



直流无刷动力产品手册

DC Brushless Power Product Manual



公司概况 Company Overview

东莞市巴特云翼科技有限公司是一家专业从事直流无刷动力系统套装研发及生产、销售、服务为一体的高新科技型企业，企业注重技术创新与性能提升，产品广泛应用于无人机、机器人、医疗设备、智能家居等领域。公司拥有专业的资深研发团队，团队具备技术研发与创新实力。拥有自主技术研发中心，研发团队由各个领域的技术人员组成，主要致力于提高直流无刷电机的能量转换效率，特别对电机的结构创新、新材料应用、电子驱动软件算法方面研究具有行业技术优势，能力，大大提升电机性能，保障智能产品在极端环境下能更加稳定精准运行。公司始终坚持“品质第一”理念，严格进行品质管控与行业认证，通过质量体系、认证资质、严格遵循ISO 9001质量管理体系，保障产品品质，并与多家知名企业建立长期合作。未来，公司将加大电机技术研发力度，致力成为全球动力系统行业的创新标杆。秉持“以科技创新驱动先行，用匠心精神定义品质”的发展理念，持续为客户提供更高效、更可靠的无刷电机产品。

Dongguan Betterwing Technology Co., Ltd. is a high-tech enterprise specializing in the research, development, production, sales, and service of DC brushless power system kits. The company focuses on technological innovation and performance enhancement, with its products widely applied in drones, robots, medical equipment, smart home devices, and other fields. The company has a professional and experienced R&D team with strong capabilities in technology research and innovation. It possesses an independent technology R&D center, and the team is composed of technical personnel from various fields, mainly dedicated to improving the energy conversion efficiency of DC brushless motors. The company has industry advantages in motor structure innovation, new material applications, and electronic drive software algorithms, which greatly enhance motor performance and ensure that smart products operate more reliably and accurately in extreme environments. The company always adheres to the principle of "quality first," strictly implementing quality control and industry certification, following the ISO 9001 quality management system to ensure product quality, and establishing long-term cooperation with many well-known enterprises. In the future, the company will increase efforts in motor technology R&D, aiming to become a global benchmark for innovation in the power system industry. Upholding the development philosophy of "driving progress through technological innovation and defining quality with craftsmanship," the company will continue to provide customers with more efficient and reliable brushless motor products.



笃守卓越圭臬

以卓越为不可动摇的最高准则，
笃诚坚守、不打折扣，于每一处
细节精进不休，终成经得起检验
的极致水准。



精研轻量玄机

于材料选型、结构优化中深探核心
奥秘，以极致匠心精简冗余，在减
重与性能平衡间臻于精妙，终成轻
而不弱、巧而耐用的上乘质感。



智拓高效新程

以智能技术为突破引擎，拓新路径、
优化逻辑，于流程重构与效能升级
中破除壁垒，让每一份投入都转化
为精准可控的卓越产出，开辟高效
新境。



深耕节能要谛

深研能耗核心机理，精耕技术优化
与场景适配，于细节处挖掘降耗潜
能，以科学方法坚守节能本质，实
现高效用能与低碳发展的双重突破。

生产能力 Production Capability

云翼具有完善的直流无刷动力系统套装加工工艺和制程，生产车间2000+平方，员工100余人。

Yunyi has a complete DC brushless power system package processing technology and manufacturing process, with a 2,000-square-meter production workshop and over 100 employees.



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无人机动力套装

Drone Power Kit

BT DC N8电机 BT DC N8 Motor

BT DC N8电机采用高强度铝合金材料进行精密切削加工，同时对整体结构进行优化设计，尤其针对电机核心部件强化防护结构，使其具备超强抗摔耐冲击能力，能大幅降低设备因跌落、撞击导致局部结构变形，进而无法正常使用的概率。

The BT DC N8 motor is precision machined from high-strength aluminum alloy material, while the overall structure is optimized. Special attention is given to reinforcing protective structures around the core components of the motor, giving it excellent resistance to drops and impacts, significantly reducing the likelihood of local structural deformation that could make the device unusable due to falls or collisions.



基础参数

最大拉力: 15Kg

单轴推荐拉力: 5-7Kg

推荐拉力力效: 9.5-8.6g/w

电压范围: 18-54V

额定电压: 12S-46V

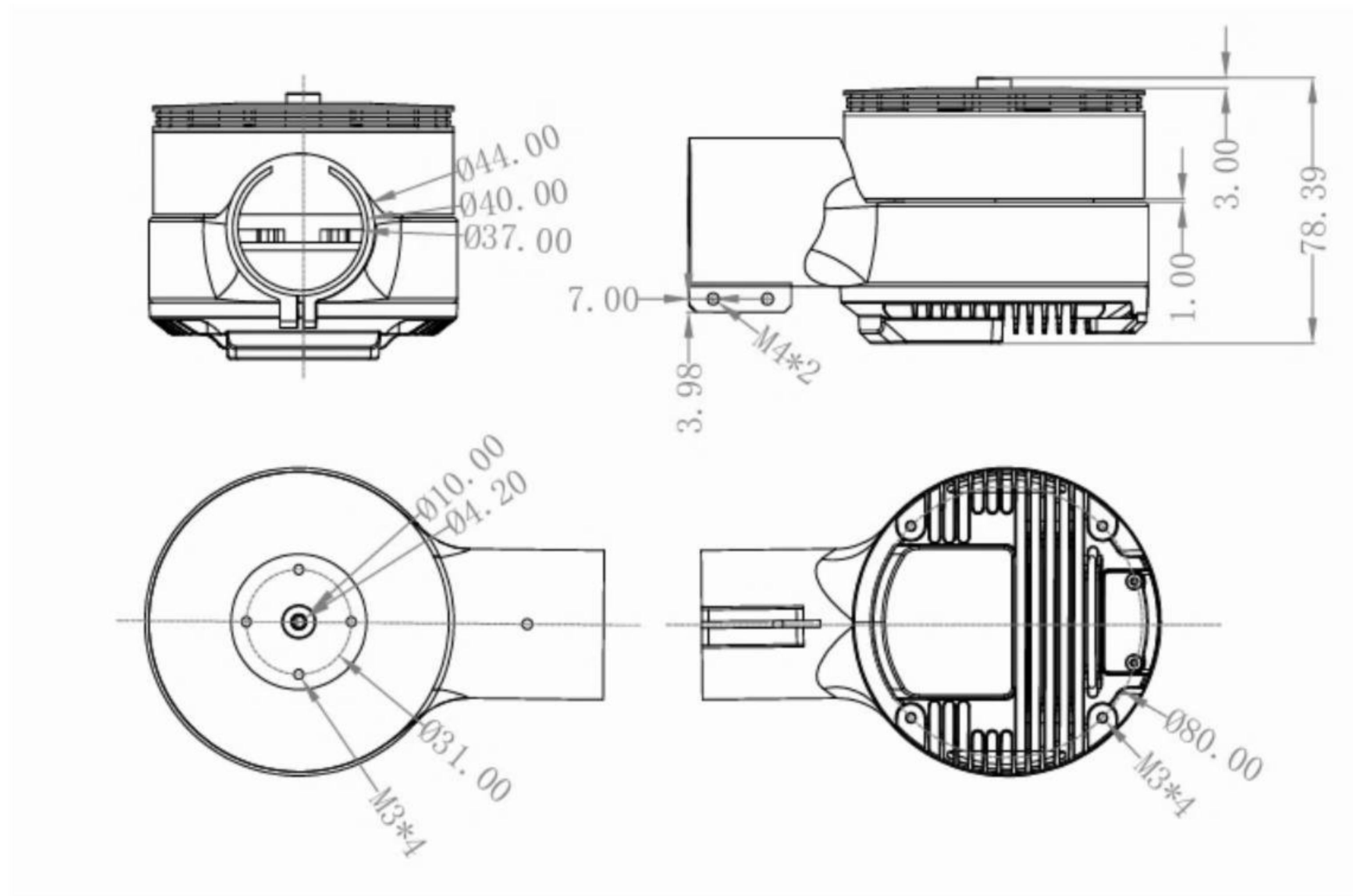
适用环境温度: -20~50℃

防尘防水等级: IPX6

额定输入/输出功率: 950W/810W

槽极速: 36N40P

工程图

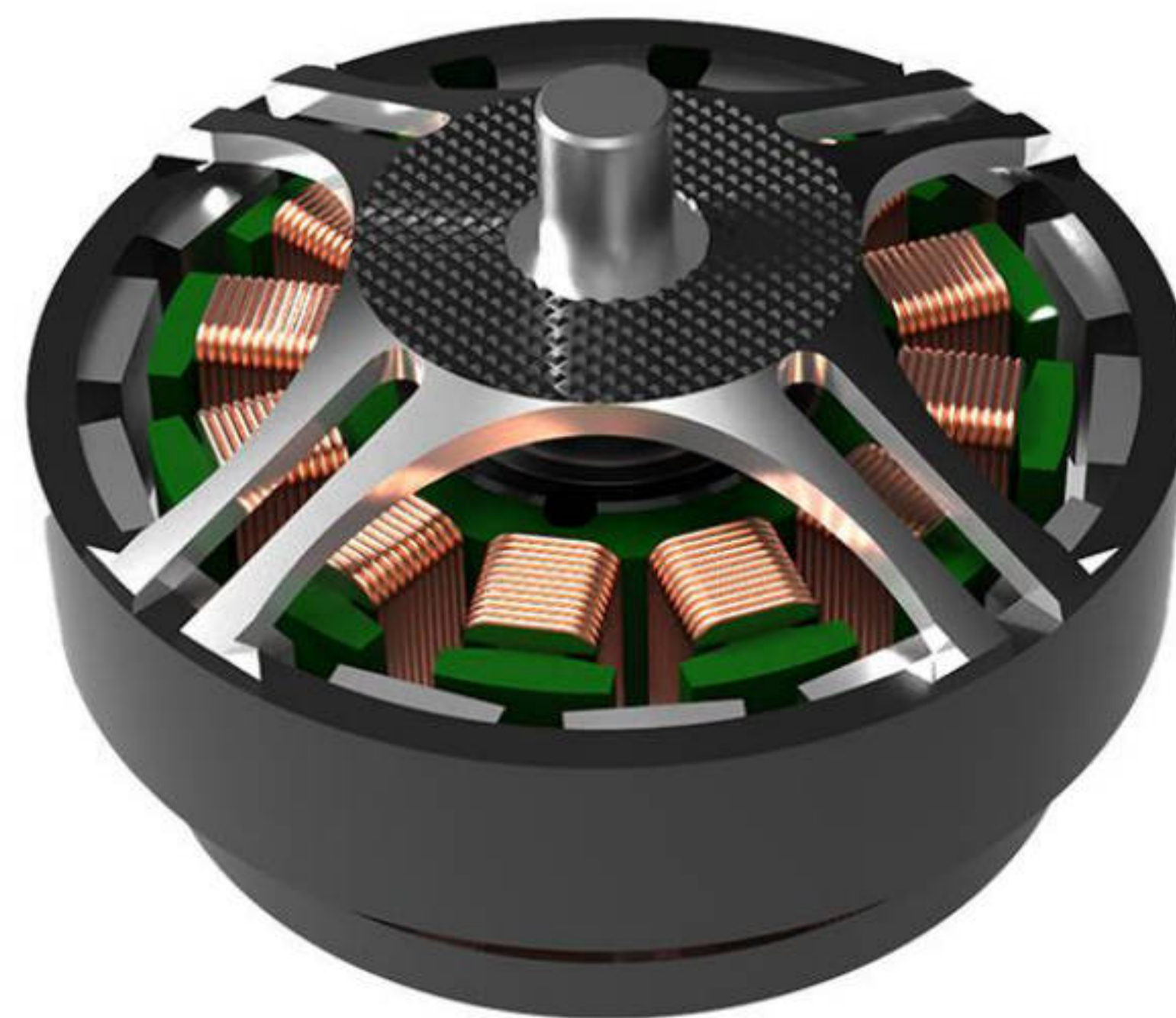


技 术 参 数										
工作电压 (V)	螺旋桨	油门(%)	拉力(g)	电流(A)	输入功率 (W)	转速 (RPM)	力效 (g/W)	扭矩 (N · m)	输出功率 (W)	电机温度 (℃)
46V(12S LiPo)	30*11"	35	1629	2.7	123.6	1332	13.2	0.61	85.2	/
		40	2468	4.3	200.0	1623	12.3	0.90	152.3	
		45	2982	5.5	254.0	1780	11.7	1.07	200.2	
		50	4467	9.5	435.7	2168	10.3	1.59	361.7	
		55	5008	11.1	510.3	2291	9.8	1.78	427.6	
		60	5973	14.2	653.1	2493	9.1	2.12	553.4	
		70	7957	21.4	986.2	2895	8.1	2.82	843.9	
		80	10958	34.6	1592.7	3339	6.9	3.90	1364.9	
		90	13522	47.7	2195.1	3688	6.2	4.84	1868.0	
		100	14715	54.0	2485.2	3828	5.9	5.24	2100.3	

BT DC 2806电机 BT DC 2806 Motor

BT DC 2806电机高效节能，低转速下保持足够扭矩，有效延长续航时间。结构稳定，保障运行的安全性。轻量化设计，有效提升整体性能。

The BT DC 2806 motor is highly efficient and energy-saving, maintaining sufficient torque at low speeds, effectively extending battery life. Its stable structure ensures safe operation. The lightweight design effectively enhances overall performance.



基础参数

最大拉力: 1.2Kg

KV 值: 650KV

工作额定电压: 4S

空载电流: 0.47A/20V

相间内阻: 218mΩ

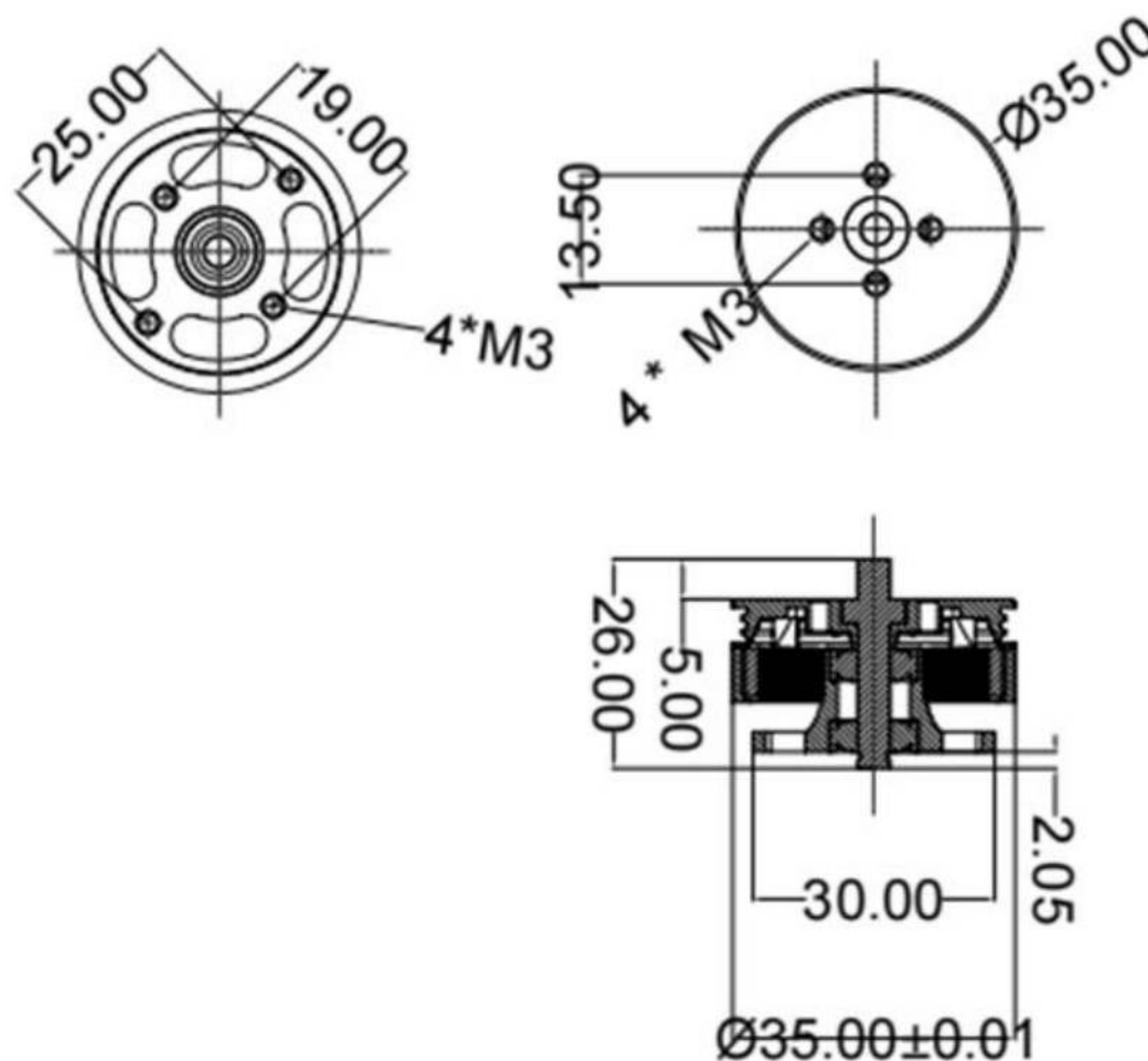
最大电流: 13.4A

最大功率: 200W

最大扭矩: 0.2Nm

单机起飞重量推荐: 300g~400g

工程图



技 术 参 数										
工作电压 (KV)	螺旋桨	油门(%)	拉力(g)	电流(A)	输入功率 (W)	转速 (RPM)	力效 (gf/W)	扭矩 (N · m)	输出功率 (W)	电机温度 (°C)
650KV	Fluxer Pro 13×4.4 MATT	35	213	0.97	14.9	2833	14.3	0.04	11.9	64°C
		40	274	1.46	22.3	3228	12.3	0.051	17.2	
		45	349	2.04	31.2	3615	11.2	0.064	24.2	
		50	415	2.69	41.0	3926	10.1	0.077	31.7	
		55	482	3.21	48.9	4218	9.9	0.086	38.0	
		60	544	3.6	58.7	4494	9.3	0.095	44.7	
		70	690	5.68	86.2	5077	8.0	0.121	64.3	
		80	878	7.89	119.1	5577	7.4	0.148	86.4	
		90	1001	10.16	152.	6053	6.6	0.168	106.5	
		100	1163	13.38	199.9	6432	5.8	0.196	132.0	

BT R3090折叠桨叶 BT R3090 Folding Propeller Blade

R3090折叠桨叶是一款通用性极强的无人机核心动力配件，以“高效动力、稳固耐用、适配广泛”为核心设计理念，精准匹配多领域作业的严苛需求，为各类中大型无人机作业提供可靠的动力支撑。其采用先进的材料工艺与气动设计，兼顾轻量化与高强度，成为多场景无人机用户的优选配件。

The R3090 folding propeller is a highly versatile core power component for drones. With a design philosophy centered on "efficient power, stability and durability, and wide compatibility," it precisely meets the stringent demands of various operational fields, providing reliable power support for a range of medium and large drones. It uses advanced material technology and aerodynamic design, balancing lightweight construction with high strength, making it a preferred component for drone users in multiple scenarios.





机器人关节配件

Robot joint components

BT YUNYI 04电机 BT YUNYI 04 Motor

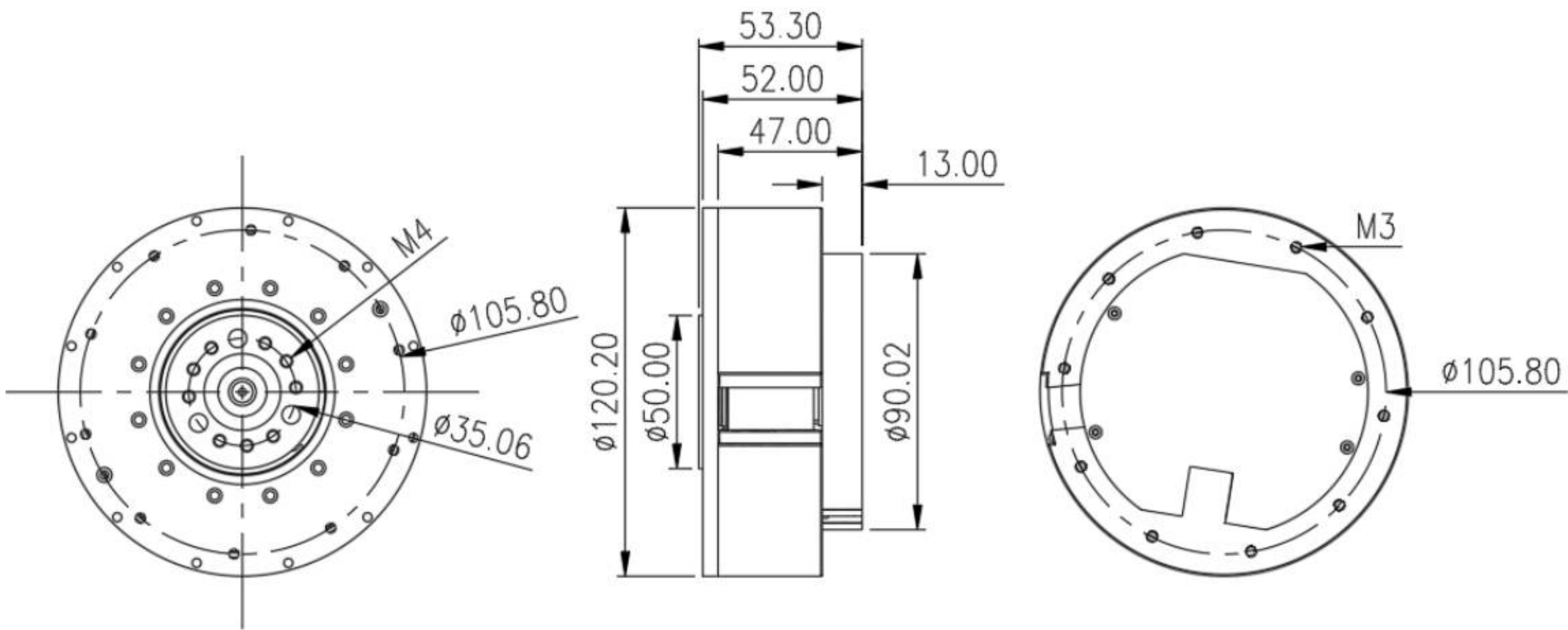
BT YUNYI 04电机高效节能，低转速下保持足够扭矩，有效延长续航时间。结构稳定，保障运行的安全性。轻量化设计，有效提升整体性能。

The BT YUNYI 04 motor is highly efficient and energy-saving, maintaining sufficient torque at low speeds, effectively extending battery life. Its stable structure ensures operational safety. The lightweight design effectively enhances overall performance.



基础参数	
额定电压：	48V
使用电压范围：	15-60V
额定扭矩：	40 N.m
峰值扭矩：	120 N.m
空载转速：	200rpm±10%
额定负载转速：	167rpm±10%
线电阻：	0.16Ω±10%
电机电感：	0.211mH±10%
峰值相电流：	90Apk±10%

工程图





居家用品动力配件

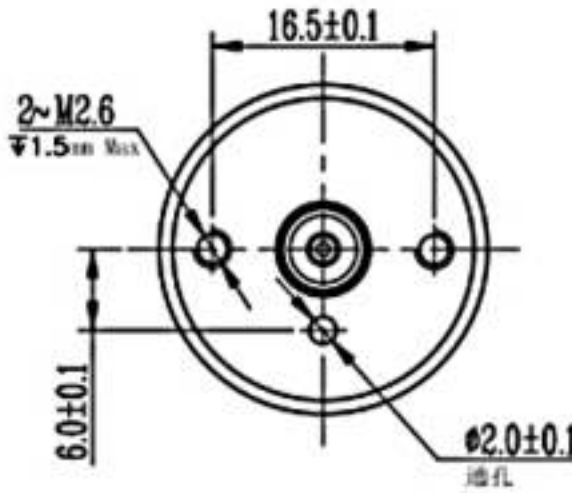
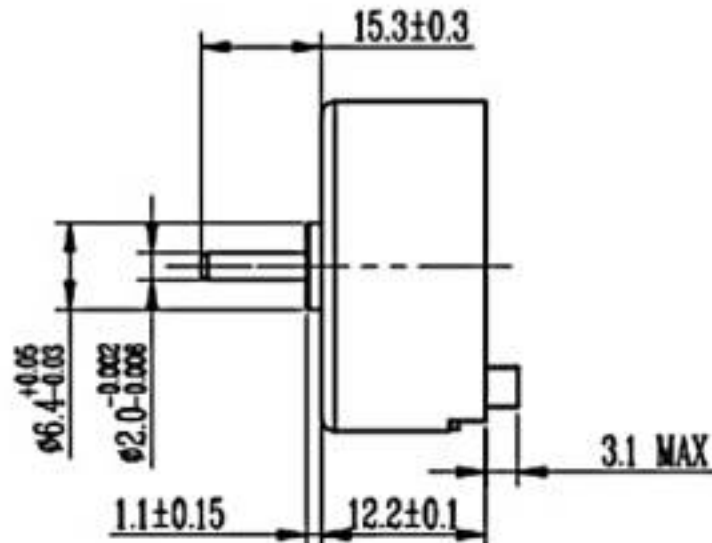
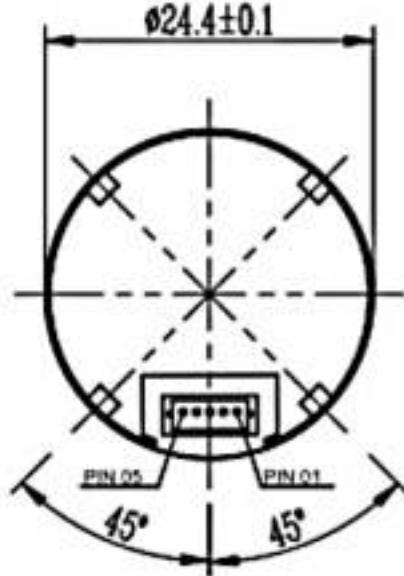
Home Appliance Power Accessories

BT DC 4212电机 BT DC 4212 Motor

BT DC 2412电机转动惯量大、永磁动力，内置集成化，FOC
矢量驱动，制作成本较低，电机具有强稳定性。

The BT DC 2412 motor has a large rotational inertia and permanent
magnet power, with built-in integration, FOC vector drive, lower
manufacturing cost, and strong stability.



基础参数		主要参数										
额定电压:	5V 12V 24V DC	MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY				STALL	
额定电流:	0.5A		OPERATING RANGE	RATED	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	TORQUE	CURRENT
额定功率:	2.5W 4.8W 6.2W				r/min	A	r/min	A	g.cm	w	g.cm	A
额定转速 (RPM) :	7300 8600 10500	V1	4V~8V	5V	7300	0.08	5500	0.5	35.0	2.5	130.0	1.5
堵转电流:	1.5A	V2	8V~26V	12V	2600	0.11	7050	0.4	55.0	4.8	290.0	1.9
使用电压范围:	4~26V DC	V3	8V~26V	24V	10500	0.04	9200	0.26	60.0	6.2	460.0	1.8
启动电压:	4V DC	工程图	DIRECTION OF ROTATION (CCW) ← (CW)   UNIT: MILLIMETERS 									
使用环境:	-30~70°C,常湿											
保存环境:	-30~70°C,常湿											

BT DC 2830电机 BT DC 2806 Motor

BT DC 2830电机转动惯量大、输出扭矩高，拉伸机壳，制作成本较低，电机具有强稳定性、高安全性。永磁体电机，能量损耗低，续航时间长,使用寿命长。

The BT DC 2830 motor is highly efficient and energy-saving, maintaining sufficient torque at low speeds and effectively extending battery life. Its stable structure ensures safe operation. The lightweight design effectively enhances overall performance.



基础参数

最大拉力: 1.2Kg

KV 值: 650KV

工作额定电压: 4S

空载电流: 0.47A/20V

相间内阻: 218mΩ

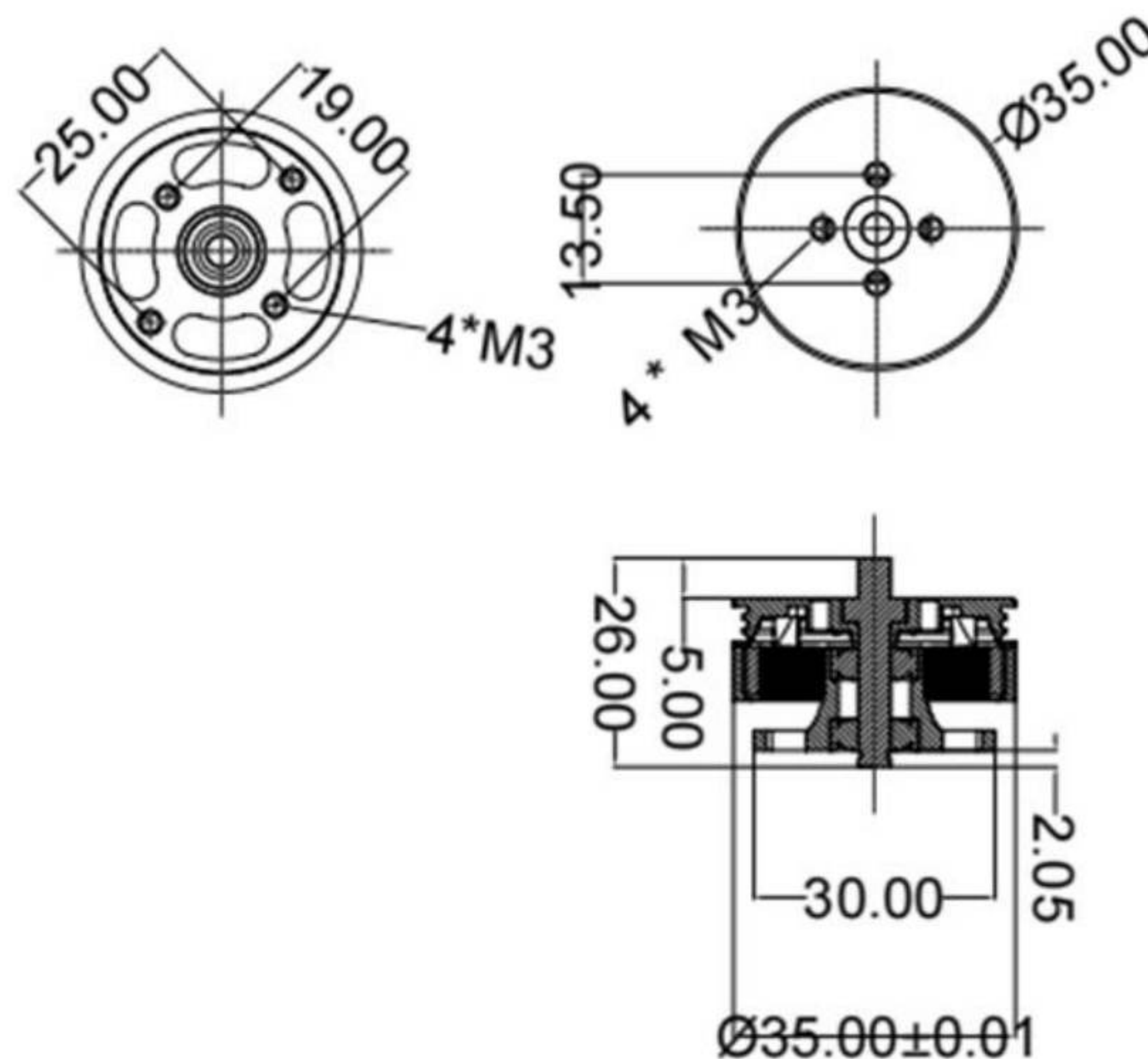
最大电流: 13.4A

最大功率: 200W

最大扭矩: 0.2Nm

单机起飞重量推荐: 300g~400g

工程图



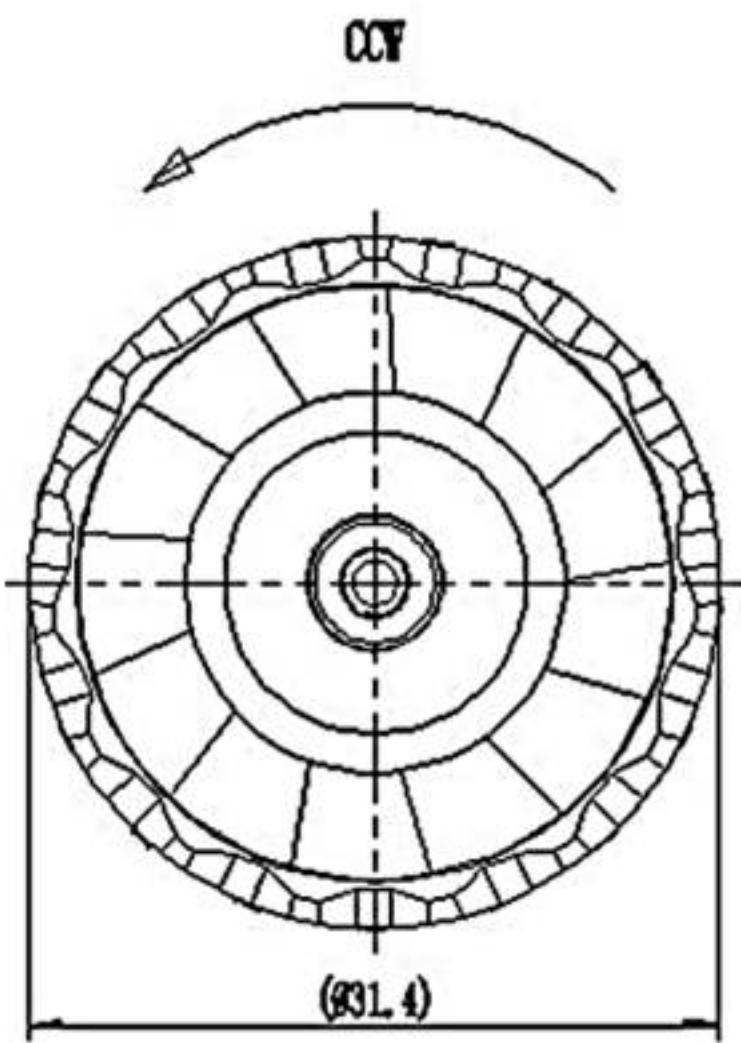
BT 29涡轮电机 BT 29 Turbo Motor

BT 29涡轮电机是一款融合先进涡轮技术与精密电机设计的高性能动力设备，凭借高效能量转换、稳定运行表现及广泛适配能力，成为工业驱动、特种装备、精密制造等领域的核心动力选择。其核心设计理念在于通过优化涡轮结构与电机适配性，实现流体动能向机械动能的高效转化，同时兼顾轻量化、低损耗与长寿命特性，全方位满足不同工况下的严苛动力需求。

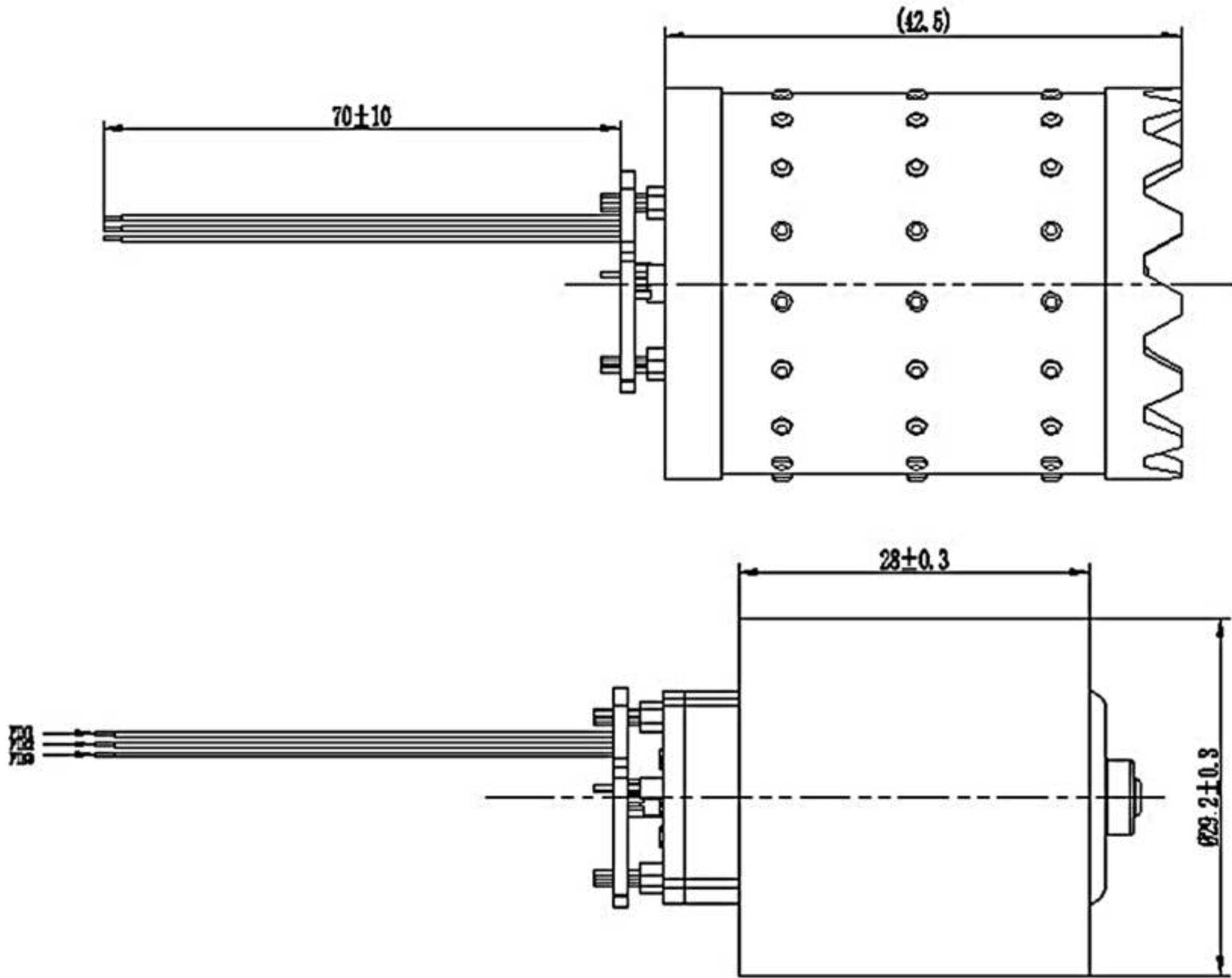
The BT 29 turbo motor is a high-performance power device that combines advanced turbine technology with precise motor design. With its efficient energy conversion, stable operation, and wide adaptability, it has become a core power choice in industrial drives, specialized equipment, precision manufacturing, and other fields. Its core design concept lies in optimizing the turbine structure and motor compatibility to achieve efficient conversion of fluid kinetic energy into mechanical energy, while also considering lightweight construction, low loss, and long lifespan, fully meeting the demanding power requirements under various operating conditions.



基础参数	
额定电压：	7.4V
电压范围：	6.6-7.4V
转速：	70000±8%RPM
最大输入功率：	48WMax
风速：	11Min
阻抗值：	0.28Ω(25°C)
绝缘电阻：	100MΩMin
低压启动：	6.6V Min
噪音：	



工程图





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