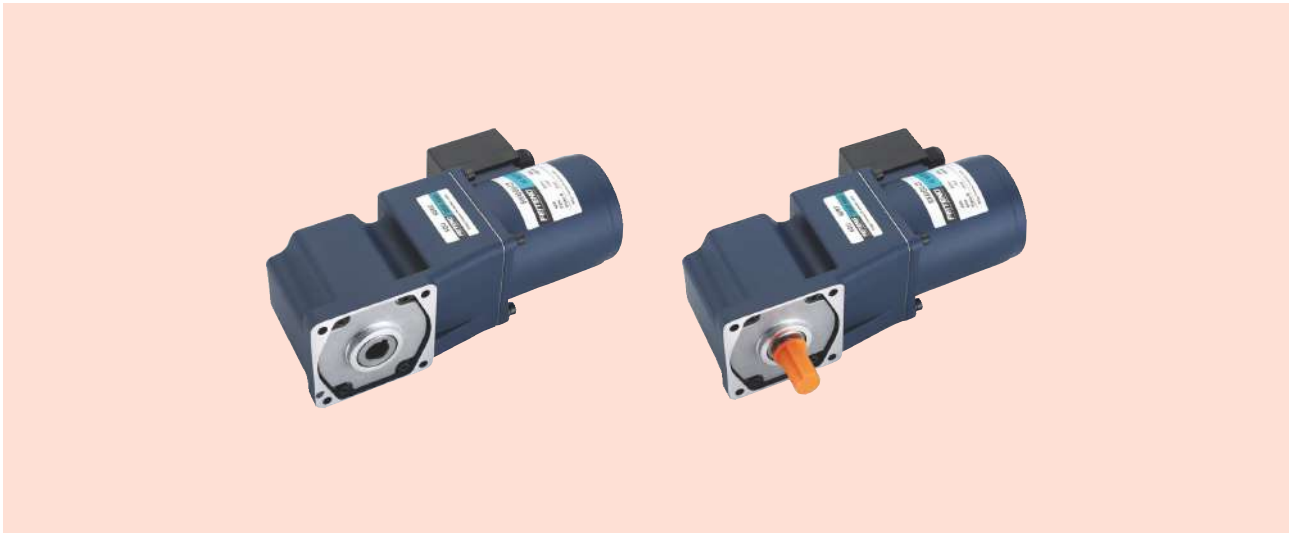
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

直角减速电机
RIGHT ANGLE GEAR MOTOR

40W
90mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
5IK40GU-C	5IK40A-C	40	1ph220	50	0.35	1350	294	194	2.5/450
				60	0.35	1550	232	199	
5IK40GU-A	5IK40A-A	40	1ph110	50	0.64	1350	286	226	10.0/250
				60	0.66	1550	234	231	
5IK40GU-S	5IK40A-S	40	3ph220	50	0.32	1350	284	1130	/
				60	0.28	1550	241	846	
5IK40GU-S3	5IK40A-S3	40	3ph380	50	0.18	1350	284	1086	/
				60	0.16	1550	241	837	

●各种安全规格以电机铭牌上的型号名取得认证。●注 :"-A" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。●如需调速电机参照 p50，电磁制动减速电机参照 p68。

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name. ● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe. ● For speed control gear motor,please refer to page65,for brake gear motor,please refer to page83.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio	3	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180
转速 Speed r/min	450	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.75	27	22.5	18	15	13.5	11.25	9	7.5
转矩 Torque N.m	0.62	1.0	1.2	1.5	1.9	2.1	2.6	3.1	3.7	4.1	5.2	6.2	6.7	7.5	9	11	14	17	19	22	28	34

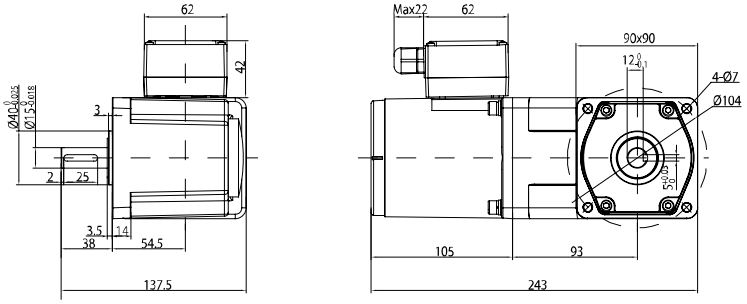
●表中转速是以电机的平均转速（50Hz：1350r/min、60Hz：1550r/min）为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中 色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 20N·M。
● In the table, the speed is calculated from the base of the motor's average speed (50Hz: 1350r/min, 60Hz: 1550r/min) divided by the deceleration ratio.
The actual speed will vary with the load, ranging from 2 % to 20%.
● The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
● The maximum allowable torque of the decelerator is 20N·M.

●外形尺寸（单位mm）Dimension (unit mm)

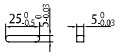
感应、阻尼尺寸图 INDUCTION、REVERSIBLE TYPE DRAWING

●弧锥齿实心轴　5IK40GU-CT/5GU □ RT

重量 Weight: 5.9kg

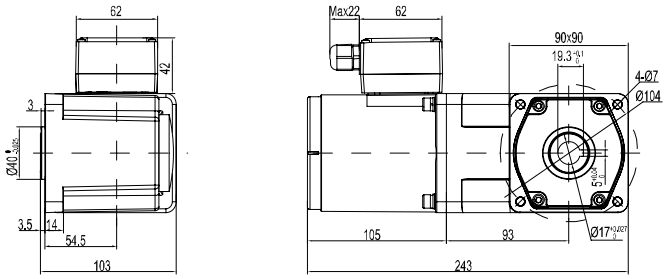


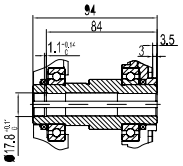
●键（减速器附件）



●弧锥齿空心轴　5IK40GU-CT/5GU □ RC

重量 Weight: 5.7kg

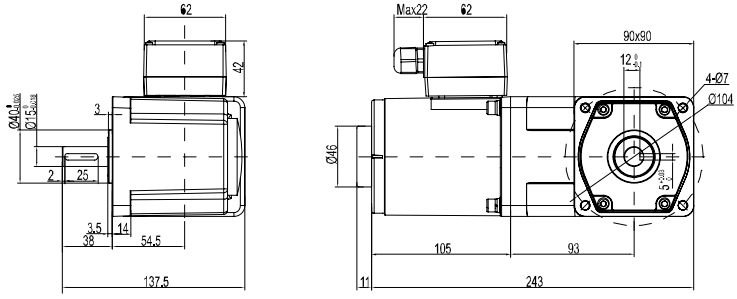




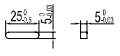
调速尺寸图 SPEED CONTROL TYPE DRAWING

●弧锥齿实心轴　5IK40RGU-CT/5GU □ RT

重量 Weight: 6.0kg

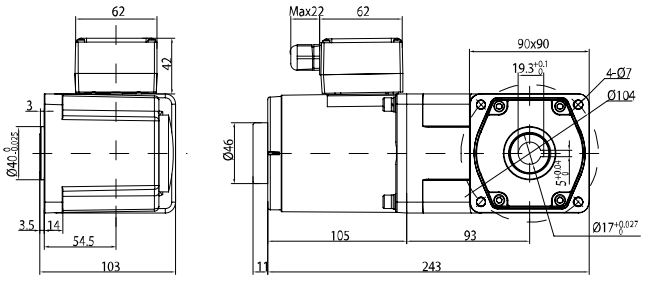


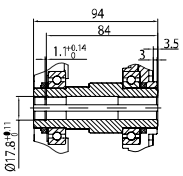
●键（减速器附件）



●弧锥齿空心轴　5IK40RGU-CT/5GU □ RC

重量 Weight: 5.8kg

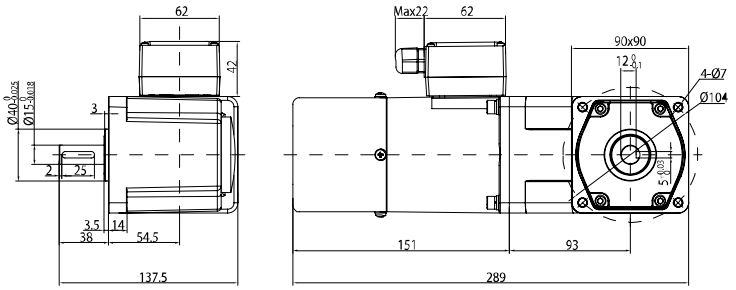




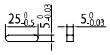
电磁制动尺寸图 BRAKE TYPE DRAWING

●弧锥齿实心轴　5RK40GU-CMT/5GU □ RT

重量 Weight: 6.8kg

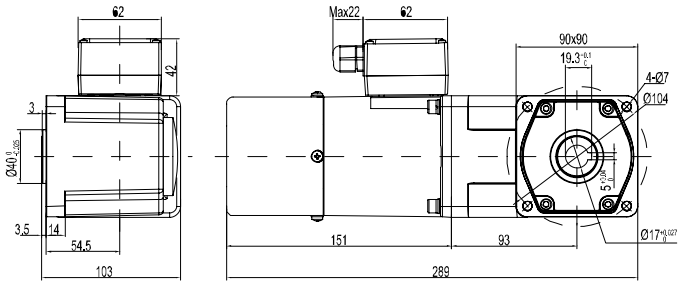


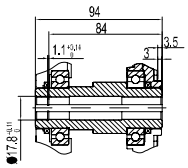
●**键**（减速器附件）



●弧锥齿空心轴　5RK40GU-CMT/5GU □ RC

重量 Weight: 6.6kg





注：接线盒可选，详见 P148。

●接线图Wiring Diagram

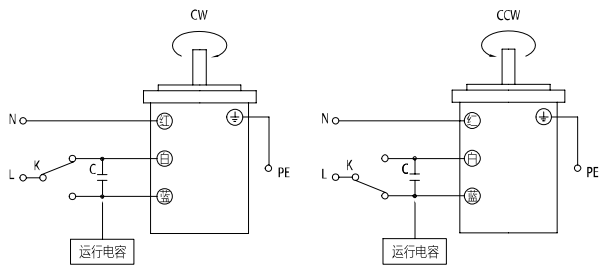
●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

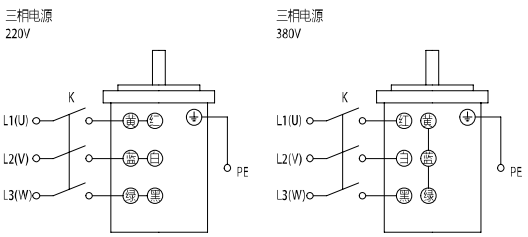
●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

5IK40GU-A、5IK40GU-C		5IK40GU-S、5IK40GU-S3
顺时针方向 CW	逆时针方向 CCW	顺时针方向 CW





三相电机若对换任意两条电源线顺序，可实现反向运转。

To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

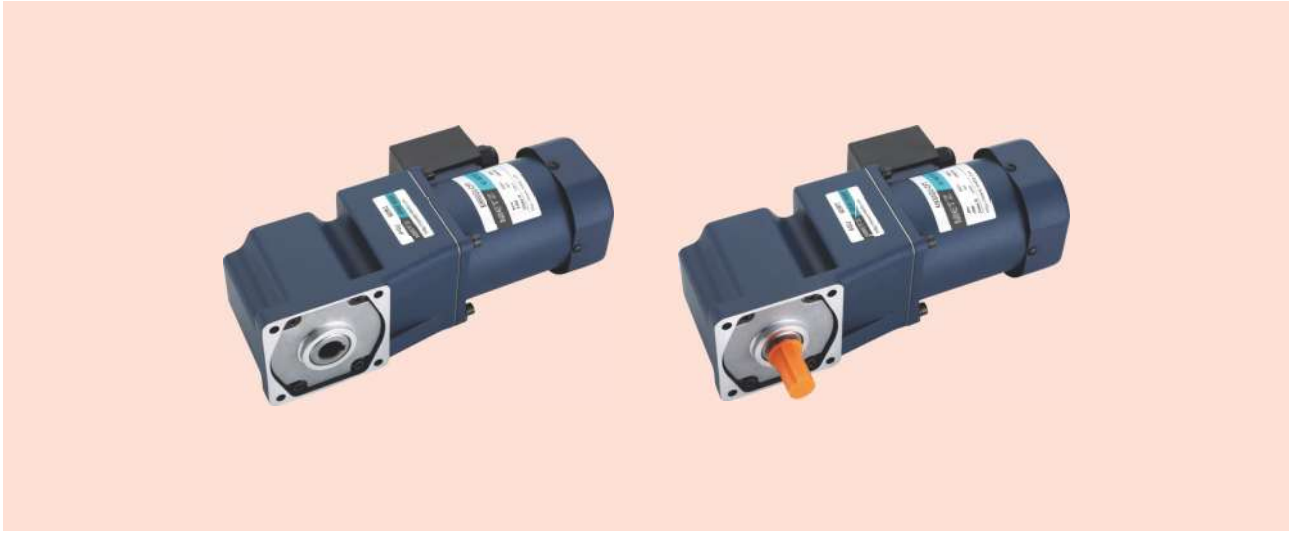
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

直角减速电机
RIGHT ANGLE GEAR MOTOR

60W
90mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
5IK60GU-CF	5IK60A-CF	60	1ph220	50	0.50	1350	427	384	4.0/450
				60	0.54	1550	353	384	
5IK60GU-AF	5IK60A-AF	60	1ph110	50	0.91	1350	431	349	15.0/250
				60	1.01	1550	355	360	
5IK60GU-SF	5IK60A-SF	60	3ph220	50	0.38	1350	465	1110	/
				60	0.35	1550	390	840	
5IK60GU-S3F	5IK60A-S3F	60	3ph380	50	0.22	1350	464	1080	/
				60	0.20	1550	390	837	

●各种安全规格以电机铭牌上的型号名取得认证。●注 :"-A" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。●如需调速电机参照 p52, 电磁制动减速电机参照 p71。

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name. ● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe. ● For speed control gear motor,please refer to page69,for brake gear motor,please refer to page89.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio	3	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180
转速 Speed r/min	450	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.75	27	22.5	18	15	13.5	11.25	9	7.5
转矩 Torque N.m	0.84	1.4	1.7	2.3	2.8	3.1	3.9	4.6	5.6	6.2	7.7	9.3	10	11	14	17	21	25	28	34	40	40

●表中转速是以电机的平均转速（50Hz：1350r/min、60Hz：1550r/min）为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中 色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 20N·M。

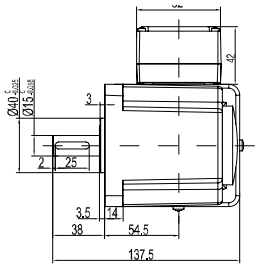
● In the table, the speed is calculated from the base of the motor's average speed (50Hz: 1350r/min, 60Hz: 1550r/min) divided by the deceleration ratio. The actual speed will vary with the load, ranging from 2 % to 20%.
● The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
● The maximum allowable torque of the decelerator is 20N·M.

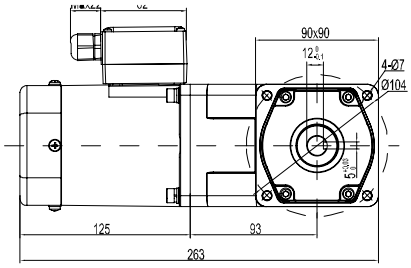
●外形尺寸（单位mm）Dimension (unit mm)

感应、阻尼尺寸图 INDUCTION、REVERSIBLE TYPE DRAWING

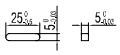
●弧锥齿实心轴　5IK60GU-CFT/5GU □ RT

重量 Weight: 6.1kg



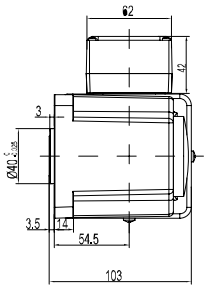


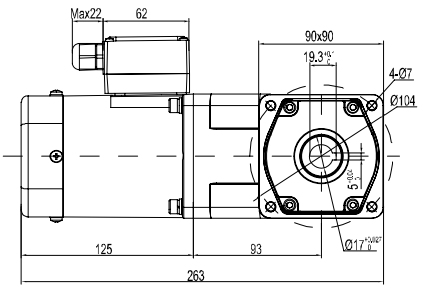
●键（减速器附件）

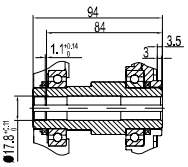


●弧锥齿空心轴　5IK60GU-CFT/5GU □ RC

重量 Weight: 5.9kg



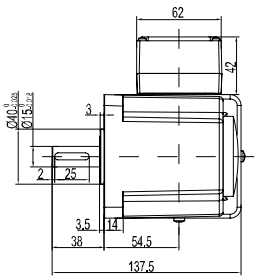


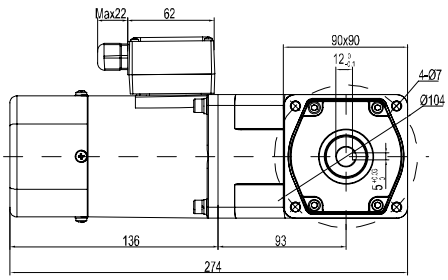


调速尺寸图 SPEED CONTROL TYPE DRAWING

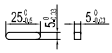
●弧锥齿实心轴　5IK60RGU-CFT/5GU □ RT

重量 Weight: 6.2kg



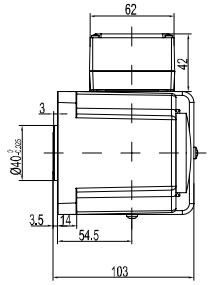


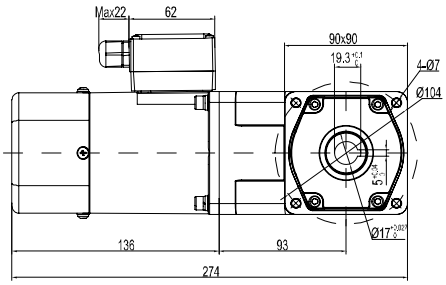
●键（减速器附件）

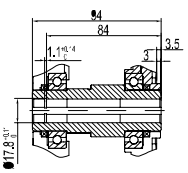


●弧锥齿空心轴　5IK60RGU-CFT/5GU □ RC

重量 Weight: 6.0kg



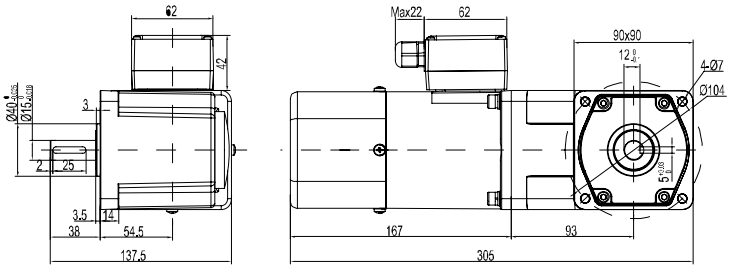




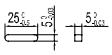
电磁制动尺寸图 BRAKE TYPE DRAWING

●弧锥齿实心轴　5RK60GU-CMFT/5GU □ RT

重量 Weight: 6.8kg

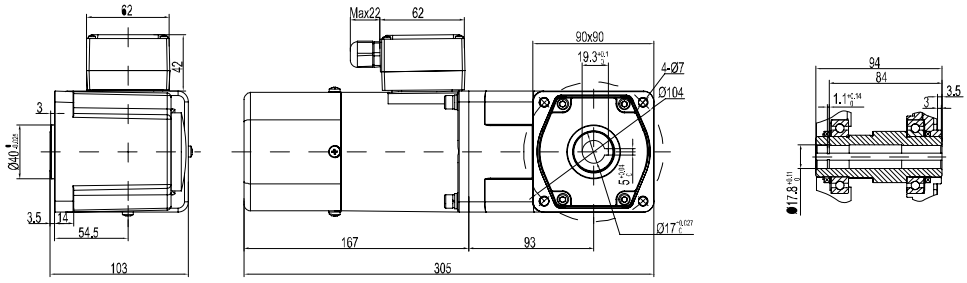


●键（减速器附件）



●弧锥齿空心轴　5RK60GU-CMFT/5GU □ RC

重量 Weight: 6.6kg



注：接线盒可选，详见 P148。

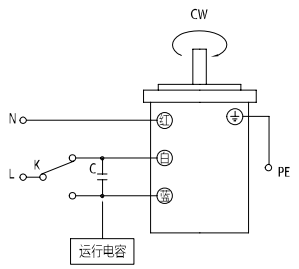
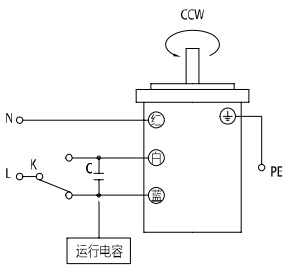
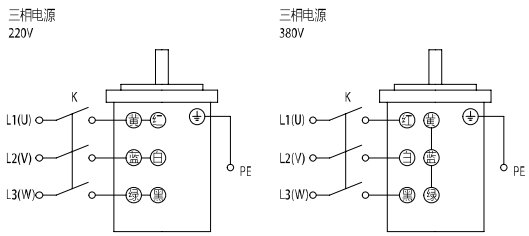
●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

5IK60GU-AF、5IK60GU-CF		5IK60GU-SF、5IK60GU-S3F
顺时针方向 CW	逆时针方向 CCW	顺时针方向 CW
		

三相电机若对换任意两条电源线顺序，可实现反向运转。

To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

直角减速电机
RIGHT ANGLE GEAR MOTOR

90W
90mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
5IK90GU-CF	5IK90A-CF	90	1ph220	50	0.64	1350	643	459	5.0/450
				60	0.71	1550	530	450	
5IK90GU-AF	5IK90A-AF	90	1ph110	50	1.26	1350	646	475	20.0/250
				60	1.40	1550	525	489	
5IK90GU-SF	5IK90A-SF	90	3ph220	50	0.53	1350	625	2800	/
				60	0.61	1550	527	2150	
5IK90GU-S3F	5IK90A-S3F	90	3ph380	50	0.37	1350	625	2660	/
				60	0.35	1550	519	2030	

●各种安全规格以电机铭牌上的型号名取得认证。●注 :"-A" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。●如需调速电机参照 p56，电磁制动减速电机参照 p77。

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name. ● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe. ● For speed control gear motor,please refer to page71,for brake gear motor,please refer to page92.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio	3	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180
转速 Speed r/min	450	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.75	27	22.5	18	15	13.5	11.25	9	7.5
转矩 Torque N.m	1.3	2.1	2.5	3.5	4.2	4.6	5.8	7.0	8.4	9.3	12	14	15	17	21	25	32	38	40	40	40	40

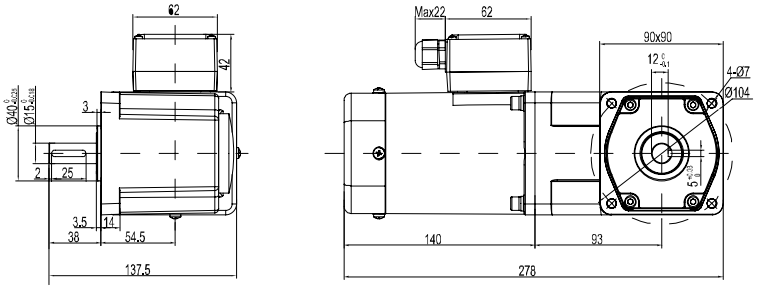
●表中转速是以电机的平均转速（50Hz：1350r/min、60Hz：1550r/min）为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中 色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 20N·M。
● In the table, the speed is calculated from the base of the motor's average speed (50Hz: 1350r/min, 60Hz: 1550r/min) divided by the deceleration ratio.
The actual speed will vary with the load, ranging from 2 % to 20%.
● The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
● The maximum allowable torque of the decelerator is 20N·M.

●外形尺寸（单位mm）Dimension (unit mm)

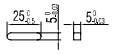
感应、阻尼尺寸图 INDUCTION、REVERSIBLE TYPE DRAWING

●弧锥齿实心轴　5IK90GU-CFT/5GU □ RT

重量 Weight: 6.6kg

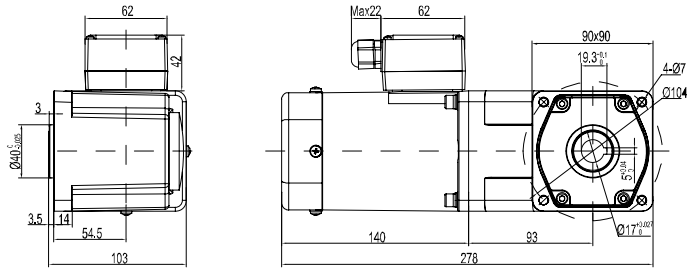


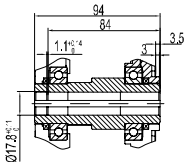
●键（减速器附件）



●弧锥齿空心轴　5IK90GU-CFT/5GU □ RC

重量 Weight: 6.4kg

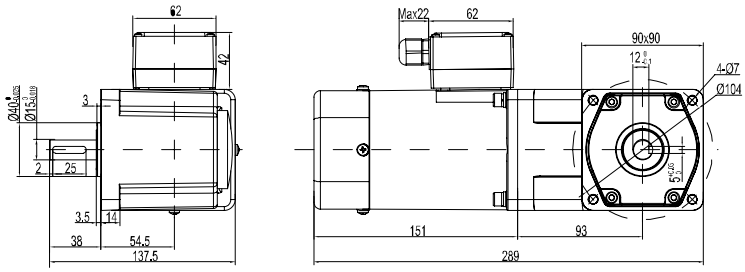




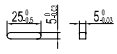
调速尺寸图 SPEED CONTROL TYPE DRAWING

●弧锥齿实心轴　5IK90RGU-CFT/5GU □ RT

重量 Weight: 6.7kg

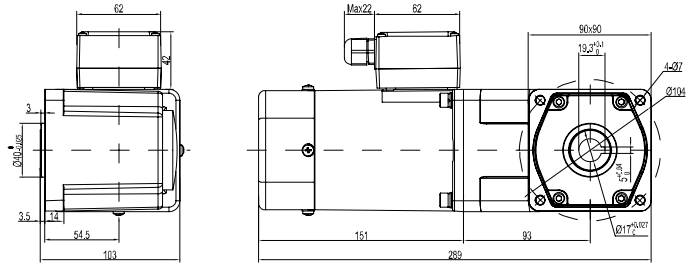


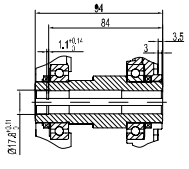
●键（减速器附件）



●弧锥齿空心轴　5IK90RGU-CFT/5GU □ RC

重量 Weight: 6.5kg

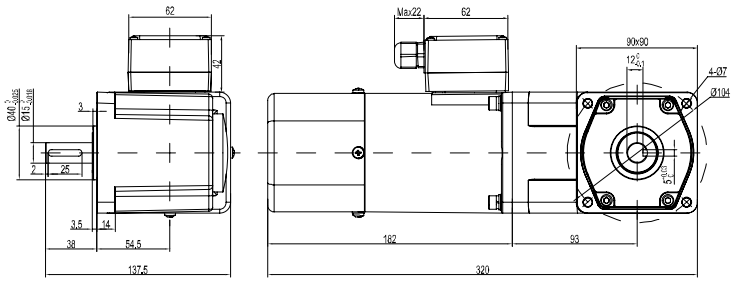




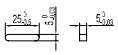
电磁制动尺寸图 BRAKE TYPE DRAWING

●弧锥齿实心轴　5RK90GU-CMFT/5GU □ RT

重量 Weight: 7.4kg

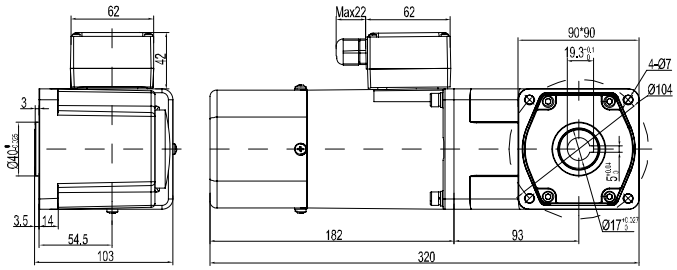


●键（减速器附件）

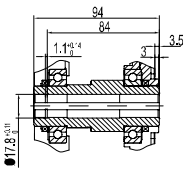


●弧锥齿空心轴　5RK90GU-CMFT/5GU □ RC

重量 Weight: 7.2kg



●键（减速器附件）



注：接线盒可选，详见 P148。

●接线图Wiring Diagram

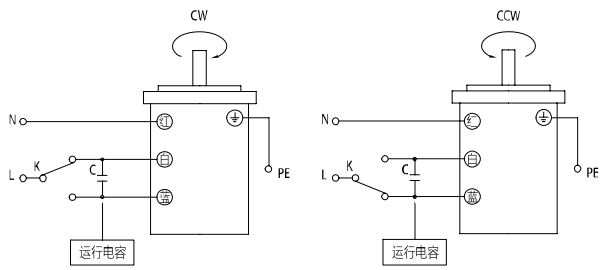
●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

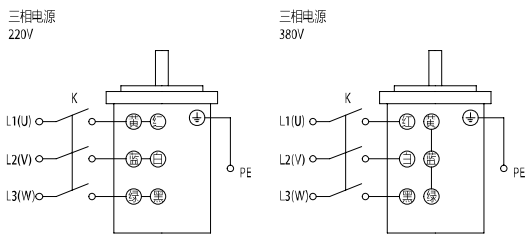
●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

5IK90GU-AF、5IK90GU-CF		5IK90GU-SF、5IK90GU-S3F
顺时针方向 CW	逆时针方向 CCW	顺时针方向 CW





三相电机若对换任意两条电源线顺序，可实现反向运转。

To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

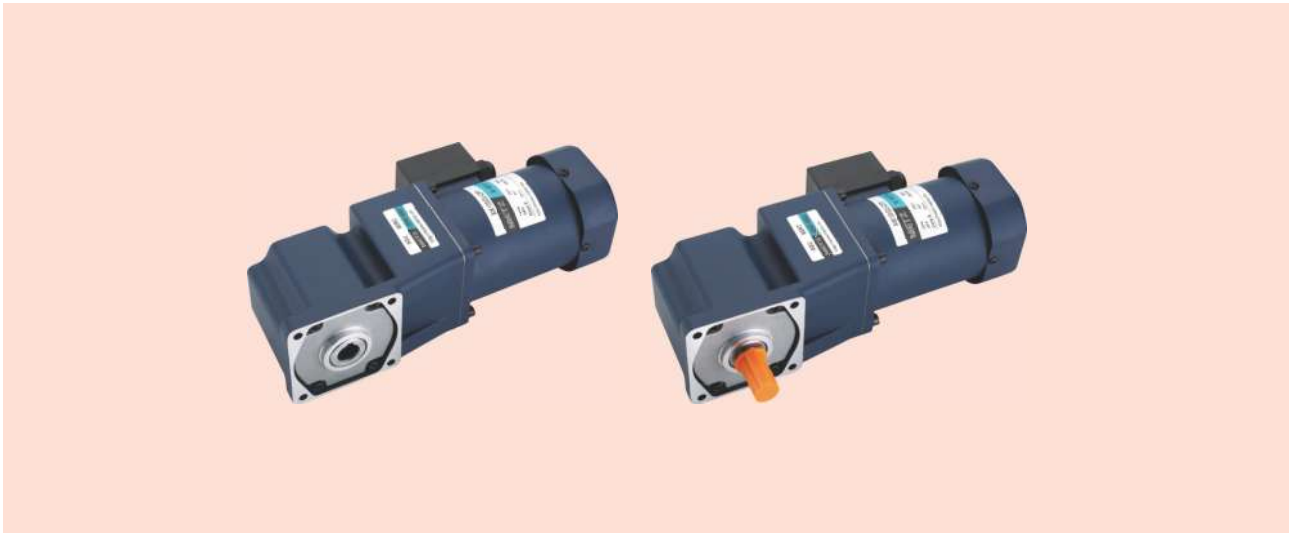
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

直角减速电机
RIGHT ANGLE GEAR MOTOR

120W
90mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
5IK120GU-CF	5IK120A-CF	120	1ph220	50	0.87	1350	874	663	6.0/450
				60	0.90	1550	709	655	
5IK120GU-AF	5IK120A-AF	120	1ph110	50	1.79	1350	919	500	25.0/250
				60	1.65	1550	740	524	
5IK120GU-SF	5IK120A-SF	120	3ph220	50	0.60	1350	879	2800	/
				60	0.70	1550	735	2150	
5IK120GU-S3F	5IK120A-S3F	120	3ph380	50	0.42	1350	879	2660	/
				60	0.40	1550	731	2030	

●各种安全规格以电机铭牌上的型号名取得认证。●注 :"-A" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。●如需调速电机参照 p58, 电磁制动减速电机参照 p80。

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name. ● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe. ● For speed control gear motor,please refer to page73,for brake gear motor,please refer to page95.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio	3	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180
转速 Speed r/min	450	270	225	180	150	135	108	90	75	67.5	54	45	37.5	33.75	27	22.5	18	15	13.5	11.25	9	7.5
转矩 Torque N.m	1.7	2.8	3.4	4.6	5.6	6.2	7.7	9.3	11	12	15	19	20	22	28	34	40	40	40	40	40	40

●表中转速是以电机的平均转速（50Hz：1350r/min、60Hz：1550r/min）为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中 色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 20N·M。

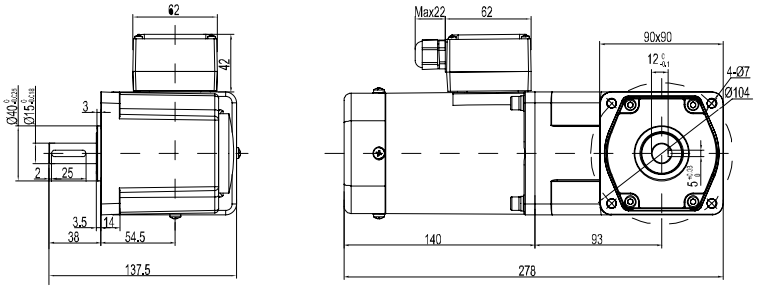
● In the table, the speed is calculated from the base of the motor's average speed (50Hz: 1350r/min, 60Hz: 1550r/min) divided by the deceleration ratio. The actual speed will vary with the load, ranging from 2 % to 20%.
● The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
● The maximum allowable torque of the decelerator is 20N·M.

●外形尺寸（单位mm）Dimension (unit mm)

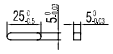
感应、阻尼尺寸图 INDUCTION、REVERSIBLE TYPE DRAWING

●弧锥齿实心轴　5IK120GU-CFT/5GU □ RT

重量 Weight: 6.6kg

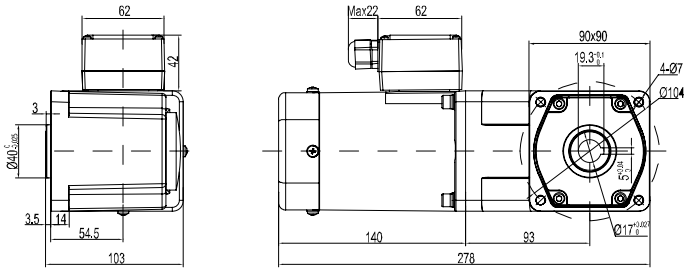


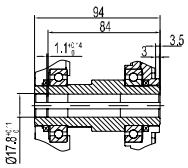
●键（减速器附件）



●弧锥齿空心轴　5IK120GU-CFT/5GU □ RC

重量 Weight: 6.4kg

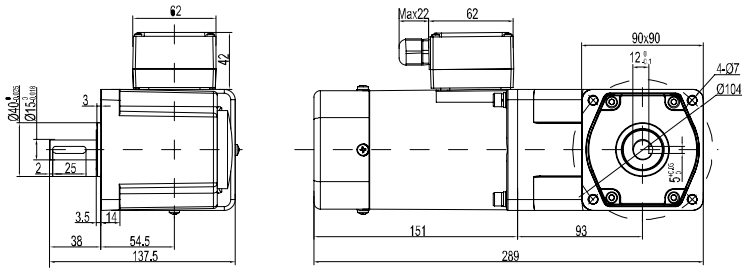




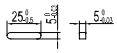
调速尺寸图 SPEED CONTROL TYPE DRAWING

●弧锥齿实心轴　5IK120RGU-CFT/5GU □ RT

重量 Weight: 6.7kg

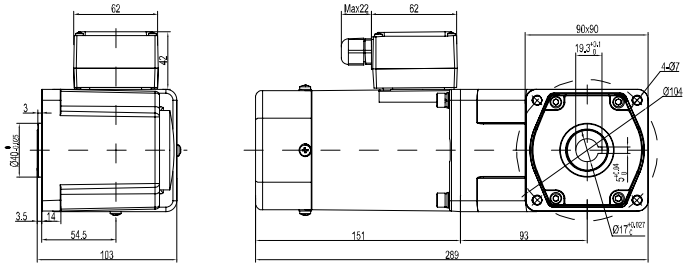


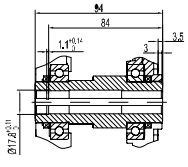
●键（减速器附件）



●弧锥齿空心轴　5IK120RGU-CFT/5GU □ RC

重量 Weight: 6.5kg

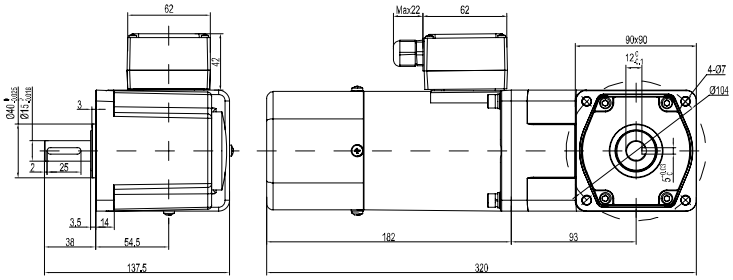




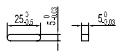
电磁制动尺寸图 BRAKE TYPE DRAWING

●弧锥齿实心轴　5RK120GU-CMFT/5GU □ RT

重量 Weight: 7.4kg

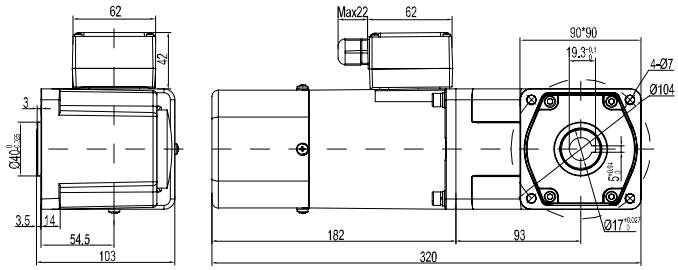


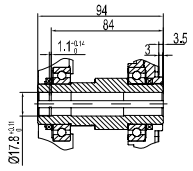
●键（减速器附件）



●弧锥齿空心轴　5RK120GU-CMFT/5GU □ RC

重量 Weight: 7.2kg





注：接线盒可选，详见 P148。

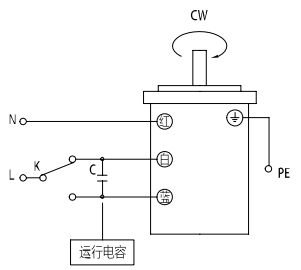
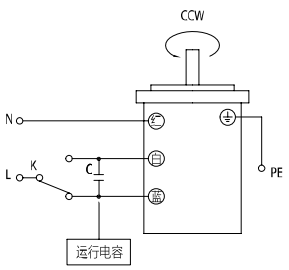
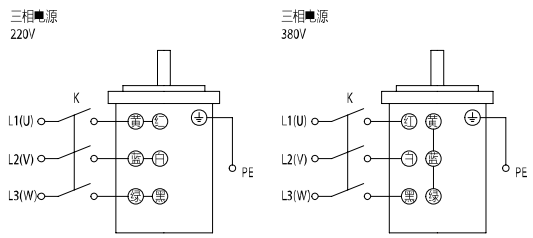
●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

5IK120GU-AF、5IK120GU-CF		5IK120GU-SF、5IK120GU-S3F
顺时针方向 CW	逆时针方向 CCW	顺时针方向 CW
		

三相电机若对换任意两条电源线顺序，可实现反向运转。

To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

直角减速电机
RIGHT ANGLE GEAR MOTOR

200W
104mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	运行电容 Capacitor
齿轮轴型 Pinion Shaft	圆轴型 Round Shaft	W	V	Hz	A	r/min	mN.m	mN.m	μF/VAC
6IK200GU-CF	6IK200A-CF	200	1ph220	50	1.30	1350	1414	1050	10.0/450
				60	1.30	1550	1060	900	
6IK200GU-AF	6IK200A-AF	200	1ph110	50	2.60	1350	1310	950	20.0/250
				60	2.70	1550	1090	920	
6IK200GU-SF	6IK200A-SF	200	3ph220	50	1.17	1350	1460	4620	/
				60	0.98	1550	1060	3420	
6IK200GU-S3F	6IK200A-S3F	200	3ph380	50	0.66	1350	1550	4500	/
				60	0.57	1550	1350	3500	

●各种安全规格以电机铭牌上的型号名取得认证。●注 :"-A" 型号中电压为 110V 时，配置电容器容量以实际铭牌为准。●如需调速电机参照 p60，电磁制动减速电机参照 p83。

● When the motor is approved under various safety standards, the model name on the nameplate is the approved model name. ● Note "sAit means the voltage 110v. the assemblycapacitor vaule it is according the labe. ● For speed control gear motor,please refer to page75,for brake gear motor,please refer to page98.

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio	3	5	6	7.5	9	10	12.5	15	18	20	25	30	36	50	60	75	90	100	120	150	180
转速 Speed r/min	450	270	225	180	150	135	108	90	75	67.5	54	45	37.5	27	22.5	18	15	13.5	11.25	9	7.5
转矩 Torque N.m	2.8	4.7	5.6	7.7	9.3	10	13	15	19	21	26	31	34	47	56	60	60	60	60	60	60

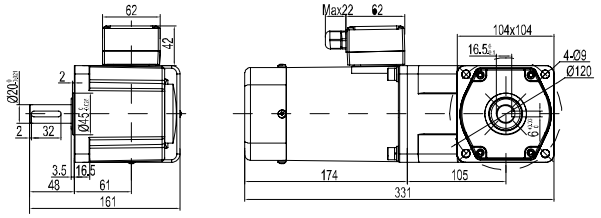
●表中转速是以电机的平均转速（50Hz：1350r/min、60Hz：1550r/min）为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
●表中 色框表示输出轴的旋转方向与电机旋转方向相反。
●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
●减速箱的最大容许转矩为 40N·M。

● In the table, the speed is calculated from the base of the motor's average speed (50Hz: 1350r/min, 60Hz: 1550r/min) divided by the deceleration ratio. The actual speed will vary with the load, ranging from 2 % to 20%.
● The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
● The maximum allowable torque of the decelerator is 40N·M.

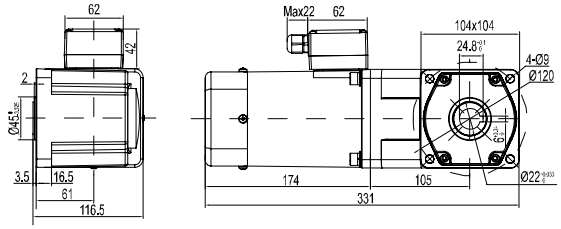
●外形尺寸（单位mm）Dimension (unit mm)

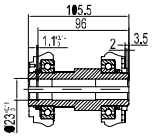
感应、阻尼、调速尺寸图 INDUCTION，REVERSIBLE ，SPEED CONTROL TYPE DRAWING

●弧锥齿实心轴　6IK200GU-CFT/6GU □ RT　6IK200RGU-CFT/6GU □ RT　重量 Weight: 10.5kg　●键（减速器附件）



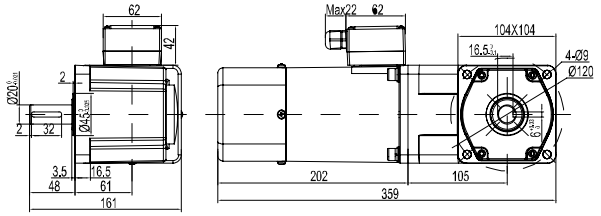
●弧锥齿空心轴　6IK200GU-CFT/6GU □ RC　6IK200RGU-CFT/6GU □ RC　重量 Weight: 10.1kg



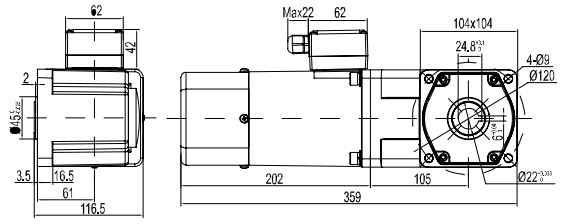


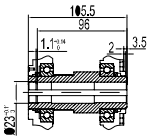
电磁制动尺寸图 BRAKE TYPE DRAWING

●弧锥齿实心轴　6RK200GU-CMFT/6GU □ RT　重量 Weight: 11.2kg　●键（减速器附件）



●弧锥齿空心轴　6RK200GU-CMFT/6GU □ RC　重量 Weight: 10.8kg



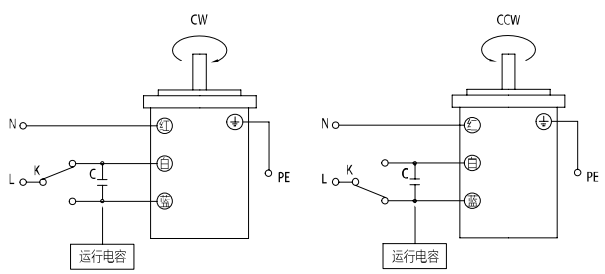


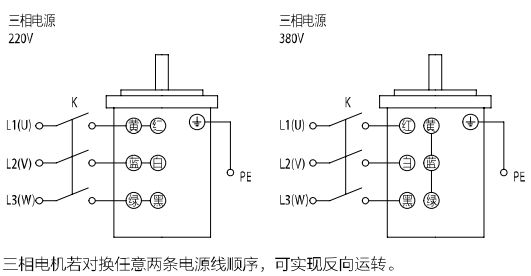
注：接线盒可选，详见 P148。

●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。●表中所记型号为齿轮轴型，圆轴型亦同。● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction. ● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

6IK2000GU-AF、6IK200GU-CF		6IK200GU-SF、6IK200GU-S3F
顺时针方向 CW	逆时针方向 CCW	顺时针方向 CW





三相电机若对换任意两条电源线顺序，可实现反向运转。
To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。Change the direction of single-phase motor rotation only after bring the motor to a stop.If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

NIETZ

MEDIUM-SIZED AC RIGHT GNGLE GEAR MOTOR

中型交流直角减速电机

Select type
of Product
manuals
2023

匠心制造 · 专注 · 用心

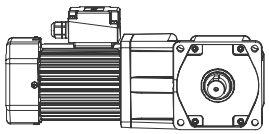
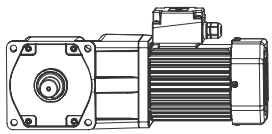
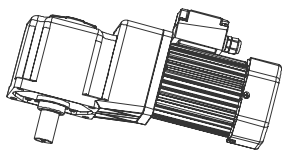
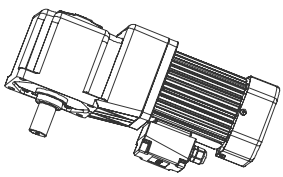
型号的阅读方法
PRODUCT NUMBER CODE

●中型交流直角减速电机 MEDIUM-SIZED AC RIGHT GNGLE GEAR MOTOR

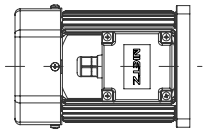
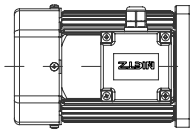
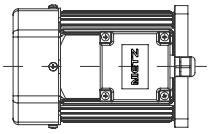
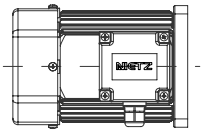
S	750	Y220	T	50	RC
①	②	③	④	⑤	⑥

①	机型名称 Motor type	S：感应减速电机 Induction gear motor F：变频减速电机 Frequency conversion gear motor B：电磁制动减速电机 Electromagn etic brake gear motor
②	输出功率 Output(W)	例（Example）750：750W
③	电源电压 Voltage	Y220：三相 220V Three-phas220V Y380：三相 380V Three-phas380V
④	接线盒 Junction box	T：带接线盒 With Junction box N：不带接线盒 No Junction box
⑤	减速比 Gear ratio	例（Example）50：1:50
⑥	输出轴类型 Type of output shaft	RC：弧锥齿空心轴输出 Spiral becel hollow shaft RT：弧锥齿实心轴输出 Spiral becel output shaft

●接线盒方向的选定 Selection of junction box direction

L- 常规 Standard	R- 右方向 Right	U- 上方向 Up	D- 下方向 Down
			

●接线盒出线口方向的选定 Selection of the direction of the junction box outlet

G- 常规 Standard	G1- 上方向 Up	G2- 右方向 Right	G4- 下方向 Down
			

●接线盒方向在型号上的显示The orientation of the junction box is displayed on the model number

1.LG 为默认方向在型号上不显示。

2. 其他方向在型号最后显示需要方向的代号。

1. LG is not displayed on the model as default orientation.

2. Other directions show the code number of the required direction at the end of the model.

中型交流直角减速电机
Medium-sized AC RIGHT GNGLE GEAR MOTOR

250W
145mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	工作制式 Working mode	防护等级 protection grades
电机种类 Type of Motor	型号 Type	W	V	Hz	A	r/min	mN.m	mN.m		
感应电机 Induction motor	S250Y22T	250	3ph220	50	1.4	1400	1.8	4.0	S1	IP44
				60	1.3	1650	1.5	3.3		
	S250Y38T		3ph380	50	0.8	1400	1.8	4.0		
				60	0.7	1650	1.5	3.3		
变频电机 Frequency conversion motor	F250Y22T	250	3ph220	2~60	1.4	50~1700	1.8	4.0		
	F250Y38T		3ph380		0.8		1.8	4.0		
电磁制动电机 Brake motor	B250Y22T	250	3ph220	50	0.26	1400	1.8	4.0		
				60	0.21	1650	1.5	3.3		
	B250Y38T		3ph380	50	0.15	1400	1.8	4.0		
				60	0.12	1650	1.5	3.3		

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio	5	7.5	10	12.5	15	20	25	30	36	50	60	75	90	100	120	150
转速 Speed r/min	270	180	135	108	90	67.5	54	45	37.5	27	22.5	18	15	13.5	11.25	9
转矩 Torque N.m	5.8	8.8	12.9	16.1	19	26	32	39	46	58	70	88	105	117	140	175

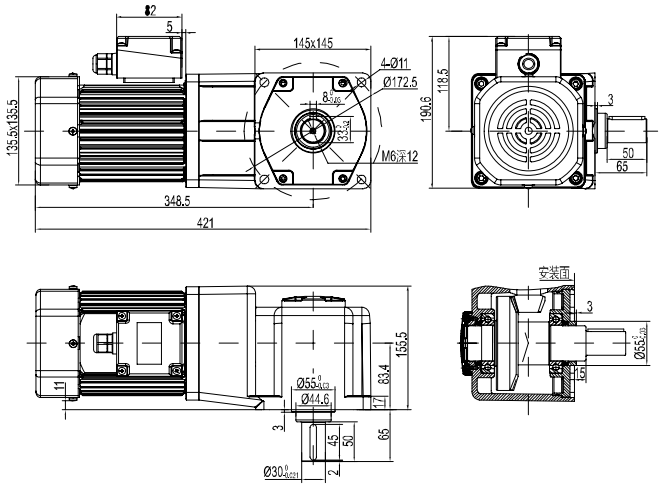
- 表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
- 表中 色框表示输出轴的旋转方向与电机旋转方向相反。
- 表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
- 减速箱的最大容许转矩为 250N·M。
- In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 250N·M.

●外形尺寸（单位mm）Dimension (unit mm)

感应尺寸图 INDUCTION TYPE DRAWING

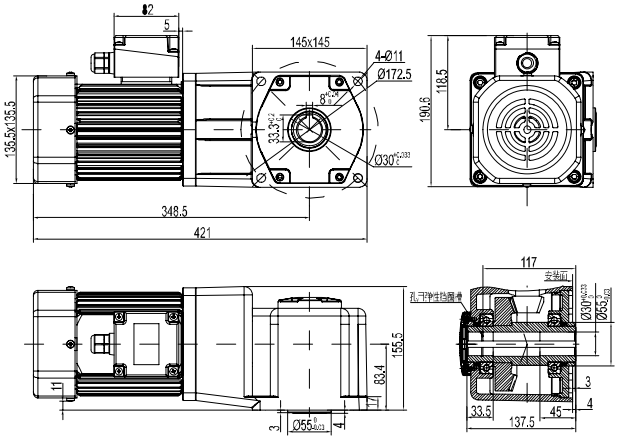
●弧锥齿实心轴　S250Y220T □ RT

重量 Weight: 18.9kg



●弧锥齿空心轴　S250Y220T □ RC

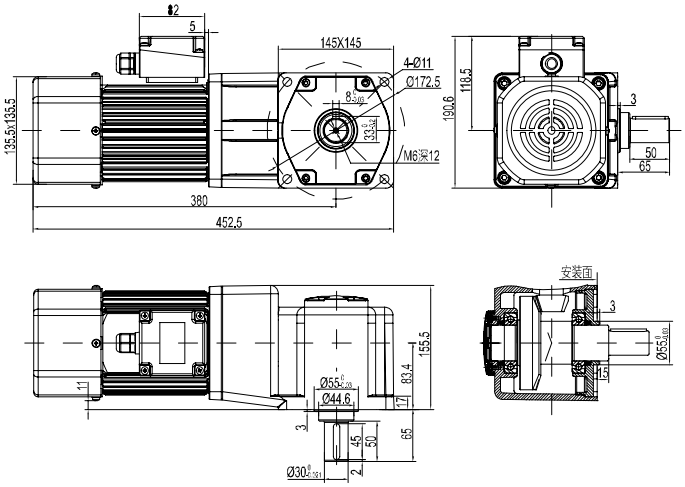
重量 Weight: 17.8kg



变频尺寸图 FRRQUENCY CONVERSION TYPE DRAWING

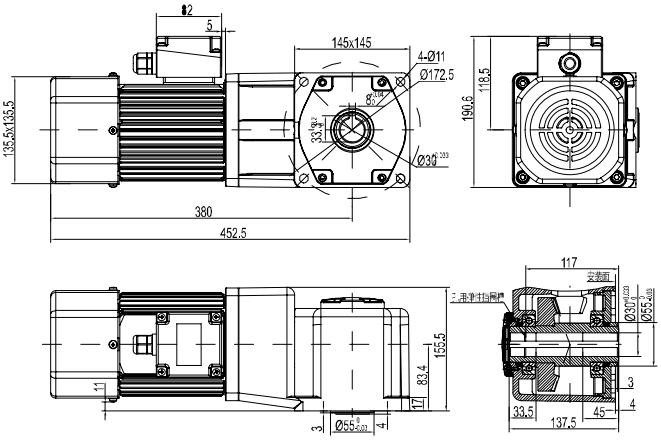
●弧锥齿实心轴　F250Y220T □ RT

重量 Weight: 19.1kg



●弧锥齿空心轴　F250Y220T □ RC

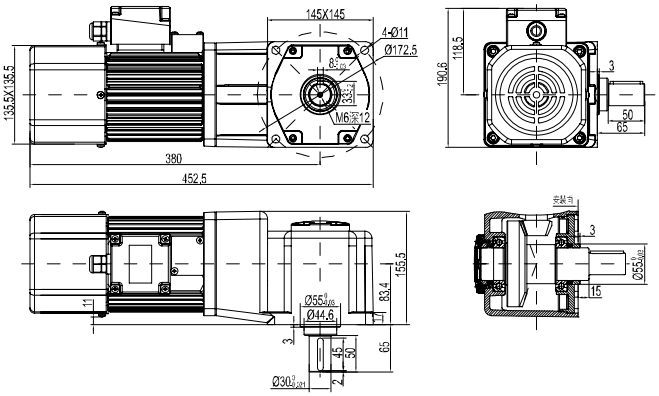
重量 Weight: 18kg



电磁制动尺寸图 BRAKE TYPE DRAWING

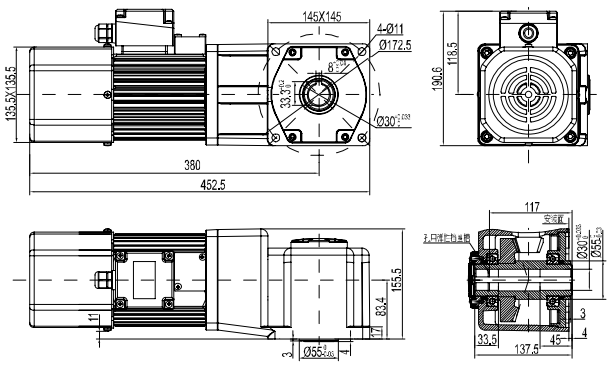
●弧锥齿实心轴　B250Y220T □ RT

重量 Weight: 19.8kg



●弧锥齿空心轴　B250Y220T □ RC

重量 Weight: 18.9kg



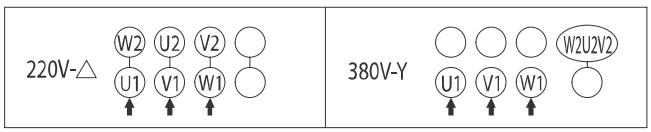
●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.



三相电机若对换任意两条电源线顺序，可实现反向运转。

To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

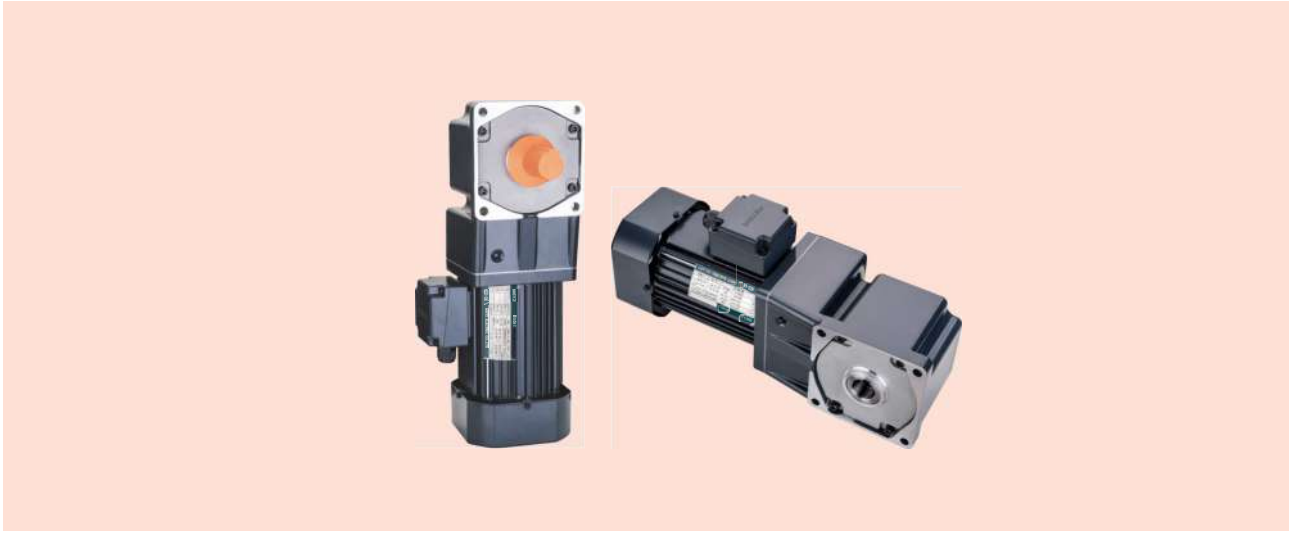
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

中型交流直角减速电机
Medium-sized AC RIGHT GNGLE GEAR MOTOR

370W
145mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	工作制式 Working mode	防护等级 protection grades
电机种类 Type of Motor	型号 Type	W	V	Hz	A	r/min	mN.m	mN.m		
感应电机 Induction motor	S370Y22T	370	3ph220	50	1.9	1400	2.7	5.9	S1	IP44
				60	1.8	1650	2.2	4.8		
	S370Y38T		3ph380	50	1.1	1400	2.7	5.9		
				60	1.0	1650	2.2	4.8		
变频电机 Frequency conversion motor	F370Y22T	370	3ph220	2~60	1.9	50~1700	2.7	5.9		
	F370Y38T		3ph380		1.1		2.7	5.9		
电磁制动电机 Brake motor	B370Y22T	370	3ph220	50	1.9	1400	2.7	5.9		
				60	1.8	1650	2.2	4.8		
	B370Y38T		3ph380	50	1.1	1400	2.7	5.9		
				60	1.0	1650	2.2	4.8		

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio	5	7.5	10	12.5	15	20	25	30	36	50	60	75	90	100	120	150
转速 Speed r/min	270	180	135	108	90	67.5	54	45	37.5	27	22.5	18	15	13.5	11.25	9
转矩 Torque N.m	8.6	13.0	19.1	23.9	29	38	48	57	69	86	104	130	155	173	207	250

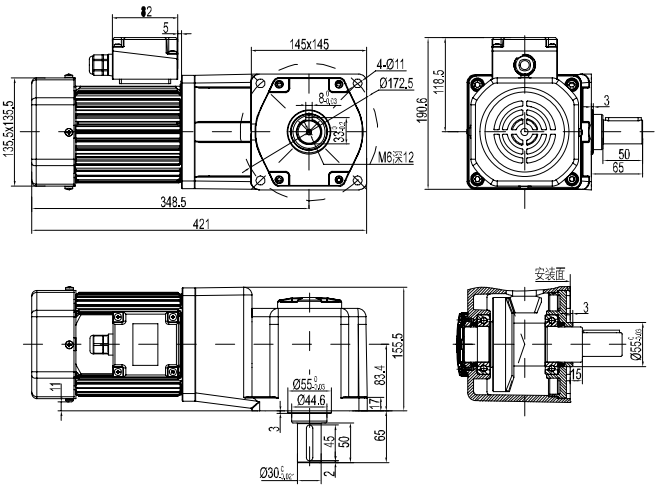
- ●表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
- ●表中 色框表示输出轴的旋转方向与电机旋转方向相反。
- ●表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
- ●减速箱的最大容许转矩为 250N·M。
- ● In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- ● The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- ● Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- ● The maximum allowable torque of the decelerator is 250N·M.

●外形尺寸（单位mm）Dimension (unit mm)

感应尺寸图 INDUCTION TYPE DRAWING

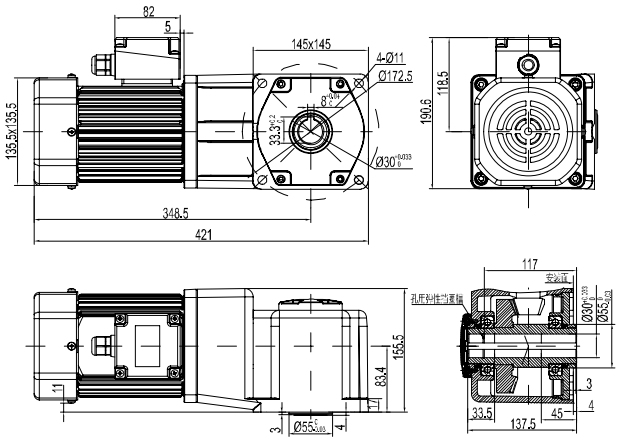
●弧锥齿实心轴　S370Y220T □ RT

重量 Weight: 19.2kg



●弧锥齿空心轴　S370Y220T □ RC

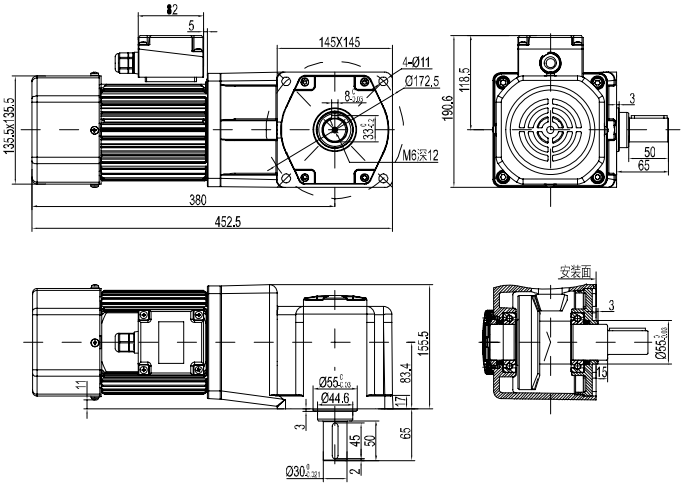
重量 Weight: 18.1kg



变频尺寸图 FRRQUENCY CONVERSION TYPE DRAWING

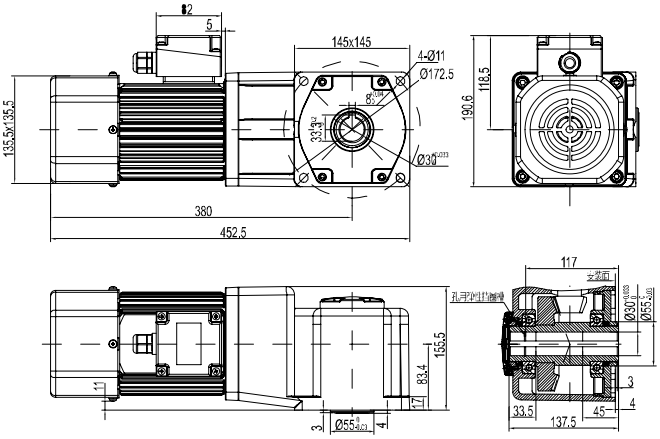
●弧锥齿实心轴　F370Y220T □ RT

重量 Weight: 19.4kg



●弧锥齿空心轴　F370Y220T □ RC

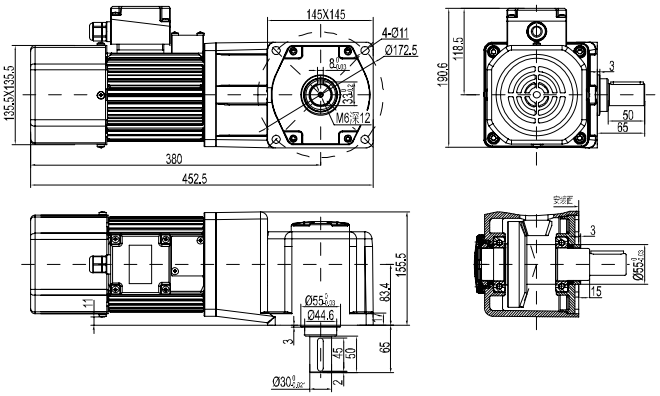
重量 Weight: 18.3kg



电磁制动尺寸图 BRAKE TYPE DRAWING

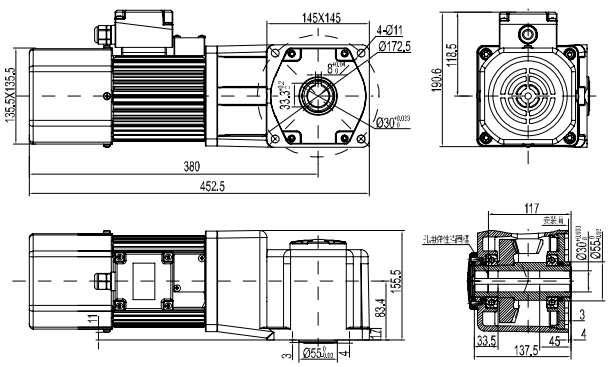
●弧锥齿实心轴　B370Y220T □ RT

重量 Weight: 20.1kg



●弧锥齿空心轴　B370Y220T □ RC

重量 Weight: 19kg



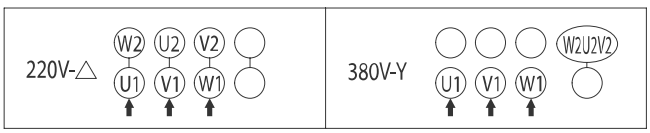
●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.



三相电机若对换任意两条电源线顺序，可实现反向运转。

To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

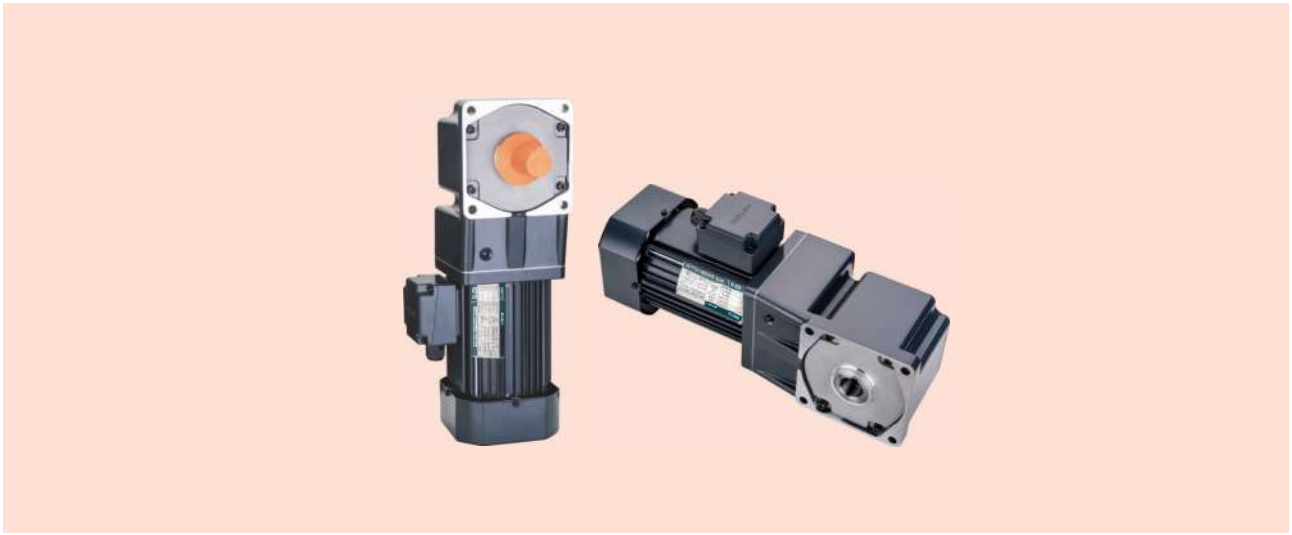
若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

中型交流直角减速电机
Medium-sized AC RIGHT GNGLE GEAR MOTOR

750W
145mm



●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	工作制式 Working mode	防护等级 protection grades
电机种类 Type of Motor	型号 Type	W	V	Hz	A	r/min	mN.m	mN.m		
感应电机 Induction motor	S750Y22T	750	3ph220	50	3.4	1400	5.4	11.9	S1	IP44
				60	3.2	1650	4.5	9.9		
	S750Y38T		3ph380	50	2.0	1400	5.4	11.9		
				60	1.9	1650	4.5	9.9		
变频电机 Frequency conversion motor	F750Y22T	750	3ph220	2~60	3.4	50~1700	5.4	11.9		
	F750Y38T		3ph380		2.0		5.4	11.9		
电磁制动电机 Brake motor	B750Y22T	750	3ph220	50	3.4	1400	5.4	11.9		
				60	3.2	1650	4.5	9.9		
	B750Y38T		3ph380	50	2.0	1400	5.4	11.9		
				60	1.9	1650	4.5	9.9		

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio	5	7.5	10	12.5	15	20	25	30	36	50	60	75
转速 Speed r/min	270	180	135	108	90	67.5	54	45	37.5	27	22.5	18
转矩 Torque N.m	17.5	26.3	38.7	48.4	58	77	97	116	126	175	210	250

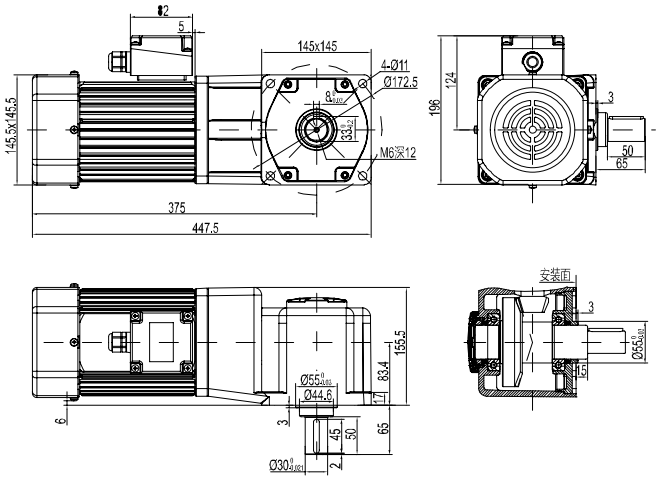
- 表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
- 表中 色框表示输出轴的旋转方向与电机旋转方向相反。
- 表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
- 减速箱的最大容许转矩为 250N·M。
- In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 250N·M.

●外形尺寸（单位mm）Dimension (unit mm)

感应尺寸图 INDUCTION TYPE DRAWING

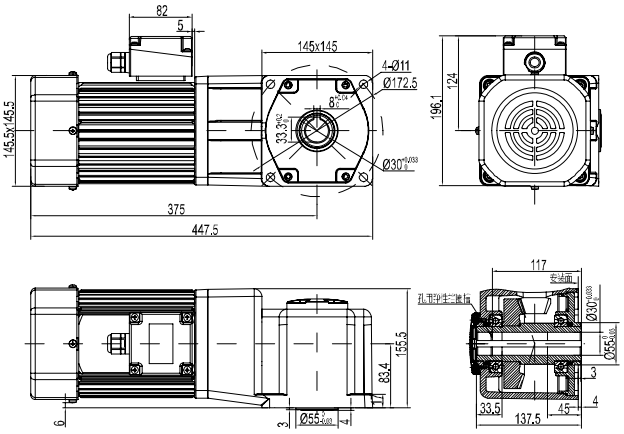
●弧锥齿实心轴 S750Y220T □ RT

重量 Weight: 22kg



●弧锥齿空心轴 S750Y220T □ RC

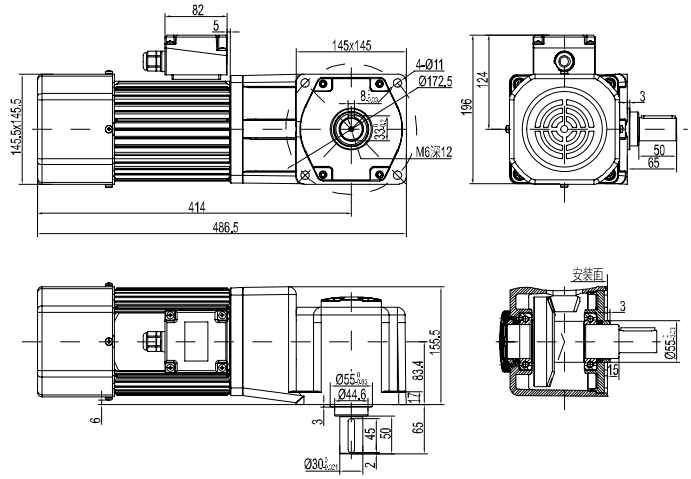
重量 Weight: 20.9kg



变频尺寸图 FRRQUENCY CONVERSION TYPE DRAWING

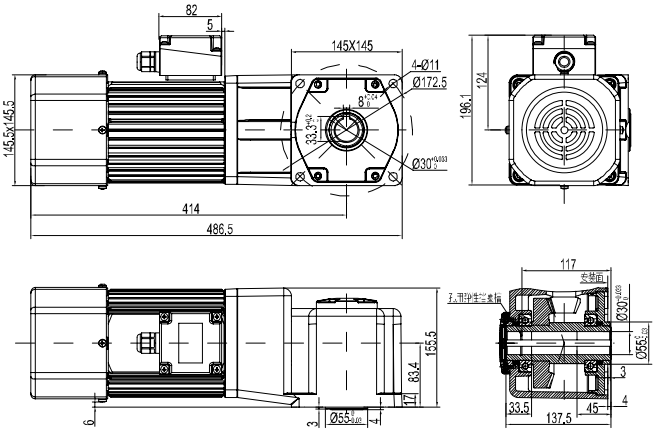
●弧锥齿实心轴 F750Y220T □ RT

重量 Weight: 22.6kg



●弧锥齿空心轴 F750Y220T □ RC

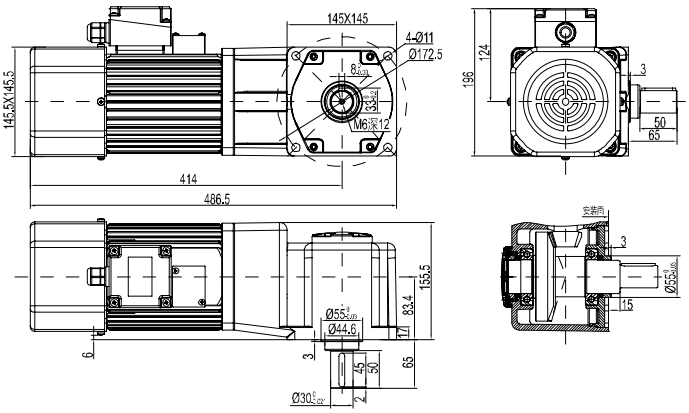
重量 Weight: 21.5kg



电磁制动尺寸图 BRAKE TYPE DRAWING

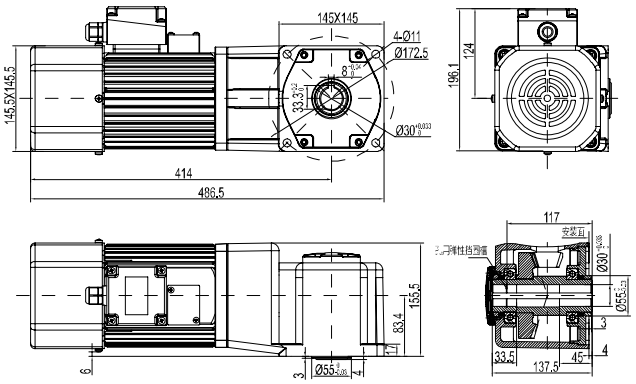
●弧锥齿实心轴　B750Y220T □ RT

重量 Weight: 23.9kg



●弧锥齿空心轴　B750Y220T □ RC

重量 Weight: 22.8kg



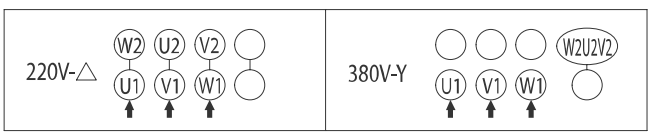
●接线图Wiring Diagram

●运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

●表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.



三相电机若对换任意两条电源线顺序，可实现反向运转。

To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.

中型交流直角减速电机
Medium-sized AC RIGHT GNGLE GEAR MOTOR

1500W
145mm

●电机型号/性能 List of motor characteristics

电机型号 Motor Model		输出功率 Output Power	电压 Voltage	频率 Frequenc	电流 Current	额定转速 Rated Speed	额定转矩 Rated Torque	启动转矩 Starting Torque	工作制式 Working mode	防护等级 protection grades
电机种类 Type of Motor	型号 Type	W	V	Hz	A	r/min	mN.m	mN.m		
感应电机 Induction motor	S1500Y22T	1500	3ph220	50	6.4	1400	10.7	23.5	S1	IP44
				60	6.1	1650	9.1	20.0		
	S1500Y38T		3ph380	50	3.7	1400	10.7	23.5		
				60	3.5	1650	9.1	20.0		
变频电机 Frequency conversion motor	F1500Y22T	1500	3ph220	2~60	6.4	50~1700	10.7	23.5		
	F1500Y38T		3ph380		2.7		10.7	23.5		
电磁制动电机 Brake motor	B1500Y22T	1500	3ph220	50	6.4	1400	10.7	23.5		
				60	6.1	1650	9.1	20.0		
	B1500Y38T		3ph380	50	3.7	1400	10.7	23.5		
				60	3.5	1650	9.1	20.0		

●减速箱减速比/性能对照表 Gear reduction ratio/performance comparison

减速比 Gear Ratio	5	7.5	10	12.5	15	20	25	30	36
转速 Speed r/min	270	180	135	108	90	67.5	54	45	37.5
转矩 Torque N.m	35.0	58.1	77.5	96.8	116	140	175	210	250

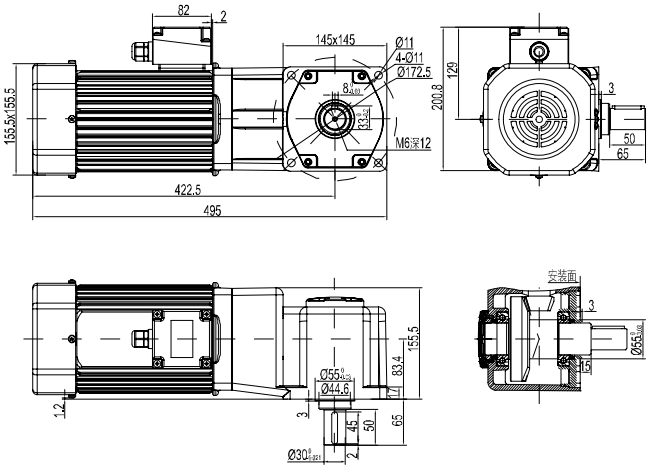
- 表中转速是以电机的平均转速为基数除以减速比而算出的数值。实际转速将随负载大小而变化，变化范围 2~20%。
- 表中 色框表示输出轴的旋转方向与电机旋转方向相反。
- 表中转矩是以电机额定转矩 × 减速比 × 传动效率计算而得。
- 减速箱的最大容许转矩为 250N·M。
- In the table, the speed is calculated from the base of the motor's average speed divided by the deceleration ratio.The actual speed will vary with the load, ranging from 2 % to 20%.
- The box in the table indicates that the rotation direction of the output axis is opposite to that of the motor.
- Table transfer torque is calculated from motor rated torque * deceleration ratio * transmission efficiency.
- The maximum allowable torque of the decelerator is 250N·M.

●外形尺寸（单位mm）Dimension (unit mm)

感应尺寸图 INDUCTION TYPE DRAWING

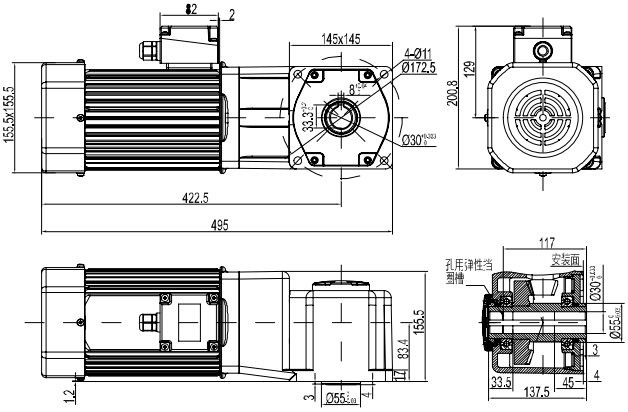
●弧锥齿实心轴 S1500Y220T □ RT

重量 Weight: 26.9kg



●弧锥齿空心轴 S1500Y220T □ RC

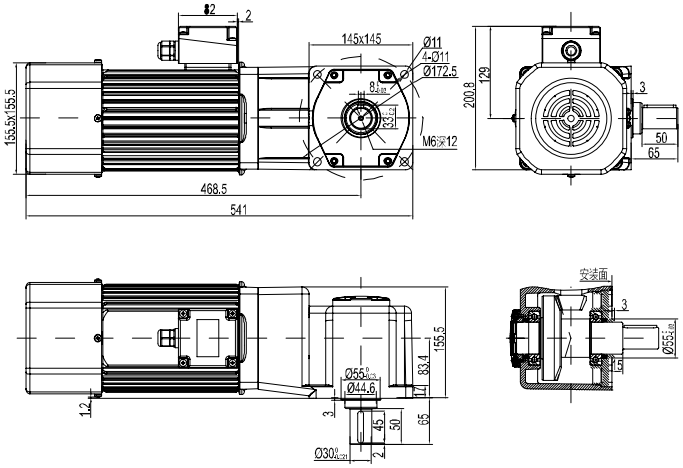
重量 Weight: 25.8kg



变频尺寸图 FRRQUENCY CONVERSION TYPE DRAWING

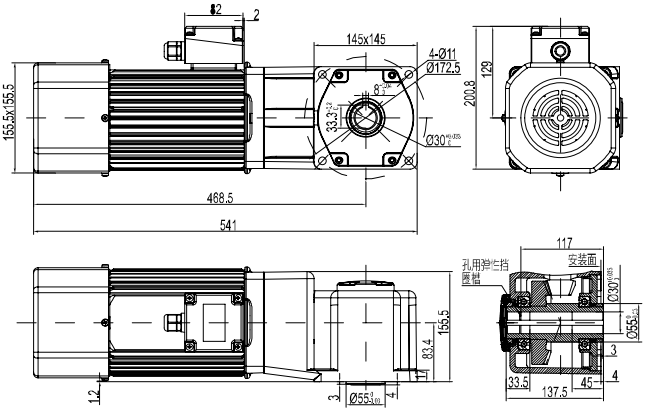
●弧锥齿实心轴 F1500Y220T □ RT

重量 Weight: 27.6kg



●弧锥齿空心轴 F1500Y220T □ RC

重量 Weight: 26.5kg



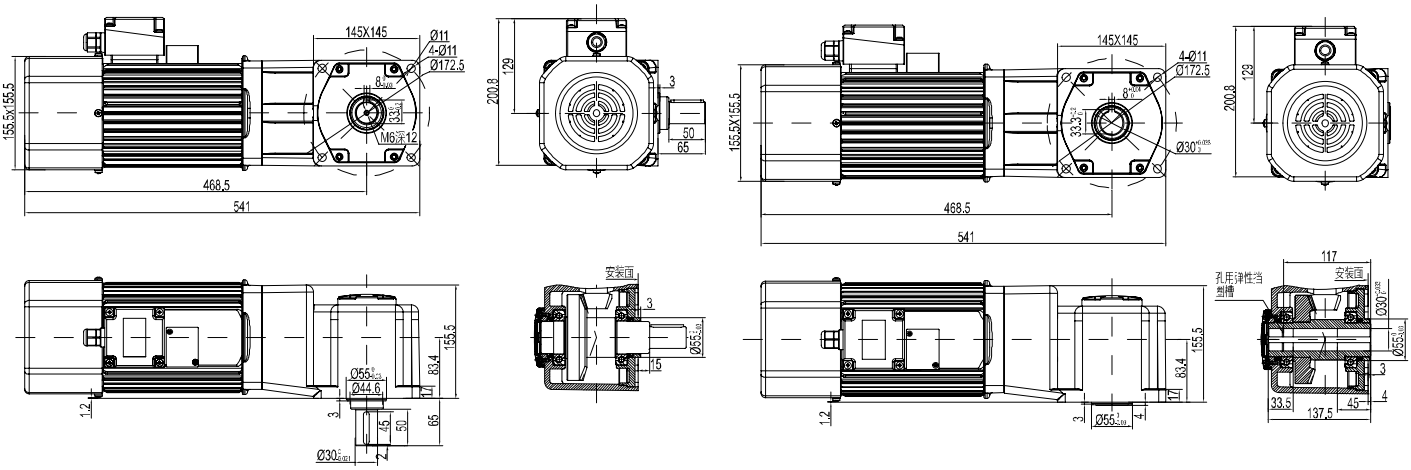
电磁制动尺寸图 BRAKE TYPE DRAWING

● 弧锥齿实心轴 B1500Y220T □ RT

重量 Weight: 30.1kg

● 弧锥齿空心轴 B1500Y220T □ RC

重量 Weight: 29kg



●接线图Wiring Diagram

● 运转方向指从电机轴看来的方向。CW 表示顺时针方向，CCW 表示逆时针方向。

● 表中所记型号为齿轮轴型，圆轴型亦同。

● The direction ol motor rotation is as viewed from the shaft end of motoc CW represents the clockwise direction, whle CCW represents the counterdockwise direction.

● Name indicated in the list is pinion shaft we, also valid for the equivalent round shaft type.

三相电机若对换任意两条电源线顺序，可实现反向运转。

To change the rotation direction change any twoconnections among.

●请注意Note

单相电机运转方向的转换应在电机停止后进行。

若在电机运转时转换运转方向，可能发生无法转换运转方向或须费时较久的情况。

Change the direction of single-phase motor rotation only after bring the motor to a stop.

If an attempt is made to change the direction of rotation while the motor is rotating, motor may ignore reversing command or change its direction of rotation after some delay.