

无刷电机产品型录

BDU 高压无刷电机及驱动器
BDU high-voltage brushless motor and driver

BDR 低压无刷电机及驱动器
BDU low-voltage brushless motor and driver

 凯福科技
Kaifull
Technology



2023 提供全球领先的运动控制解决方案
Provide the world's leading motion control solutions

关于凯福科技

ABOUT US

广东凯福电子科技有限公司是一家一直致力于高品质运动控制产品的研发、生产和销售于一体的高新技术企业，公司始终坚持“以市场需求为导向，以技术创新为核心”作为企业理念和发展战略。经过 15 年的努力经营，已发展成为国内领先的步进电机和驱动器及相关产品的研发制造商。

Guangdong Kaifull Electronics Technology Co., Ltd. is a high-tech enterprise that has been committed to the research and development, production and sales of high-quality motion control products. The company always adheres to the development strategy that is "market-oriented, and places technological innovation as the core", and after 15 years of unremitting efforts, it has been grown into a leading research and development manufacturer of stepper motors, drivers and related products in China.

凯福科技拥有自主品牌“凯福 (Kaifull) ”、“YARAK”，产品涵盖步进电机驱动系统、伺服电机驱动系统、无刷电机驱动系统行星减速机、中空旋转平台、精密微调台、对位平台、直线电机等系列产品，广泛应用于 3c 行业、数控机床、医疗设备、激光雕刻、纺织印刷、包装机械、电子设备、机器人、锂电池、半导体等高新技术行业。

The company has its own brand "Kaifull", "YARAK", and its products cover stepper motor drive system, servo motor drive system, brushless motor drive system, planetary reducer, hollow rotary platform, precision fine tuning table, alignment platform, linear motors and other products. The products are widely applied to 3C industry, CNC machine tool, medical equipment, laser engraving, textile printing, packaging machinery, electronic equipment, robot, lithium battery, semiconductor and other high-tech industries.

凯福，多年以来一直致力于工业自动化控制领域，先后与医疗、半导体、3c 电子、锂电池、激光设备等行业内的知名企业建立了良好的合作关系。

The company has been committed to the field of industrial automation control over the years, and has established good cooperative relations with well-known enterprises in the medical, semiconductor, 3c electronics, lithium battery, laser equipment and other industries.

公司在东莞和苏州分别建立了生产基地，强大的研发能力以及先进的制造设备和制造工艺，运用完善的检测手段，确保产品的质量及供货保障。同时，公司拥有经验丰富的销售和技术团队，通过服务提升客户价值，不断了解客户需求，持续跟踪客户发展，为客户提供最好的运动控制解决方案，15 年来凯福科技秉承“提供全球领先的运动控制方案”的使命，立志让每一家智能制造工厂都信赖凯福的产品和服务！

The company has established production bases in Dongguan and Suzhou respectively. With strong R&D capabilities and advanced manufacturing equipment and manufacturing technology, together with the application of perfect testing means, it aims to ensure product quality and supply security. At the same time, the company has an experienced sales and technical team, which is dedicated to enhancing customer value through services, constantly understanding customer needs, and continuing to track customer development, thus to provide customers with the best motion control solutions. Over the past 15 years, Kaifull Technology has been adhering to the mission of "providing the world-leading motion control solutions", and is determined to make every intelligent factory rely on products and services provided by Kaifull!

		
东莞总公司 Dongguan Headquarters	苏州分公司 Suzhou Branch	武汉分公司 Wuhan Branch

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BDR 系列低压无刷电机及驱动器

BDR series low-voltage brushless motor and driver

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Official website: www.kaiful.net | Sales service hotline: 400-960-1069

凯福科技
Kaifull Technology

无刷电机及驱动器
Brushless motor and
driver

快速配线、轻松控制速度、使用更简单
Fast wiring, easy speed control, easier to
use



产品特点

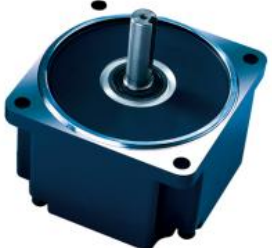
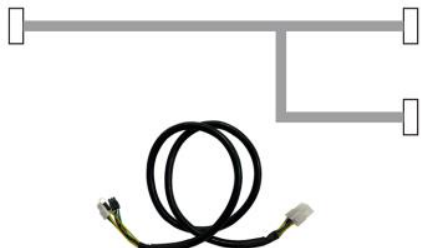

Product features

<h3>简单配线 Simple wiring</h3> <p>直接连接到电机;轻松连接到驱动器侧; IO 连接器无需螺丝</p> <p>Directly connected to the motor; Easily connected to the driver side; IO connector dispenses with screws</p>	<h3>数字显示功能 Digital display function</h3> <p>可监控转速、负载率、运行状况、IO 状态等, 方便在线设置参数值和功能;</p> <p>Able to monitor speed, load rate, running status, IO status, etc., facilitate parameter values and functions online;</p>	<h3>面板控制 Panel control</h3> <p>支持面板操控控制电机, 支持通过外部 IO 控制电机;</p> <p>Support control of motor by panel or external IO;</p>												
														
<h3>4 段速控制 Four-stage speed control</h3> <p>最大扭矩可调, 加减速可调, 支持 4 段速控制;</p> <p>The maximum torque is adjustable, the acceleration and deceleration are adjustable, and the four-stage speed control is supported;</p>	<h3>速度稳定 Stable speed</h3> <p>速度闭环控制使速度受负载波动影响极小, 额定转速下速度误差小于 1%;</p> <p>The speed closed-loop control makes the speed subject to minimal affect of the load fluctuation, and the speed error is less than 1% under the rated speed.</p> <p>普通变频器 V/F 调速的速度误差大于 10%;</p> <p>The speed error of common frequency converter V/F speed regulation is greater than 10%;</p>	<h3>调速范围宽 Wide range of speed regulation</h3> <p>可实现电机转速从 120RPM~3600RPM 的无极调速, 速度变化柔和, 减少对设备的冲击;</p> <p>Able to realize the motor stepless speed regulation ranging from 120RPM to 3600RPM, the soft speed variation may reduce the impact on the equipment;</p>												
		<table border="1"> <thead> <tr> <th>产品群</th> <th>速度控制范围*</th> <th>速度比</th> </tr> </thead> <tbody> <tr> <td>无刷电机 BDU 系列</td> <td>120~3600r/min</td> <td>1:30</td> </tr> <tr> <td>变频器控制三相感应电动机</td> <td>200~2400r/min</td> <td>1:12</td> </tr> <tr> <td>AC 调速电动机</td> <td>50Hz: 90~1400r/min 60Hz: 90~1600r/min</td> <td>1:15</td> </tr> </tbody> </table> <p>* 不同的产品各有不同的速度控制范围。 * Different products come with different speed control ranges.</p>	产品群	速度控制范围*	速度比	无刷电机 BDU 系列	120~3600r/min	1:30	变频器控制三相感应电动机	200~2400r/min	1:12	AC 调速电动机	50Hz: 90~1400r/min 60Hz: 90~1600r/min	1:15
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<h3>功率密度高 High power density</h3>	<h3>其他功能 Other features</h3>													
	<ul style="list-style-type: none"> 参数可保存 Parameters are savable 停车力矩保持 Peak torque holding 设定加速度、减速度 Set acceleration and deceleration 设定转速上下限 Set upper and lower limits of speed 													

	<ul style="list-style-type: none">● 设定电流上限● Set upper limit of current● 分配 IO 功能● Allocate IO function● 显示经加、减速后的负载速率● Display the load rate after acceleration and deceleration● 设定上电后是否运行● Set whether to run after power-on● 保护功能● Protection features	
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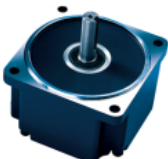


■产品构成

■ Product composition

电机 Motor	连接线 Connecting wire	驱动器 Driver
		

■产品种类

■ Product type

电机 Motor	输出功率 Output	安装尺寸 Installation	安装尺寸 Installation	减速机减速比 Reduction ratio	驱动器 Driver	驱动器型号 Driver model	电源电压 Supply
	30W	单电机 BL6B30-DT-F30 Single motor BL6B30-DT-F30	60mm	/		BDUB30	单相 220V Single-
		含减速机 BL6B30F□-DL-F30 Including reducer BL6B30F□-DL-F30		3、5、9、15、18、25、30、50、60、100			
单电机 Single motor	80W	单电机 BL8B80-DT-F30 Single motor BL8B80-DT-F30	80mm	/			
		含减速机 BL8B80FD-KL-F30 Including reducer BL8B80FD-KL-F30		3、5、9、15、18、25、30、50、60、100			
	120W	单电机 BL9B120-DT-F30 Single motor BL9B120-DT-F30	90mm	/			
		含减速机 BL9B120F□-KL-F30 Including reducer BL9B120F□-KL-F30		3、5、9、15、18、25、30、50、60、100			
含减速机 Including reducer	200W	单电机 BLAB200-KT-F30 Single motor BLAB200-KT-F30	104mm	/			
		含减速机 BLAB200F□-KL-F30 Including reducer BLAB200F□-KL-F30		3、5、9、15、18、25、30、50、60、100			

*功率小于 120W 如需单相 AC110V 可与客服联系。
※ If you require single-phase AC110V when the power is less than 120W, please contact the customer service personnel.

■连接线

■ Connecting wire

长度 Length	1m	1.5m	2m	3m	4m	6m	8m
型号 Model	CMU1	CMU1.5	CMU2	CMU3	CMU4	CMU6	CMU8

■使用方法

■ Application method

		
轻松设定速度 Easy speed setting	开始/停止 Start/stop	旋转方向的切换 Switch of rotation direction

<p>轻轻转动设定盘,设定成合适的数值。按下设定盘,即可保存转速。</p> <p>Gently turn the setting disc to set the appropriate value. Press the setting disc to save the speed.</p>	<p>通过前面的运行开关可轻松进行驱动、停止工作。</p> <p>Driving and inoperation can be enabled easily through the front running switch. 不需要在外部设置开关。</p> <p>It is unnecessary to install a switch externally.</p>	<p>可通过旋转方向开关切换电机的旋转方向。运行状态下也可以更改。</p> <p>The rotation direction of the motor can be switched by rotating the direction switch. Change is allowed in operation.</p>
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品名的阅读方式
Reading mode of item name

无刷驱动器
Brushless driver

① ② ③ ④ ⑤

无刷电机含减速机
Brushless motor (including reducer)

BL 8 B 80 F 9 - K L - F 30

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

连接线

Connecting wire

CMU 2 - □ □

① ② ③ ④ ⑤ ⑥

①	驱动器代号 BDU: BDU 系列 Driver code BDU: BDU series
②	电压等级 B: 220VAe 单相 A: 110VAC 单相 Voltage class phase B: 220VAe single-phase A: 110VAC single-phase
③	功率 30: 30W 80: Power 30: 30W 80: 120: 120W 200: 80W
①	电机代号 BL: 无刷电机 Motor code BL: Brushless motor
②	法兰尺寸 6: 60mm 8: 80mm Flange size 6: 60mm 8: 80mm 9: 90mm A: 104mm 9: 90mm A: 104mm
③	电压等级 B: 220VAC 单相 A: 110VAC 单相 Voltage class B: 220VAC single-phase A: 110VAC single-phase
④	功率等级 30: 30W 80: 80W Power class 30: 30W 80: 80W 120: 120W 200: 200W 120: 120W 200: 200W
⑥	减速机类型 □ 方型减速机 □ 空心减速机
①	连接线代号 C Connecting wire code C
②	连接线类型 M: 电机 Type of connecting wire M: Motor
③	产品系列 U: BDU 系列 Product series U: BDU series
④	1: 1m 1.5: 1.5m 2: 2m 1: 1m 1.5: 1.5m 2: 2m 连接线长度 3: 3m 4: 4m 6: 6m Length of connecting wire 3: 3m 4: 4m 6: 6m 8: 8m

⑤ ⑥ 电机转速 30: 3000rpm
Motor speed 30: 3000rpm
⑩ 定制功能 30: 3000rpm
Customized functions Reserved

■ 电机规格

■ Motor specifications

功率 Power	法兰 Flange	输入电压 Input voltage	额定输入电流 Rated input current A	最大输入电流 Maximum input current A	额定转速 Rated speed	额定转矩 Rated torque	瞬时最大转矩 Instantaneous maximum torque	电机长度 Motor length
30W	60mm	单相 220V±15% Single-phase 220V±15%	<0.5	<1.2	3000rpm	0.096Nm	0.191Nm	55mm
80W	80mm		<1.0	<2.0		0.254Nm	0.509Nm	58mm
120W	90mm		<1.5	<2.5		0.382Nm	0.611Nm	72mm
200W	104mm		<2.0	<3.0		0.636Nm	0.826Nm	80mm

■ 减速机参数

■ Reducer parameters

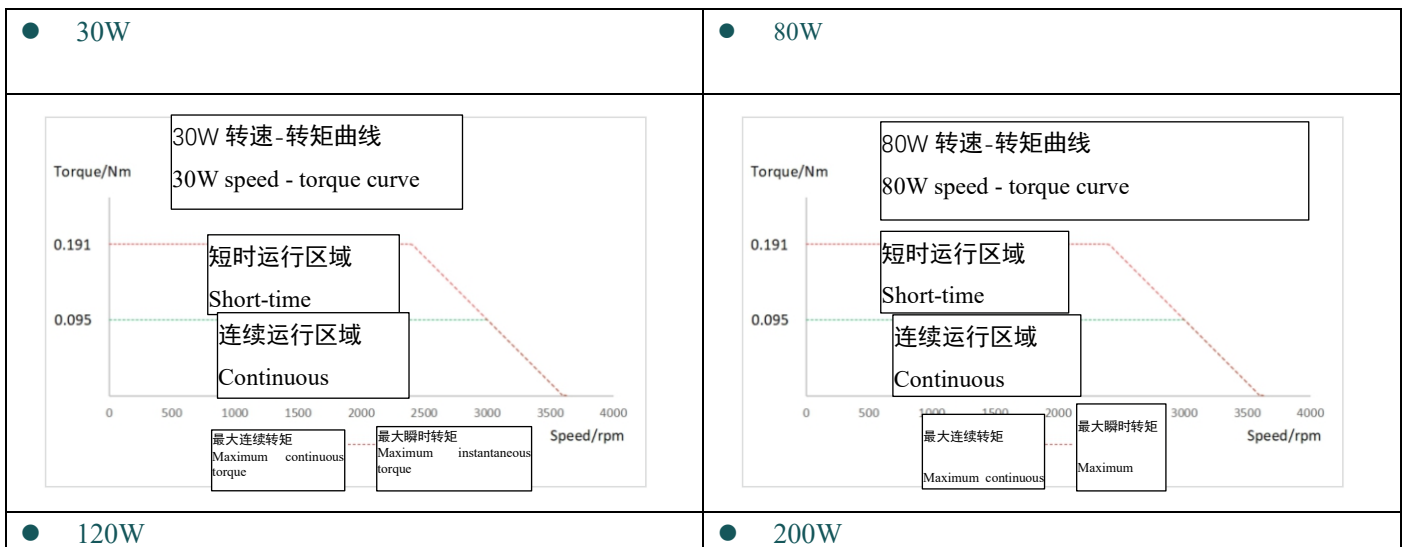
法兰尺寸 Flange size	减速比 Reduction ratio	3	5	9	15	18	25	30	50	60	100
	输出转速/rpm Output speed/rpm	1000	600	333	200	166	120	100	60	50	30
60mm	输出转矩/Nm Output torque/Nm	0.23	0.38	0.69	1.15	1.38	1.69	2.03	3.0	3.0	3.0
80mm		0.61	1.02	1.83	3.06	3.68	4.52	5.42	8.0	8.0	8.0
90mm		0.92	1.53	2.75	4.58	4.95	6.30	7.56	12.4	14.9	20.0
104mm		1.53	2.54	4.58	6.87	8.24	10.50	12.60	20.99	25.18	40.0

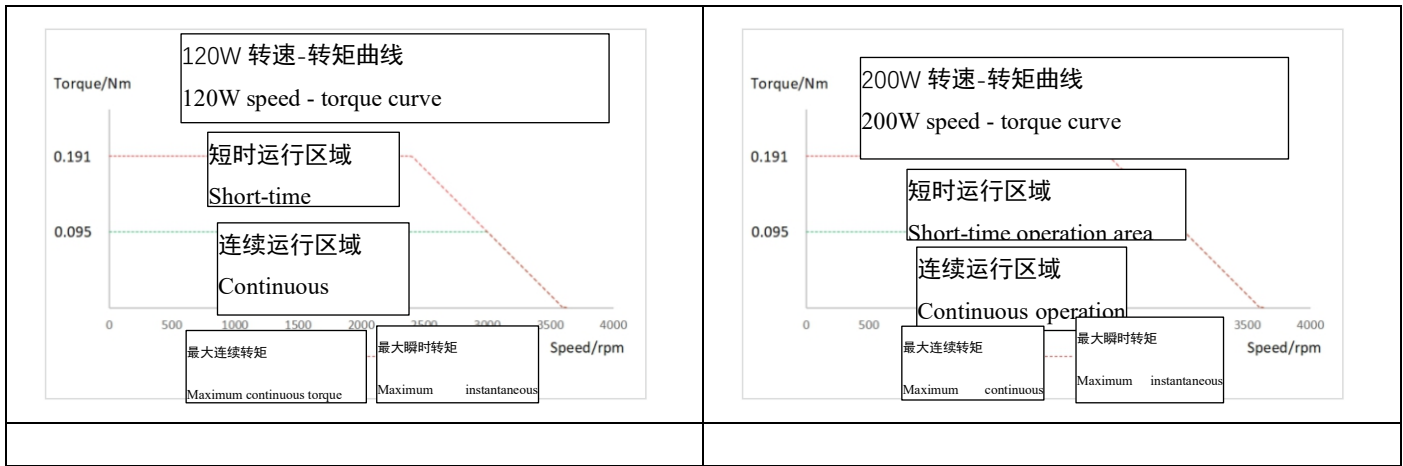
*表中转速是以电机额定转速除以减速比的计算值，实际转速会因负载以及减速机个体差异而降低 2%~10%。

* The speed in the table is the calculated value of the motor rated speed divided by the reduction ratio, and the actual speed will be reduced by 2% to 10% due to the load and the individual difference of the reducer.

■ 转速-转矩特性

■ Speed - torque features



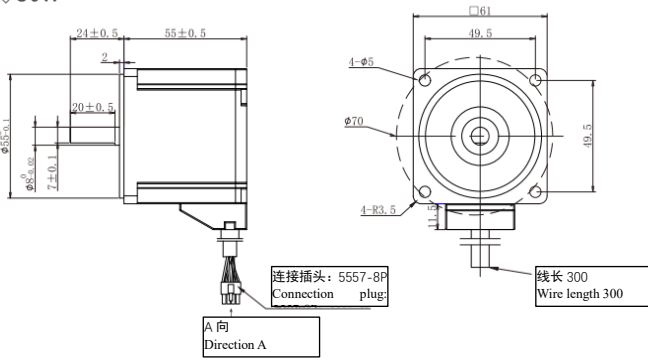


■电机机械尺寸（单电机）（单位:mm）

■ Motor mechanical dimensions (single motor) (unit: mm)

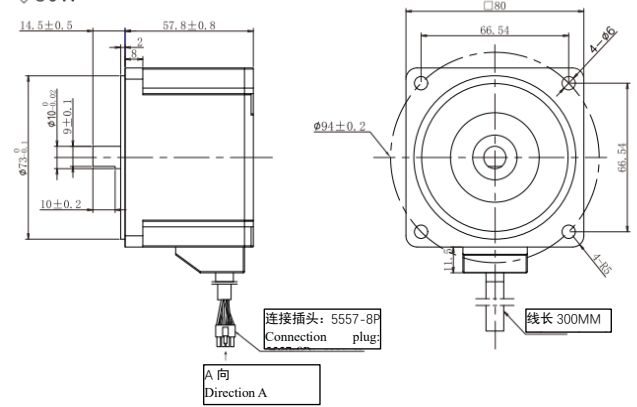
●BL6B30-DT-F30

◇30W



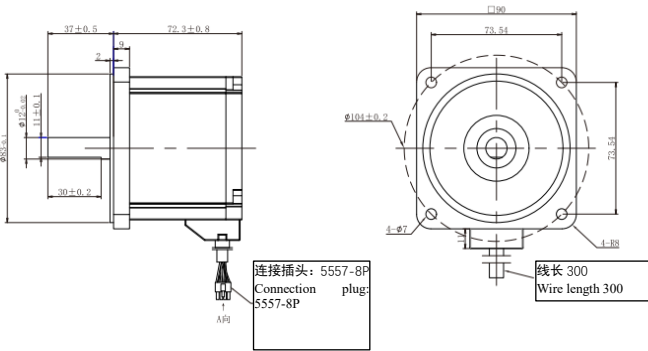
●BL8B80-DT-F30

◇80W



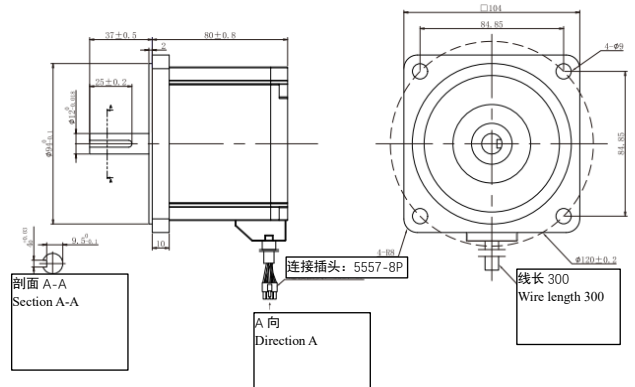
●BL9B120-DT-F30

◇120W



●BLAB200-KT-F30

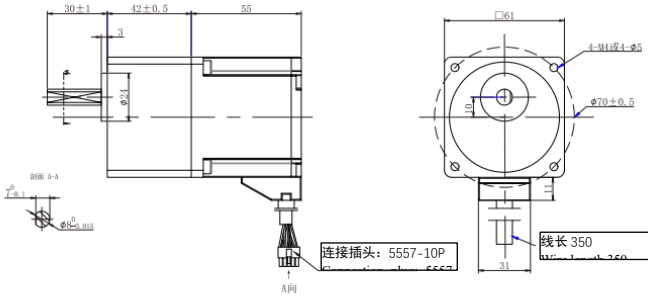
◇200W



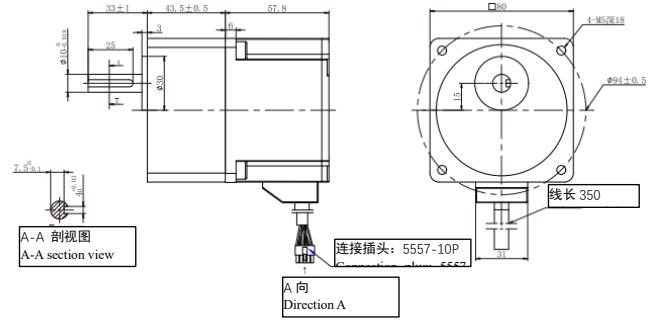
■电机机械尺寸（含减速机）（单位:mm）

■ Motor mechanical dimensions (including reducer) (unit: mm)

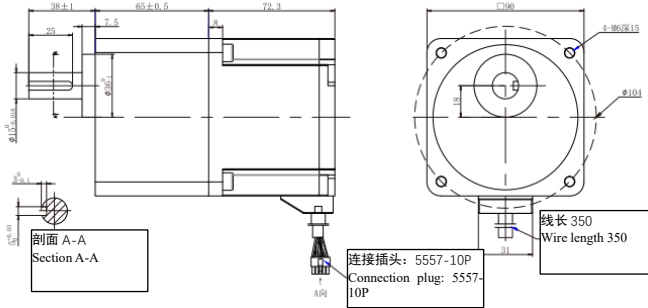
●BL6B30F□-DL-F30
◇30W



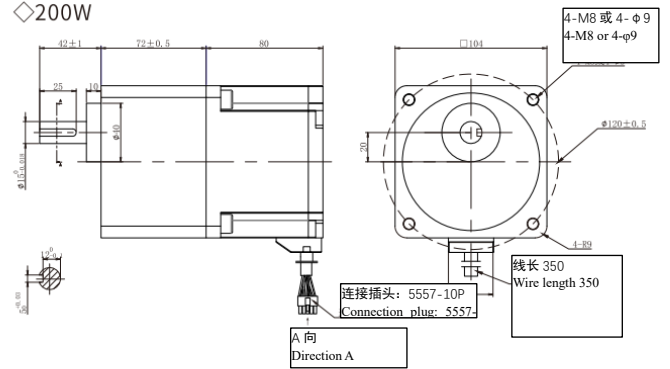
●BL8B80F□-KL-F30
◇80W



●BL9B120F□-KL-F30
◇120W

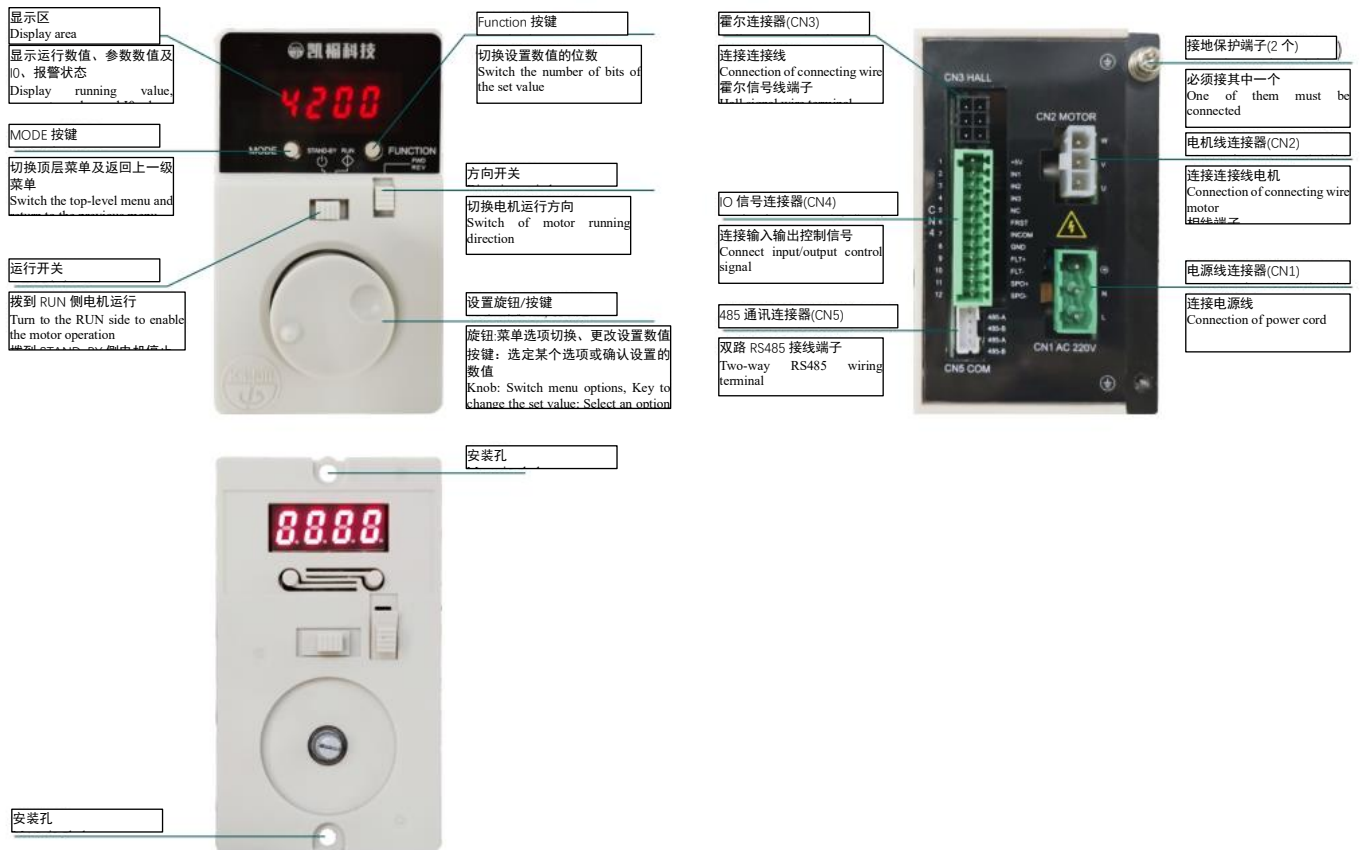


●BLAB200F□-KL-F30
◇200W



驱动器外观介绍

Introduction of driver appearance



引脚介绍

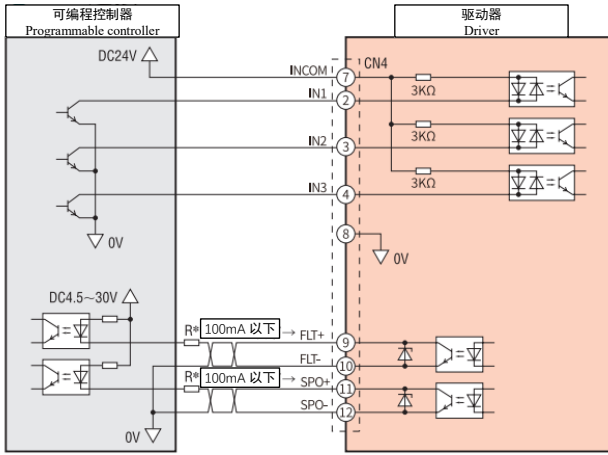
Pin introduction

接口名称	说明
CN1	220V 电源接口 220V power interface
CN2	连接线电机相线接口 Motor phase line interface of connecting wire
CN3	连接线霍尔线接口 Hall wire interface of connecting wire
CN4	数字 IO 接口 : 1: 内置 5V 电源+端;2~4: 通用输入口; 6: 故障清除输入口; 7: 输入口公共端;8: 内置 5V 电源-端; 6: Fault clearance input port; 7: Public terminal of input port; 8: Built-in 5V power supply 9,10: 故障报警输出口; 11,12: 转速脉冲输出口, 转速二脉冲频率 x2 9, 10: Fault alarm output port; 11,12: Speed pulse output port, speed pulse frequency *2
CN5	RS485 通讯接口 RS485 communication interface

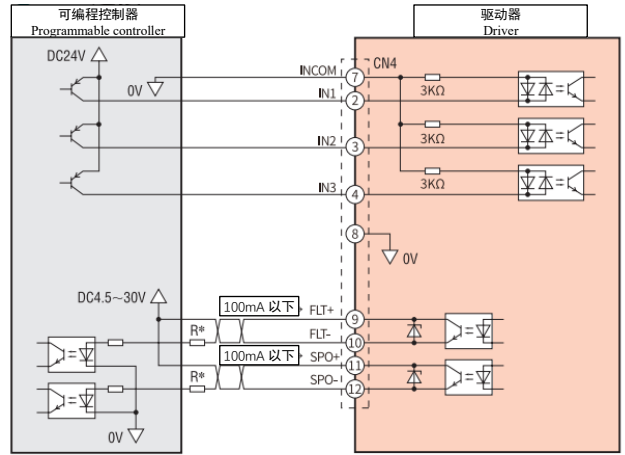
10 信号接线图

Signal wiring diagram

<ul style="list-style-type: none"> ● NPN 连接 ● NPN connection 	<ul style="list-style-type: none"> ● PNP 连接 ● PNP connection
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建议电阻值: DC24V 时: 680-2.7K Ω;
 Suspected resistance: In case of DC24V: 680 - 2.7KΩ;
 DC5V 时: 150-560 Ω



■ 典型操作说明

■ Typical operating instructions

<ul style="list-style-type: none">● 面板操作● Panel operation <p>01.1 设置面板控制模式（非面板控制模式才需要设置）： 01.1 Setting of panel control mode (the setting is required only under non-panel control mode) : 按 MODE 按键数次直至显示 Ctrl 并按下旋钮按键-> Press the MODE key several times until Ctrl is displayed and press the knob key -> 旋转旋钮选择 modE 并按下旋钮按键进入-> Turn the knob to select modE and press the knob to enter-> 旋转旋钮选择 m-Pn 并按下旋钮按键确定。 Turn the knob to select m-Pn and press the knob to confirm. 电机运行状态立即由面板上的开关以及设置的转速控制。</p> <p>The running state of the motor is immediately controlled by the switch on the panel and the set speed.</p> <p>01.2 电机运行: RUN/STANDBY 开关拨至 URUN 侧 01.2 Motor operation: The RUN/STANDBY switch is toggled to the URUN side</p> <p>01.3 电机停机:RU N/STANDBY 开关拨至 USTANDBY 侧 01.3 Motor shutdown: RU N/STANDBY switch is toggled to the USTANDBY side</p> <p>01.4 切换运转方向: FW/REV 开关拨到相应侧 01.4 Switch of running direction: The FW/REV switch is toggled to the corresponding side</p> <p>01.5 设置转速:①在默认显示速度状态下按下旋钮按键或者 01.5 Speed setting: ① Press the button when the speed is displayed by default or ②在非显示速度状态下按 MODE 键数次直至显示 DISP 并按下旋钮按键-> 旋转旋钮选中 SPD 并按下旋钮按键显示当前速度, ② When the speed is not displayed, press the MODE key several times until DISP is displayed and press the knob button -> Rotate the knob to select SPD and press the knob to display the current speed, 再按一次旋钮按键进入编辑状态-> Press the knob again to enter the edit status -></p> <p>旋转旋钮改变数字大小, 按 FUNCTION 按键切换数位, 设置速度值立即生效 若按下旋钮按键保存设置速度, 下次启动按此速度运行; Turn the knob to change the number size, press the FUNCTION button to switch the digit position, and the set speed value takes effect immediately. If you press the rotation button to save the set speed, the motor will be put into running by such speed at next startup; 若不按旋钮按键不保存速度值, 下次启动按上次保存过的速度运行。</p> <p>If you do not press the knob to save the speed value, the motor will be put into running by the speed saved previously at next startup;</p>	<ul style="list-style-type: none">● IO 操作● IO operation <p>02.1 设置 IO 控制模式（非 IO 控制模式才需要设置）： 按 MODE 按键数次直至显示 Ctrl 并按下旋钮按键进入-> 旋转旋钮选择 modE 并按下旋钮按键进入-> 旋转旋钮选择 m-IO 并按下旋钮按键确定。 02.1 Setting of I/O control mode (the setting is required only under non-I/O control mode) : Press the MODE key several times until Ctrl is displayed and press the knob to enter -> Turn the knob to select modE and press the knob to enter -> Turn the knob to select m-IO and press the knob to confirm. 电机运行状态立即由 IO 状态控制。</p> <p>The motor operating state is immediately controlled by the IO state.</p> <p>02.2 默认状态下, IN1 为运行指令接口 RUN/STOP, 接通为 RUN,不接通为 STOP; 02.2 By default, IN1 indicates operation command interface RUN/STOP, the motor is under running status when the interface is switched on; when the interface is switched off, the motor stops; IN2 为运行方向指令接口 FW/REV, 用户可根据电机及机构的情况选择接通或不接通; IN3 为速度指令接口, 默认为 2000rpm, 接通为 2000rpm,不接通为 0;</p> <p>IN2 refers to the running direction command interface FW/REV. Users can choose to switch on or off the interface according to the motor and mechanism conditions. IN3 is the speed command interface. The speed is 2000rpm by default. If the interface is switched on, the speed is 2000rpm; if the interface is switched off, the speed is 0;</p> <p>02.3 更改速度指令接口对应速度值: 02.3 Change of corresponding speed value of speed command interface: 按 MODE 按键数次直至显示 IOcF 并按下旋钮按键进入-> 旋转旋钮选中 M10 并按下旋钮按键进入-> Press the MODE button several times until IOcF is displayed and press the knob to enter -> Turn the knob to select M10 and press the knob to enter -> 旋转旋钮设置速度值大小,按下 FUNCTION 按键可切换数位-> 按下旋钮按键完成速度值设定。 Turn the knob to set the speed value, press the FUNCTION button to switch digit position -> Press the knob to complete the speed value setting.</p>
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■ 驱动器尺寸 (单位:mm)

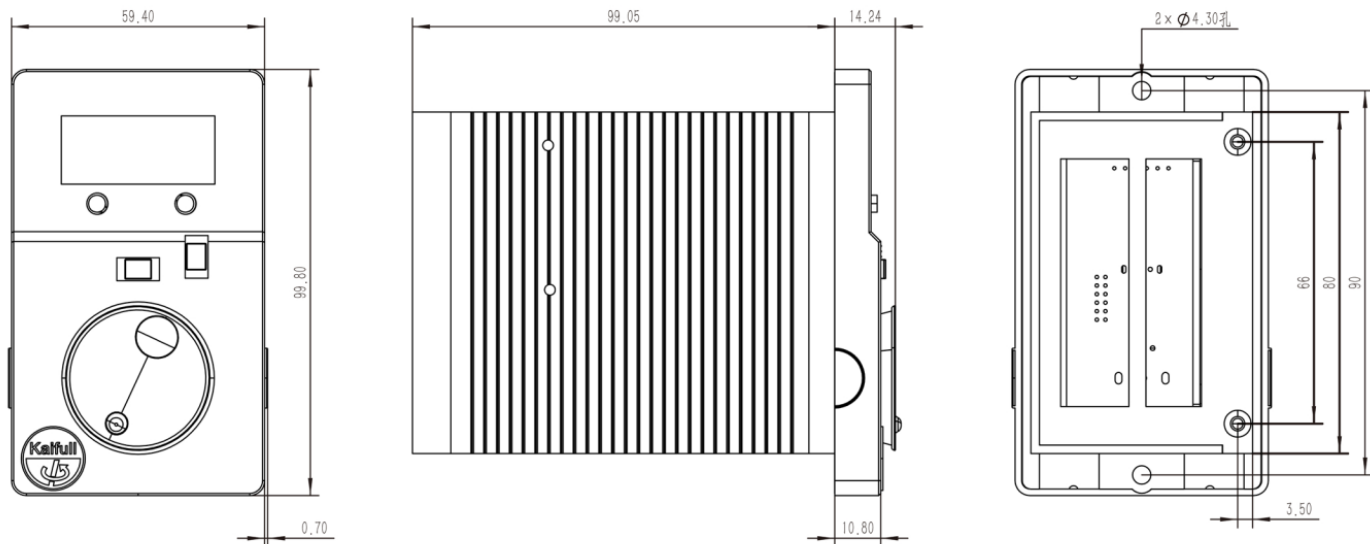
■ Driver dimensions (unit: mm)

- 无刷驱动器

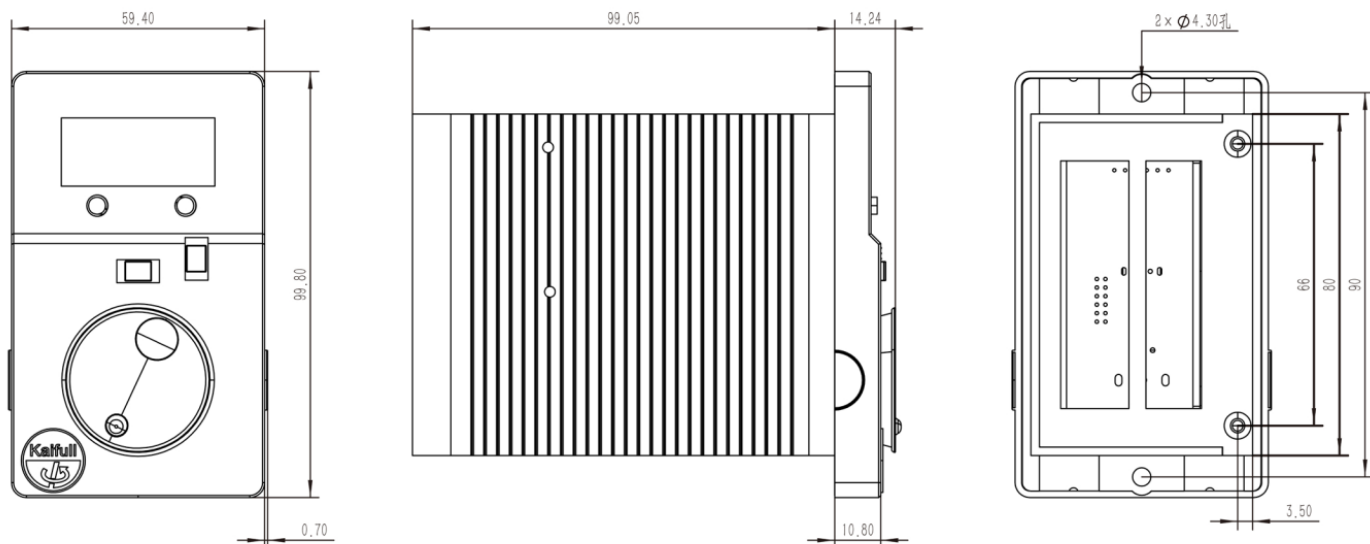
- Brushless driver

◇ 30W、80W、120W、200W

◇ 30W, 80W, 120W, 200W

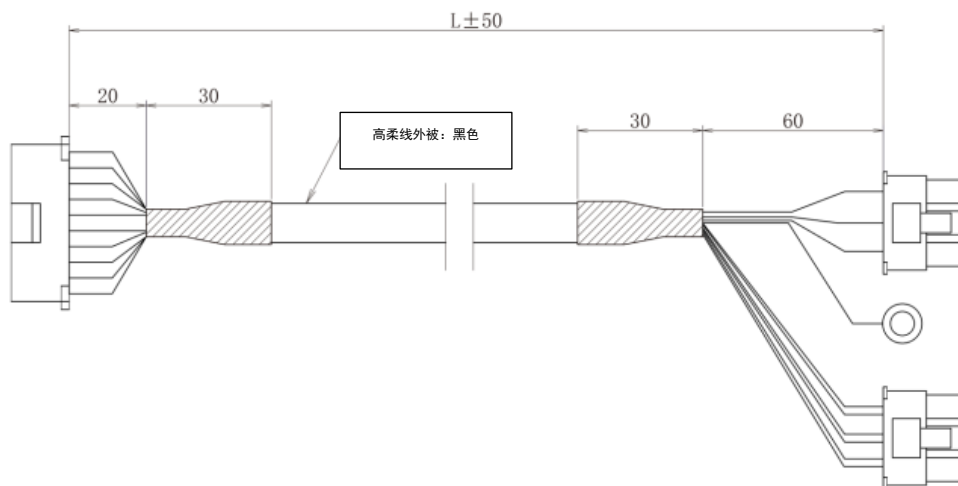


■ 连接线尺寸图



■ Dimensional drawing of connecting wire

- CMU□



凯福科技

Kaifull Technology

无刷电机及驱动器 Brushless motor and driver

多种速度控制方式、满足更多使用场景

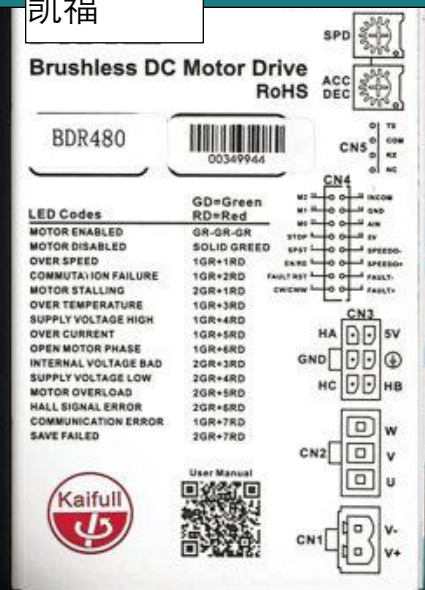
A variety of speed control modes are
available to fulfill more usage scenarios

BDR 系列低压无刷电机及驱动器

BDR series low-voltage brushless motor and driver






凯福



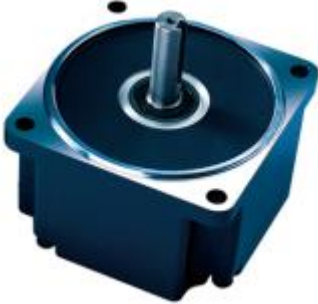
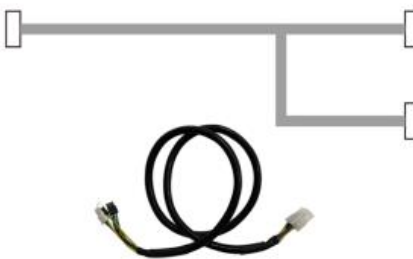

产品特点

Product features

 <p>低压安全 Low voltage safety</p>	 <p>接口丰富 Extensive interfaces</p>	 <p>紧凑小巧 Small and compact</p>
<p>直流 24V 供电，安全，平稳， With the adoption of DC 24V power supply, it is safe, stable and compatible with most digital electrical equipment such as PLC, handheld panels etc.</p>	<p>支持内置模拟量、外置模拟量、数字 IO 以及 通讯等多种方式进行调速。 It supports built-in analog, external analog, digital IO and communication and other ways for speed regulation. 另配备使能运行、正反转、故障清除、数字调速等 输入口以及转速故障输出口，满足用户多种控制程序。 In addition, it is equipped with input ports such as enable operation, positive/negative rotation, fault clearing, digital speed regulation as well as speed fault output, which can fulfill various control programs of users</p>	<p>驱动器尺寸 113x63x30mm，兼容 30W ~ 200W 功率范围，安装方便，适用于电气柜尺寸要求高的场合 With a size of 113*63*30mm, the driver is compatible with a power range from 30W to 200W. The product is easy to install, and suitable for occasions with high requirements on size of electrical cabinet</p>

产品构成

Product composition

电机 Motor	连接线 Connecting wire	驱动器 Driver
		

产品种类

Product type

电机	输出功率	安装尺寸	安装尺寸	减速机减速比	驱动器	驱动器型号	电源电压
 单电机 Single motor	30W	单电机 BL6230-DT Single motor BL6230-DT	60mm	/		BDR430	单相 24V 如需 36V、48V 可与客服联系。 If you require 36V and 48V, please contact the
		含减速机 BL6230F□-DL Including reducer BL6230F□-DL		3、5、9、15、18、25、30、50、60、100			
 单电机 Single motor	40W	单电机 BL7240-DT Single motor BL7240-DT	70mm	/		BDR440	
		含减速机 BL7240F□-KL Including reducer BL7240F□-KL		3、5、9、15、18、25、30、50、60、100			
 单电机 Single motor	80W	单电机 BL8280-DT Single motor BL8280-DT	80mm	/		BDR480	
		含减速机 BL8280F□-KL Including reducer BL8280F□-KL		3、5、9、15、18、25、30、50、60、100			
 含减速机 Including reducer	120W	单电机 BL92120-DT Single motor BL92120-DT	90mm	/		BDR4120	
		含减速机 BL92120F□-KL Including reducer BL92120F□-KL		3、5、9、15、18、25、30、50、60、100			
 含减速机 Including reducer	200W	单电机 BLA2200-KT Single motor BLA2200-KT	104mm	/		BDR4200	
		含减速机 BLA2200F-KL Including reducer BLA2200F-KL		3、5、9、15、18、25、30、50、60、100			

■ 连接线

■ Connecting wire

长度 Length	1m	2m	3m	4m	6m	8m
型号 Model	CMR11	CMR12	CMR13	CMR14	CMR16	CMR18

■ 应用

■ Applications

工业流水线 Industrial assembly line	物流传送线 Logistics conveyer line	PCB 切割 PCB cutting	锂电薄膜清洁 Lithium film cleaning
流动泵 Flow pump	搅拌机 Mixer	移动车辆 Moving vehicle	

品名的阅读方式

Reading mode of item name

无刷驱动器

Brushless driver

① ② ③ ④

无刷电机含减速机

Brushless motor (including reducer)

BL 8 2 80 F 9 - K L -

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

连接线

Connecting wire

C M R I 2 -

① ② ③ ④ ⑤ ⑥ ⑦

①	驱动器代号 Driver code	BDR: BDR 系列 BDR: BDR series
②	电压等级 Voltage class	4: 24~48V
③	功率 Power	30: 30W 40: 40W 30: 30W 40: 40W 80: 80W 120: 120W 80: 80W 120: 200: 200: 200W
④	定制功能 Customized function	预留

①	电机代号 Motor code	BL: 无刷电机 BL: Brushless motor
②	法兰尺寸 Flange size	6: 60mm 7: 70mm 6: 60mm 7: 70mm 8: 80mm 9: 90mm A: 104mm A: 104mm
③	电压等级 Voltage class	2: 24VDC 3: 36VDC 4: 48VDC 2: 24VDC 3: 36VDC 4: 48VDC
④	功率等级 Power class	30: 30W 40: 40W 30: 30W 40: 40W 80: 80W 120: 120W 80: 80W 120: 120W 200: 200W 200: 200W
⑤	减速机类型 Reducer type	F: 方型减速机 空: 无减速 F: Square gearbox Blank: No reduction
⑥	减速比 Reduction ratio	数字: 减速比 空: 无减速 Digital: Reduction ratio Blank: No reduction

①	连接线代号	C
②	连接线类型	M: 电机
③	产品系列	R: BDR 系列
④	内部代号	1: 内部代号
⑤	连接线长度	1: 1m 2: 2m 3: 3m 4: 4m 6: 6m 8: 8m
⑥⑦	定制功能	预留

※产品详情请查看官方网站:www.kaifull.net 下载 3D/2D 资料及使用手册。
※ For product details, please visit the official website www.kaifull.net to download 3D/2D information and the user manual.

电机规格

Motor specifications

功率 Power	法兰 Flange	输入电压 Input voltage	额定输入电流 A Rated input current A	最大输入电流 A Maximum input current A	额定转速 Rated speed	额定转矩 Rated torque	瞬时最大转矩 Instantaneous maximum torque	电机长度 Motor length
30W	60mm	24VDC±15%	<1.8	<3.6	2000rpm	0.143Nm	0.286Nm	55mm
40W	70mm		<2.5	<5.0		0.191Nm	0.382Nm	55mm
80W	80mm		<4.6	<9.2		0.382Nm	0.764Nm	58mm
120W	90mm		<6.8	<10.2		0.572Nm	0.858Nm	72mm
200W	104mm		<10.5	<13.65		0.955Nm	1.241Nm	80mm

减速机参数

Reducer parameters

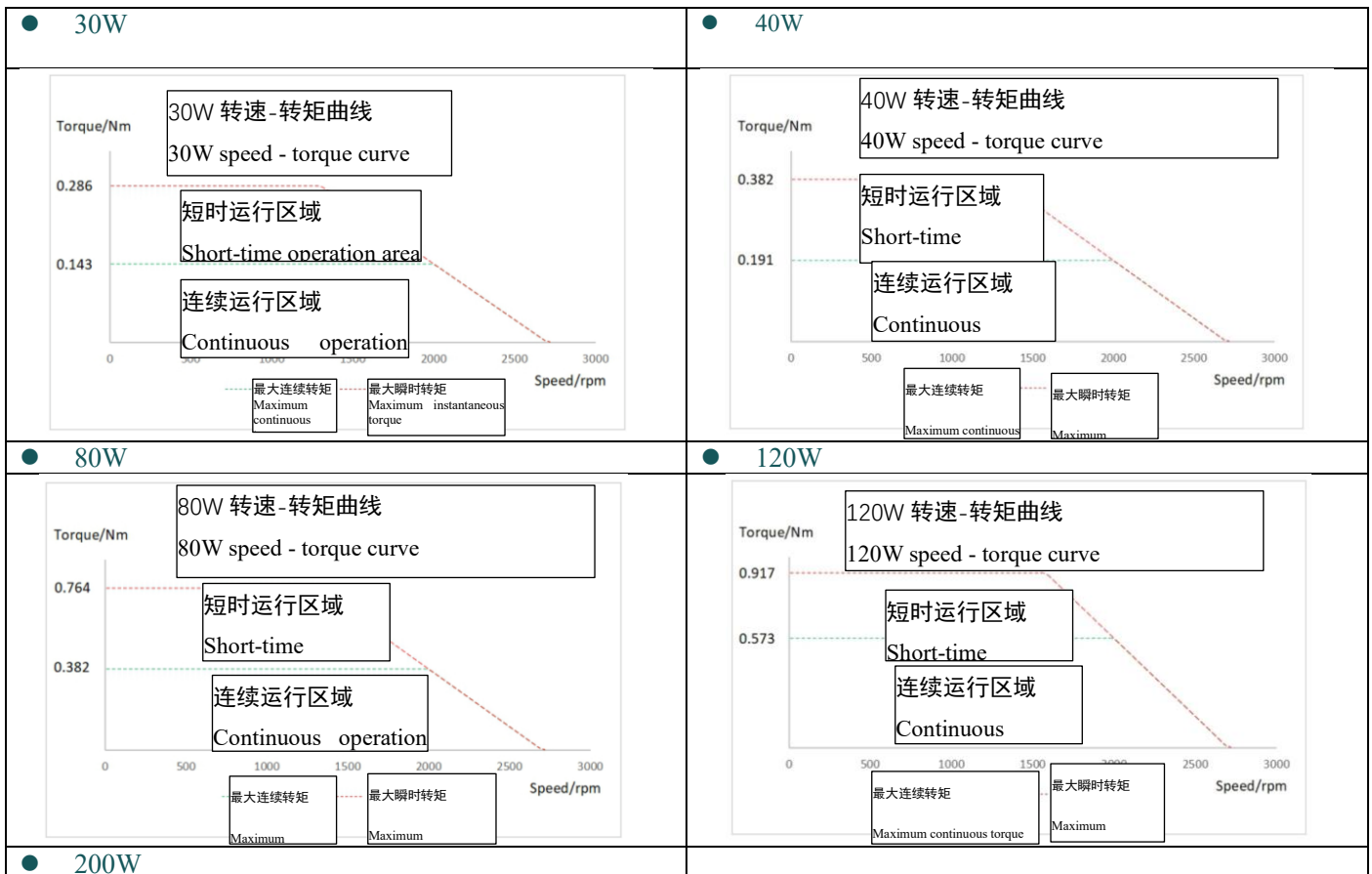
法兰尺寸 Flange size	减速比 Reduction ratio	3	5	9	15	18	25	30	50	60	100
	输出转速/rpm Output speed/rpm	666	400	222	133	111	80	66	40	33	20
60mm	输出转矩/Nm Output torque/Nm	0.34	0.57	1.03	1.71	2.06	2.57	3.0	3.0	3.0	3.0
70mm		0.45	0.76	1.37	2.29	2.75	3.43	4.12	5.0	5.0	5.0
80mm		0.91	1.52	2.75	4.58	5.50	6.87	8.0	8.0	8.0	8.0
90mm		1.37	2.29	4.12	6.18	7.42	8.45	11.34	18.90	20.0	20.0
104mm		2.29	3.82	6.87	10.31	12.37	15.75	18.90	31.51	37.81	40.0

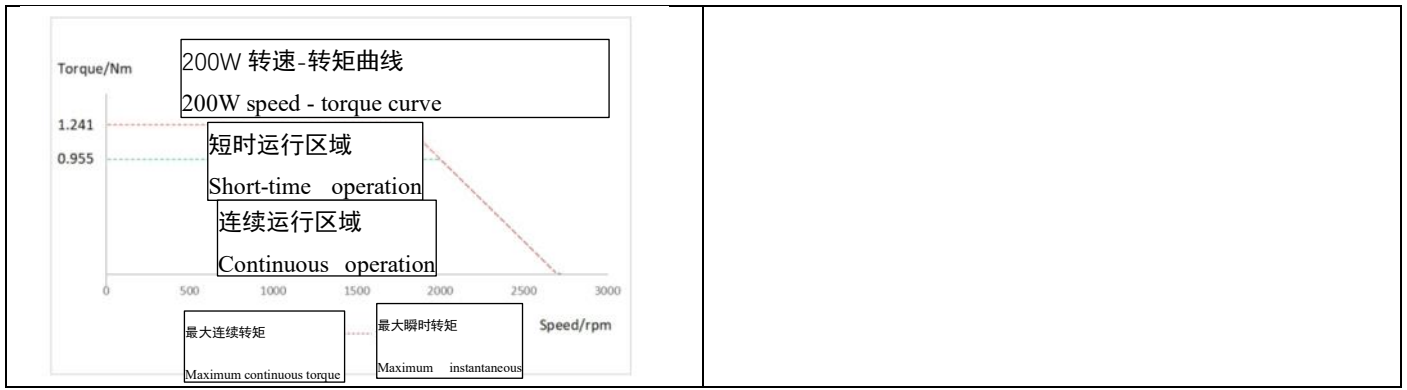
*表中转速是以电机额定转速除以减速比的计算值，实际转速会因负载以及减速机个体差异而降低 2%~10%。

* The speed in the table is the calculated value of the motor rated speed divided by the reduction ratio, and the actual speed will be reduced by 2% to 10% due to the load and the individual difference of the reducer.

转速-转矩特性

Speed - torque features

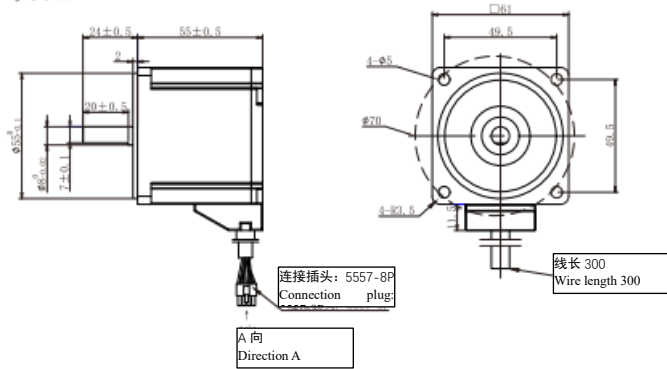




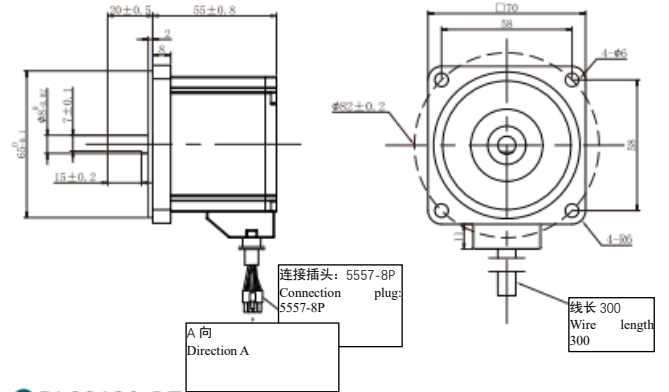
■电机机械尺寸（单电机）（单位:mm）

■ Motor mechanical dimensions (single motor) (unit: mm)

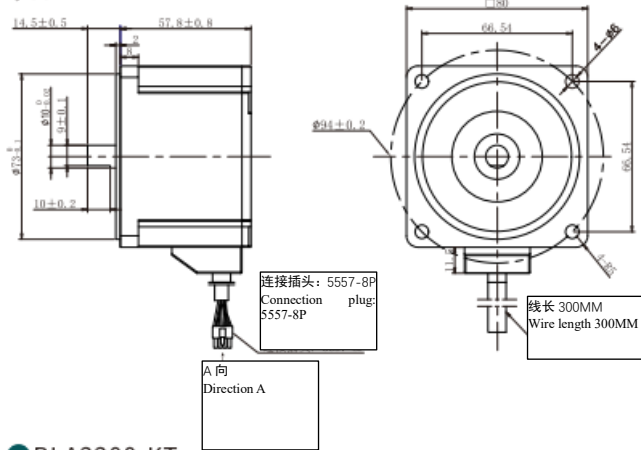
●BL6230-DT
◇30W



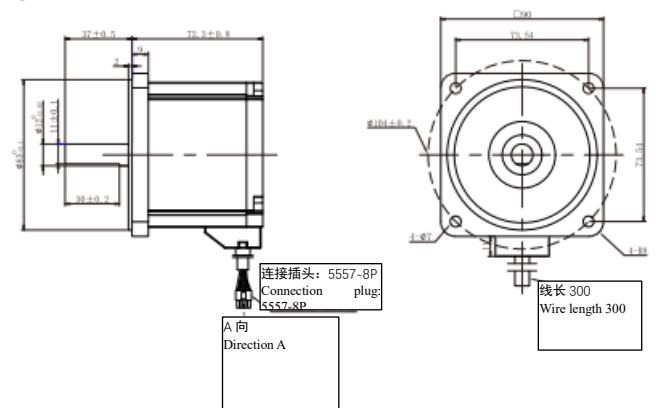
●BL7240-DT
◇40W



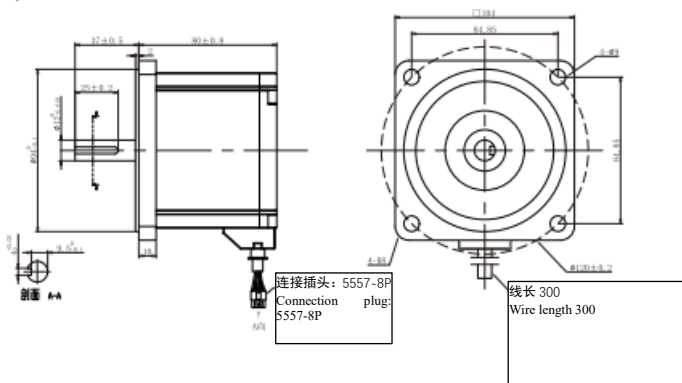
●BL8280-DT
◇80W



●BL92120-DT
◇120W



●BLA2200-KT
◇200W

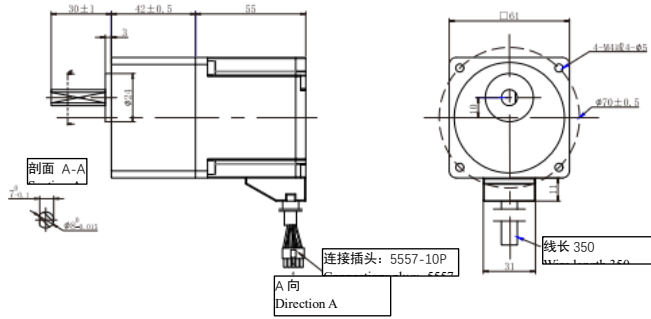


■电机机械尺寸（含减速机）（单位:mm）

■ Motor mechanical dimensions (including reducer) (unit: mm)

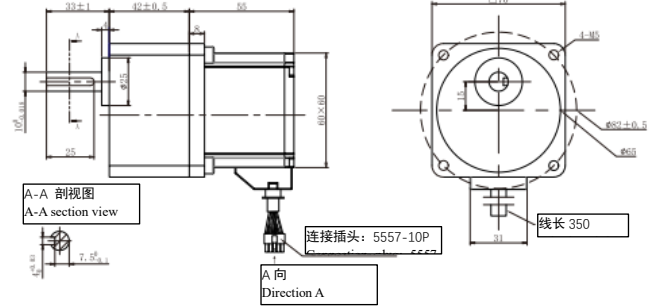
●BL6230F□-DL

◇30W



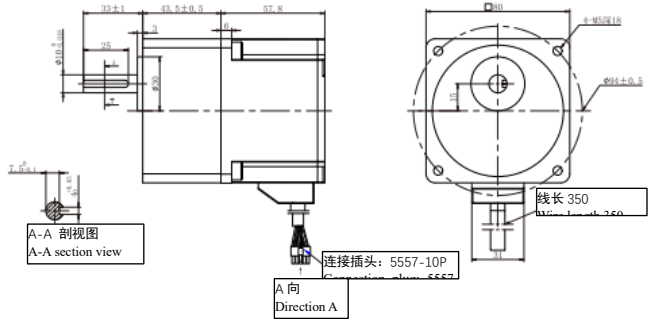
●BL7240F□-KL

◇40W



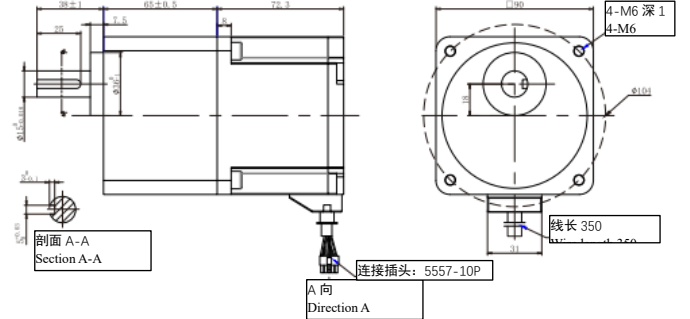
●BL8280F□-KL

◇80W



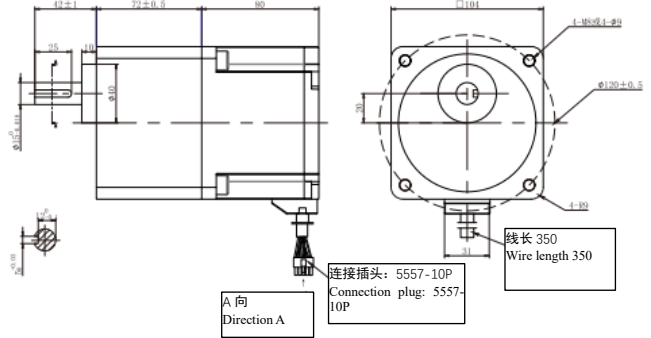
●BL92120F□-KL

◇120W



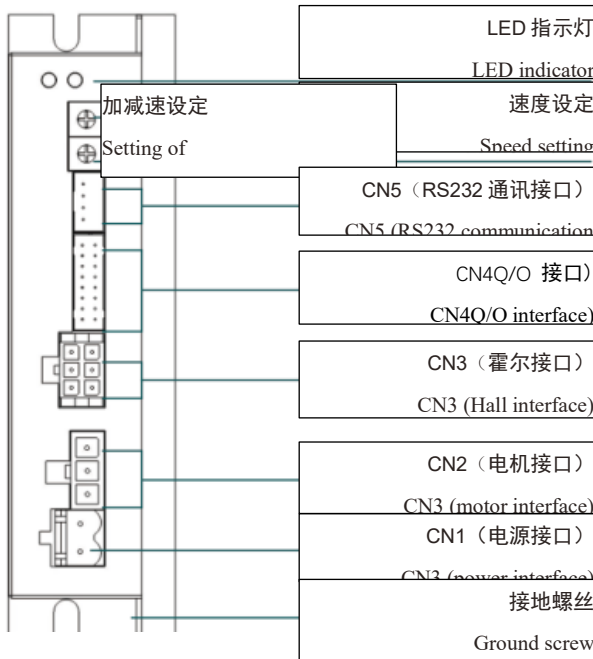
●BLA2200F□-KL

◇200W



■ 连接与运行

■ Connection and running



■ 10 端口 (CN4)

■ Port 10 (CN4)

引脚编号 Pin No.	信号名称 Signal name	颜色 Color	功能 Function
1	CW/CWW	粉红 Pink	顺/逆时针方向旋转 Clockwise/counterclockwise rotation
2	FAULT+	蓝色 Blue	报警输出+ Alar output +
3	FAULT-RESET	棕色 Brown	清除报警信号 Erase alarm signal
4	AFULT-	兰黑 Blue and	报警输出- Alarm output
5	EN/RE	橙色 Orange	使能信号 Enabling signal
6	SPEEDO+	黄色 Yellow	转速输出+ (单独三极管输出) Speed output + (separate triode output)
7	SPEEDSET(SPST)	绿色 Green	内部/外部模拟量控制 Internal/external analog control
8	SPEEDO-	黄黑 Yellow	转速输出- (单独三极管输出) Speed output + (separate triode output)
9	STOP	橙黑 Orange	停止 Stop
10	5V	红色 Red	5V 输出 5V output
11	MO	灰色 Gray	八段码调速 Eight-segment code speed regulation
12	AIN	红黑 Red and	外部模拟量输入 External analog input
13	M1	白色 White	八段码调速 Eight-segment code speed regulation
14	GND	黑色 Black	内部控制信号 GND (对应 5V GND) Internal control signal GND (corresponding 5V GND)
15	M2	黑白 Black	八段码调速 Eight-segment code speed regulation
16	INCOM	紫色 Purple	双向光耦公共端 Common terminal of two-way optocoupler

※ IO 端口出线 300MM 长

※ The outgoing line at the IO port is 300MM long

■ 电源接口 (CN1)

■ Power interface (CN1)

端子标识 Terminal identification	电源连接 Power supply connection
V+	电源+ Power supply +

■ RS232 串口通讯 (CN5)

■ RS232 serial port communication (CN5)

端口号 Port No.	线号 Wire No.	信号名 Signal name
CN5	1	NC
	2	RX
	3	GND
	4	TX

V-

GND

※请注意不要接反，选择适当的电源。

※ Please be careful not to connect reversely, and choose the appropriate power supply.

■ 电机接口 (CN2)

■ Motor interface (CN2)

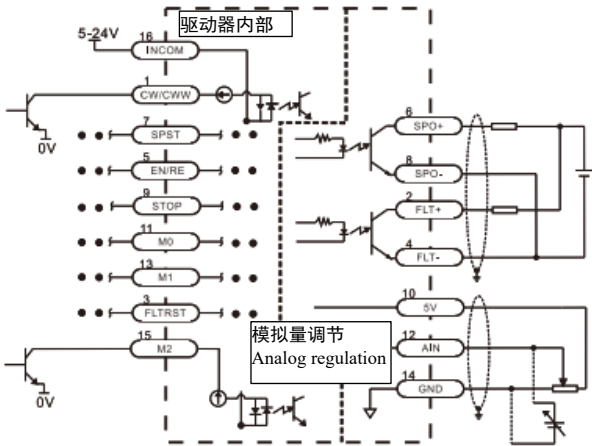
引脚编号 Pin No.	端子标识 Terminal identification
1	U
2	V
3	W

■ 霍尔接口 (CN3)

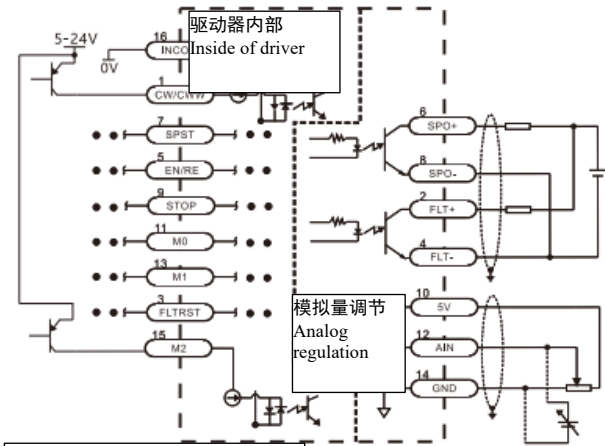
■ Hall interface (CN3)

引脚编号 Pin No.	端子标识 Terminal identification
1	HC
2	HB
3	GND
4	GROUNG
5	HA
6	5V

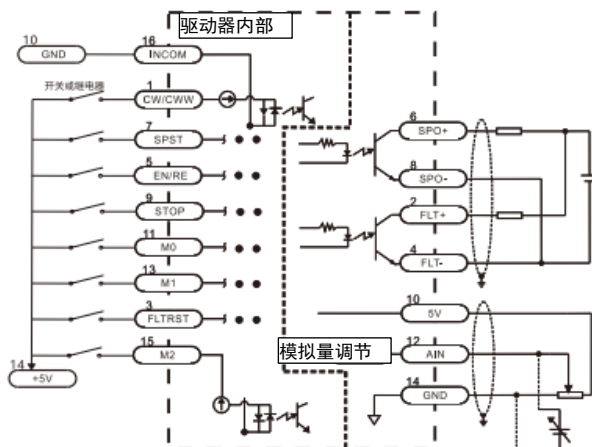
外部电源共阳极接法
Common anode connection of external power supply



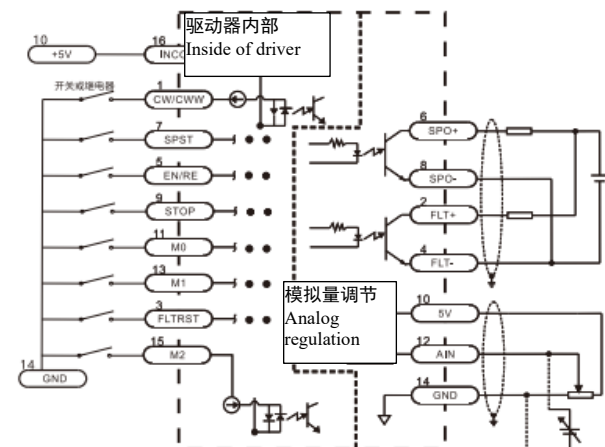
外部电源共阴极接法
Common cathode connection of external power supply



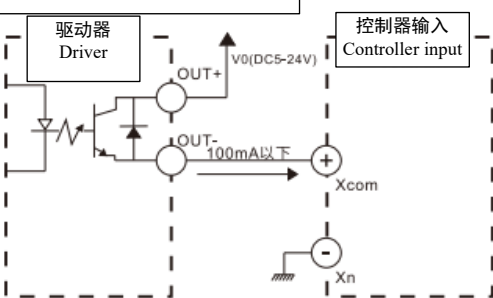
内部电源共阴极接法



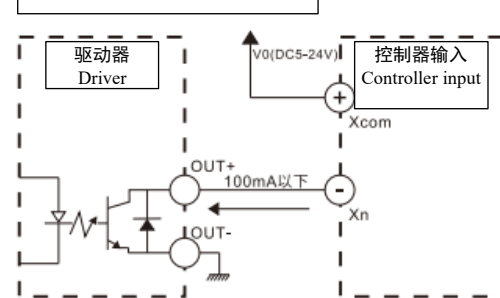
内部电源共阳极接法
Common anode connection of internal power supply



驱动器输出开发射极接法
Driver output open emitter connection



驱动器输出开集电极接法
Driver output open collector connection



■速度设定

■ Speed setting

速度设定: 1、内部模拟量设定: 该电位器用于设置电机的转速。

Speed setting: 1. Internal analog setting: The potentiometer is used to set the motor speed.

默认转速范围是 0-3500rpm。

The speed range is from 0 to 3500rpm by default.

顺时针旋转电位器, 电机按设定加速度加速运行。

Rotate the potentiometer clockwise, so that the motor will be put into accelerated service

according to the set acceleration.

逆时针旋转电位器, 电机按设定加速度减速运行。

Rotate the potentiometer in a counter-clockwise direction, so that the motor will be put into

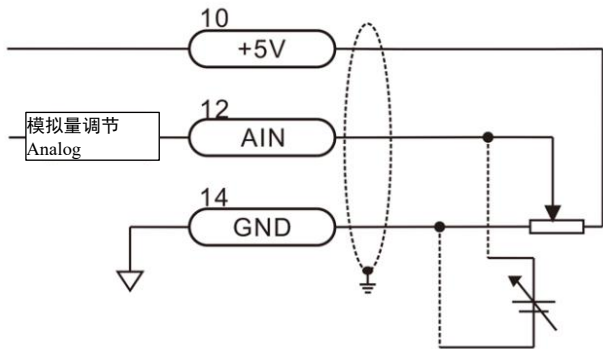
decelerated service according to the set acceleration.

出厂值为: 0rpm

Factory default: 0rpm

2、外部模拟量设定: 将外接电位器连接到 IO 接口 (CN4)。推荐阻值为 10KΩ 的电位器。

2. External analog setting: Connect the external potentiometer to the IO interface (CN4). A potentiometer with a resistance of 10KΩ is recommended.



3、IO 启动 (8 段码调速输入)

3. IO start (8-segment code speed regulation input)

速度(rpm) Speed (rpm)	I. 控制选择 I. Controlled selection			速度设定方法 Speed setting method
	M2	M1	M0	
Xrpm(max)	OFF	OFF	OFF	内部模拟量设定 Internal analog setting
1X/7rpm	OFF	OFF	ON	数字设定 1 倍速 Numeric setting of 1x
2X/7rpm	OFF	ON	OFF	数字设定 2 倍速 Numeric setting of 2x
3X/7rpm	OFF	ON	ON	数字设定 3 倍速 Numeric setting of 3x
4X/7rpm	ON	OFF	OFF	数字设定 4 倍速 Numeric setting of 4x
5X/7rpm	ON	OFF	ON	数字设定 5 倍速 Numeric setting of 5x
6X/7rpm	ON	ON	OFF	数字设定 6 倍速 Numeric setting of 6x

■状态指示灯

■ Status indicator lamp

状态 Status	故障 Failure	原因 Cause
绿灯闪烁 Green light	驱动器工作正常 Driver working properly	电机正常运行过程 Normal operation of motor
红灯常亮 Red light	驱动器未使能 Driver disabled	STOP/EN 口信号为 OFF The signal at the STOP/EN port is
绿灯常亮 Green lamp is	电机使能 Motor enabling	电机正常使能 Normal operation of motor
1 红 1 绿 1 red and 1	速度过高 Overspeed	电机极对数不匹配或者失速 Mismatch of motor pole pairs or stall
2 红 1 绿 2 red and 1	换相失败 Failure of motor phase changing	换相过程电机被堵或霍尔故障 The motor is blocked or subject to Hall
1 红 2 绿 1 red and 2	电机堵转 Motor stall	外部力矩过大 The external torque is excessively large
3 红 2 绿 3 red and 2	驱动器内部电压出错 Internal voltage error of driver	驱动器内部电路故障 Circuit failure inside the driver
4 红 2 绿 4 red and 2	驱动器电源输入欠压 Driver power input undervoltage	供电电压小于 15VDC The supply voltage is less than
5 红 1 绿 5 red and 1	驱动器过流 Driver overcurrent	马达接线错误或 mos 短路 Wiring error of motor or mos short
6 红 1 绿 6 red and 1	马达绕组开路 Motor winding in open circuit	马达线未接好 The motor wire is not connected properly
4 红 1 绿 4 red and 1	驱动器电源输入过压 Driver power input overvoltage	供电电压大于 48V (根据电机电压设置) The supply voltage is greater than 48V (set according to motor voltage)
5 红 2 绿 5 red and 2	电机过载 Motor overload	
6 红 2 绿 6 red and 2	霍尔信号出错 Hall signal error	
2 红 2 绿 2 red and 2	电机未换相 Failure to conduct motor phase	
7 红 2 绿 7 red and 2	FALSH 读写错误 FALSH read/write error	

7X/7rpm

ON

ON

ON

数字设定 7 倍速

Numeric setting of 7x

■ 加减速设定

■ Setting of acceleration/deceleration

该电位器用于设置电机的加减速速度。默认范围是 3736rps²

The potentiometer is used to set the motor acceleration/deceleration. Th default range is 3736rps²

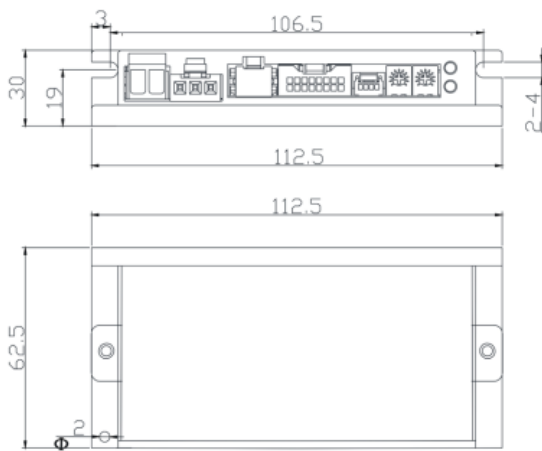
■ 驱动器尺寸 (单位:mm)

■ Driver dimensions (unit: mm)

- 无刷驱动器
- Brushless driver

◇30W、40W、80W、120W、200W

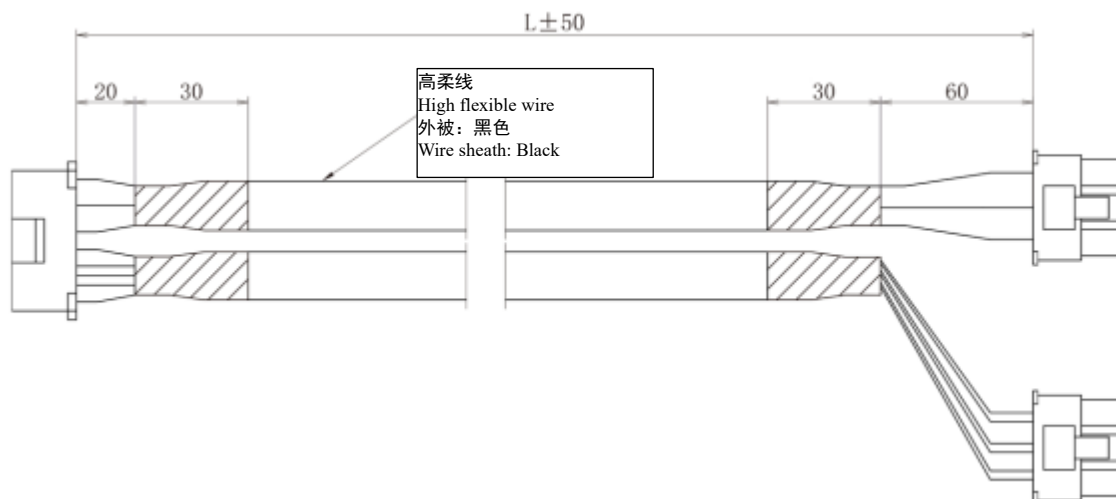
◇30w, 40w, 80w, 120w, 200w



■ 连接线尺寸图

■ Dimensional drawing of connecting wire

• CMRI□



■ 通用规格

■ Common specifications

项目 Item	规格 Specification
调速范围 Speed regulation range	120rpm~3500rpm
调速方式 Mode of speed regulation	BDU : 面板旋钮调速,数字 10 调速; BDU: Speed regulation by panel knob, speed regulation by the figure 10; BDR: 内部旋钮调速,数字 10 调速,外部模拟量调速。 BDR: Speed regulation by internal knob, speed regulation by the figure 10, external analog speed regulation.
加速度、减速度 Acceleration and deceleration	BDU: 3rps2-333rps2; BDU: 3rps2-333rps2; BDR: 3rps2T33rps2; BDR: 3rps2T33rps2; (从停止加速到额定转速大概需要 150ms ~ 300ms)。注:在不同负载条件下,实际的加减速速度会略有不同。 (It may take about 150ms - 300ms from stopping acceleration to reach the rated speed). Note: The actual acceleration and deceleration may be slightly different under different load conditions.
输入信号 Input signal	双向光耦输入,可使用内部 5V 电源,亦可使用外部 5v~24V 电源 (大于 100mA),支持 NPN 型或 PNP 型外部 10 接入方式; With two-way optocoupler input, you can either use internal 5V power supply or external 5v-24V power supply (greater than 100mA), and it supports NPN-type or PNP-type external 10 access mode;
输出信号 Output signal	开极电集开发射极输出, 可使用外部 5V~24V 直流电源供电组成 NPN 型或 PNP 型电路输出; With open collector emitter output, the external 5V - 24V DC power supply is available to constitute NPN-type or PNP-type circuit output;
保护功能 Protection features	过压、欠压、过流、过载、超速、缺相、传感器异常、EEPROM 异常。 Overvoltage, undervoltage, overcurrent, overload, overspeed, phase loss, sensor exception, EEPROM exception.
最大延长距离 Maximum extended distance	电机与驱动器之间最大延长距离为 8m。 The maximum extended distance between the motor and the driver is 8m.

■一般规格

■ General specifications

项目 Item	电机 Motor	驱动器 Driver
绝缘电阻 Insulation resistance	100MQ 以上 100MQ above	100M。以上 100M. Above
绝缘耐压 Insulation and voltage resistance	500VAC	500VAC
工作温升 Operating temperature rise	小于 70K Less than 70K	小于 50K Less than 50K
使用环境温度 Operating ambient temperature	0~40°C	0~40°C
保存环境温度 Storage ambient temperature	-10~70°C (无结冰) -10 - 70°C (no icing)	-10~70°C (无结冰) -10 - 70°C (no icing)
使用环境湿度 Operating ambient temperature	20%RH~80%RH (无结露) 20%RH - 80%RH (no condensation)	20%RH~80%RH (无结露) 20%RH - 80%RH (no condensation)
防护等级 IP	IP20	IP20



微信二维码



官网二维码



抖音二维码

广东凯福电子科技有限公司

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