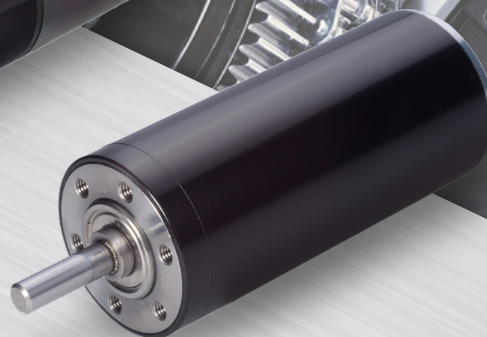
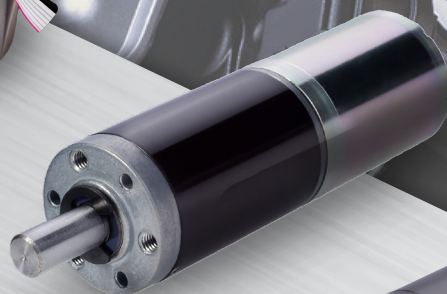
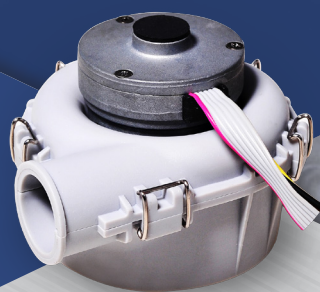




助力创想 驱动未来  
DRIVING IDEAS INTO  
ACHIEVEMENTS

**2022**



[www.constarmotor.com](http://www.constarmotor.com)

# CONTENT 目录

## 01

### 公司概况 COMPANY PROFILE

COMPANY INTRODUCTION	公司简介	2-3
SENIOR MANAGEMENT	高层管理	4-5
DRIVEN BY ACHIEVEMENT	未来驱动	6-7
DRIVEN BY INNOVATION	创新驱动	8-9
DRIVEN BY PROFESSION	专业驱动	10-11

## 02

### 精密直流空心杯电机 PRECISION DC CORELESS MOTOR

		12-47

## 03

### 无刷电机 BRUSHLESS DC MOTOR

INNER ROTOR, SLOTLESS, HIGH EFFICIENCY	内转子无槽高效率	54-57
INNER ROTOR	内转子	58-74
OUTER ROTOR	外转子	75-107
FLAT BLDC MOTOR	扁平无刷电机	108
BRUSHLESS DC BLOWER	无刷风机	109

## 04

### 无刷电机驱动器 ELECTRONIC SPEED CONTROLLER

UNIVERSAL ESC FOR BLDC MOTOR	无刷电机通用驱动器	114-115
COMPACT ESC FOR BLDC MOTOR	无刷电机紧凑型驱动器	116-117
ESC FOR MULTI-ROTOR	多旋翼无人机电调	118

## 05

### 精密齿轮减速电机 PRECISION GEARMOTOR

PLANETARY GEARBOX SERIES	行星齿轮系列	124-144
SPUR GEARBOX SERIES	正齿轮系列	145-152

## 06

### 精密伺服电机 PRECISION SERVO MOTOR

		158-163

# 07

直流空心杯电机  
DC CORELESS MOTOR

DRIVING SERIES 驱动系列 168-199

VIBRATING SERIES 振动系列 200-209

# 08

圆扁式直流电机  
FLAT DC MOTOR

DRIVING SERIES 驱动系列 214

VIBRATING SERIES 振动系列 215-218

# 09

直流铁芯电机  
DC CORE MOTOR

224-238

# 10

微型步进电机  
MINI STEP MOTOR

244-245

# 11

声波振动电机  
SONIC MOTOR

250-258

# 12

联系方式  
CONTACT

260-261

# COMPANY INTRODUCTION

## 公司简介

Constar创建于2000年，是提供一体化的微电机产品与解决方案的民营高科技企业。公司位于深圳市光明区，拥有深圳精密微电机厂、重庆涪陵微电机厂两大生产基地及深圳高新区科技生态园研发中心，具备年产各类微特电机1亿台的生产能力。在微特电机制造领域里，公司担当着成功企业背后的驱动力管理顾问的角色，Constar作为代表具备国际竞争力的本土微电机产品与解决方案的一流品牌，广泛应用于医疗保健、汽车、工业自动化、机器人、无人机、智能家居、安防设备等领域，影响欧美、日韩、台港及中国大陆众多知名企业。如今Constar遍及全球，销售公司及分支机构覆盖国内外重点区域，为社会提供不可或缺的精密传动支持。

Constar, founded in 2000 and located in Guangming District, Shenzhen, is a private high-tech enterprise which focuses on providing integrated micromotor products and related solutions. We have two production bases, the Shenzhen Precision Micromotor Factory and Chongqing Fuling Micromotor Factory, as well as a Research and Development Center in Shenzhen High-tech Zone's Science and Technology Ecological Park. It has an annual production capacity of 100 million sets of various types of micromotors. In the field of micromotor manufacturing, our company acts as a management consultant of driving force for the successful customer enterprises. Constar is a competitive and representative brand in international market, of which, micromotors and solutions are widely used in medical treatment and health care, automobiles, industry automatization, robotics, UAV, smart homes, security devices, etc., and exerted impacts on numerous famous enterprise in Europe and America, Japan and South Korea, Taiwan and Chinese Mainland. So far, Constar's business has covered all over the world. We have established sales companies and subsidiaries in major areas at home and abroad, which provide the society with indispensable precision transmission support.



# CONSTAR MOTION AND RELATED COMPANIES 德达兴及关联公司

## 深圳市德达兴驱动科技有限公司

位于深圳市光明区马田街道马山头社区钟表基地瑞辉大厦

### Constar Motion Co.,LTD

Located in Ruihui Building, Mashantou Community

Clock&Watch Base, Matian Subdistrict, Guangming District,  
Shenzhen, China

## 深圳市仓兴达科技有限公司

位于深圳市福田区车公庙天安科技创业园大厦

### Constar Micromotor Co.,LTD

Located in Futian Tian'an Hi-Tech Venture Park, Futian  
District, Shenzhen, China

## 深圳市仓兴达科技有限公司精密微电机厂

位于深圳市光明区马田街道马山头社区钟表基地瑞辉大厦

### Constar Micromotor Co.,LTD Precision Micromotor Factory

Room 501-601, Ruihui Building, Mashantou Community Clock&Watch  
Base, Matian Subdistrict, Guangming District, Shenzhen, China

## 重庆市仓兴达科技有限公司

位于重庆市涪陵区新城区

### Constar Micromotor Chongqing Co.,Ltd

Located in New Town, Fuling District, Chongqing, China

## KOCO DC-MOTION, Inc.

位于美国加州胡桃市

KOCO DC-MOTION, Inc. Located in Walnut, CA, U.S.A.



# SENIOR MANAGEMENT 高层管理



王 旭 Wang Xu  
原董事长 Former President

原电子工业部处长  
全国微电机行业主管  
The section chief of the former Electronic Ministry, the  
supervisor of the national micromotor industry



刘 东 Liu Dong  
董事长兼总经理 President & General Manager

重庆大学电机专业, 香港科技大学 EMBA  
Bachelor of electronic engineering from Chongqing  
University, EMBA from Hong Kong University of Science  
and Technology



左起 From the Left

黄昕, 副董事长兼副总经理, 重庆大学电机硕士, 深圳大学国际营销 EMBA  
Carol Huang, Vice President & Deputy General Manager, master of electronic engineering from Chongqing  
University, EMBA of international marketing from Shenzhen University

杨竹, 副董事长兼副总经理, 高级会计师, 清华大学 EMBA  
Yang Zhu, Vice President & Deputy General Manager, Senior Accountant, EMBA from Tsinghua University



**公司元老，行业前辈** FOUNDING MEMBERS OF THE COMPANY,  
PREDECESSORS OF MICROMOTOR INDUSTRY



左起 From the Left

刘明杰 销售副总经理，毕业于清华大学，原电子部 906 厂副厂长  
Liu Mingjie, Deputy General Manager in charge of Sales, graduated from Tsinghua University, the vice manager of 906 plant of the former Electronic Ministry

单 贵 原监事会监事，毕业于清华大学，原电子部 880 厂厂长  
Shan Gui, Former Supervisor of Supervisory Board, graduated from Tsinghua University, the factory manager of 880 plant of the former Electronic Ministry

王 旭 原董事长  
Wang Xu, Former President

黄定远 总经理特别助理，毕业于清华大学，原电子部 907 厂总工程师，教授级高工  
Huang Dingyuan, Special Assistant to General Manager, graduated from Tsinghua University, the chief engineer of 907 plant of the former Electronic Ministry, a professorate senior engineer

沈镜莹 总工程师，毕业于清华大学，原电子部 907 厂设计室主任，享受国务院津贴专家  
Shen Jingying, Chief Engineer, graduated from Tsinghua University, the director of design office of 907 plant of former Electronic Ministry, State Council Expert for Special Allowance



公司生产会议 Corporate Production Meetings



公司管理会议 Corporate Management Meetings

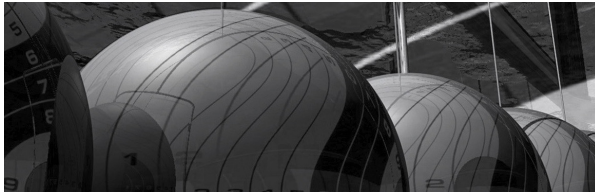


## DRIVEN BY ACHIEVEMENT 未来驱动

我们坚持以客户业务要求及产品应用要求为起点,组建了7个专业研发项目团队,与客户共同开发量身定制的个性化解决方案,帮助客户产品在市场上脱颖而出。我们的产品已成功应用于医疗器械、机器人、无人机、汽车电子、工业自动化、智能家居、个人护理用品、穿戴设备、安防等众多领域,以其出色的可靠性赢得客户好评。

Starting out with our customers' business demands and products' application requirements, we have constructed 7 professional R&D project teams to jointly develop tailored personalized solutions with our customers to help their products win out among various products in the market. Our products are successfully applied to numerous fields like medical devices, robotics, UAV, automotive electronics, industry automatization, smart home, personal care appliances, wearable devices, security devices, etc. and have won great praise from our customers with excellent reliability.





## 专业驱动

### Rooted Motor

植根驱动行业，专注并矢志不移地投入和释放自身的潜力，不断的革新体制，追求以尖端产品和良好的客户服务塑造值得信赖的驱动产品供应商，致力于为诸多领域提供具有价格竞争力的创新解决方案，涵盖工业自动化、医疗保健、安全技术、仪器仪表、通讯技术、日用消费等领域。

Constar is rooted in motor industry and focuses on investment and potential exploration. It aims to develop into a reliable supplier of motor products by constantly innovating system, pursuing tiptop products and excellent services, and devoting to provide competitive and innovative solutions in different aspects, such as industry automatization, medical treatment and health care, security technology, instruments and meters, communication technology, daily consumption, etc.



## 成就创想

### Imagination Manage

以业界领先的驱动技术与专业服务，帮助客户生产更具安全价值与品质保障的产品，从而满足终端用户需求，实现客户创想，亦是我们的价值所在。

Provide customers with safer products of higher quality with our leading driving technology and professional services, meet needs of end-users and realize customer's creative ideas in actual use, where our value also lies.



## 客户导向

### Customer Motivated

我们视客户的成功为自己的成功，坚持以客户业务要求及产品应用要求为起点，量身定制富有实效的个性化服务，以协助客户使其产品在市场上脱颖而出。注重沟通与产品质量，建立起相互信任的长期合作关系。

Our success depends on customers'. We customize more practical and effective personalized services on the basis of business requirements of customers and application requirements of products so that we are able to help their products be more competitive in the market. We focus on communications and quality of products and have established long-term cooperative relations with them on the basis of mutual trust.



## 引领卓越

### Keep Moving

践行超越，永不止步。制定并努力实现宏伟目标，对所做的一切和已经实现的目标引以为豪；重视卓越的人才、流程、产品和服务；卓越不仅仅是价值，决心通过创新、不断完善，它也是让未来更加美好的规律和方式。

Constar keeps constantly making progress and innovation. It will set down ambitions and make great efforts to realize them. It also prides itself on what have been achieved and the goals reached. Furthermore, it values much the talents, procedures, products and services, and determines to improve itself by innovation. Constar believes that it can create a brilliant future for all by providing excellent values.

# DRIVEN BY INNOVATION

## 创新驱动

Constar 执着创新, 荟萃电机行业资深专家及年轻、富有经验的专业人才, 还拥有与著名高等院校合作的研发团队, 以强大的研发力量带动技术突破, 获得六十余项专利授权。

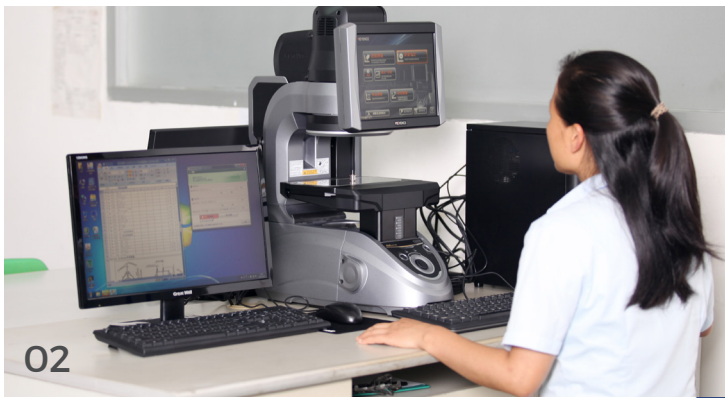
Constar is devoted to innovation. To further that end, we have acquired both senior experts and young experienced professionals from motor industry, have our own research and development teams cooperating with famous higher educational institutions, make technological breakthroughs through our vast research and development power, and have been awarded dozens of patents.



荣誉证书  
Certificate



知识产权证书  
Intellectual Property Certificates



01 Anechoic Room  
消音室

02 Image Dimension Measuring System  
图像尺寸测量仪

03 Hardness Tester  
硬度计

04 R&D Office  
开发技术部办公室

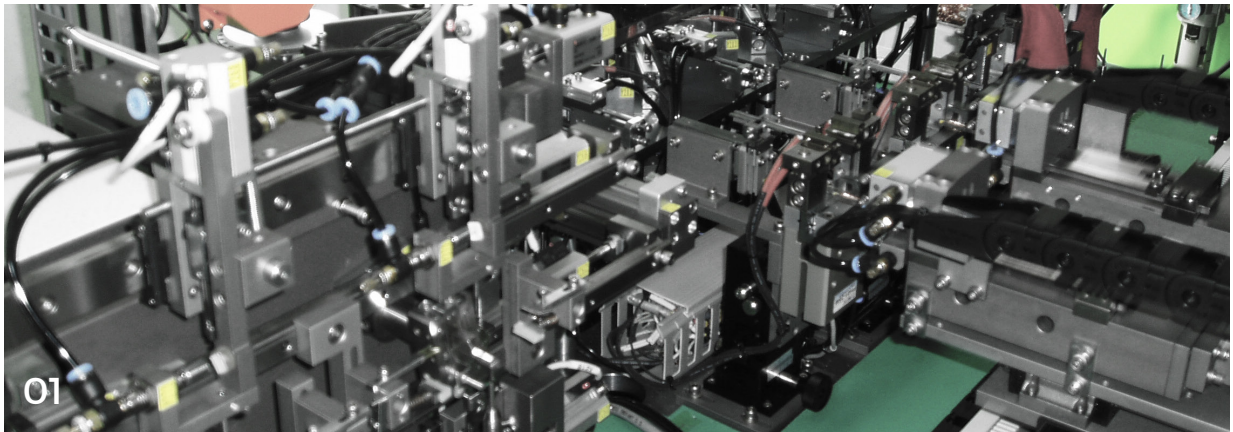
05 Laboratory  
实验室

06 Burn-in Room  
跑滑室

## DRIVEN BY PROFESSION 专业驱动

Constar 充分发挥深圳的技术与市场优势, 致力于客户需求产品 (特别是高端产品) 的开发。与此同时, Constar 将重庆工厂作为大批量产品的生产基地, 充分发挥西部地区的低成本优势, 配以投入高效率的自动化、半自动化设备, 卓然立足, 茁壮成长。

Constar leverages its technology and market advantage in Shenzhen to devote itself to developing products (especially high-end products) required by customers. We have set a factory in Chongqing as the production base with large production volume, leveraging low-cost advantages of western regions, and have introduced effective automatic and semi-automatic equipment. These efforts have helped Constar develop and flourish in a stable and sustainable fashion.



01 Automatic Winding Machine  
全自动绕线机

02 Automated Production Line  
自动化生产线



面对全球经济一体化带来的新机遇和挑战, Constar 不遗余力地苛求产品品质。公司已顺利通过 IATF16949、ISO9001 品质管理体系认证, 建立了完整而卓有成效的经营管理和质量保证体系。

Constar strictly adheres to high product quality to meet new opportunities and challenges due to global economic integration. Our company has passed IATF16949 and ISO9001 Quality Management Systems certification, and established a thorough and effective operation management and quality assurance system.



01 Clean Room  
无尘车间

02 Automated Production Shop  
自动化生产车间

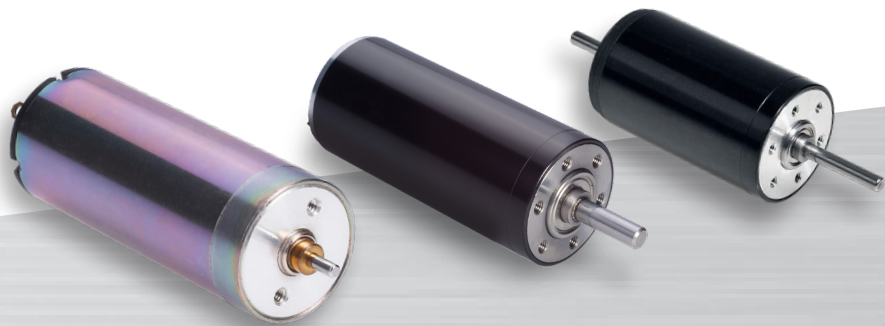
03 CNC Machining Center  
CNC 加工中心



## PRECISION DC CORELESS MOTOR 精密直流空心杯电机

Constar 精密直流空心杯电机采用了无铁芯绕组结构。由于其绕组对称，电机振动小、运行平稳；绕组、换向器与电机轴一体化结构，使得电机转动惯量低、转速快、效率高、电磁干扰小、寿命长；电机输出特性线性化，方便调速，伺服性能极佳；采用高性能钕铁硼稀土磁钢，产品体积小。对于低功率要求的场合，使用贵金属换向结构的电机，如果输出功率较高及长寿命，则可选择碳刷换向结构的电机。产品应用于医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Coreless windings are utilized in our precision DC coreless motors (Micromotors). Due to an integrated structure consisting of a symmetrical winding, commutator and motor shaft, these motors are very smooth and stable running and without vibration. The motors are characterized by: low inertia, rapid acceleration, high efficiency, no cogging and linear output performance. They have excellent speed regulation and servo performance. High performance Nd-Fe-B magnets are used, and the product is compact in size. The motor with precious metal commutation is used in low power applications, whereas carbon-brush commutation is used in higher power applications with long operational lifetime. The product is typically used for precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.



# CONTENT 目录

## 精密直流空心杯电机

PRECISION DC CORELESS MOTOR

	电机型号 Motor No.	尺寸 Dimension	换向结构 Commutation Structure	页码 Page
1	0615N5M	φ6*15 mm	贵金属电刷/Precious Metal Commutation	16
2	0816N5M	φ8*16.2 mm	贵金属电刷/Precious Metal Commutation	17
3	1020N5M	φ10*20.7 mm	贵金属电刷/Precious Metal Commutation	18
4	1025N5M	φ10*24 mm	贵金属电刷/Precious Metal Commutation	19
5	1221N5M2B	φ12*21 mm	贵金属电刷/Precious Metal Commutation	20
6	1230N5M	φ12.4*30.9 mm	贵金属电刷/Precious Metal Commutation	21
7	1230N7M	φ12.4*30.9 mm	贵金属电刷/Precious Metal Commutation	22
8	1331N5M	φ13*31.5 mm	贵金属电刷/Precious Metal Commutation	23
9	1331N7M	φ13*30.7 mm	贵金属电刷/Precious Metal Commutation	24
10	1515N5M	φ15*15.2 mm	贵金属电刷/Precious Metal Commutation	25
11	1620N5M	φ16*20 mm	贵金属电刷/Precious Metal Commutation	26
12	1625N5M	φ16*25.2 mm	贵金属电刷/Precious Metal Commutation	27
13	1625N9M	φ16*25.2 mm	贵金属电刷/Precious Metal Commutation	28
14	1625N5C	φ16*25.6 mm	碳刷/Graphite Brush	29
15	1627N5M(1)	φ16*27 mm	贵金属电刷/Precious Metal Commutation	30
16	1627N5M(2)	φ16*27 mm	贵金属电刷/Precious Metal Commutation	31
17	1630N5M	φ16*30 mm	贵金属电刷/Precious Metal Commutation	32
18	1630N5C	φ16*30 mm	碳刷/Graphite Brush	33
19	1635N5C	φ16*35 mm	碳刷/Graphite Brush	34
20	1735N5C2B	φ17*35 mm	碳刷/Graphite Brush	35
21	1925N9M	φ19*25 mm	贵金属电刷/Precious Metal Commutation	36
22	2224N5M	φ22*24 mm	贵金属电刷/Precious Metal Commutation	37
23	2225N5M	φ22*25.3 mm	贵金属电刷/Precious Metal Commutation	38
24	2232N5M2B	φ22*31.6 mm	贵金属电刷/Precious Metal Commutation	39
25	2232N9M	φ22*31.6 mm	贵金属电刷/Precious Metal Commutation	40
26	2233N5C	φ22*33.7 mm	碳刷/Graphite Brush	41
27	2433N5M2B	φ24*32.8 mm	贵金属电刷/Precious Metal Commutation	42
28	2543N9C2B	φ25*43.5 mm	碳刷/Graphite Brush	43



29	2554N9C2B	φ25*53.3 mm	碳刷/Graphite Brush	44
30	3068N9C2B	φ30*68 mm	碳刷/Graphite Brush	45
31	3257N9C2B	φ32*57 mm	碳刷/Graphite Brush	46

# 精密直流空心杯电机

## PRECISION DC CORELESS MOTOR

### 0615N5M | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

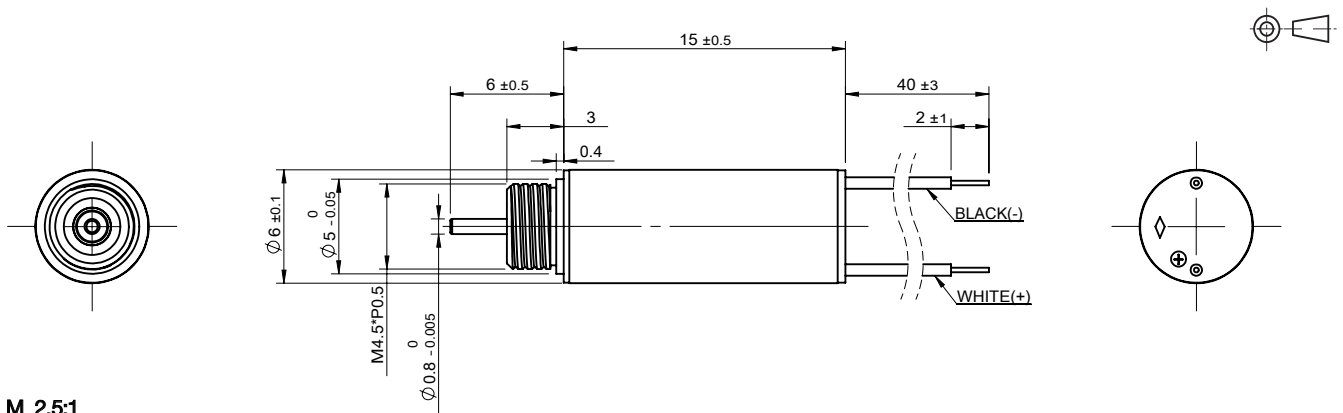
#### 主要技术指标 | Characteristics

			01-122-3.0	02-185-3.0	03-295-6.0
1	电压	Voltage	V	3.0	6.0
2	端电阻	Terminal resistance	$\Omega$	19.0	10.1
3	空载转速	No-load speed	rpm	12200	29500
4	空载电流	No-load current	mA	10	20
5	堵转转矩	Stall torque	mNm	0.33	1.07
6	堵转电流	Stall current	mA	160	590
7	额定转矩	Nominal torque	mNm	0.10	0.30
8	额定转速	Nominal speed	rpm	8500	21230
9	额定电流	Nominal current	mA	60	180
10	最大输出功率	Max. output power	W	0.11	0.83
11	最大效率	Max. efficiency	%	56	67
12	反电势常数	Back-EMF constant	mV/rpm	0.2	0.2
13	转矩常数	Torque constant	mNm/A	2.2	1.9
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	37000	27600
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.015	0.015
16	重量	Weight	g	2.5	2.5
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		75.83
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		42.08
19	热时常数 (电机)	Thermal time constant motor	s		78
20	热时常数 (线圈)	Thermal time constant winding	s		15
21	工作温度范围	Operating temperature range	°C		-20~+85
22	绕组耐温等级	Thermal class of winding	°C		130
23	轴向间隙	Axial play	mm		≤0.3
24	径向间隙	Radial play	mm		0.012
25	动态轴向载荷	Axial load dynamic	N		0.15
26	静态轴向载荷	Axial load static	N		10
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		0.7
28	极对数	No. of pole pairs			1
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings
30	换向结构	Commutator			贵金属 5 相/metal 5 segments
31	防护等级	Protection class			IP 40

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

齿轮箱 Gearheads

#### 外观图 | Outline Drawing



## 0816N5M | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

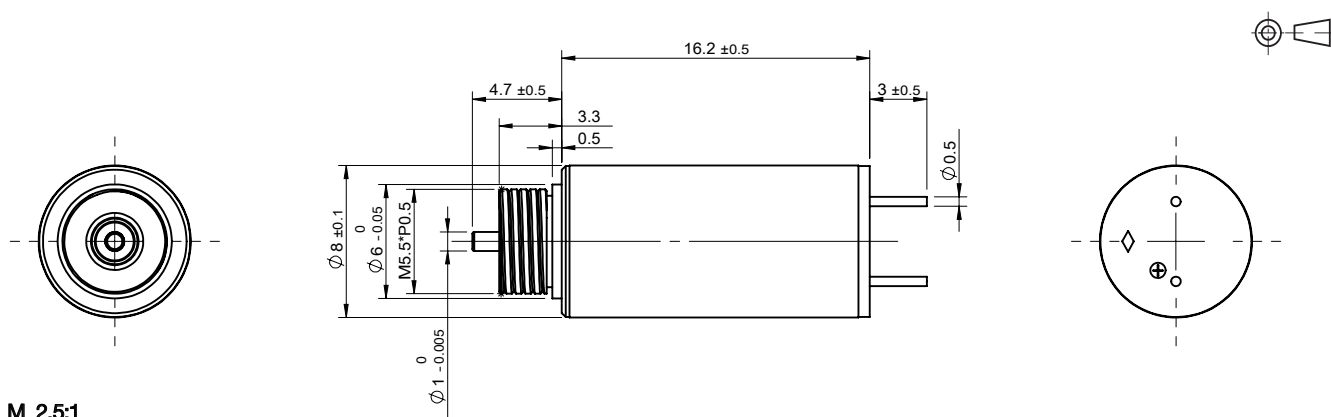
### 主要技术指标 | Characteristics

			02-137-4.2	11-148-6.0	01-155-8.0	
1	电压	Voltage	V	4.2	6.0	8.0
2	端电阻	Terminal resistance	$\Omega$	13.5	25.3	60.0
3	空载转速	No-load speed	rpm	13700	14800	15500
4	空载电流	No-load current	mA	15	7	6
5	堵转转矩	Stall torque	mNm	0.82	0.88	0.58
6	堵转电流	Stall current	mA	310	240	130
7	额定转矩	Nominal torque	mNm	0.25	0.30	0.15
8	额定转速	Nominal speed	rpm	9530	9730	11520
9	额定电流	Nominal current	mA	100	90	40
10	最大输出功率	Max. output power	W	0.30	0.34	0.24
11	最大效率	Max. efficiency	%	61	69	62
12	反电势常数	Back-EMF constant	mV/rpm	0.3	0.4	0.5
13	转矩常数	Torque constant	mNm/A	2.8	3.8	4.7
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	16700	16900	26600
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.04	0.04	0.04
16	重量	Weight	g	3.6	3.6	3.6
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		66.15	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		27.25	
19	热时常数 (电机)	Thermal time constant motor	s		104	
20	热时常数 (线圈)	Thermal time constant winding	s		21	
21	工作温度范围	Operating temperature range	°C		-20~+85	
22	绕组耐温等级	Thermal class of winding	°C		130	
23	轴向间隙	Axial play	mm		≤0.3	
24	径向间隙	Radial play	mm		0.012	
25	动态轴向载荷	Axial load dynamic	N		0.15	
26	静态轴向载荷	Axial load static	N		10	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		0.7	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator			贵金属 5 相/metal 5 segments	
31	防护等级	Protection class			IP 40	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

齿轮箱 Gearheads 编码器 Encoder

### 外观图 | Outline Drawing



# 精密直流空心杯电机

## PRECISION DC CORELESS MOTOR

### 1020N5M | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

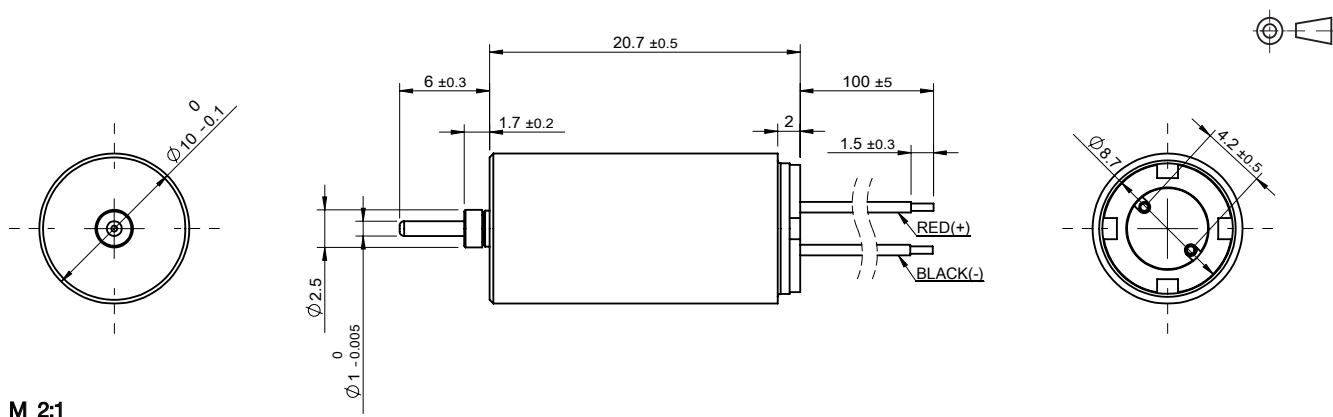
#### 主要技术指标 | Characteristics

			52-115-3.0	14-125-6.0	16-280-7.4	
1	电压	Voltage	V	3.0	6.0	7.4
2	端电阻	Terminal resistance	$\Omega$	3.8	11.7	3.3
3	空载转速	No-load speed	rpm	11500	12500	28000
4	空载电流	No-load current	mA	16	15	30
5	堵转转矩	Stall torque	mNm	1.89	2.20	5.50
6	堵转电流	Stall current	mA	790	510	2240
7	额定转矩	Nominal torque	mNm	0.5	0.5	1.0
8	额定转速	Nominal speed	rpm	8460	9660	22910
9	额定电流	Nominal current	mA	220	130	430
10	最大输出功率	Max. output power	W	0.57	0.72	4.04
11	最大效率	Max. efficiency	%	74	69	78
12	反电势常数	Back-EMF constant	mV/rpm	0.26	0.47	0.26
13	转矩常数	Torque constant	mNm/A	2.4	4.4	2.5
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	6100	6100	6100
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.07	0.07	0.07
16	重量	Weight	g	6.1	6.1	6.1
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		38.5	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		33.2	
19	热时常数 (电机)	Thermal time constant motor	s		78	
20	热时常数 (线圈)	Thermal time constant winding	s		61	
21	工作温度范围	Operating temperature range	°C		-20~+85	
22	绕组耐温等级	Thermal class of winding	°C		130	
23	轴向间隙	Axial play	mm		0.01~0.15	
24	径向间隙	Radial play	mm		0.012	
25	动态轴向载荷	Axial load dynamic	N		0.15	
26	静态轴向载荷	Axial load static	N		15	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		0.4	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator			贵金属 5 相/metal 5 segments	
31	防护等级	Protection class			IP 40	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

齿轮箱 Gearheads 编码器 Encoder

#### 外观图 | Outline Drawing



## 1024N5M | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

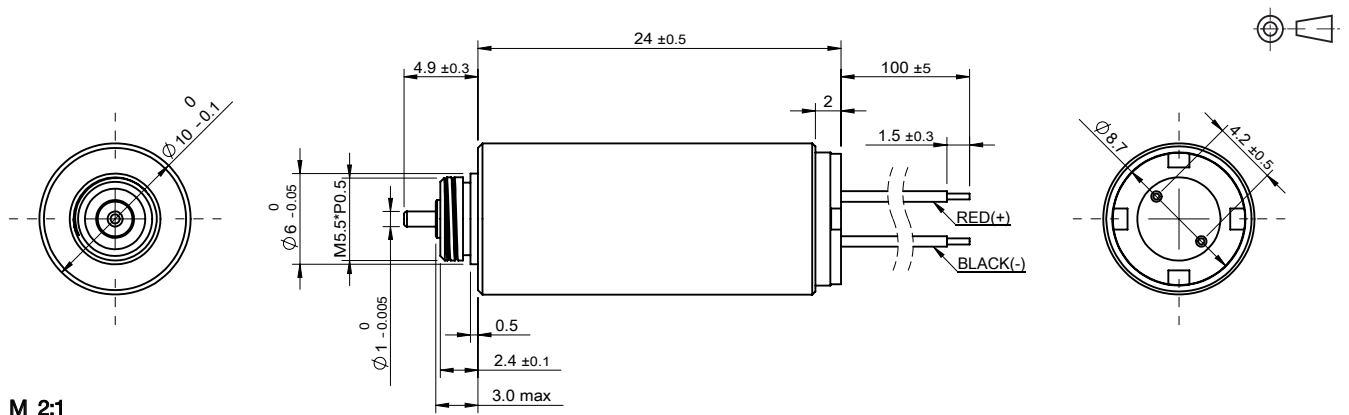
### 主要技术指标 | Characteristics

			03-92-3.0	02-130-6.0	05-150-12.0	
1	电压	Voltage	V	3.0	6.0	12.0
2	端电阻	Terminal resistance	$\Omega$	5.3	6.5	22.5
3	空载转速	No-load speed	rpm	9200	13000	15000
4	空载电流	No-load current	mA	20	20	15
5	堵转转矩	Stall torque	mNm	1.65	3.88	3.82
6	堵转电流	Stall current	mA	570	920	530
7	额定转矩	Nominal torque	mNm	1.0	1.0	1.0
8	额定转速	Nominal speed	rpm	3630	9650	11080
9	额定电流	Nominal current	mA	350	250	150
10	最大输出功率	Max. output power	W	0.40	1.32	1.50
11	最大效率	Max. efficiency	%	66	73	69
12	反电势常数	Back-EMF constant	mV/rpm	0.3	0.5	0.8
13	转矩常数	Torque constant	mNm/A	3.0	4.3	7.4
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	5600	3300	3900
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.09	0.09	0.09
16	重量	Weight	g	7.0	7.0	7.0
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		32.56	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		36.8	
19	热时常数 (电机)	Thermal time constant motor	s		113	
20	热时常数 (线圈)	Thermal time constant winding	s		90	
21	工作温度范围	Operating temperature range	°C		-20~+85	
22	绕组耐温等级	Thermal class of winding	°C		130	
23	轴向间隙	Axial play	mm		≤0.15	
24	径向间隙	Radial play	mm		0.012	
25	动态轴向载荷	Axial load dynamic	N		0.15	
26	静态轴向载荷	Axial load static	N		15	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		0.4	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator			贵金属 5 相/metal 5 segments	
31	防护等级	Protection class			IP 40	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

齿轮箱 Gearheads 编码器 Encoder

### 外观图 | Outline Drawing



# 精密直流空心杯电机

## PRECISION DC CORELESS MOTOR

### 1221N5M2B | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

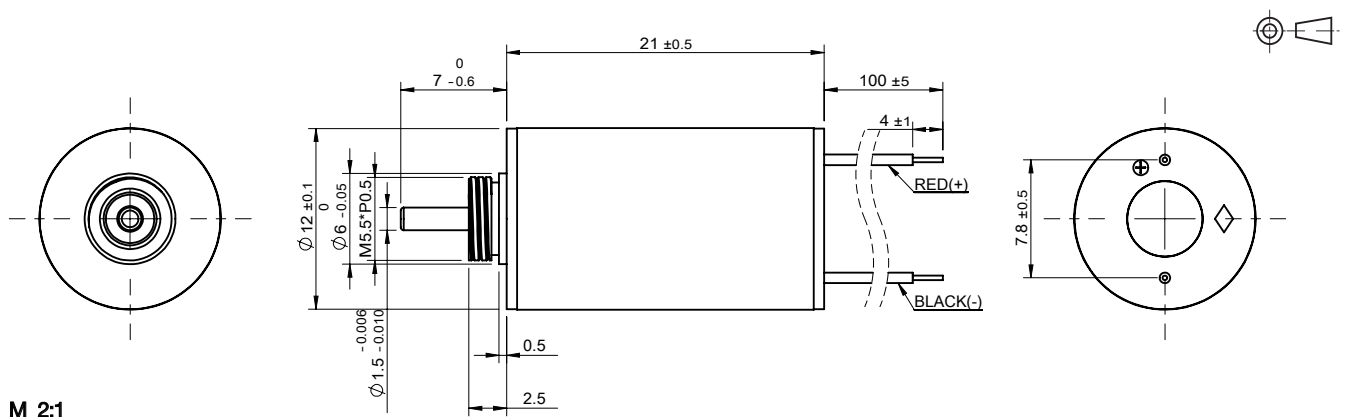
#### 主要技术指标 | Characteristics

			26-79-3.3	27-120-6.0	43-141-12.0	
1	电压	Voltage	V	3.3	6.0	12.0
2	端电阻	Terminal resistance	$\Omega$	6.9	5.2	17.9
3	空载转速	No-load speed	rpm	7900	12000	14100
4	空载电流	No-load current	mA	14	30	8
5	堵转转矩	Stall torque	mNm	1.8	5.2	5.3
6	堵转电流	Stall current	mA	480	1150	670
7	额定转矩	Nominal torque	mNm	0.4	2.3	2.1
8	额定转速	Nominal speed	rpm	6370	6700	8530
9	额定电流	Nominal current	mA	100	520	270
10	最大输出功率	Max. output power	W	0.37	1.64	1.96
11	最大效率	Max. efficiency	%	69	70	79
12	反电势常数	Back-EMF constant	mV/rpm	0.4	0.5	0.8
13	转矩常数	Torque constant	mNm/A	3.9	4.7	8.0
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	4400	2300	2700
15	转子惯量	Rotor inertia	$\text{gcm}^2$	0.15	0.15	0.15
16	重量	Weight	g	10	10	10
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		33.3	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		35.3	
19	热时常数 (电机)	Thermal time constant motor	s		144	
20	热时常数 (线圈)	Thermal time constant winding	s		120	
21	工作温度范围	Operating temperature range	$^{\circ}\text{C}$		-20~+85	
22	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$		130	
23	轴向间隙	Axial play	mm		0.02~0.15	
24	径向间隙	Radial play	mm		0.025	
25	动态轴向载荷	Axial load dynamic	N		0.8	
26	静态轴向载荷	Axial load static	N		30	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		4	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
30	换向结构	Commutator			贵金属 5 相/metal 5 segments	
31	防护等级	Protection class			IP 40	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

轴承类型 Bearing type 齿轮箱 Gearheads

#### 外观图 | Outline Drawing



## 1230N5M | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

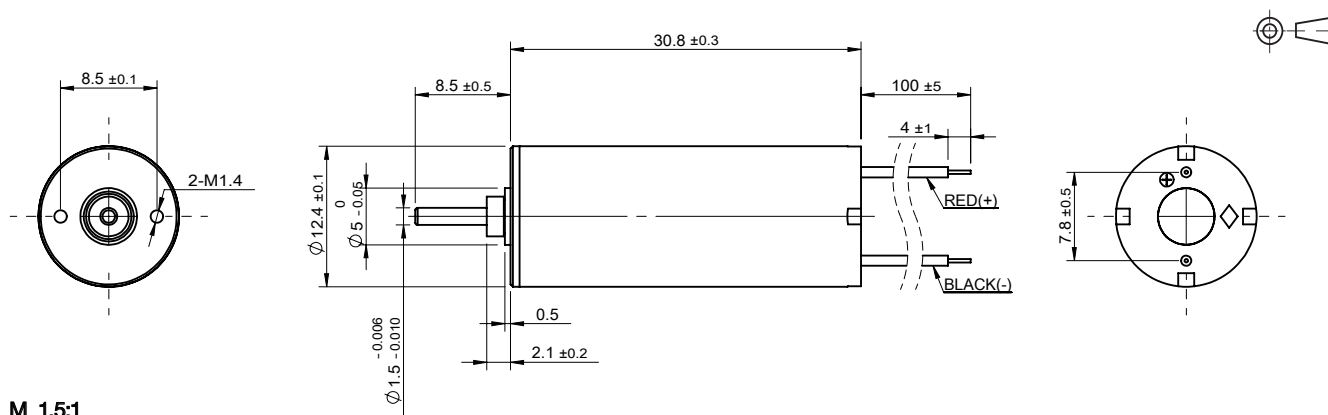
### 主要技术指标 | Characteristics

			06-44-5.3	15-113-12.0	17-108-24.0	
1	电压	Voltage	V	5.3	12.0	24.0
2	端电阻	Terminal resistance	$\Omega$	12.9	10.4	59.0
3	空载转速	No-load speed	rpm	4450	11300	10800
4	空载电流	No-load current	mA	10	15	5
5	堵转转矩	Stall torque	mNm	4.4	11.4	8.5
6	堵转电流	Stall current	mA	410	1150	410
7	额定转矩	Nominal torque	mNm	0.9	3.0	3.7
8	额定转速	Nominal speed	rpm	3550	8320	6090
9	额定电流	Nominal current	mA	90	310	180
10	最大输出功率	Max. output power	W	0.52	3.36	2.40
11	最大效率	Max. efficiency	%	71	79	79
12	反电势常数	Back-EMF constant	mV/rpm	1.2	1.0	2.2
13	转矩常数	Torque constant	mNm/A	11.1	10.0	21.0
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1000	990	1270
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.25	0.25	0.25
16	重量	Weight	g	17.7	17.7	17.7
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		35.15	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		12.49	
19	热时常数 (电机)	Thermal time constant motor	s		202	
20	热时常数 (线圈)	Thermal time constant winding	s		20	
21	工作温度范围	Operating temperature range	$^{\circ}\text{C}$		-20~+85	
22	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$		130	
23	轴向间隙	Axial play	mm		0.02~0.15	
24	径向间隙	Radial play	mm		0.014	
25	动态轴向载荷	Axial load dynamic	N		0.8	
26	静态轴向载荷	Axial load static	N		30	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		1.4	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator			贵金属 5 相/metal 5 segments	
31	防护等级	Protection class			IP 40	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

轴承类型 Bearing type 齿轮箱 Gearheads

### 外观图 | Outline Drawing



M 1.5:1

# 精密直流空心杯电机

## PRECISION DC CORELESS MOTOR

### 1230N7M | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

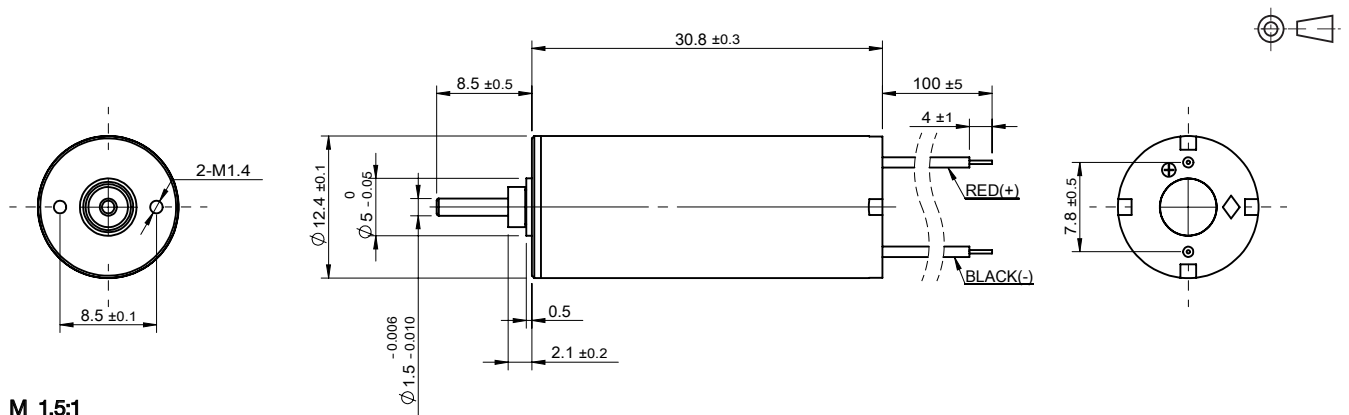
#### 主要技术指标 | Characteristics

			**-100-6.0	**-114-12.0	**-114-24.0	
1	电压	Voltage	V	6.0	12.0	24.0
2	端电阻	Terminal resistance	Ω	2.9	10.5	42.0
3	空载转速	No-load speed	rpm	10000	11400	11400
4	空载电流	No-load current	mA	25	15	8
5	堵转转矩	Stall torque	mNm	11.6	11.2	11.1
6	堵转电流	Stall current	mA	2070	1140	570
7	额定转矩	Nominal torque	mNm	2.0	2.0	1.5
8	额定转速	Nominal speed	rpm	8270	9360	9870
9	额定电流	Nominal current	mA	380	220	80
10	最大输出功率	Max. output power	W	3.03	3.33	3.33
11	最大效率	Max. efficiency	%	79	78	78
12	反电势常数	Back-EMF constant	mV/rpm	0.6	1.0	2.1
13	转矩常数	Torque constant	mNm/A	5.7	9.9	19.8
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	860	1020	1020
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.25	0.25	0.25
16	重量	Weight	g	17.7	17.7	17.7
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		27.8	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		23.7	
19	热时常数 (电机)	Thermal time constant motor	s		135	
20	热时常数 (线圈)	Thermal time constant winding	s		20	
21	工作温度范围	Operating temperature range	°C		-20~+85	
22	绕组耐温等级	Thermal class of winding	°C		85	
23	轴向间隙	Axial play	mm		0.02~0.15	
24	径向间隙	Radial play	mm		0.014	
25	动态轴向载荷	Axial load dynamic	N		0.8	
26	静态轴向载荷	Axial load static	N		30	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		1.4	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator			贵金属 7 相/metal 7 segments	
31	防护等级	Protection class			IP 40	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

齿轮箱 Gearheads 编码器 Encoder

#### 外观图 | Outline Drawing



M 1.5:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com



## 1331N5M | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

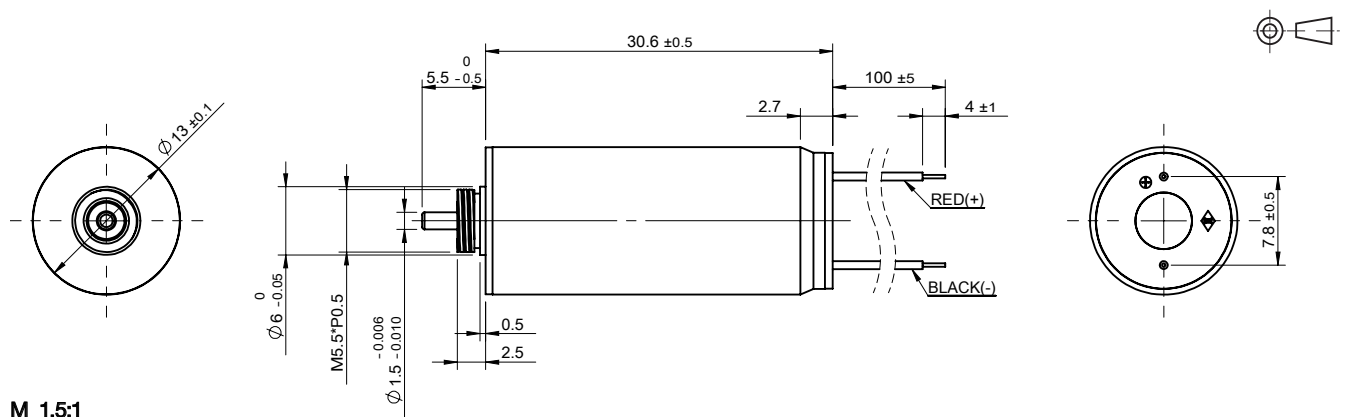
### 主要技术指标 | Characteristics

			02-39-4.5	01-67-9.0	09-87-12.0	
1	电压	Voltage	V	4.5	9.0	12.0
2	端电阻	Terminal resistance	$\Omega$	10.3	17.7	15.7
3	空载转速	No-load speed	rpm	3900	6700	8700
4	空载电流	No-load current	mA	4	7	8
5	堵转转矩	Stall torque	mNm	4.8	6.4	9.8
6	堵转电流	Stall current	mA	440	510	760
7	额定转矩	Nominal torque	mNm	1.0	2.0	3.0
8	额定转速	Nominal speed	rpm	3080	4590	6040
9	额定电流	Nominal current	mA	100	170	240
10	最大输出功率	Max. output power	W	0.49	1.12	2.23
11	最大效率	Max. efficiency	%	82	78	81
12	反电势常数	Back-EMF constant	mV/rpm	1.1	1.3	1.4
13	转矩常数	Torque constant	mNm/A	10.9	12.7	13.0
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	820	1050	890
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.52	0.52	0.52
16	重量	Weight	g	19	19	19
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		34.8	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		38.6	
19	热时常数 (电机)	Thermal time constant motor	s		211	
20	热时常数 (线圈)	Thermal time constant winding	s		163	
21	工作温度范围	Operating temperature range	$^{\circ}\text{C}$		-20~+85	
22	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$		130	
23	轴向间隙	Axial play	mm		0.02~0.15	
24	径向间隙	Radial play	mm		0.014	
25	动态轴向载荷	Axial load dynamic	N		0.8	
26	静态轴向载荷	Axial load static	N		30	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		1.4	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator			贵金属 5 相/metal 5 segments	
31	防护等级	Protection class			IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

轴承类型 Bearing type 齿轮箱 Gearheads

### 外观图 | Outline Drawing



# 精密直流空心杯电机

## PRECISION DC CORELESS MOTOR

### 1331N7M | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

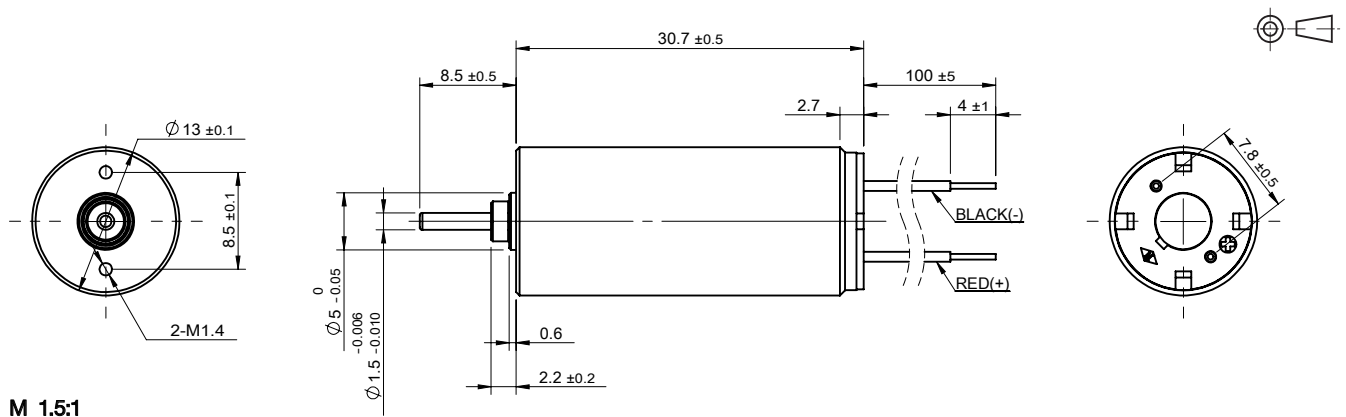
#### 主要技术指标 | Characteristics

			02-110-6.0	03-148-12.0	01-96-24.0	
1	电压	Voltage	V	6.0	12.0	24.0
2	端电阻	Terminal resistance	$\Omega$	2.6	5.0	39.8
3	空载转速	No-load speed	rpm	11000	14800	9600
4	空载电流	No-load current	mA	25	40	4
5	堵转转矩	Stall torque	mNm	11.8	18.0	14.1
6	堵转电流	Stall current	mA	2310	2400	600
7	额定转矩	Nominal torque	mNm	3.0	4.5	3.5
8	额定转速	Nominal speed	rpm	8200	11090	7220
9	额定电流	Nominal current	mA	610	630	150
10	最大输出功率	Max. output power	W	3.39	6.97	3.56
11	最大效率	Max. efficiency	%	80	76	84
12	反电势常数	Back-EMF constant	mV/rpm	0.5	0.8	2.5
13	转矩常数	Torque constant	mNm/A	5.2	7.6	23.7
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	930	820	680
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.52	0.52	0.52
16	重量	Weight	g	19	19	19
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		34.8	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		38.6	
19	热时常数 (电机)	Thermal time constant motor	s		211	
20	热时常数 (线圈)	Thermal time constant winding	s		163	
21	工作温度范围	Operating temperature range	°C		-20~+85	
22	绕组耐温等级	Thermal class of winding	°C		130	
23	轴向间隙	Axial play	mm		0.02~0.15	
24	径向间隙	Radial play	mm		0.014	
25	动态轴向载荷	Axial load dynamic	N		0.8	
26	静态轴向载荷	Axial load static	N		30	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		1.4	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator			贵金属 7 相/metal 7 segments	
31	防护等级	Protection class			IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

轴承类型 Bearing type 齿轮箱 Gearheads

#### 外观图 | Outline Drawing



## 1515N5M | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

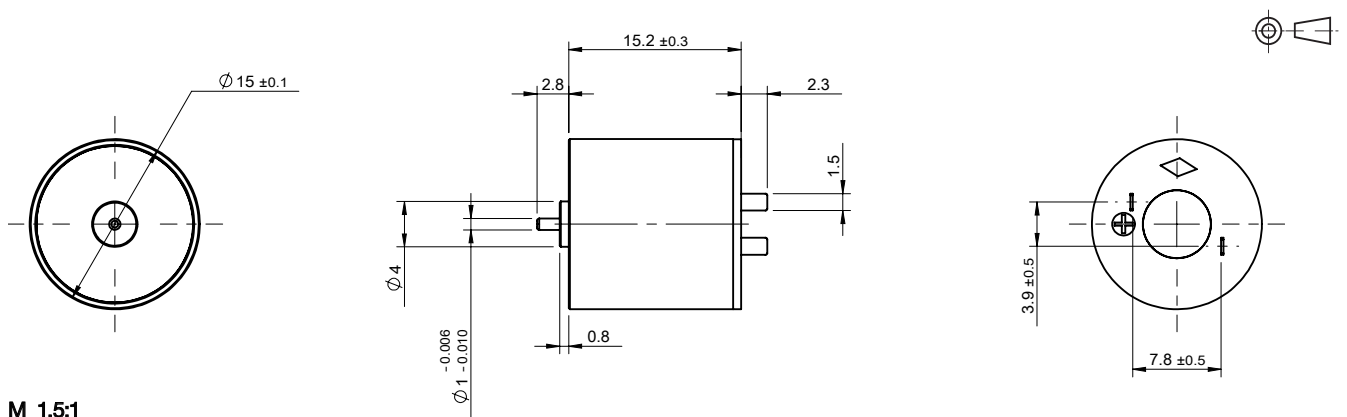
### 主要技术指标 | Characteristics

			02-255-7.4	10-240-12.0	07-220-18.0	
1	电压	Voltage	V	7.4	12.0	18.0
2	端电阻	Terminal resistance	$\Omega$	2.5	8.1	30.8
3	空载转速	No-load speed	rpm	25500	24000	22000
4	空载电流	No-load current	mA	95	50	15
5	堵转转矩	Stall torque	mNm	7.7	6.6	4.3
6	堵转电流	Stall current	mA	2960	1480	580
7	额定转矩	Nominal torque	mNm	2.0	1.5	1.0
8	额定转速	Nominal speed	rpm	18860	18540	16890
9	额定电流	Nominal current	mA	840	380	150
10	最大输出功率	Max. output power	W	5.14	4.15	2.48
11	最大效率	Max. efficiency	%	67	67	71
12	反电势常数	Back-EMF constant	mV/rpm	0.3	0.5	0.8
13	转矩常数	Torque constant	mNm/A	2.7	4.6	7.6
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	3320	3640	5110
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.21	0.21	0.21
16	重量	Weight	g	14.2	14.2	14.2
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		32.1	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		26.3	
19	热时常数 (电机)	Thermal time constant motor	s		130	
20	热时常数 (线圈)	Thermal time constant winding	s		98	
21	工作温度范围	Operating temperature range	°C		-20~+85	
22	绕组耐温等级	Thermal class of winding	°C		130	
23	轴向间隙	Axial play	mm		≤0.3	
24	径向间隙	Radial play	mm		0.012	
25	动态轴向载荷	Axial load dynamic	N		0.15	
26	静态轴向载荷	Axial load static	N		15	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		0.4	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator			贵金属 5 相/metal 5 segments	
31	防护等级	Protection class			IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

齿轮箱 Gearheads

### 外观图 | Outline Drawing



M 1.5:1

# 精密直流空心杯电机

## PRECISION DC CORELESS MOTOR

### 1620N5M | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

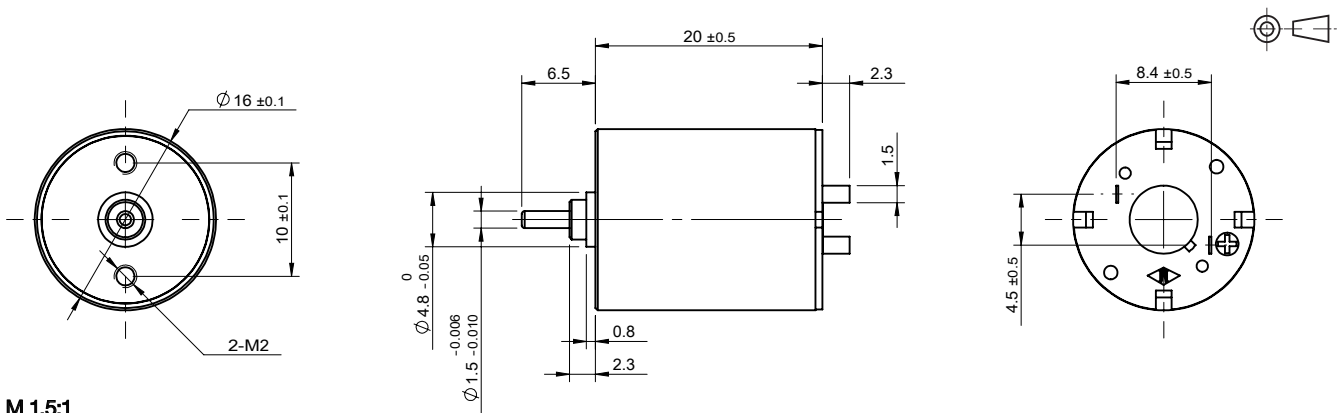
#### 主要技术指标 | Characteristics

			32-48-3.0	01-75-5.0	30-160-6.0
1	电压	Voltage	V	3.0	6.0
2	端电阻	Terminal resistance	$\Omega$	6.5	2.5
3	空载转速	No-load speed	rpm	4850	16000
4	空载电流	No-load current	mA	5	60
5	堵转转矩	Stall torque	mNm	2.7	8.2
6	堵转电流	Stall current	mA	460	2400
7	额定转矩	Nominal torque	mNm	0.5	2.5
8	额定转速	Nominal speed	rpm	3940	11100
9	额定电流	Nominal current	mA	90	780
10	最大输出功率	Max. output power	W	0.34	3.43
11	最大效率	Max. efficiency	%	80	71
12	反电势常数	Back-EMF constant	mV/rpm	0.6	0.4
13	转矩常数	Torque constant	mNm/A	5.8	3.5
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1820	1960
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.25	0.25
16	重量	Weight	g	16	16
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		35.7
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		25.6
19	热时常数 (电机)	Thermal time constant motor	s		172
20	热时常数 (线圈)	Thermal time constant winding	s		122
21	工作温度范围	Operating temperature range	°C		-20~+85
22	绕组耐温等级	Thermal class of winding	°C		130
23	轴向间隙	Axial play	mm		0.02~0.15
24	径向间隙	Radial play	mm		0.014
25	动态轴向载荷	Axial load dynamic	N		0.8
26	静态轴向载荷	Axial load static	N		30
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		1.4
28	极对数	No. of pole pairs			1
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings
30	换向结构	Commutator			贵金属 5 相/metal 5 segments
31	防护等级	Protection class			IP 30

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

齿轮箱 Gearheads

#### 外观图 | Outline Drawing



M 1.5:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## 1625N5M | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

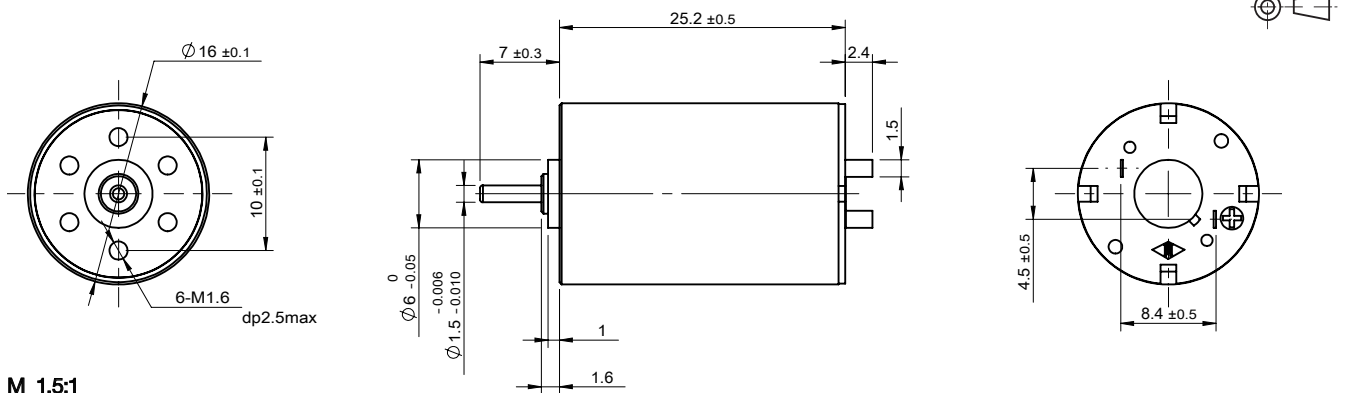
### 主要技术指标 | Characteristics

			24-60-3.7	25-88-6.0	17-81-12.0
1	电压	Voltage	V	3.7	12.0
2	端电阻	Terminal resistance	$\Omega$	7.6	16.5
3	空载转速	No-load speed	rpm	6000	8100
4	空载电流	No-load current	mA	12	10
5	堵转转矩	Stall torque	mNm	2.7	10.0
6	堵转电流	Stall current	mA	490	730
7	额定转矩	Nominal torque	mNm	0.5	3.0
8	额定转速	Nominal speed	rpm	4910	5680
9	额定电流	Nominal current	mA	100	230
10	最大输出功率	Max. output power	W	0.43	2.13
11	最大效率	Max. efficiency	%	71	78
12	反电势常数	Back-EMF constant	mV/rpm	0.6	1.5
13	转矩常数	Torque constant	mNm/A	5.7	14.0
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	2190	810
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.78	0.8
16	重量	Weight	g	21.8	21.8
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		24.8
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		30.3
19	热时常数 (电机)	Thermal time constant motor	s		201
20	热时常数 (线圈)	Thermal time constant winding	s		175
21	工作温度范围	Operating temperature range	$^{\circ}\text{C}$		-20~+85
22	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$		130
23	轴向间隙	Axial play	mm		0.02~0.15
24	径向间隙	Radial play	mm		0.014
25	动态轴向载荷	Axial load dynamic	N		0.8
26	静态轴向载荷	Axial load static	N		30
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		1.4
28	极对数	No. of pole pairs			1
29	轴承	Bearings		2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator		贵金属 5 相/metal 5 segments	
31	防护等级	Protection class		IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

轴承类型 Bearing type 齿轮箱 Gearheads

### 外观图 | Outline Drawing



M 1.5:1

# 精密直流空心杯电机

## PRECISION DC CORELESS MOTOR

### 1625N9M | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

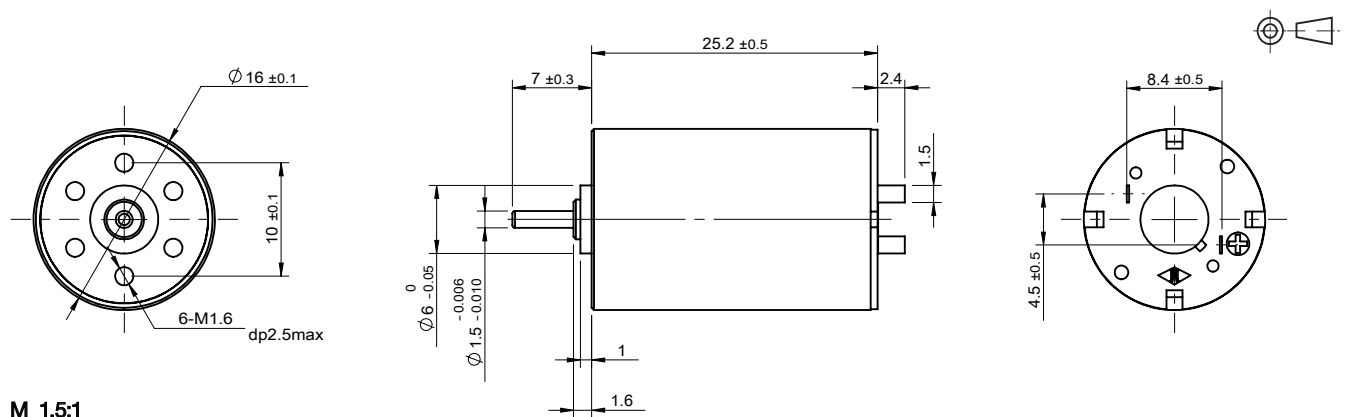
#### 主要技术指标 | Characteristics

			01-115-3.0	02-92-6.0	03-115-12.0	
1	电压	Voltage	V	3.0	6.0	12.0
2	端电阻	Terminal resistance	$\Omega$	1.1	4.4	13.4
3	空载转速	No-load speed	rpm	11500	9200	11500
4	空载电流	No-load current	mA	50	20	12
5	堵转转矩	Stall torque	mNm	6.6	8.2	8.7
6	堵转电流	Stall current	mA	2730	1360	900
7	额定转矩	Nominal torque	mNm	1.0	1.2	1.5
8	额定转速	Nominal speed	rpm	9750	7860	9520
9	额定电流	Nominal current	mA	460	220	160
10	最大输出功率	Max. output power	W	2.0	2.0	2.6
11	最大效率	Max. efficiency	%	75	77	78
12	反电势常数	Back-EMF constant	mV/rpm	0.3	0.6	1.0
13	转矩常数	Torque constant	mNm/A	2.4	6.1	9.8
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1750	1120	1320
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.78	0.8	0.82
16	重量	Weight	g	21.8	21.8	21.8
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		24.8	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		30.3	
19	热时常数 (电机)	Thermal time constant motor	s		201	
20	热时常数 (线圈)	Thermal time constant winding	s		175	
21	工作温度范围	Operating temperature range	°C		-20~+85	
22	绕组耐温等级	Thermal class of winding	°C		130	
23	轴向间隙	Axial play	mm		0.02~0.15	
24	径向间隙	Radial play	mm		0.014	
25	动态轴向载荷	Axial load dynamic	N		0.8	
26	静态轴向载荷	Axial load static	N		30	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		1.4	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator			贵金属 9 相/metal 9 segments	
31	防护等级	Protection class			IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

轴承类型 Bearing type 齿轮箱 Gearheads

#### 外观图 | Outline Drawing



M 1.5:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## 1625N5C | 碳刷 Graphite Brush

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

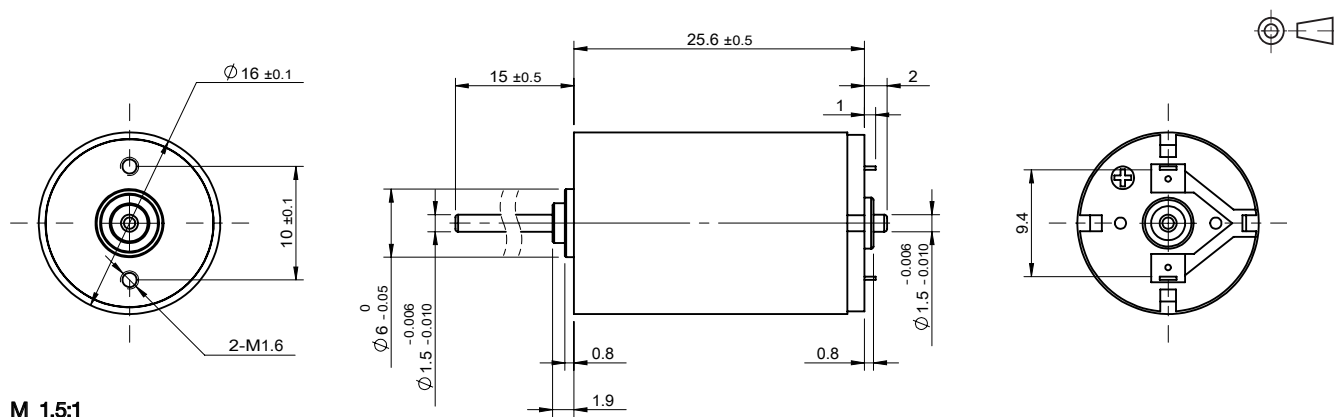
### 主要技术指标 | Characteristics

				01-150-12.0
1	电压	Voltage	V	12.0
2	转子电阻	Rotor Resistance	$\Omega$	13.0
3	空载转速	No-load speed	rpm	15000
4	空载电流	No-load current	mA	25
5	堵转转矩	Stall torque	mNm	6.7
6	堵转电流	Stall current	mA	920
7	额定转矩	Nominal torque	mNm	3.3
8	额定转速	Nominal speed	rpm	7560
9	额定电流	Nominal current	mA	470
10	最大输出功率	Max. output power	W	2.6
11	最大效率	Max. efficiency	%	70
12	反电势常数	Back-EMF constant	mV/rpm	0.8
13	转矩常数	Torque constant	mNm/A	7.4
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	2250
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.95
16	重量	Weight	g	22.5
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W	25.04
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W	9.71
19	热时常数 (电机)	Thermal time constant motor	s	190
20	热时常数 (线圈)	Thermal time constant winding	s	147
21	工作温度范围	Operating temperature range	°C	-20~+85
22	绕组耐温等级	Thermal class of winding	°C	130
23	轴向间隙	Axial play	mm	0.02~0.15
24	径向间隙	Radial play	mm	0.012
25	动态轴向载荷	Axial load dynamic	N	0.8
26	静态轴向载荷	Axial load static	N	30
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N	1.5
28	极对数	No. of pole pairs		1
29	轴承	Bearings		2 枚含油轴承/2 sleeve bearings
30	换向结构	Commutator		贵金属 5 相/metal 5 segments
31	防护等级	Protection class		IP 30

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 轴承类型 Bearing type

齿轮箱 Gearheads 编码器 Encoder

### 外观图 | Outline Drawing



M 1.5:1

# 精密直流空心杯电机

## PRECISION DC CORELESS MOTOR

### 1627N5M (1) | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

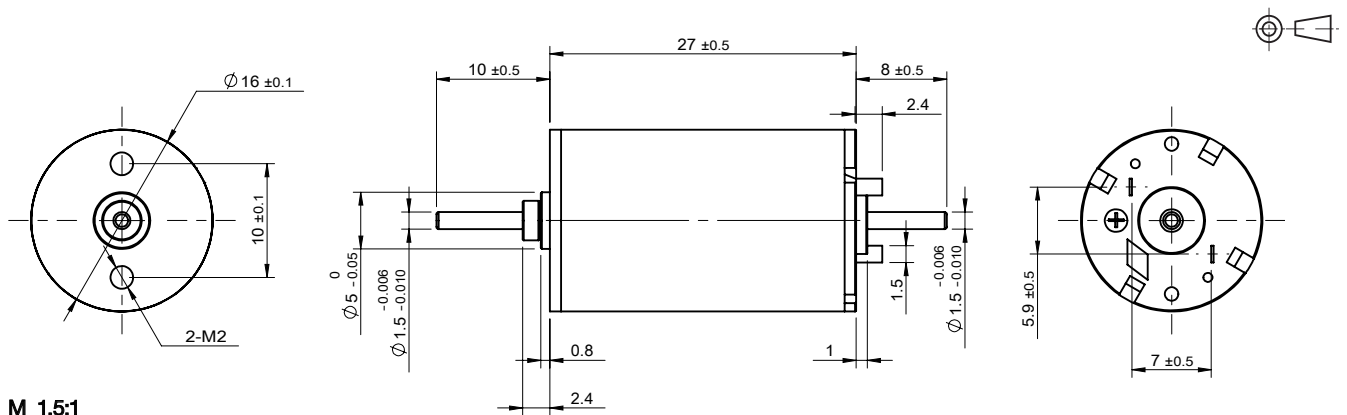
#### 主要技术指标 | Characteristics

			07-101-4.5	20-113-6.0	14-118-12.0	
1	电压	Voltage	V	4.5	6.0	12.0
2	端电阻	Terminal resistance	$\Omega$	1.5	1.8	8.7
3	空载转速	No-load speed	rpm	10100	11300	11800
4	空载电流	No-load current	mA	50	50	20
5	堵转转矩	Stall torque	mNm	12.3	16.4	13.0
6	堵转电流	Stall current	mA	3000	3330	1380
7	额定转矩	Nominal torque	mNm	3.0	4.0	3.3
8	额定转速	Nominal speed	rpm	7640	8540	8810
9	额定电流	Nominal current	mA	770	850	360
10	最大输出功率	Max. output power	W	3.3	4.9	4.0
11	最大效率	Max. efficiency	%	76	77	77
12	反电势常数	Back-EMF constant	mV/rpm	0.4	0.5	1.0
13	转矩常数	Torque constant	mNm/A	4.2	5.0	9.6
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	820	690	910
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.6	0.6	0.7
16	重量	Weight	g	25	25	25
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		24.88	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		29.38	
19	热时常数 (电机)	Thermal time constant motor	s		228	
20	热时常数 (线圈)	Thermal time constant winding	s		176	
21	工作温度范围	Operating temperature range	°C		-20~+85	
22	绕组耐温等级	Thermal class of winding	°C		130	
23	轴向间隙	Axial play	mm		0.02~0.15	
24	径向间隙	Radial play	mm		0.014	
25	动态轴向载荷	Axial load dynamic	N		0.8	
26	静态轴向载荷	Axial load static	N		30	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		1.4	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator			贵金属 5 相/metal 5 segments	
31	防护等级	Protection class			IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 轴承类型 Bearing type

齿轮箱 Gearheads 编码器 Encoder

#### 外观图 | Outline Drawing



M 1.5:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com



## 1627N5M (2) | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

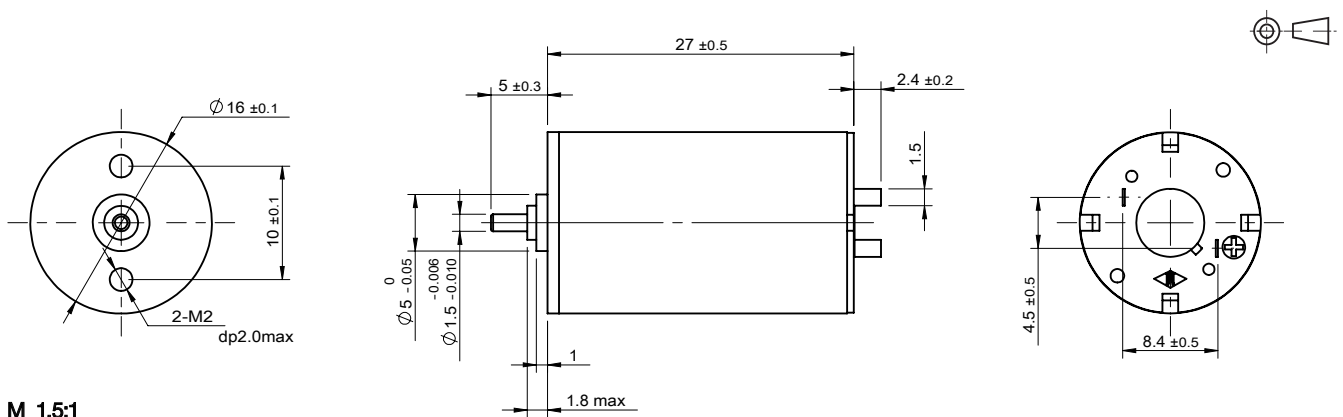
### 主要技术指标 | Characteristics

			27-66-6.0	21-113-12.0	16-85-24.0	
1	电压	Voltage	V	6.0	12.0	24.0
2	端电阻	Terminal resistance	$\Omega$	8.2	11.8	73.2
3	空载转速	No-load speed	rpm	6600	11300	8500
4	空载电流	No-load current	mA	11	13	6
5	堵转转矩	Stall torque	mNm	6.1	10.1	8.6
6	堵转电流	Stall current	mA	730	1020	330
7	额定转矩	Nominal torque	mNm	1.5	3.0	2.0
8	额定转速	Nominal speed	rpm	4990	7940	6520
9	额定电流	Nominal current	mA	190	310	80
10	最大输出功率	Max. output power	W	1.1	3.0	1.9
11	最大效率	Max. efficiency	%	77	79	75
12	反电势常数	Back-EMF constant	mV/rpm	0.9	1.0	2.8
13	转矩常数	Torque constant	mNm/A	8.6	10.0	26.5
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1070	1120	990
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.7	0.6	0.7
16	重量	Weight	g	25	25	25
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		24.9	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		29.4	
19	热时常数 (电机)	Thermal time constant motor	s		228	
20	热时常数 (线圈)	Thermal time constant winding	s		176	
21	工作温度范围	Operating temperature range	°C		-20~+85	
22	绕组耐温等级	Thermal class of winding	°C		130	
23	轴向间隙	Axial play	mm		0.02~0.15	
24	径向间隙	Radial play	mm		0.014	
25	动态轴向载荷	Axial load dynamic	N		0.8	
26	静态轴向载荷	Axial load static	N		30	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		1.4	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator			贵金属 5 相/metal 5 segments	
31	防护等级	Protection class			IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 轴承类型 Bearing type

齿轮箱 Gearheads 编码器 Encoder

### 外观图 | Outline Drawing



M 1.5:1

# 精密直流空心杯电机

## PRECISION DC CORELESS MOTOR

### 1630N5M | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

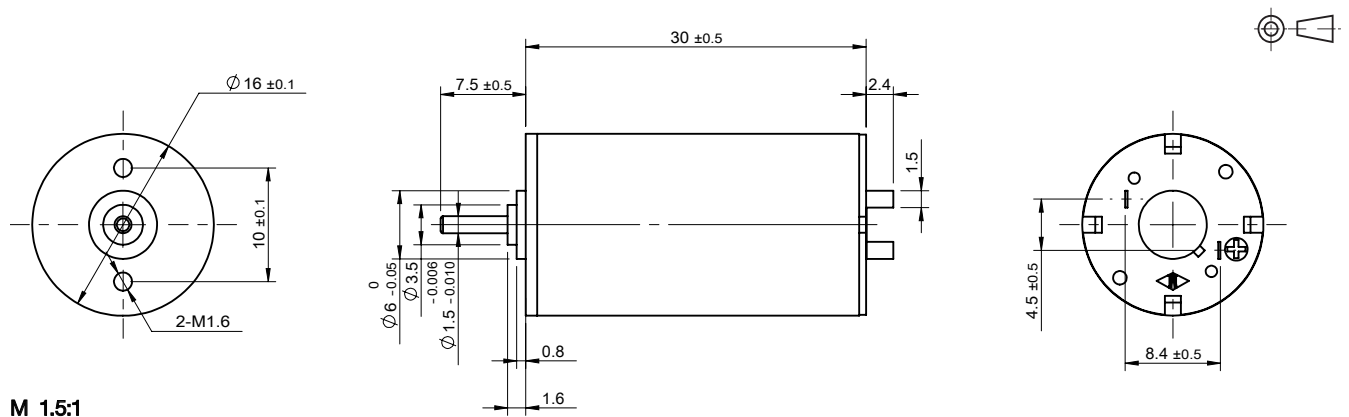
#### 主要技术指标 | Characteristics

			22-116-5.0	29-78-7.4	36-87-12.0
1	电压	Voltage	V	5.0	12.0
2	端电阻	Terminal resistance	$\Omega$	1.5	9.4
3	空载转速	No-load speed	rpm	11600	8700
4	空载电流	No-load current	mA	36	7
5	堵转转矩	Stall torque	mNm	13.4	16.7
6	堵转电流	Stall current	mA	3330	1280
7	额定转矩	Nominal torque	mNm	3.0	4.0
8	额定转速	Nominal speed	rpm	9010	6610
9	额定电流	Nominal current	mA	770	310
10	最大输出功率	Max. output power	W	4.1	3.8
11	最大效率	Max. efficiency	%	80	86
12	反电势常数	Back-EMF constant	mV/rpm	0.4	1.4
13	转矩常数	Torque constant	mNm/A	4.1	13.1
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	860	520
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.6	0.7
16	重量	Weight	g	27	27
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		26.79
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		3.79
19	热时常数 (电机)	Thermal time constant motor	s		242
20	热时常数 (线圈)	Thermal time constant winding	s		232
21	工作温度范围	Operating temperature range	$^{\circ}\text{C}$		-20~+85
22	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$		130
23	轴向间隙	Axial play	mm		0.02~0.15
24	径向间隙	Radial play	mm		0.025
25	动态轴向载荷	Axial load dynamic	N		2.2
26	静态轴向载荷	Axial load static	N		30
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		8
28	极对数	No. of pole pairs			1
29	轴承	Bearings		2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator		贵金属 5 相/metal 5 segments	
31	防护等级	Protection class		IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

轴承类型 Bearing type 齿轮箱 Gearheads

#### 外观图 | Outline Drawing



M 1.5:1

## 1630N5C | 碳刷 Graphite Brush

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

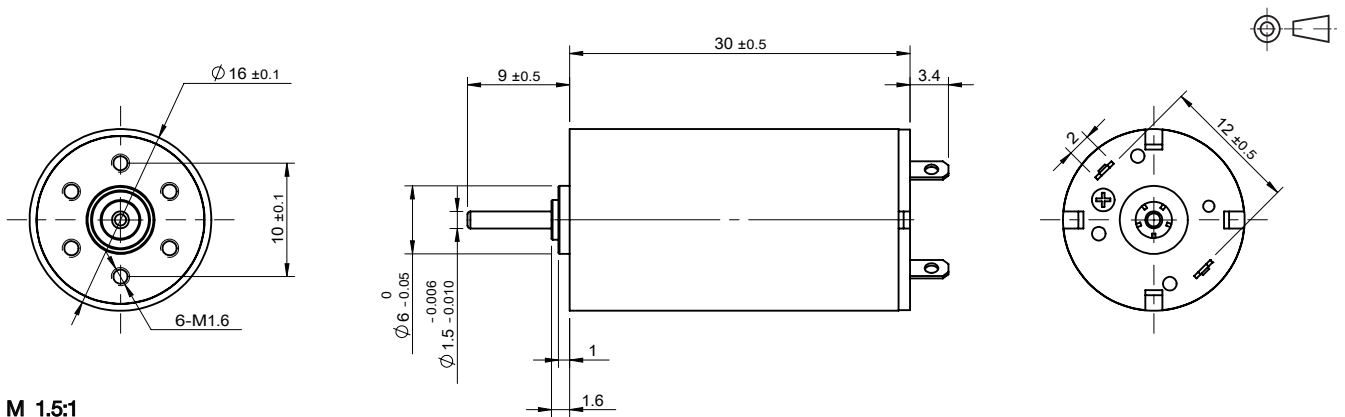
### 主要技术指标 | Characteristics

			06-195-6.0	05-115-12.0	08-93-24.0	
1	电压	Voltage	V	6.0	12.0	24.0
2	转子电阻	Rotor Resistance	$\Omega$	0.7	4.5	34.5
3	空载转速	No-load speed	rpm	19500	11500	9300
4	空载电流	No-load current	mA	150	50	30
5	堵转转矩	Stall torque	mNm	24.3	25.6	15.8
6	堵转电流	Stall current	mA	8570	2670	700
7	额定转矩	Nominal torque	mNm	5.0	5.0	4.0
8	额定转速	Nominal speed	rpm	15490	9260	6950
9	额定电流	Nominal current	mA	1880	560	200
10	最大输出功率	Max. output power	W	12.4	7.7	3.9
11	最大效率	Max. efficiency	%	75	75	63
12	反电势常数	Back-EMF constant	mV/rpm	0.3	1.0	2.5
13	转矩常数	Torque constant	mNm/A	2.9	9.8	23.6
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	800	450	590
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.95	0.95	0.95
16	重量	Weight	g	22.5	22.5	22.5
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		26.8	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		30.6	
19	热时常数 (电机)	Thermal time constant motor	s		242	
20	热时常数 (线圈)	Thermal time constant winding	s		232	
21	工作温度范围	Operating temperature range	°C		-20~+85	
22	绕组耐温等级	Thermal class of winding	°C		130	
23	轴向间隙	Axial play	mm		0.02~0.15	
24	径向间隙	Radial play	mm		0.012	
25	动态轴向载荷	Axial load dynamic	N		0.8	
26	静态轴向载荷	Axial load static	N		30	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		1.5	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator			贵金属 5 相/metal 5 segments	
31	防护等级	Protection class			IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

轴承类型 Bearing type 齿轮箱 Gearheads

### 外观图 | Outline Drawing



M 1.5:1

# 精密直流空心杯电机

## PRECISION DC CORELESS MOTOR

### 1635N5C | 碳刷 Graphite Brush

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

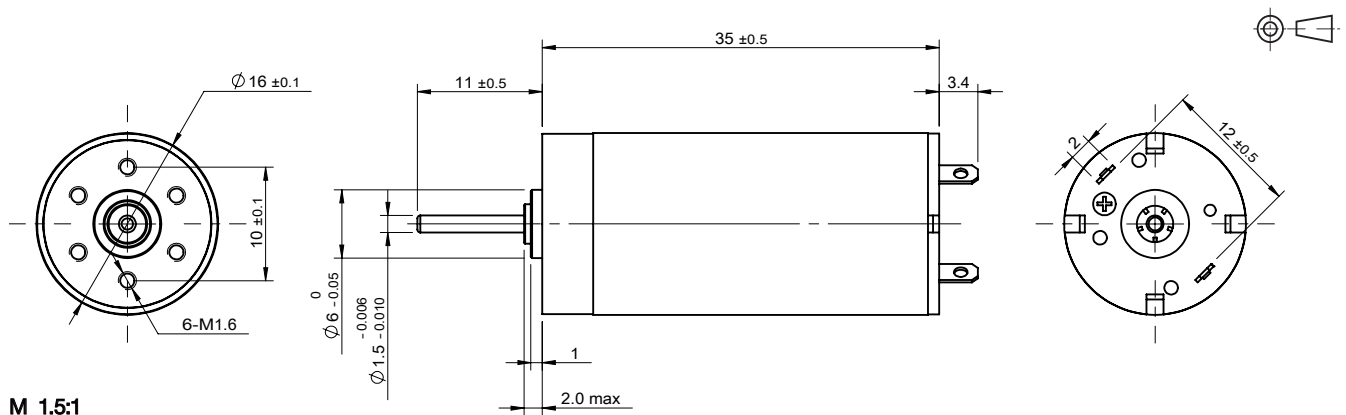
#### 主要技术指标 | Characteristics

			04-115-6.0	08-150-12.0	10-150-24.0	
1	电压	Voltage	V	6.0	12.0	24.0
2	转子电阻	Rotor Resistance	$\Omega$	1.7	3.2	14.7
3	空载转速	No-load speed	rpm	11500	15000	15000
4	空载电流	No-load current	mA	110	75	30
5	堵转转矩	Stall torque	mNm	16.5	27.5	24.0
6	堵转电流	Stall current	mA	3530	3750	1630
7	额定转矩	Nominal torque	mNm	4.0	6.0	4.5
8	额定转速	Nominal speed	rpm	8710	11730	12190
9	额定电流	Nominal current	mA	940	880	330
10	最大输出功率	Max. output power	W	5.0	10.8	9.4
11	最大效率	Max. efficiency	%	68	74	75
12	反电势常数	Back-EMF constant	mV/rpm	0.5	0.8	1.6
13	转矩常数	Torque constant	mNm/A	4.8	7.5	15.0
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	700	550	630
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.95	0.95	0.95
16	重量	Weight	g	22.5	22.5	22.5
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		26.8	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		30.6	
19	热时常数 (电机)	Thermal time constant motor	s		242	
20	热时常数 (线圈)	Thermal time constant winding	s		232	
21	工作温度范围	Operating temperature range	°C		-20~+85	
22	绕组耐温等级	Thermal class of winding	°C		130	
23	轴向间隙	Axial play	mm		0.02~0.15	
24	径向间隙	Radial play	mm		0.012	
25	动态轴向载荷	Axial load dynamic	N		0.8	
26	静态轴向载荷	Axial load static	N		30	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		1.5	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator			贵金属 5 相/metal 5 segments	
31	防护等级	Protection class			IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

轴承类型 Bearing type 齿轮箱 Gearheads

#### 外观图 | Outline Drawing



## 1735N5C2B | 碳刷 Graphite Brush

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

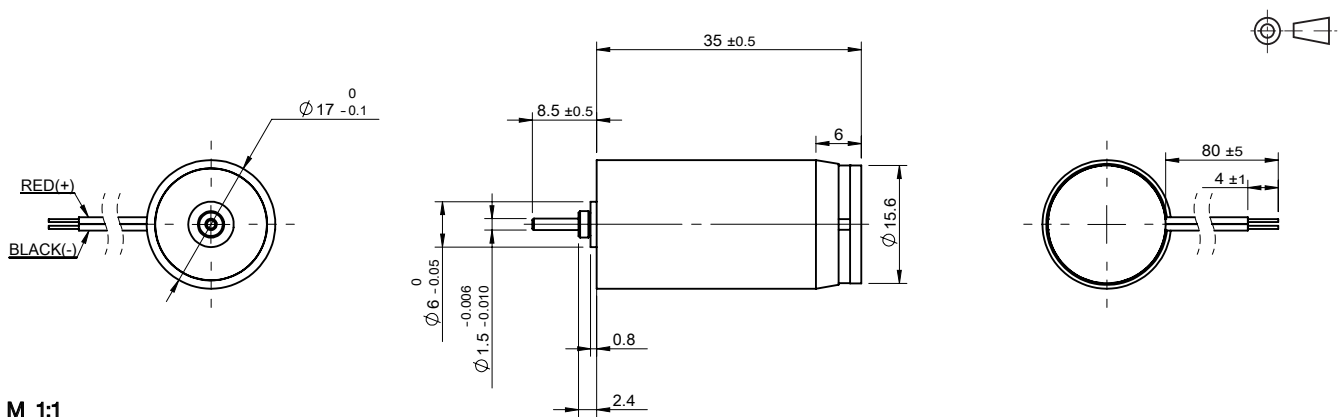
### 主要技术指标 | Characteristics

			01-128-12.0	02-90-24.0	
1	电压	Voltage	V	12.0	24.0
2	转子电阻	Rotor Resistance	$\Omega$	5.1	34.5
3	空载转速	No-load speed	rpm	12800	9000
4	空载电流	No-load current	mA	20	10
5	堵转转矩	Stall torque	mNm	20.7	17.3
6	堵转电流	Stall current	mA	2350	700
7	额定转矩	Nominal torque	mNm	5.0	5.0
8	额定转速	Nominal speed	rpm	9710	6400
9	额定电流	Nominal current	mA	580	210
10	最大输出功率	Max. output power	W	6.9	4.1
11	最大效率	Max. efficiency	%	82	78
12	反电势常数	Back-EMF constant	mV/rpm	0.9	2.6
13	转矩常数	Torque constant	mNm/A	8.9	25.1
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	620	520
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.95	0.95
16	重量	Weight	g	34	34
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		25.7
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		30.4
19	热时常数 (电机)	Thermal time constant motor	s		245
20	热时常数 (线圈)	Thermal time constant winding	s		232
21	工作温度范围	Operating temperature range	°C		-20~+85
22	绕组耐温等级	Thermal class of winding	°C		130
23	轴向间隙	Axial play	mm		0.01~0.15
24	径向间隙	Radial play	mm		0.025
25	动态轴向载荷	Axial load dynamic	N		2.2
26	静态轴向载荷	Axial load static	N		30
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		8
28	极对数	No. of pole pairs			1
29	轴承	Bearings			2 枚滚动轴承/2 ball bearings
30	换向结构	Commutator			贵金属 5 相/metal 5 segments
31	防护等级	Protection class			IP 30

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

齿轮箱 Gearheads 编码器 Encoder

### 外观图 | Outline Drawing



M 1:1

# 精密直流空心杯电机

## PRECISION DC CORELESS MOTOR

### 1925N9M | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

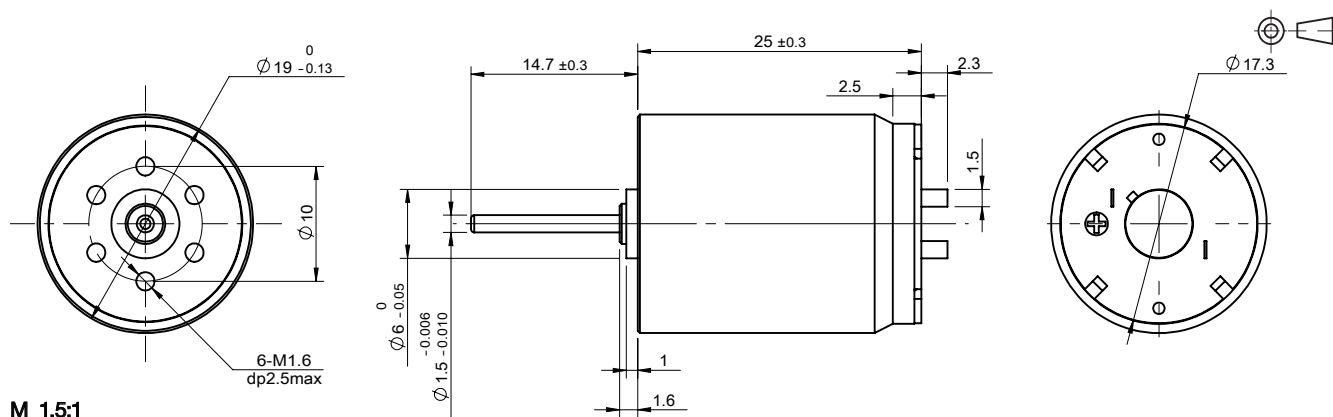
#### 主要技术指标 | Characteristics

			01-69-6.0	02-80-12.0	03-85-24.0	
1	电压	Voltage	V	6.0	12.0	24.0
2	端电阻	Terminal resistance	$\Omega$	2.8	9.6	28.3
3	空载转速	No-load speed	rpm	6900	8000	8500
4	空载电流	No-load current	mA	25	15	9
5	堵转转矩	Stall torque	mNm	17.4	17.5	22.4
6	堵转电流	Stall current	mA	2140	1250	850
7	额定转矩	Nominal torque	mNm	4.0	4.0	4.0
8	额定转速	Nominal speed	rpm	5310	6170	6980
9	额定电流	Nominal current	mA	510	300	160
10	最大输出功率	Max. output power	W	3.1	3.7	5.0
11	最大效率	Max. efficiency	%	80	79	81
12	反电势常数	Back-EMF constant	mV/rpm	0.9	1.5	2.8
13	转矩常数	Torque constant	mNm/A	8.2	14.2	26.7
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	400	460	380
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.6	0.6	0.6
16	重量	Weight	g	30	30	30
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		22.4	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		3.79	
19	热时常数 (电机)	Thermal time constant motor	s		267	
20	热时常数 (线圈)	Thermal time constant winding	s		232	
21	工作温度范围	Operating temperature range	°C		-20~+85	
22	绕组耐温等级	Thermal class of winding	°C		130	
23	轴向间隙	Axial play	mm		0.02~0.15	
24	径向间隙	Radial play	mm		0.025	
25	动态轴向载荷	Axial load dynamic	N		2.2	
26	静态轴向载荷	Axial load static	N		30	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		8	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator			贵金属 9 相/metal 9 segments	
31	防护等级	Protection class			IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

轴承类型 Bearing type 齿轮箱 Gearheads

#### 外观图 | Outline Drawing



M 1.5:1

## 2224N5M | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

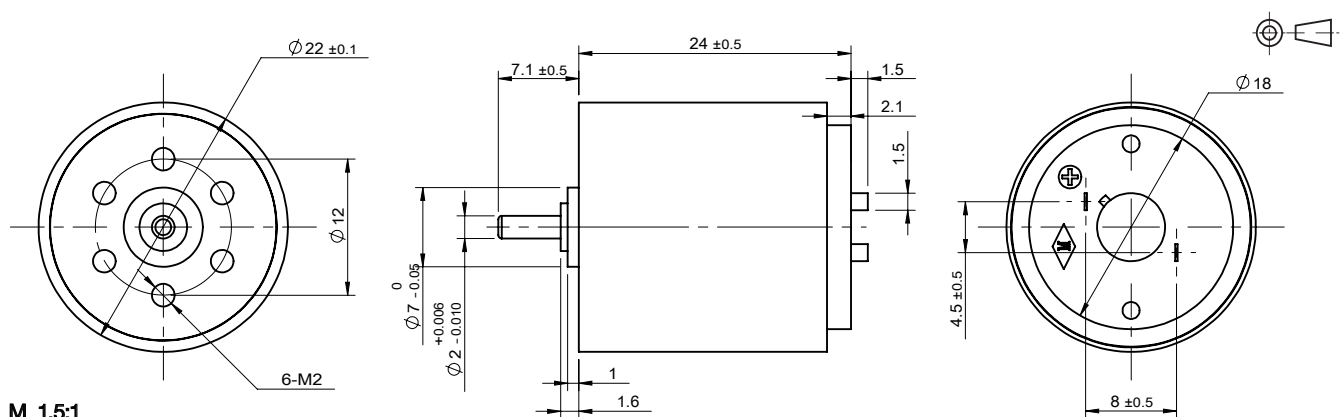
### 主要技术指标 | Characteristics

			11-105-6.0	09-158-12.0	12-112-12.0	
1	电压	Voltage	V	6.0	12.0	12.0
2	端电阻	Terminal resistance	$\Omega$	1.3	2.0	5.9
3	空载转速	No-load speed	rpm	10500	15800	11200
4	空载电流	No-load current	mA	60	55	30
5	堵转转矩	Stall torque	mNm	24.6	42.7	20.2
6	堵转电流	Stall current	mA	4620	6000	2030
7	额定转矩	Nominal torque	mNm	5.0	5.0	3.0
8	额定转速	Nominal speed	rpm	8360	13950	9530
9	额定电流	Nominal current	mA	990	750	330
10	最大输出功率	Max. output power	W	6.8	17.7	5.9
11	最大效率	Max. efficiency	%	79	82	77
12	反电势常数	Back-EMF constant	mV/rpm	0.6	0.8	1.1
13	转矩常数	Torque constant	mNm/A	5.4	7.2	10.1
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	430	370	560
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	2.4	2.4	2.4
16	重量	Weight	g	36	36	36
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		22.31	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		6.06	
19	热时常数 (电机)	Thermal time constant motor	s		313	
20	热时常数 (线圈)	Thermal time constant winding	s		218	
21	工作温度范围	Operating temperature range	°C		-20~+85	
22	绕组耐温等级	Thermal class of winding	°C		130	
23	轴向间隙	Axial play	mm		0.02~0.15	
24	径向间隙	Radial play	mm		0.025	
25	动态轴向载荷	Axial load dynamic	N		3.3	
26	静态轴向载荷	Axial load static	N		60	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		14	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator			贵金属 5 相/metal 5 segments	
31	防护等级	Protection class			IP 40	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

轴承 Bearing type 齿轮箱 Gearheads

### 外观图 | Outline Drawing



# 精密直流空心杯电机

## PRECISION DC CORELESS MOTOR

### 2225N5M | 贵金属电刷 Precious Metal Commutation

应用领域：射钉枪等。

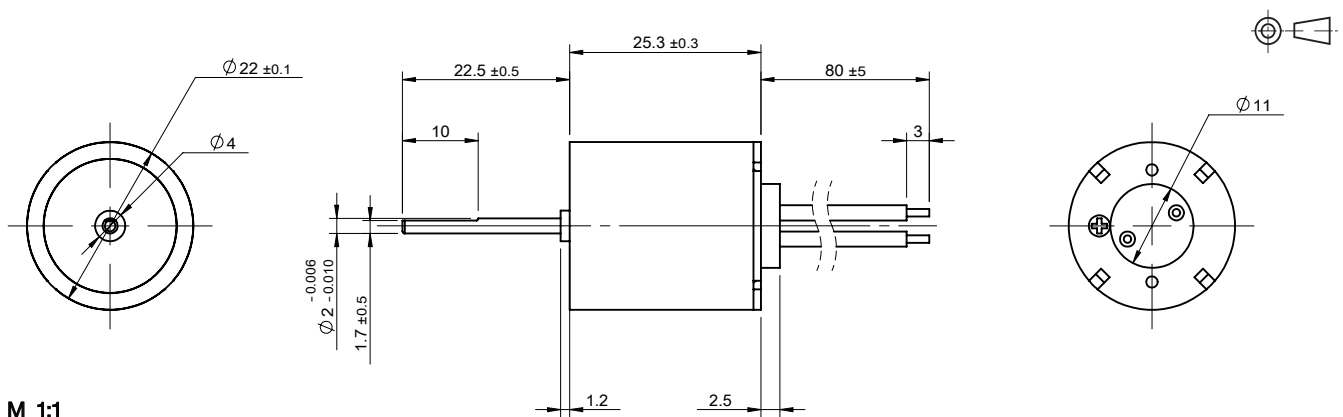
Applications: nail gun, etc.

#### 主要技术指标 | Characteristics

			01-161-7.2	
1	电压	Voltage	V	7.2
2	端电阻	Terminal resistance	$\Omega$	1.9
3	空载转速	No-load speed	rpm	16100
4	空载电流	No-load current	mA	200
5	堵转转矩	Stall torque	mNm	14.5
6	堵转电流	Stall current	mA	3790
7	额定转矩	Nominal torque	mNm	2.5
8	额定转速	Nominal speed	rpm	13330
9	额定电流	Nominal current	mA	820
10	最大输出功率	Max. output power	W	6.1
11	最大效率	Max. efficiency	%	59
12	反电势常数	Back-EMF constant	mV/rpm	0.4
13	转矩常数	Torque constant	mNm/A	4.0
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1109
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	2.3
16	重量	Weight	g	42.5
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W	22.3
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W	28.4
19	热时常数 (电机)	Thermal time constant motor	s	313
20	热时常数 (线圈)	Thermal time constant winding	s	218
21	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+120
22	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$	155
23	轴向间隙	Axial play	mm	0.02~0.15
24	径向间隙	Radial play	mm	0.012
25	动态轴向载荷	Axial load dynamic	N	2
26	静态轴向载荷	Axial load static	N	150
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N	4
28	极对数	No. of pole pairs		1
29	轴承	Bearings		2 枚含油轴承/2 sleeve bearings
30	换向结构	Commutator		贵金属 5 相/metal 5 segments
31	防护等级	Protection class		IP 40

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

#### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com



## 2232N5M2B | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

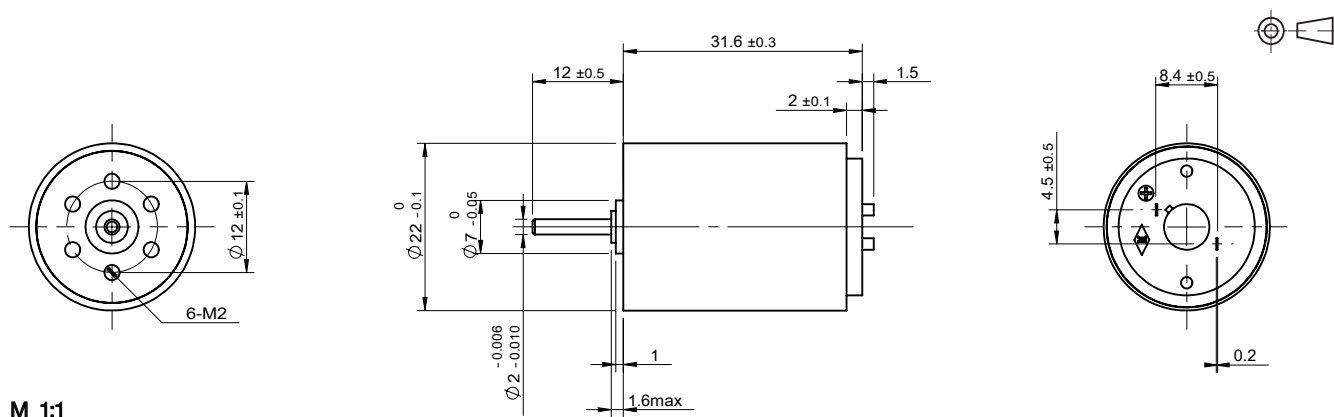
### 主要技术指标 | Characteristics

			03-81-6.0	08-95-9.0	04-100-12.0	
1	电压	Voltage	V	6.0	9.0	12.0
2	端电阻	Terminal resistance	Ω	2.0	2.9	4.3
3	空载转速	No-load speed	rpm	8100	9500	10000
4	空载电流	No-load current	mA	20	20	20
5	堵转转矩	Stall torque	mNm	20.9	27.7	31.5
6	堵转电流	Stall current	mA	3000	3100	2790
7	额定转矩	Nominal torque	mNm	5.0	7.0	8.0
8	额定转速	Nominal speed	rpm	6170	7100	7460
9	额定电流	Nominal current	mA	730	800	720
10	最大输出功率	Max. output power	W	4.4	6.9	8.3
11	最大效率	Max. efficiency	%	84	85	84
12	反电势常数	Back-EMF constant	mV/rpm	0.7	0.9	1.2
13	转矩常数	Torque constant	mNm/A	7.0	9.0	11.4
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	390	340	320
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	4.4	4.4	4.4
16	重量	Weight	g	55.8	55.8	55.8
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		19.4	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		21.7	
19	热时常数 (电机)	Thermal time constant motor	s		383	
20	热时常数 (线圈)	Thermal time constant winding	s		329	
21	工作温度范围	Operating temperature range	°C		-20~+85	
22	绕组耐温等级	Thermal class of winding	°C		130	
23	轴向间隙	Axial play	mm		0.02~0.15	
24	径向间隙	Radial play	mm		0.025	
25	动态轴向载荷	Axial load dynamic	N		3.3	
26	静态轴向载荷	Axial load static	N		60	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		14	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
30	换向结构	Commutator			贵金属 5 相/metal 5 segments	
31	防护等级	Protection class			IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

轴承 Bearing type 齿轮箱 Gearheads

### 外观图 | Outline Drawing



M 1:1

## 2232N9M | 贵金属电刷 Precious Metal Commutation

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

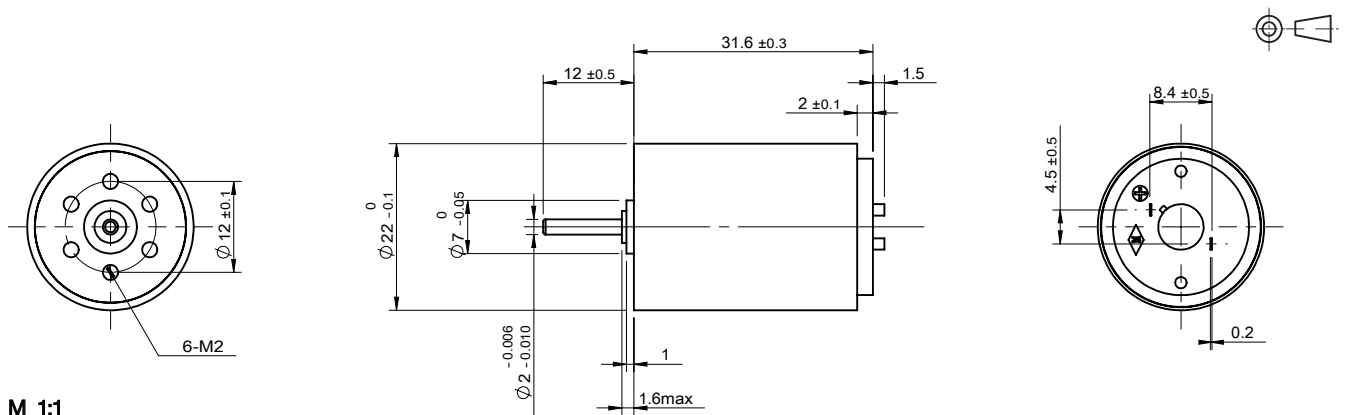
### 主要技术指标 | Characteristics

			03-68-6.0	**-60-12.0	01-110-24.0	
1	电压	Voltage	V	6.0	12.0	24.0
2	端电阻	Terminal resistance	$\Omega$	2.8	4.3	17.2
3	空载转速	No-load speed	rpm	6800	11000	11000
4	空载电流	No-load current	mA	25	20	8
5	堵转转矩	Stall torque	mNm	17.6	28.6	28.8
6	堵转电流	Stall current	mA	2140	2790	1400
7	额定转矩	Nominal torque	mNm	3.0	4.0	7.0
8	额定转速	Nominal speed	rpm	5640	9460	8330
9	额定电流	Nominal current	mA	390	410	350
10	最大输出功率	Max. output power	W	3.1	8.3	8.3
11	最大效率	Max. efficiency	%	80	84	86
12	反电势常数	Back-EMF constant	mV/rpm	0.9	1.1	2.2
13	转矩常数	Torque constant	mNm/A	8.3	10.3	20.7
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	390	380	380
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	4.4	4.4	4.4
16	重量	Weight	g	55.8	55.8	55.8
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		19.4	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		21.7	
19	热时常数 (电机)	Thermal time constant motor	s		383	
20	热时常数 (线圈)	Thermal time constant winding	s		329	
21	工作温度范围	Operating temperature range	°C		-20~+85	
22	绕组耐温等级	Thermal class of winding	°C		85	
23	轴向间隙	Axial play	mm		0.02~0.15	
24	径向间隙	Radial play	mm		0.025	
25	动态轴向载荷	Axial load dynamic	N		3.3	
26	静态轴向载荷	Axial load static	N		60	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		14	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings	
30	换向结构	Commutator			贵金属 9 相/metal 9 segments	
31	防护等级	Protection class			IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

齿轮箱 Gearheads 编码器 Encoder

### 外观图 | Outline Drawing



M 1:1

## 2233N5C | 碳刷 Graphite Brush

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

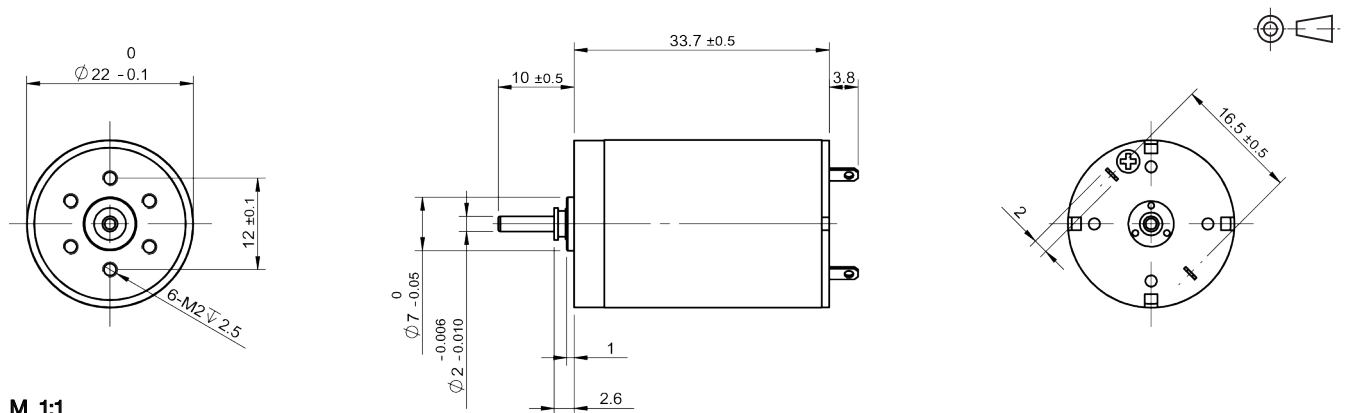
### 主要技术指标 | Characteristics

			22-69-12.0	23-105-24.0	
1	电压	Voltage	V	12.0	24.0
2	转子电阻	Rotor Resistance	$\Omega$	14.80	10.60
3	空载转速	No-load speed	rpm	6900	10500
4	空载电流	No-load current	mA	30	35
5	堵转转矩	Stall torque	mNm	12.5	47.8
6	堵转电流	Stall current	mA	810	2260
7	额定转矩	Nominal torque	mNm	3.0	4.5
8	额定转速	Nominal speed	rpm	5240	9510
9	额定电流	Nominal current	mA	220	240
10	最大输出功率	Max. output power	W	2.3	13.2
11	最大效率	Max. efficiency	%	65	77
12	反电势常数	Back-EMF constant	mV/rpm	1.7	2.3
13	转矩常数	Torque constant	mNm/A	16.0	21.5
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	550	220
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	2.5	2.5
16	重量	Weight	g	52	52
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		21
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		11.2
19	热时常数 (电机)	Thermal time constant motor	s		240
20	热时常数 (线圈)	Thermal time constant winding	s		10
21	工作温度范围	Operating temperature range	$^{\circ}\text{C}$		-20~+85
22	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$		130
23	轴向间隙	Axial play	mm		0.02~0.15
24	径向间隙	Radial play	mm		0.012
25	动态轴向载荷	Axial load dynamic	N		1
26	静态轴向载荷	Axial load static	N		80
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		3
28	极对数	No. of pole pairs			1
29	轴承	Bearings			2 枚含油轴承/2 sleeve bearings
30	换向结构	Commutator			贵金属 5 相/metal 5 segments
31	防护等级	Protection class			IP 30

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 轴承 Bearing type

齿轮箱 Gearheads 编码器 Encoder

### 外观图 | Outline Drawing



# 精密直流空心杯电机

## PRECISION DC CORELESS MOTOR

### 2433N5M2B | 贵金属电刷 Precious Metal Commutation

应用领域: 医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

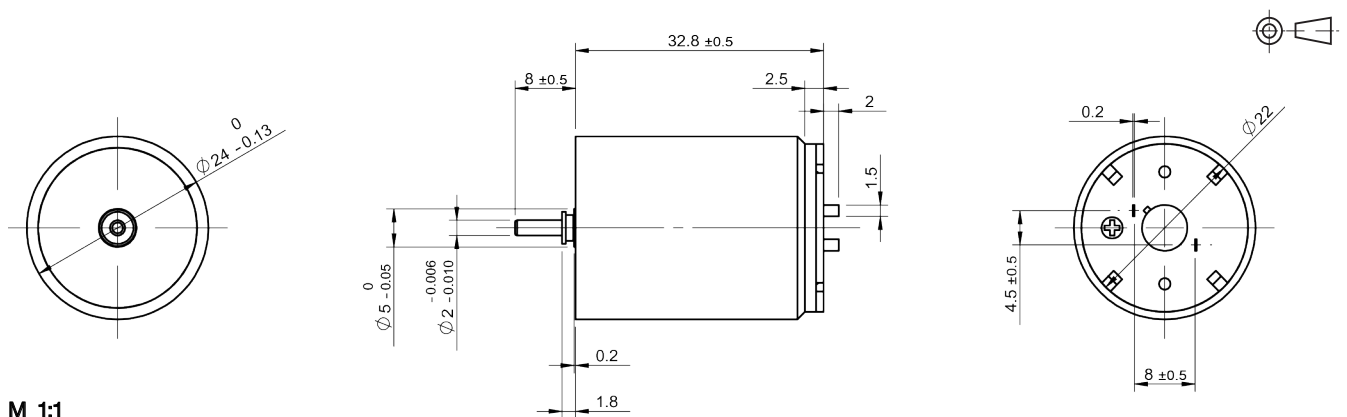
#### 主要技术指标 | Characteristics

			01-78-4.5	** -80-9.0	** -80-24.0	
1	电压	Voltage	V	4.5	9.0	24.0
2	端电阻	Terminal resistance	$\Omega$	0.5	2.0	16.0
3	空载转速	No-load speed	rpm	8000	8000	8000
4	空载电流	No-load current	mA	35	30	15
5	堵转转矩	Stall torque	mNm	48.0	47.7	42.1
6	堵转电流	Stall current	mA	9000	4500	1500
7	额定转矩	Nominal torque	mNm	3.0	2.5	5.0
8	额定转速	Nominal speed	rpm	7500	7580	7050
9	额定电流	Nominal current	mA	600	260	190
10	最大输出功率	Max. output power	W	10.1	10.0	8.8
11	最大效率	Max. efficiency	%	88	84	81
12	反电势常数	Back-EMF constant	mV/rpm	0.6	1.1	3.0
13	转矩常数	Torque constant	mNm/A	5.4	10.7	28.4
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	170	170	190
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	2.2	2.2	2.2
16	重量	Weight	g	68	68	68
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		16.8	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		22.1	
19	热时常数 (电机)	Thermal time constant motor	s		332	
20	热时常数 (线圈)	Thermal time constant winding	s		263	
21	工作温度范围	Operating temperature range	°C		-20~+85	
22	绕组耐温等级	Thermal class of winding	°C		130	
23	轴向间隙	Axial play	mm		0.01~0.15	
24	径向间隙	Radial play	mm		0.025	
25	动态轴向载荷	Axial load dynamic	N		3.3	
26	静态轴向载荷	Axial load static	N		60	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		14	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
30	换向结构	Commutator			贵金属 5 相/metal 5 segments	
31	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

齿轮箱 Gearheads 编码器 Encoder

#### 外观图 | Outline Drawing



规格如有变更, 恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## 2543N9C2B | 碳刷 Graphite Brush

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

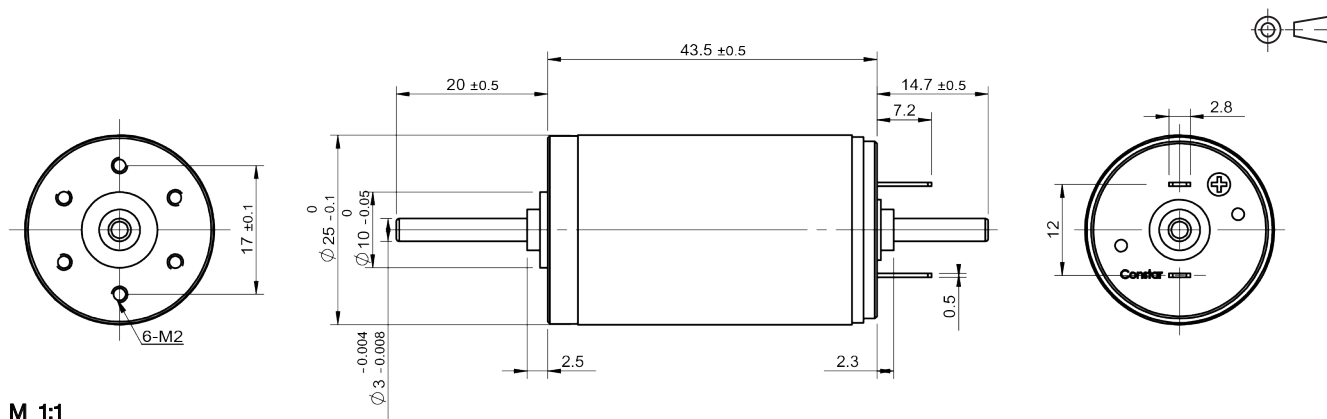
### 主要技术指标 | Characteristics

			03-65-24.0	06-110-24.0	05-65-48.0
1	电压	Voltage	V	24.0	48.0
2	转子电阻	Rotor Resistance	$\Omega$	6.3	23.0
3	空载转速	No-load speed	rpm	6500	6500
4	空载电流	No-load current	mA	25	20
5	堵转转矩	Stall torque	mNm	132.6	144.6
6	堵转电流	Stall current	mA	3810	2090
7	额定转矩	Nominal torque	mNm	37.6	42.6
8	额定转速	Nominal speed	rpm	4660	4580
9	额定电流	Nominal current	mA	1100	630
10	最大输出功率	Max. output power	W	22.6	24.6
11	最大效率	Max. efficiency	%	85	81
12	反电势常数	Back-EMF constant	mV/rpm	3.7	7.3
13	转矩常数	Torque constant	mNm/A	35.0	69.8
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	49.0	45.0
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	13.2	13.2
16	重量	Weight	g	98	98
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		11.04
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		4.67
19	热时常数 (电机)	Thermal time constant motor	s		266
20	热时常数 (线圈)	Thermal time constant winding	s		123
21	工作温度范围	Operating temperature range	°C		-20~+120
22	绕组耐温等级	Thermal class of winding	°C		155
23	轴向间隙	Axial play	mm		0.025
24	径向间隙	Radial play	mm		0.02~0.15
25	动态轴向载荷	Axial load dynamic	N		20
26	静态轴向载荷	Axial load static	N		60
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		40
28	极对数	No. of pole pairs			1
29	轴承	Bearings		2 枚滚动轴承/2 ball bearings	
30	换向结构	Commutator		贵金属 9 相/metal 9 segments	
31	防护等级	Protection class		IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

齿轮箱 Gearheads 编码器 Encoder

### 外观图 | Outline Drawing



M 1:1

# 精密直流空心杯电机

## PRECISION DC CORELESS MOTOR

### 2554N9C2B | 碳刷 Graphite Brush

应用领域：医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

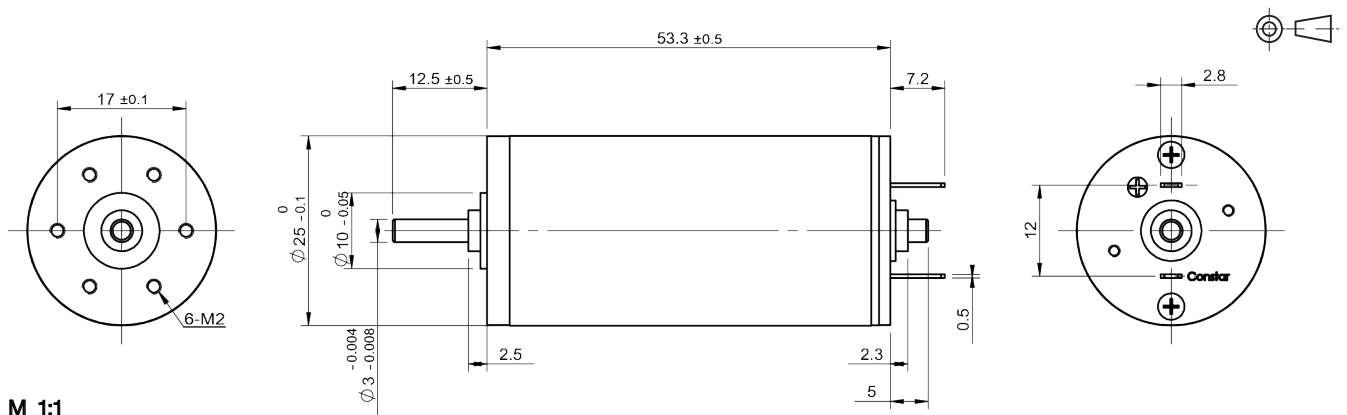
#### 主要技术指标 | Characteristics

			03-51-12.0	04-82-24.0	02-93-24.0	
1	电压	Voltage	V	12.0	24.0	24.0
2	转子电阻	Rotor Resistance	$\Omega$	1.92	3.1	2.5
3	空载转速	No-load speed	rpm	5100	8200	9300
4	空载电流	No-load current	mA	20	35	65
5	堵转转矩	Stall torque	mNm	139.5	214.4	233.4
6	堵转电流	Stall current	mA	6250	7740	9600
7	额定转矩	Nominal torque	mNm	42.0	32.4	28.0
8	额定转速	Nominal speed	rpm	3560	6960	8180
9	额定电流	Nominal current	mA	1900	1200	1210
10	最大输出功率	Max. output power	W	18.6	46.1	56.9
11	最大效率	Max. efficiency	%	89	87	84
12	反电势常数	Back-EMF constant	mV/rpm	2.3	2.9	2.6
13	转矩常数	Torque constant	mNm/A	22.4	27.8	24.5
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	36.6	38.3	39.8
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	14.2	14.2	14.2
16	重量	Weight	g	120	120	120
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		10.8	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		4	
19	热时常数 (电机)	Thermal time constant motor	s		284	
20	热时常数 (线圈)	Thermal time constant winding	s		157	
21	工作温度范围	Operating temperature range	°C		-20~+120	
22	绕组耐温等级	Thermal class of winding	°C		120	
23	轴向间隙	Axial play	mm		0.02~0.15	
24	径向间隙	Radial play	mm		0.025	
25	动态轴向载荷	Axial load dynamic	N		20	
26	静态轴向载荷	Axial load static	N		60	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		40	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
30	换向结构	Commutator			贵金属 9 相/metal 9 segments	
31	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

齿轮箱 Gearheads 编码器 Encoder

#### 外观图 | Outline Drawing



M 1:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## 3068N9C2B | 碳刷 Graphite Brush

应用领域: 医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

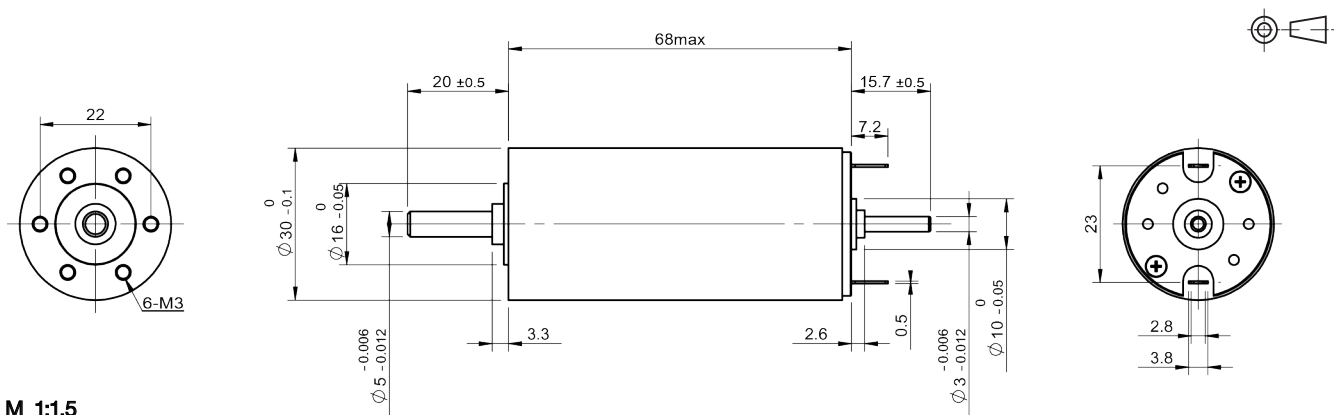
### 主要技术指标 | Characteristics

			01-85-24.0	02-85-36.0	04-87-48.0	
1	电压	Voltage	V	24.0	36.0	48.0
2	转子电阻	Rotor Resistance	$\Omega$	0.9	1.5	3.65
3	空载转速	No-load speed	rpm	8500	8500	8700
4	空载电流	No-load current	mA	150	130	50
5	堵转转矩	Stall torque	mNm	711.0	960.2	687.6
6	堵转电流	Stall current	mA	26670	24000	13150
7	额定转矩	Nominal torque	mNm	60.0	86.0	30.0
8	额定转速	Nominal speed	rpm	7780	7740	8320
9	额定电流	Nominal current	mA	2390	2270	620
10	最大输出功率	Max. output power	W	158	214	157
11	最大效率	Max. efficiency	%	86	86	88
12	反电势常数	Back-EMF constant	mV/rpm	2.8	4.2	5.5
13	转矩常数	Torque constant	mNm/A	26.8	40.2	52.5
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	12.0	8.9	12.7
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	33	33	33
16	重量	Weight	g	250	250	250
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		6.2	
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		3.8	
19	热时常数 (电机)	Thermal time constant motor	s		225	
20	热时常数 (线圈)	Thermal time constant winding	s		7.8	
21	工作温度范围	Operating temperature range	°C		-20~+120	
22	绕组耐温等级	Thermal class of winding	°C		155	
23	轴向间隙	Axial play	mm		0.02~0.15	
24	径向间隙	Radial play	mm		0.025	
25	动态轴向载荷	Axial load dynamic	N		5.6	
26	静态轴向载荷	Axial load static	N		110	
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		30	
28	极对数	No. of pole pairs			1	
29	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
30	换向结构	Commutator			贵金属 9 相/metal 9 segments	
31	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

齿轮箱 Gearheads 编码器 Encoder

### 外观图 | Outline Drawing



# 精密直流空心杯电机

## PRECISION DC CORELESS MOTOR

### 3257N9C2B | 碳刷 Graphite Brush

应用领域: 医疗、保健、汽车、机器人、工业自动化等精密驱动领域。

Applications: precision drives in medical equipment and devices, healthcare products, automotive, robotics, and industrial automation.

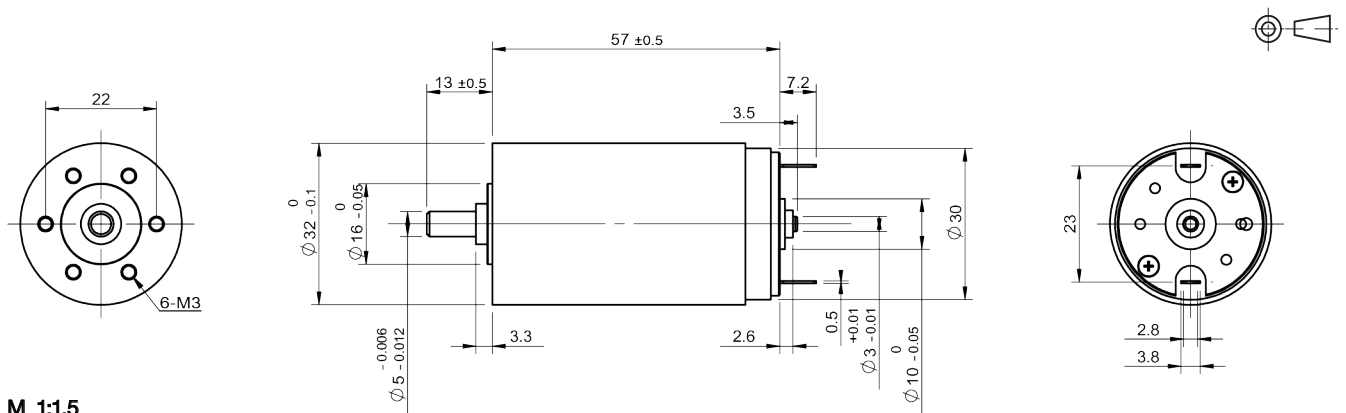
#### 主要技术指标 | Characteristics

			01-54-12.0	02-64-24.0	08-74-24.0
1	电压	Voltage	V	12.0	24.0
2	转子电阻	Rotor Resistance	$\Omega$	0.44	1.84
3	空载转速	No-load speed	rpm	5440	7400
4	空载电流	No-load current	mA	150	100
5	堵转转矩	Stall torque	mNm	568.1	366.4
6	堵转电流	Stall current	mA	27270	10430
7	额定转矩	Nominal torque	mNm	45.5	38.5
8	额定转速	Nominal speed	rpm	5000	5730
9	额定电流	Nominal current	mA	2320	1190
10	最大输出功率	Max. output power	W	81	61
11	最大效率	Max. efficiency	%	86	81
12	反电势常数	Back-EMF constant	mV/rpm	2.2	3.7
13	转矩常数	Torque constant	mNm/A	20.9	35.5
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	9.6	17.5
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	42	42
16	重量	Weight	g	230	230
17	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		7.57
18	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		4.05
19	热时常数 (电机)	Thermal time constant motor	s		725
20	热时常数 (线圈)	Thermal time constant winding	s		540
21	工作温度范围	Operating temperature range	°C		-20~+120
22	绕组耐温等级	Thermal class of winding	°C		155
23	轴向间隙	Axial play	mm		0.02~0.15
24	径向间隙	Radial play	mm		0.025
25	动态轴向载荷	Axial load dynamic	N		5.6
26	静态轴向载荷	Axial load static	N		110
27	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		30
28	极对数	No. of pole pairs			1
29	轴承	Bearings		2 枚滚动轴承/2 ball bearings	
30	换向结构	Commutator		贵金属 9 相/metal 9 segments	
31	防护等级	Protection class		IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

齿轮箱 Gearheads 编码器 Encoder

#### 外观图 | Outline Drawing



M 1:1.5

规格如有变更, 恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com







## BRUSHLESS DC MOTOR 无刷电机

Constar 无刷电机,采用电子换向替代机械换向,克服了传统有刷直流电机接触式机械换向的致命弱点,使用寿命超长,其优越的性能还表现在:电机可靠性高、转速高、体积小、过载能力强,电磁干扰小,噪音低,有良好的调速性能,可在恶劣的环境中工作。产品应用于医疗器械、工业设备、无人机、电动工具、小型家电等领域。

The brushless dc motor (BLDC) utilizes electronic commutation instead of mechanical commutation which overcomes the weaknesses of contact-type (brush) commutation, while providing excellent reliability and extremely long lifetime. Attributes of the motor's excellent performance include: high reliability, high rotational speed, excellent size to power ratio, high short-term overload capability, low EMI, good speed regulation and can operate in certain poor environment conditions. These motors are frequently used in application fields such as medical equipment, robotics, industrial equipment, UAV, electrical tools, and small household appliances.



# CONTENT 目录

## 无刷电机

BRUSHLESS DC MOTOR

### 内转子无槽高效率

INNER ROTOR, SLOTLESS,  
HIGH EFFICIENCY

	电机型号 Motor No.	尺寸 Dimension	换向结构 Commutation Structure	页码 Page
1	BH0831NH	φ8*31 mm	霍尔传感器/Hall Sensor	54
2	BH1659NH2B	φ16*58.6 mm	霍尔传感器/Hall Sensor	55
3	BH2245NH2B	φ22*45 mm	霍尔传感器/Hall Sensor	56
4	BH2260NH2B	φ22*59.7 mm	霍尔传感器/Hall Sensor	57

### 内转子无槽

INNER ROTOR, SLOTLESS

	电机型号 Motor No.	直径 Gearbox Diameter	减速比 Reduction Ratio	页码 Page
1	B0815N2B	φ8*15 mm	无传感器/Sensorless	58
2	B1020N	φ10*20 mm	无传感器/Sensorless	59
3	B1023NH2B	φ10*23mm	霍尔传感器/Hall Sensor	60
4	B1215N2B	φ12*15 mm	无传感器/Sensorless	61
5	B1220N2B	φ12*20 mm	无传感器/Sensorless	62
6	B1230N2B	φ12*30 mm	无传感器/Sensorless	63
7	B1233NH2B	φ12*32.8 mm	霍尔传感器/Hall Sensor	64
8	B1329N2B	φ13*29 mm	无传感器/Sensorless	65
9	B1635N2B	φ16*35 mm	无传感器/Sensorless	66
10	B2040N2B	φ20*40 mm	无传感器/Sensorless	67
11	B2440NH2B	φ24*40 mm	霍尔传感器/Hall Sensor	68
12	B2950NH2B	φ29*50 mm	霍尔传感器/Hall Sensor	69
13	B3265NH2B	φ32*65 mm	霍尔传感器/Hall Sensor	70
14	B4040NH2B	φ40*40.3 mm	霍尔传感器/Hall Sensor	71
15	B7584FBHIE2B	φ75*84 mm	霍尔传感器/Hall Sensor	72

### 内转子有槽

INNER ROTOR, SLOTTED

	电机型号 Motor No.	尺寸 Dimension	换向结构 Commutation Structure	页码 Page
1	BS2838NB2B	φ27.6*37.6 mm	无传感器/Sensorless	73
2	BS3246NBH2B	φ32*46.5 mm	霍尔传感器/Hall Sensor	74

## 外转子

OUTER ROTOR

	电机型号 Motor No.	尺寸 Dimension	换向结构 Commutation Structure	页码 Page
1	BO1012N2B	φ10*12 mm	无传感器/Sensorless	75
2	BO1410NB2B	φ14.2*9.6 mm	无传感器/Sensorless	76
3	BO1412N2B	φ14.3*11.6 mm	无传感器/Sensorless	77
4	BO1509NBH2B	φ15.5*8.7 mm	无传感器/Sensorless	78
5	BO1511N2B	φ14.2*12 mm	无传感器/Sensorless	79
6	BO1613N2B	φ16*13.3 mm	无传感器/Sensorless	80
7	BO1709NB2B	φ17*9.5 mm	无传感器/Sensorless	81
8	BO1808NBH2B	φ17.5*8.5 mm	霍尔传感器/Hall Sensor	82
9	BO1812N2B	φ17.6*12.6mm	无传感器/Sensorless	83
10	BO1815N2B	φ18*14.5 mm	无传感器/Sensorless	84
11	BO2008NBH2B	φ20*8.5 mm	霍尔传感器/Hall Sensor	85
12	BO2010NB2B	φ20*10 mm	无传感器/Sensorless	86
13	BO2015NB2B	φ21.2*15.2 mm	无传感器/Sensorless	87
14	BO2316N2B	φ22.8*16 mm	无传感器/Sensorless	88
15	BO2414NB2B	φ24.5*13.9 mm	无传感器/Sensorless	89
16	BO2814N2B	φ27.6*14.3 mm	无传感器/Sensorless	90
17	BO2820N2B	φ27.6*20.1 mm	无传感器/Sensorless	91
18	BO2824N2B	φ27.6*24 mm	无传感器/Sensorless	92
19	BO2826N2B	φ27.6*25.8 mm	无传感器/Sensorless	93
20	BO2828N2B	φ27.7*29.4 mm	无传感器/Sensorless	94
21	BO2914NBH2B	φ29*14 mm	霍尔传感器/Hall Sensor	95
22	BO3216NB2B	φ31.5*15.9 mm	无传感器/Sensorless	96
23	BO3823N2B	φ37.6*23 mm	无传感器/Sensorless	97
24	BO3828N2B	φ37.1*27.6 mm	无传感器/Sensorless	98
25	BO3846NH2B	φ37.6*46 mm	霍尔传感器/Hall Sensor	99
26	BO4316NB2B	φ42.8*16.4 mm	无传感器/Sensorless	100
27	BO4326NBH2B	φ43.2*27 mm	霍尔传感器/Hall Sensor	101
28	BO4416N2B	φ43.95*16 mm	无传感器/Sensorless	102

# CONTENT 目录

29	BO4831NH2B	φ48*30 mm	霍尔传感器/Hall Sensor	103
30	BO4840NH2B	φ48*40 mm	霍尔传感器/Hall Sensor	104
31	BO6133N2B	φ61.2*33 mm	无传感器/Sensorless	105
32	BO6452N3B	φ64*52.5 mm	无传感器/Sensorless	106
33	BO8724N2B	φ87*24.5 mm	无传感器/Sensorless	107

## 扁平无刷电机 FLAT BLDC MOTOR

	电机型号 Motor No.	尺寸 Dimension	换向结构 Commutation Structure	页码 Page
1	BF3211N2B	φ32*11.2 mm	无传感器/Sensorless	108

## 无刷风机 BRUSHLESS DC BLOWER

	电机型号 Motor No.	尺寸 Dimension	换向结构 Commutation Structure	页码 Page
1	7054ZWF	φ68.5*52.5 mm	霍尔传感器/Hall Sensor	109



**BH0831NH | 内转子无槽带传感器高效率 Inner Rotor, Slotless, Sensored, High efficiency**

应用领域：医疗器械、工业设备等精密驱动领域。

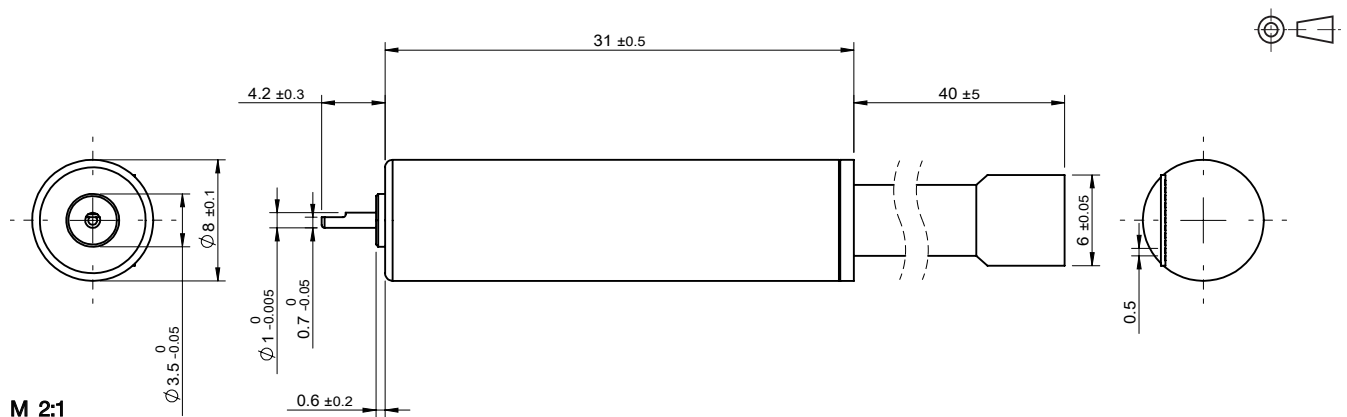
Applications: precision drives in medical equipment, industrial automation fields.

主要技术指标 | Characteristics

			310-8.5-0003	
1	电压	Voltage	V	8.5
2	端电阻	Terminal resistance	Ω	2.83
3	空载转速	No-load speed	rpm	31000
4	空载电流	No-load current	A	0.16
5	堵转转矩	Stall torque	mNm	7.0
6	堵转电流	Stall current	A	3.0
7	额定转矩	Nominal torque	mNm	1.3
8	额定转速	Nominal speed	rpm	25280
9	额定电流	Nominal current	A	0.67
10	最大输出功率	Max. output power	W	6
11	最大效率	Max. efficiency	%	59.2
12	反电势常数	Back-EMF constant	mV/rpm	0.26
13	转矩常数	Torque constant	mNm/A	2.48
14	KV 值	KV Value	rpm/V	3650
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	4398
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.65
17	重量	Weight	g	51.5
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W	47.4
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W	14.8
20	热时常数 (电机)	Thermal time constant motor	s	120
21	热时常数 (线圈)	Thermal time constant winding	s	0.7
22	工作温度范围	Operating temperature range	°C	-20~+85
23	绕组耐温等级	Thermal class of winding	°C	125
24	轴向间隙	Axial play	mm	0.3
25	径向间隙	Radial play	mm	0.01
26	动态轴向载荷	Axial load dynamic	N	0.05
27	静态轴向载荷	Axial load static	N	10
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N	0.2
29	极对数	No. of pole pairs		1
30	轴承	Bearings	2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation	霍尔传感器/Hall Sensor	
32	防护等级	Protection class	IP 20	

★可选参数 Options: 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type  
霍尔传感器 Hall sensor 驱动器 Driver

外观图 | Outline Drawing





## BH1659NH2B | 内转子无槽带传感器高效率 Inner Rotor, Slotless, Sensored, High efficiency

应用领域：医疗器械、工业设备等精密驱动领域。

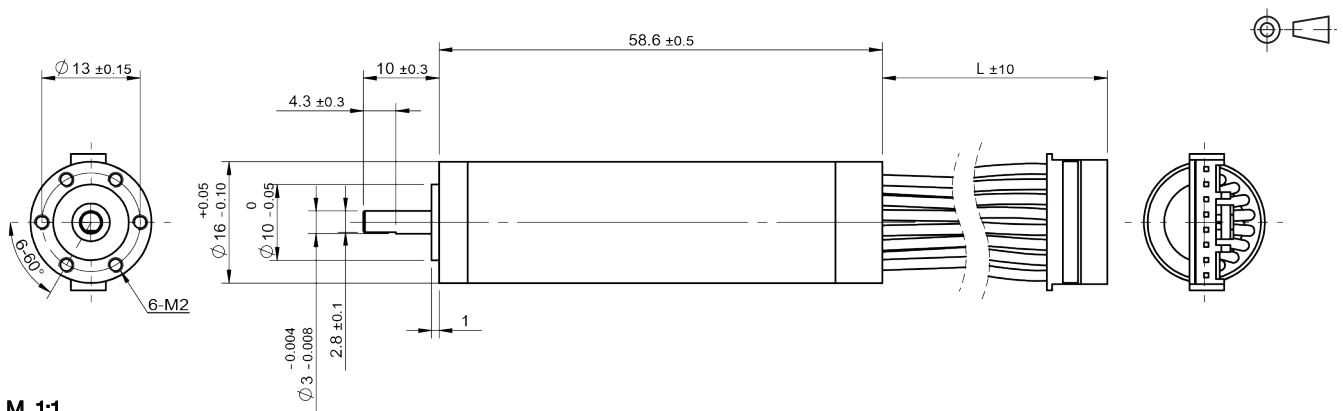
Applications: precision drives in medical equipment, industrial automation fields.

### 主要技术指标 | Characteristics

			425-32.0-0030	645-36.0-****
1	电压	Voltage	V	32.0
2	端电阻	Terminal resistance	$\Omega$	1.42
3	空载转速	No-load speed	rpm	41000
4	空载电流	No-load current	A	0.12
5	堵转转矩	Stall torque	mNm	166.2
6	堵转电流	Stall current	A	22.5
7	额定转矩	Nominal torque	mNm	8.6
8	额定转速	Nominal speed	rpm	38880
9	额定电流	Nominal current	A	1.31
10	最大输出功率	Max. output power	W	179
11	最大效率	Max. efficiency	%	86.0
12	反电势常数	Back-EMF constant	mV/rpm	0.776
13	转矩常数	Torque constant	mNm/A	7.41
14	KV 值	KV Value	rpm/V	1280
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	247
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.65
17	重量	Weight	g	51.5
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W	15.3
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W	18.7
20	热时常数 (电机)	Thermal time constant motor	s	362
21	热时常数 (线圈)	Thermal time constant winding	s	233
22	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-40~+120
23	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$	155
24	轴向间隙	Axial play	mm	0.012
25	径向间隙	Radial play	mm	0.008
26	动态轴向载荷	Axial load dynamic	N	1.5
27	静态轴向载荷	Axial load static	N	60
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N	10
29	极对数	No. of pole pairs		1
30	轴承	Bearings		2 枚滚动轴承/2 ball bearings
31	换向结构	Commutation		霍尔传感器/Hall Sensor
32	防护等级	Protection class		IP 20

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



M 1:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

**BH2245NH2B | 内转子无槽带传感器高效率 Inner Rotor, Slotless, Sensored, High efficiency**

应用领域：医疗器械、工业设备等精密驱动领域。

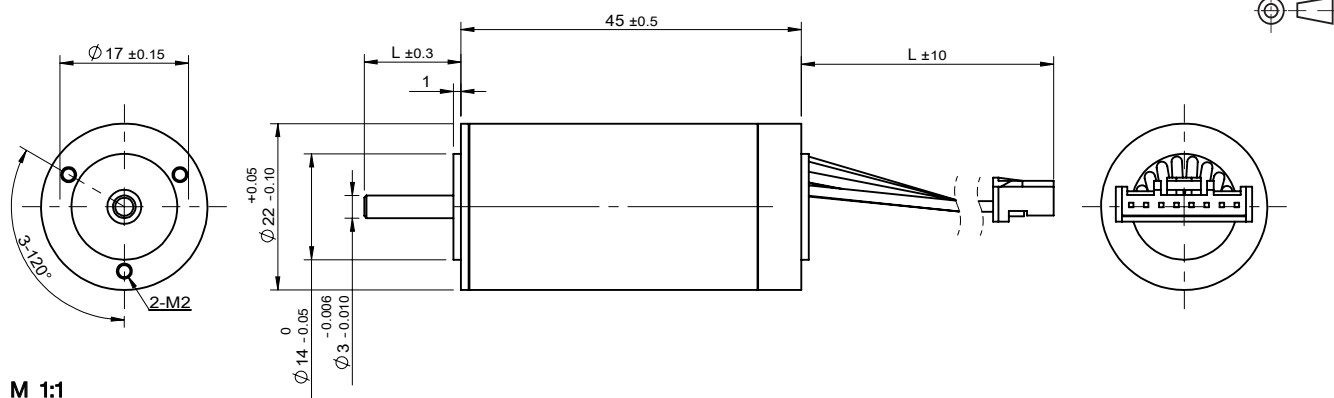
Applications: precision drives in medical equipment, industrial automation fields.

主要技术指标 | Characteristics

			01-400-24.0-0024	02-640-24.0-****
1	电压	Voltage	V	24.0
2	端电阻	Terminal resistance	Ω	0.44
3	空载转速	No-load speed	rpm	39000
4	空载电流	No-load current	A	0.21
5	堵转转矩	Stall torque	mNm	318.1
6	堵转电流	Stall current	A	54.5
7	额定转矩	Nominal torque	mNm	11
8	额定转速	Nominal speed	rpm	37650
9	额定电流	Nominal current	A	2.1
10	最大输出功率	Max. output power	W	325
11	最大效率	Max. efficiency	%	88.1
12	反电势常数	Back-EMF constant	mV/rpm	0.613
13	转矩常数	Torque constant	mNm/A	5.85
14	KV 值	KV Value	rpm/V	1630
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	123
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	1.49
17	重量	Weight	g	92.0
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W	6.41
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W	0.37
20	热时常数 (电机)	Thermal time constant motor	s	885
21	热时常数 (线圈)	Thermal time constant winding	s	830
22	工作温度范围	Operating temperature range	°C	-40~+120
23	绕组耐温等级	Thermal class of winding	°C	155
24	轴向间隙	Axial play	mm	0.012
25	径向间隙	Radial play	mm	0.008
26	动态轴向载荷	Axial load dynamic	N	1.5
27	静态轴向载荷	Axial load static	N	60
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N	10
29	极对数	No. of pole pairs		1
30	轴承	Bearings		2 枚滚动轴承/2 ball bearings
31	换向结构	Commutation		霍尔传感器/Hall Sensor
32	防护等级	Protection class		IP 20

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

外观图 | Outline Drawing



M 1:1

## BH2260NH2B | 内转子无槽带传感器高效率 Inner Rotor, Slotless, Sensored, High efficiency

应用领域：医疗器械、工业设备等精密驱动领域。

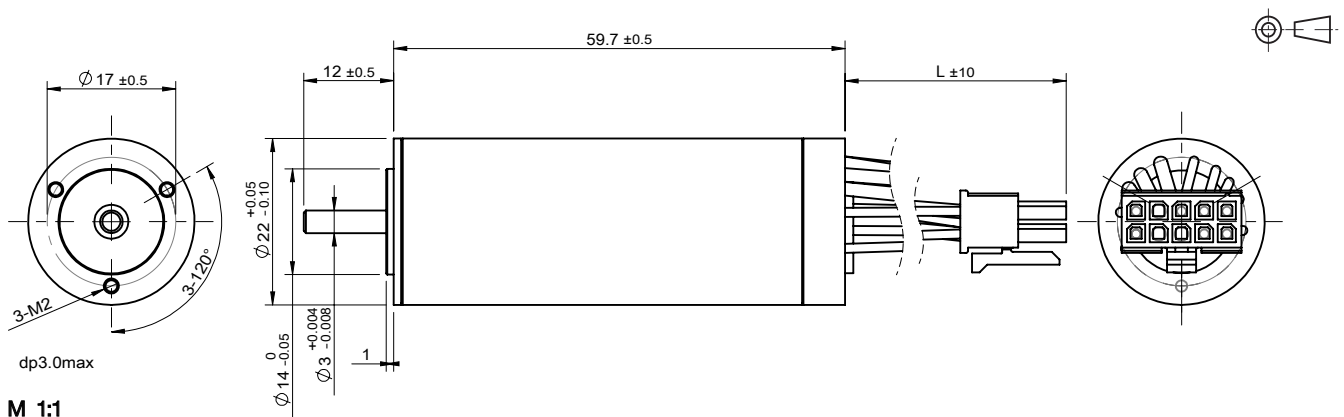
Applications: precision drives in medical equipment, industrial automation fields.

### 主要技术指标 | Characteristics

			01-530-24.0-****	**-530-36.0-****
1	电压	Voltage	V	24.0
2	端电阻	Terminal resistance	Ω	0.15
3	空载转速	No-load speed	rpm	53000
4	空载电流	No-load current	A	0.38
5	堵转转矩	Stall torque	mNm	688.6
6	堵转电流	Stall current	A	160.0
7	额定转矩	Nominal torque	mNm	17.2
8	额定转速	Nominal speed	rpm	51680
9	额定电流	Nominal current	A	4.4
10	最大输出功率	Max. output power	W	956
11	最大效率	Max. efficiency	%	90.6
12	反电势常数	Back-EMF constant	mV/rpm	0.452
13	转矩常数	Torque constant	mNm/A	4.31
14	KV 值	KV Value	rpm/V	2210
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	77
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	2.53
17	重量	Weight	g	107
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W	5.28
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W	0.57
20	热时常数 (电机)	Thermal time constant motor	s	900
21	热时常数 (线圈)	Thermal time constant winding	s	850
22	工作温度范围	Operating temperature range	°C	-40~+120
23	绕组耐温等级	Thermal class of winding	°C	155
24	轴向间隙	Axial play	mm	0.012
25	径向间隙	Radial play	mm	0.008
26	动态轴向载荷	Axial load dynamic	N	1.5
27	静态轴向载荷	Axial load static	N	60
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N	10
29	极对数	No. of pole pairs		1
30	轴承	Bearings		2 枚滚动轴承/2 ball bearings
31	换向结构	Commutation		霍尔传感器/Hall Sensor
32	防护等级	Protection class		IP 20

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## B0815N2B | 内转子无槽无传感器 Inner Rotor, Slotless, Sensorless

应用领域：医疗器械、工业设备等精密驱动领域。

Applications: precision drives in medical equipment, industrial automation fields.

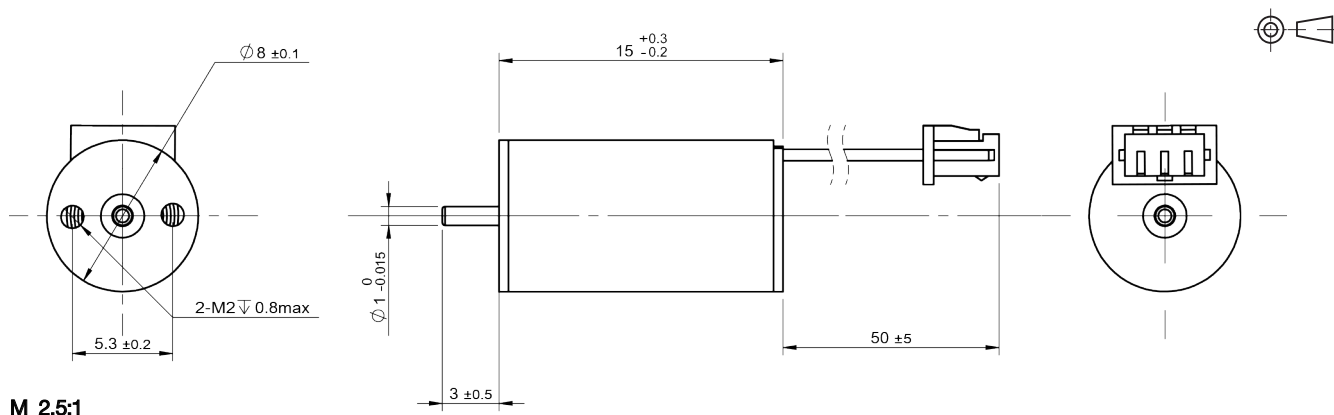
### 主要技术指标 | Characteristics

			02-81-3.7	04-200-5.0	05-323-3.7
1	电压	Voltage	V	3.7	3.7
2	端电阻	Terminal resistance	$\Omega$	36.5	3.1
3	空载转速	No-load speed	rpm	8100	32300
4	空载电流	No-load current	A	0.02	0.1
5	堵转转矩	Stall torque	mNm	0.32	1.1
6	堵转电流	Stall current	A	0.1	1.2
7	额定转矩	Nominal torque	mNm	0.1	0.2
8	额定转速	Nominal speed	rpm	6800	27800
9	额定电流	Nominal current	A	0.03	0.26
10	最大输出功率	Max. output power	W	0.07	0.92
11	最大效率	Max. efficiency	%	38	50
12	反电势常数	Back-EMF constant	mV/rpm	0.39	0.10
13	转矩常数	Torque constant	mNm/A	3.70	1.00
14	KV 值	KV Value	rpm/V	2180	8730
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	25310	29360
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.02	0.02
17	重量	Weight	g	3	3
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		110
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		26
20	热时常数 (电机)	Thermal time constant motor	s		63
21	热时常数 (线圈)	Thermal time constant winding	s		57
22	工作温度范围	Operating temperature range	°C		-40~+100
23	绕组耐温等级	Thermal class of winding	°C		130
24	轴向间隙	Axial play	mm		0.012
25	径向间隙	Radial play	mm		0.008
26	动态轴向载荷	Axial load dynamic	N		1
27	静态轴向载荷	Axial load static	N		25
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		6.3
29	极对数	No. of pole pairs			1
30	轴承	Bearings		2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation		无传感器/Sensorless	
32	防护等级	Protection class		IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## B1020N | 内转子无槽无传感器 Inner Rotor, Slotless, Sensorless

应用领域：医疗器械、工业设备等精密驱动领域。

Applications: precision drives in medical equipment, industrial automation fields.

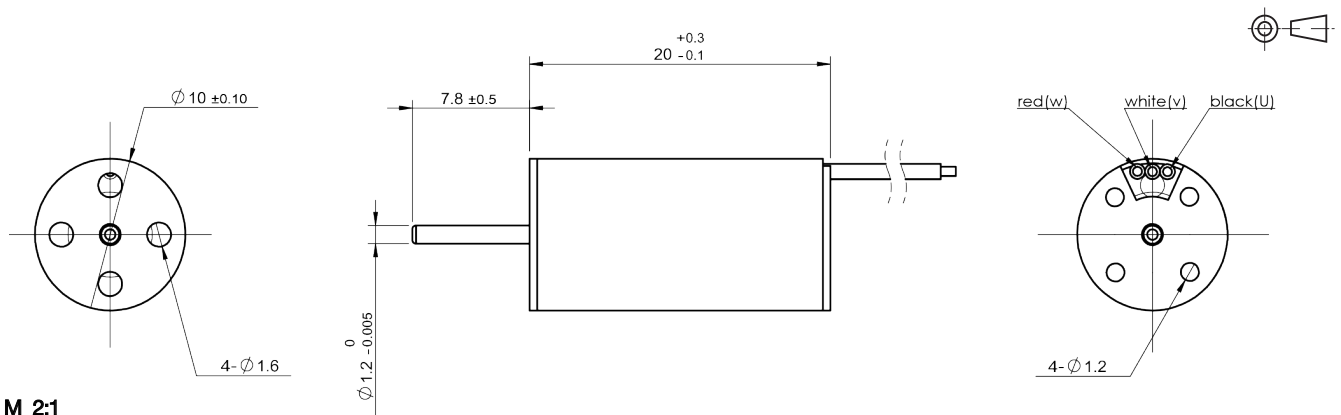
### 主要技术指标 | Characteristics

			01-393-7.4	03-85-3.7	05-382-7.4
1	电压	Voltage	V	7.4	7.4
2	端电阻	Terminal resistance	Ω	1.08	1.4
3	空载转速	No-load speed	rpm	39300	38200
4	空载电流	No-load current	A	0.32	0.24
5	堵转转矩	Stall torque	mNm	11.2	8.9
6	堵转电流	Stall current	A	6.85	5.3
7	额定转矩	Nominal torque	mNm	2.6	2.6
8	额定转速	Nominal speed	rpm	30000	27000
9	额定电流	Nominal current	A	1.85	1.7
10	最大输出功率	Max. output power	W	11.5	9.0
11	最大效率	Max. efficiency	%	61	61
12	反电势常数	Back-EMF constant	mV/rpm	0.18	0.18
13	转矩常数	Torque constant	mNm/A	1.70	1.76
14	KV 值	KV Value	rpm/V	5300	5160
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	3500	4290
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.06	0.06
17	重量	Weight	g	6.8	6.8
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		44
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		10
20	热时常数 (电机)	Thermal time constant motor	s		124
21	热时常数 (线圈)	Thermal time constant winding	s		119
22	工作温度范围	Operating temperature range	°C		-20~+100
23	绕组耐温等级	Thermal class of winding	°C		155
24	轴向间隙	Axial play	mm		0.012
25	径向间隙	Radial play	mm		0.008
26	动态轴向载荷	Axial load dynamic	N		1
27	静态轴向载荷	Axial load static	N		25
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		6.3
29	极对数	No. of pole pairs			1
30	轴承	Bearings		2 枚含油轴承/2 sleeve bearings	
31	换向结构	Commutation		无传感器/Sensorless	
32	防护等级	Protection class		IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



M 2:1

## B1023NH2B | 内转子无槽带传感器 Inner Rotor, Slotless, Sensored

应用领域：医疗器械、工业设备等精密驱动领域。

Applications: precision drives in medical equipment, industrial automation fields.

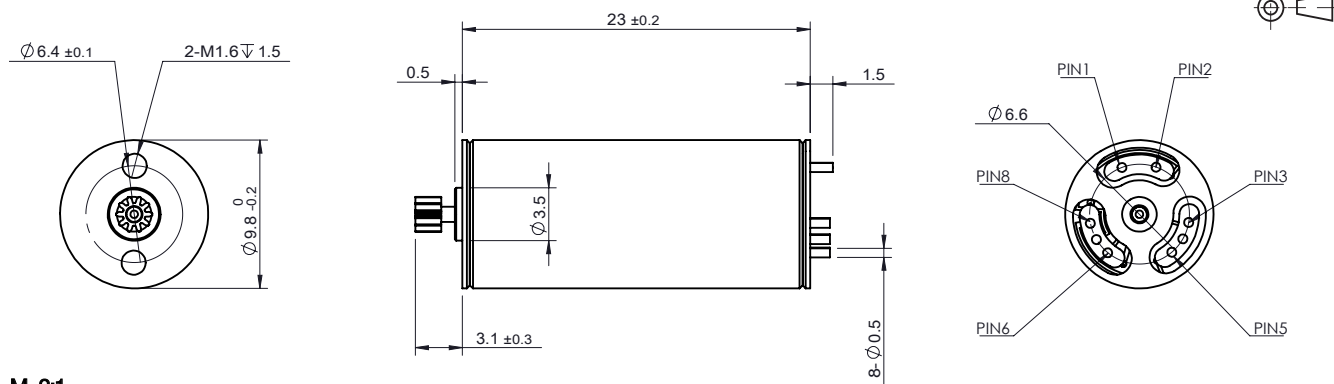
### 主要技术指标 | Characteristics

			05-382-7.4	06-310-12.0	03-85-3.7
1	电压	Voltage	V	7.4	3.7
2	端电阻	Terminal resistance	$\Omega$	1.4	6.2
3	空载转速	No-load speed	rpm	38200	8500
4	空载电流	No-load current	A	0.30	0.07
5	堵转转矩	Stall torque	mNm	8.7	1.90
6	堵转电流	Stall current	A	5.3	1.0
7	额定转矩	Nominal torque	mNm	1.7	0.6
8	额定转速	Nominal speed	rpm	30750	6077
9	额定电流	Nominal current	A	1.27	0.23
10	最大输出功率	Max. output power	W	8.7	0.43
11	最大效率	Max. efficiency	%	57	43
12	反电势常数	Back-EMF constant	mV/rpm	0.18	0.38
13	转矩常数	Torque constant	mNm/A	1.75	3.66
14	KV 值	KV Value	rpm/V	5160	2290
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	4390	4473
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.06	0.06
17	重量	Weight	g	8.3	8.3
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		44
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		10
20	热时常数 (电机)	Thermal time constant motor	s		124
21	热时常数 (线圈)	Thermal time constant winding	s		119
22	工作温度范围	Operating temperature range	°C		-40~+100
23	绕组耐温等级	Thermal class of winding	°C		155
24	轴向间隙	Axial play	mm		0.05
25	径向间隙	Radial play	mm		0.0125
26	动态轴向载荷	Axial load dynamic	N		1
27	静态轴向载荷	Axial load static	N		25
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		6.3
29	极对数	No. of pole pairs			1
30	轴承	Bearings		2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation		霍尔传感器/Hall Sensor	
32	防护等级	Protection class		IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



M 2:1

## B1215N2B | 内转子无槽无传感器 Inner Rotor, Slotless, Sensorless

应用领域：医疗器械、工业设备等精密驱动领域。

Applications: precision drives in medical equipment, industrial automation fields.

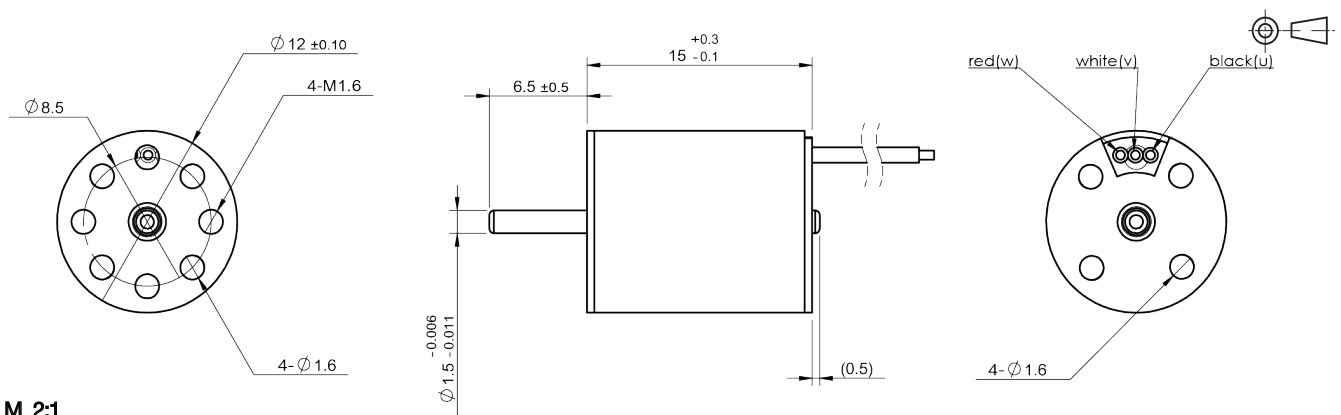
### 主要技术指标 | Characteristics

			09-350-3.6	06-145-4.5	12-425-7.4	
1	电压	Voltage	V	3.6	4.5	7.4
2	端电阻	Terminal resistance	$\Omega$	0.67	5.2	2.6
3	空载转速	No-load speed	rpm	35000	14500	42500
4	空载电流	No-load current	A	0.3	0.1	0.2
5	堵转转矩	Stall torque	mNm	4.7	2.0	4.0
6	堵转电流	Stall current	A	5.4	0.9	2.9
7	额定转矩	Nominal torque	mNm	0.7	1.0	0.3
8	额定转速	Nominal speed	rpm	28200	4400	38000
9	额定电流	Nominal current	A	1.1	0.5	0.4
10	最大输出功率	Max. output power	W	4.3	0.8	4.6
11	最大效率	Max. efficiency	%	58	44	54
12	反电势常数	Back-EMF constant	mV/rpm	0.10	0.27	0.16
13	转矩常数	Torque constant	mNm/A	0.93	2.62	1.55
14	KV 值	KV Value	rpm/V	9720	3220	5740
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	7440	7230	10400
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.14	0.14	0.14
17	重量	Weight	g	7	7	7
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		37.8	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		6.2	
20	热时常数 (电机)	Thermal time constant motor	s		170	
21	热时常数 (线圈)	Thermal time constant winding	s		2	
22	工作温度范围	Operating temperature range	°C		-40~+100	
23	绕组耐温等级	Thermal class of winding	°C		155	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		1	
27	静态轴向载荷	Axial load static	N		25	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		6.3	
29	极对数	No. of pole pairs			1	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器/Sensorless	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



M 2:1

## B1220N2B | 内转子无槽无传感器 Inner Rotor, Slotless, Sensorless

应用领域：医疗器械、工业设备等精密驱动领域。

Applications: precision drives in medical equipment, industrial automation fields.

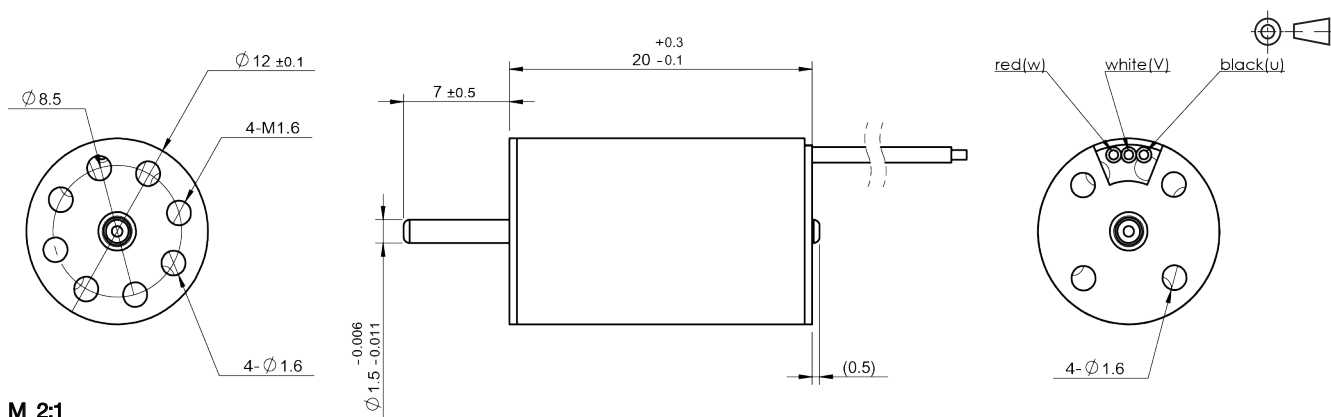
### 主要技术指标 | Characteristics

			03-230-7.4	02-172-6.0	01-175-5.0	
1	电压	Voltage	V	7.4	6.0	5.0
2	端电阻	Terminal resistance	$\Omega$	3.8	3.4	2
3	空载转速	No-load speed	rpm	23000	17200	17500
4	空载电流	No-load current	A	0.1	0.15	0.18
5	堵转转矩	Stall torque	mNm	5.3	4.9	5.8
6	堵转电流	Stall current	A	2	1.8	2.5
7	额定转矩	Nominal torque	mNm	1.3	1.3	1.4
8	额定转速	Nominal speed	rpm	15300	10800	11600
9	额定电流	Nominal current	A	0.57	0.6	0.78
10	最大输出功率	Max. output power	W	3.3	2.2	2.5
11	最大效率	Max. efficiency	%	62	50	51
12	反电势常数	Back-EMF constant	mV/rpm	0.3	0.3	0.3
13	转矩常数	Torque constant	mNm/A	2.9	3.0	2.5
14	KV 值	KV Value	rpm/V	3100	2900	3500
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	3800	3700	3030
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.17	0.17	0.17
17	重量	Weight	g	9.5	9.5	9.5
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		32	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		5.5	
20	热时常数 (电机)	Thermal time constant motor	s		190	
21	热时常数 (线圈)	Thermal time constant winding	s		1.5	
22	工作温度范围	Operating temperature range	°C		-40~+100	
23	绕组耐温等级	Thermal class of winding	°C		155	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		1	
27	静态轴向载荷	Axial load static	N		25	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		6.3	
29	极对数	No. of pole pairs			1	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器/Sensorless	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



M 2:1



## B1230N2B | 内转子无槽无传感器 Inner Rotor, Slotless, Sensorless

应用领域：医疗器械、工业设备等精密驱动领域。

Applications: precision drives in medical equipment, industrial automation fields.

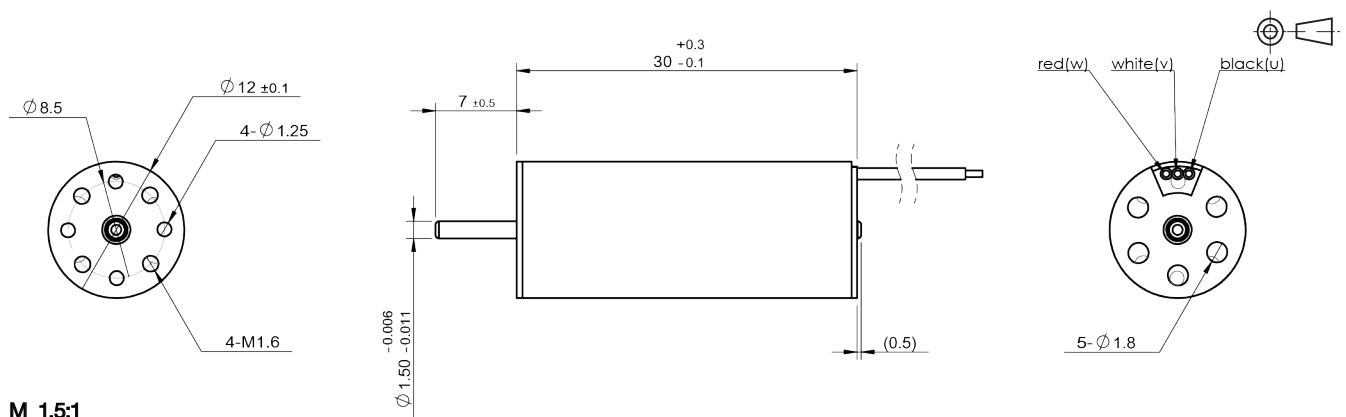
### 主要技术指标 | Characteristics

			28-115-12.0	10-180-9.0	15-180-3.7	
1	电压	Voltage	V	12.0	9.0	3.7
2	端电阻	Terminal resistance	$\Omega$	9	2.4	0.6
3	空载转速	No-load speed	rpm	11500	18000	18000
4	空载电流	No-load current	A	0.05	0.15	0.23
5	堵转转矩	Stall torque	mNm	12.3	16.5	11.2
6	堵转电流	Stall current	A	1.4	3.8	6.2
7	额定转矩	Nominal torque	mNm	3.8	2.7	2.7
8	额定转速	Nominal speed	rpm	6800	14100	12200
9	额定电流	Nominal current	A	0.45	0.74	1.7
10	最大输出功率	Max. output power	W	3.7	7.8	5.9
11	最大效率	Max. efficiency	%	65	64	67
12	反电势常数	Back-EMF constant	mV/rpm	1.0	0.5	0.2
13	转矩常数	Torque constant	mNm/A	9.6	4.6	1.9
14	KV 值	KV Value	rpm/V	960	2000	4860
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	930	1090	1430
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.21	0.21	0.21
17	重量	Weight	g	15	15	15
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		24	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		4.5	
20	热时常数 (电机)	Thermal time constant motor	s		240	
21	热时常数 (线圈)	Thermal time constant winding	s		2	
22	工作温度范围	Operating temperature range	°C		-40~+100	
23	绕组耐温等级	Thermal class of winding	°C		155	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		1	
27	静态轴向载荷	Axial load static	N		25	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		6.3	
29	极对数	No. of pole pairs			1	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器/Sensorless	
32	防护等级	Protection class			IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## B1233NH2B | 内转子无槽带传感器 Inner Rotor, Slotless, Sensored

应用领域：医疗器械、工业设备等精密驱动领域。

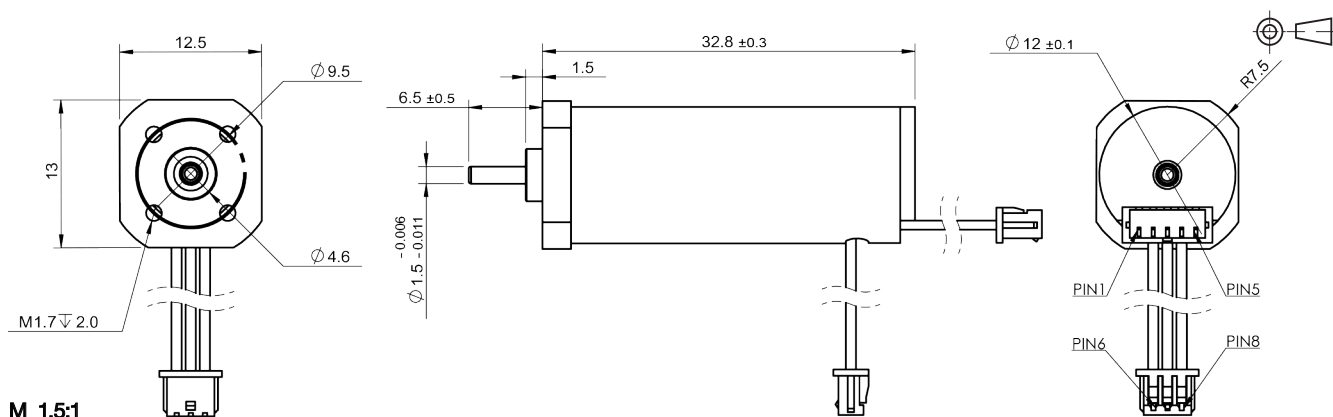
Applications: precision drives in medical equipment, industrial automation fields.

### 主要技术指标 | Characteristics

			42-200-12.0	54-117-24.0	55-105-9.0	
1	电压	Voltage	V	12.0	24.0	9.0
2	端电阻	Terminal resistance	$\Omega$	3.3	39.3	6.7
3	空载转速	No-load speed	rpm	20000	11700	10500
4	空载电流	No-load current	A	0.15	0.04	0.07
5	堵转转矩	Stall torque	mNm	19.2	10.6	9.8
6	堵转电流	Stall current	A	3.6	0.6	1.4
7	额定转矩	Nominal torque	mNm	1.1	3.0	3.0
8	额定转速	Nominal speed	rpm	18900	8400	7300
9	额定电流	Nominal current	A	0.35	0.2	0.5
10	最大输出功率	Max. output power	W	10	3.3	2.7
11	最大效率	Max. efficiency	%	63	57	59
12	反电势常数	Back-EMF constant	mV/rpm	0.6	1.9	0.81
13	转矩常数	Torque constant	mNm/A	5.5	18.5	7.75
14	KV 值	KV Value	rpm/V	1660	487	1160
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1040	297	1071
16	转子惯量	Rotor inertia	$\text{gcm}^2$	0.21	0.21	0.21
17	重量	Weight	g	16	16	16
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		24	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		4.5	
20	热时常数 (电机)	Thermal time constant motor	s		240	
21	热时常数 (线圈)	Thermal time constant winding	s		2	
22	工作温度范围	Operating temperature range	$^{\circ}\text{C}$		-40~+100	
23	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$		155	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		1	
27	静态轴向载荷	Axial load static	N		25	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		6.3	
29	极对数	No. of pole pairs			1	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			霍尔传感器/Hall Sensor	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## B1329N2B | 内转子无槽无传感器 Inner Rotor, Slotless, Sensorless

应用领域：医疗器械、工业设备等精密驱动领域。

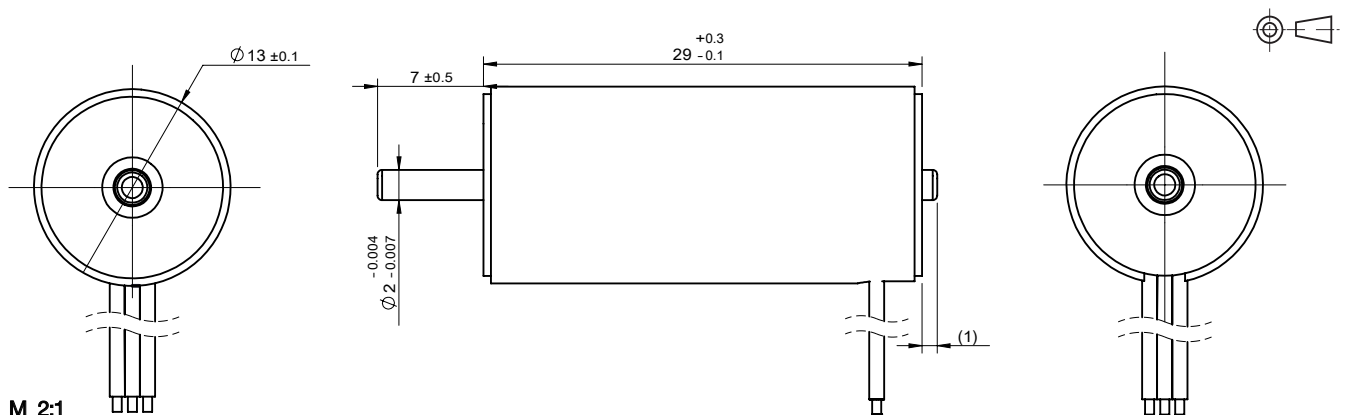
Applications: precision drives in medical equipment, industrial automation fields.

### 主要技术指标 | Characteristics

			01-250-12.0	03-617-24.0	04-250-12.0	
1	电压	Voltage	V	12.0	24.0	12.0
2	端电阻	Terminal resistance	$\Omega$	7.5	4.0	6.9
3	空载转速	No-load speed	rpm	25000	61700	25000
4	空载电流	No-load current	A	0.1	0.2	0.07
5	堵转转矩	Stall torque	mNm	6.4	20.8	7.2
6	堵转电流	Stall current	A	1.6	6.0	1.8
7	额定转矩	Nominal torque	mNm	1.7	4.2	2.2
8	额定转速	Nominal speed	rpm	15300	49000	17500
9	额定电流	Nominal current	A	0.51	1.35	0.6
10	最大输出功率	Max. output power	W	4.2	33.0	4.70
11	最大效率	Max. efficiency	%	56.0	65.0	61.0
12	反电势常数	Back-EMF constant	mV/rpm	0.45	0.37	0.45
13	转矩常数	Torque constant	mNm/A	4.3	3.6	4.30
14	KV 值	KV Value	rpm/V	2100	2570	2080
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	3900	2966	3470
16	转子惯量	Rotor inertia	$\text{gcm}^2$	0.18	0.18	0.18
17	重量	Weight	g	15	15	15
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		24	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		4.5	
20	热时常数 (电机)	Thermal time constant motor	s		250	
21	热时常数 (线圈)	Thermal time constant winding	s		2	
22	工作温度范围	Operating temperature range	$^{\circ}\text{C}$		-40~+120	
23	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$		155	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		1.5	
27	静态轴向载荷	Axial load static	N		37	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		12	
29	极对数	No. of pole pairs			1	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器/Sensorless	
32	防护等级	Protection class			IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



M 2:1

## B1635N2B | 内转子无槽无传感器 Inner Rotor, Slotless, Sensorless

应用领域：医疗器械、工业设备等精密驱动领域。

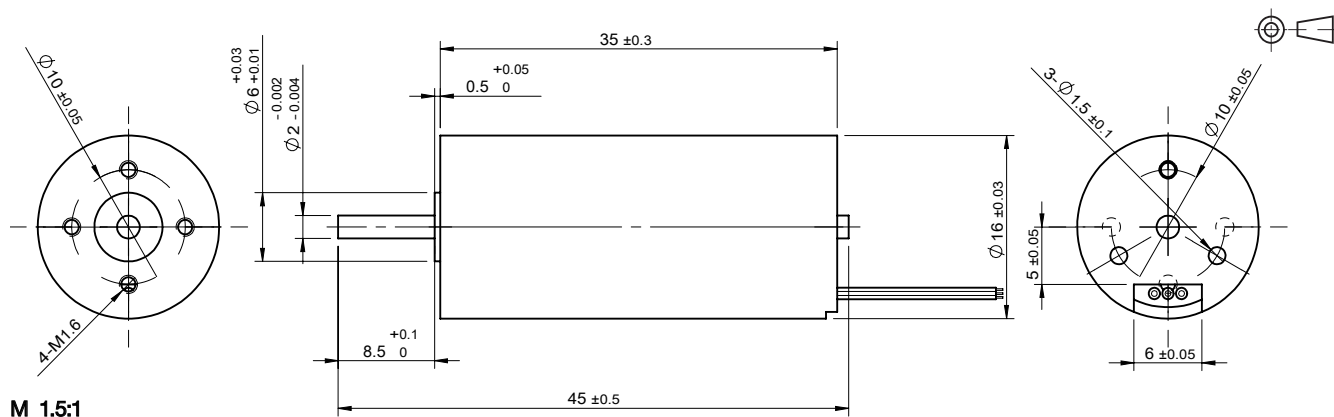
Applications: precision drives in medical equipment, industrial automation fields.

### 主要技术指标 | Characteristics

			01-450-12.0	02-200-24.0	03-120-3.7
1	电压	Voltage	V	12.0	3.7
2	端电阻	Terminal resistance	$\Omega$	0.35	0.7
3	空载转速	No-load speed	rpm	45000	12000
4	空载电流	No-load current	A	0.35	0.2
5	堵转转矩	Stall torque	mNm	85	14.4
6	堵转电流	Stall current	A	34	5.2
7	额定转矩	Nominal torque	mNm	1.5	1.5
8	额定转速	Nominal speed	rpm	43800	10000
9	额定电流	Nominal current	A	0.96	0.75
10	最大输出功率	Max. output power	W	100	4.5
11	最大效率	Max. efficiency	%	81	64.8
12	反电势常数	Back-EMF constant	mV/rpm	0.3	0.29
13	转矩常数	Torque constant	mNm/A	2.5	2.8
14	KV 值	KV Value	rpm/V	3750	3242
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	530	832
16	转子惯量	Rotor inertia	$\text{gcm}^2$	1.5	1.5
17	重量	Weight	g	40	40
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		17
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		4.8
20	热时常数 (电机)	Thermal time constant motor	s		250
21	热时常数 (线圈)	Thermal time constant winding	s		6
22	工作温度范围	Operating temperature range	$^{\circ}\text{C}$		-40~+120
23	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$		155
24	轴向间隙	Axial play	mm		0.012
25	径向间隙	Radial play	mm		0.008
26	动态轴向载荷	Axial load dynamic	N		1.5
27	静态轴向载荷	Axial load static	N		37
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		12
29	极对数	No. of pole pairs			1
30	轴承	Bearings		2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation		无传感器/Sensorless	
32	防护等级	Protection class		IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## B2040N2B | 内转子无槽无传感器 Inner Rotor, Slotless, Sensorless

应用领域：医疗器械、工业设备等精密驱动领域。

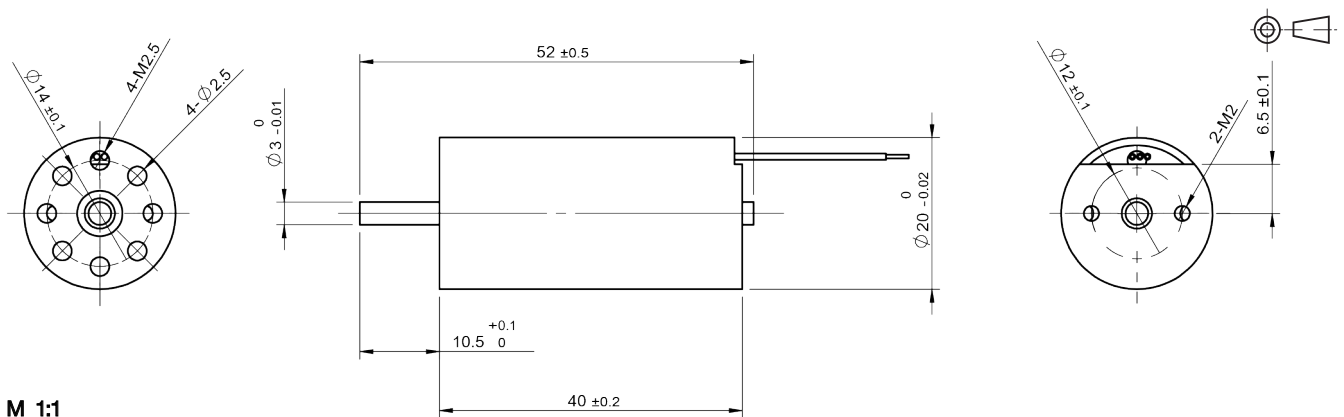
Applications: precision drives in medical equipment, industrial automation fields.

### 主要技术指标 | Characteristics

			01-150-12.0	02-80-12.0	03-67-9.0	
1	电压	Voltage	V	12.0	12.0	9.0
2	端电阻	Terminal resistance	$\Omega$	1.1	3.6	2.5
3	空载转速	No-load speed	rpm	15000	8000	6700
4	空载电流	No-load current	A	0.25	0.22	0.2
5	堵转转矩	Stall torque	mNm	79.6	41.7	41.2
6	堵转电流	Stall current	A	10.9	3.3	3.6
7	额定转矩	Nominal torque	mNm	7.6	7.6	10.2
8	额定转速	Nominal speed	rpm	13000	5900	4300
9	额定电流	Nominal current	A	1.3	0.8	1.1
10	最大输出功率	Max. output power	W	31	8.7	7.2
11	最大效率	Max. efficiency	%	72	55	58
12	反电势常数	Back-EMF constant	mV/rpm	0.8	1.4	1.3
13	转矩常数	Torque constant	mNm/A	7.5	13.4	12.1
14	KV 值	KV Value	rpm/V	1250.0	666.7	744.4
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	188.5	192.1	162.7
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	2	2	2
17	重量	Weight	g	55	55	55
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		16	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		3.5	
20	热时常数 (电机)	Thermal time constant motor	s		620	
21	热时常数 (线圈)	Thermal time constant winding	s		4	
22	工作温度范围	Operating temperature range	°C		-40~+100	
23	绕组耐温等级	Thermal class of winding	°C		155	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		5	
27	静态轴向载荷	Axial load static	N		80	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		29	
29	极对数	No. of pole pairs			1	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器/Sensorless	
32	防护等级	Protection class			IP20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



**B2440NH2B | 内转子无槽带传感器 Inner Rotor, Slotless, Sensored**

应用领域：医疗器械、工业设备等精密驱动领域。

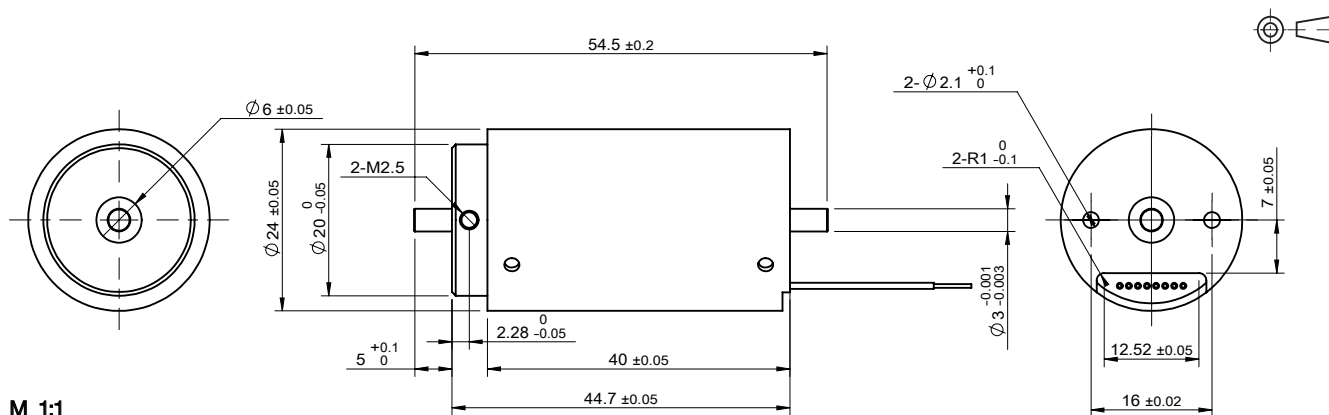
Applications: precision drives in medical equipment, industrial automation fields.

主要技术指标 | Characteristics

			01-170-24.0	02-170-18.0	03-120-24.0	
1	电压	Voltage	V	24.0	18.0	24
2	端电阻	Terminal resistance	Ω	2.5	1.875	3.54
3	空载转速	No-load speed	rpm	17000	17000	12000
4	空载电流	No-load current	A	0.15	0.15	0.14
5	堵转转矩	Stall torque	mNm	125.4	94.1	124.2
6	堵转电流	Stall current	A	9.6	9.6	6.8
7	额定转矩	Nominal torque	mNm	18.2	13.7	18.2
8	额定转速	Nominal speed	rpm	14500	14500	10200
9	额定电流	Nominal current	A	1.52	1.14	1.07
10	最大输出功率	Max. output power	W	56	41.9	39
11	最大效率	Max. efficiency	%	76	43.5	49.7
12	反电势常数	Back-EMF constant	mV/rpm	1.4	1.0	2.0
13	转矩常数	Torque constant	mNm/A	13.3	10.0	18.7
14	KV 值	KV Value	rpm/V	708.3	944.4	500.0
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	135.6	180.7	96.6
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	2	2	2
17	重量	Weight	g	80	80	80
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		9	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		3.5	
20	热时常数 (电机)	Thermal time constant motor	s		620	
21	热时常数 (线圈)	Thermal time constant winding	s		4	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		155	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		5	
27	静态轴向载荷	Axial load static	N		80	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		29	
29	极对数	No. of pole pairs			1	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			霍尔传感器/Hall Sensor	
32	防护等级	Protection class			IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

外观图 | Outline Drawing



## B2950NH2B | 内转子无槽带传感器 Inner Rotor, Slotless, Sensored

应用领域：医疗器械、工业设备等精密驱动领域。

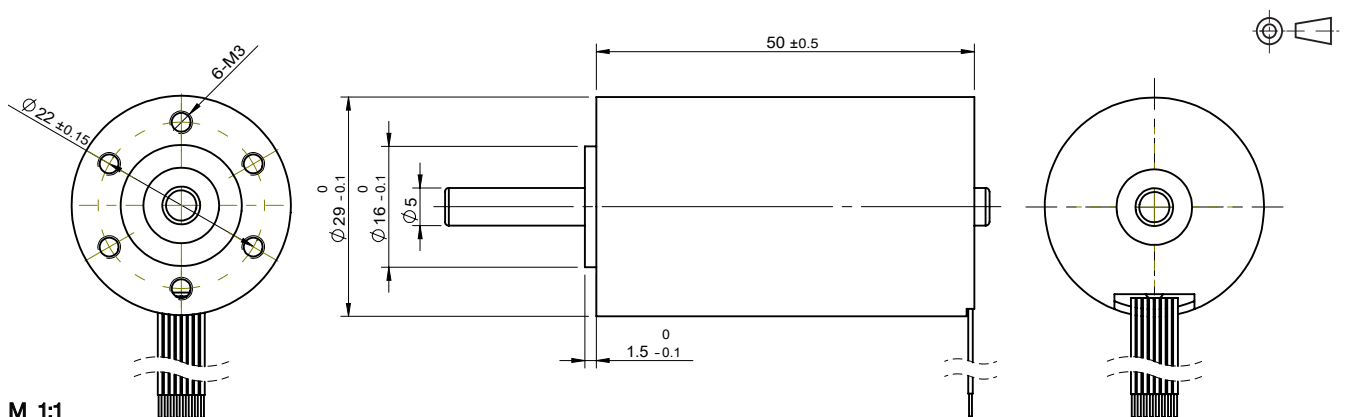
Applications: precision drives in medical equipment, industrial automation fields.

### 主要技术指标 | Characteristics

			01-130-24.0	02-130-18.0
1	电压	Voltage	V	24.0
2	端电阻	Terminal resistance	$\Omega$	1.32
3	空载转速	No-load speed	rpm	13000
4	空载电流	No-load current	A	0.3
5	堵转转矩	Stall torque	mNm	310.0
6	堵转电流	Stall current	A	18.2
7	额定转矩	Nominal torque	mNm	28
8	额定转速	Nominal speed	rpm	11800
9	额定电流	Nominal current	A	1.9
10	最大输出功率	Max. output power	W	105
11	最大效率	Max. efficiency	%	75
12	反电势常数	Back-EMF constant	mV/rpm	1.8
13	转矩常数	Torque constant	mNm/A	17.3
14	KV 值	KV Value	rpm/V	541.7
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	41.9
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	5
17	重量	Weight	g	140
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W	7.8
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W	5.9
20	热时常数 (电机)	Thermal time constant motor	s	1400
21	热时常数 (线圈)	Thermal time constant winding	s	20
22	工作温度范围	Operating temperature range	°C	-40~+100
23	绕组耐温等级	Thermal class of winding	°C	155
24	轴向间隙	Axial play	mm	0.012
25	径向间隙	Radial play	mm	0.008
26	动态轴向载荷	Axial load dynamic	N	5
27	静态轴向载荷	Axial load static	N	80
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N	29
29	极对数	No. of pole pairs		2
30	轴承	Bearings		2 枚滚动轴承/2 ball bearings
31	换向结构	Commutation		霍尔传感器/Hall Sensor
32	防护等级	Protection class		IP 20

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



M 1:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## B3265NH2B | 内转子无槽带传感器 Inner Rotor, Slotless, Sensored

应用领域：医疗器械、工业设备等精密驱动领域。

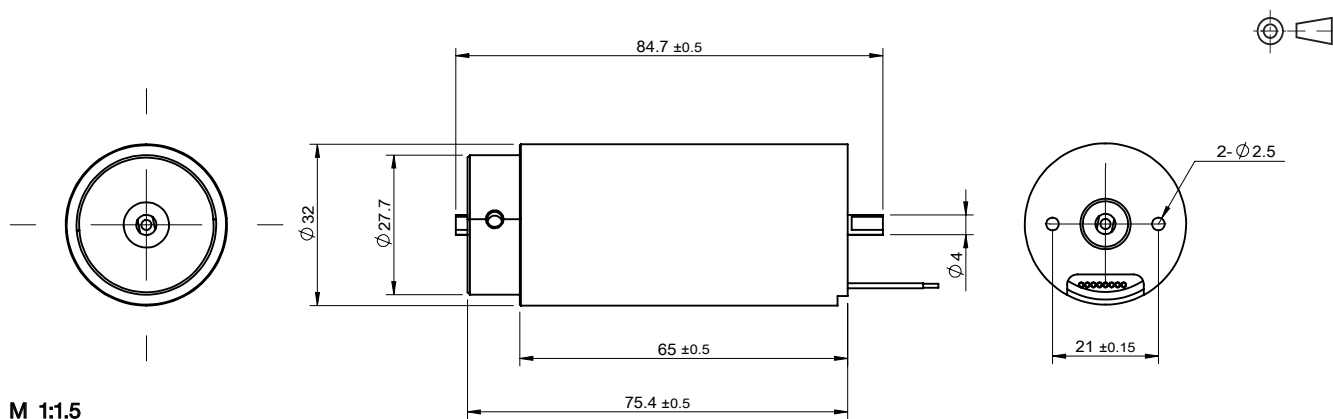
Applications: precision drives in medical equipment, industrial automation fields.

### 主要技术指标 | Characteristics

			01-150-24.0	02-150-18.0	03-120-24.0	
1	电压	Voltage	V	24.0	18.0	24.0
2	端电阻	Terminal resistance	Ω	0.65	0.49	0.81
3	空载转速	No-load speed	rpm	15000	15000	12000
4	空载电流	No-load current	A	0.55	0.55	0.53
5	堵转转矩	Stall torque	mNm	547.5	408.4	545.8
6	堵转电流	Stall current	A	36.9	36.7	29.6
7	额定转矩	Nominal torque	mNm	22	17	22
8	额定转速	Nominal speed	rpm	14400	10500	14400
9	额定电流	Nominal current	A	1.95	1.46	1.56
10	最大输出功率	Max. output power	W	215	161.6	171
11	最大效率	Max. efficiency	%	78	68	72
12	反电势常数	Back-EMF constant	mV/rpm	1.6	1.2	2.0
13	转矩常数	Torque constant	mNm/A	15.1	11.3	18.8
14	KV 值	KV Value	rpm/V	625.0	833.3	500.0
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	27.4	36.7	22.0
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	6	6	6
17	重量	Weight	g	180	180	180
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		6.8	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		4.3	
20	热时常数 (电机)	Thermal time constant motor	s		1400	
21	热时常数 (线圈)	Thermal time constant winding	s		20	
22	工作温度范围	Operating temperature range	°C		-40~+100	
23	绕组耐温等级	Thermal class of winding	°C		155	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		5	
27	静态轴向载荷	Axial load static	N		80	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		29	
29	极对数	No. of pole pairs			2	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			霍尔传感器/Hall Sensor	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



M 1:1.5



## B4040NH2B | 内转子无槽带传感器 Inner Rotor, Slotless, Sensored

应用领域：医疗器械、工业设备等精密驱动领域。

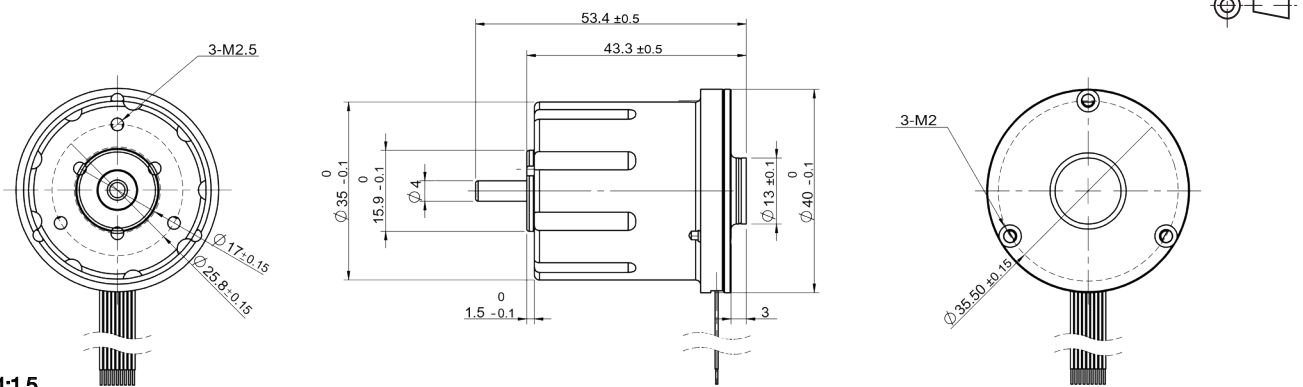
Applications: precision drives in medical equipment, industrial automation fields.

### 主要技术指标 | Characteristics

			02-420-18.0	01-420-24.0	03-300-24.0	
1	电压	Voltage	V	18.0	24.0	24.0
2	端电阻	Terminal resistance	$\Omega$	1.5	2	2.8
3	空载转速	No-load speed	rpm	42000	42000	30000
4	空载电流	No-load current	A	0.168	0.2	0.2
5	堵转转矩	Stall torque	mNm	47.7	63.3	62.5
6	堵转电流	Stall current	A	12	12	8.6
7	额定转矩	Nominal torque	mNm	5	5	5
8	额定转速	Nominal speed	rpm	37000	38000	27000
9	额定电流	Nominal current	A	1.4	1.2	0.9
10	最大输出功率	Max. output power	W	52.6	69.7	49.1
11	最大效率	Max. efficiency	%	77.7	75.8	71.7
12	反电势常数	Back-EMF constant	mV/rpm	0.4	0.56	0.78
13	转矩常数	Torque constant	mNm/A	4.0	5.4	7.5
14	KV 值	KV Value	rpm/V	2333.3	1750	1250
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	879.7	663.3	480.3
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	20	20	20
17	重量	Weight	g	200	200	200
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		9	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		2.4	
20	热时常数 (电机)	Thermal time constant motor	s		1400	
21	热时常数 (线圈)	Thermal time constant winding	s		20	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		155	
24	轴向间隙	Axial play	mm		2.3	
25	径向间隙	Radial play	mm		0.012	
26	动态轴向载荷	Axial load dynamic	N		8	
27	静态轴向载荷	Axial load static	N		110	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		31	
29	极对数	No. of pole pairs			2	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			霍尔传感器/Hall Sensor	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



M 1:1.5

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## B7584FBHIE2B | 内转子无槽带内置驱动器 Inner Rotor With Integrated Driver, Slotless

应用领域：医疗器械、工业设备等精密驱动领域。

Applications: precision drives in medical equipment, industrial automation fields.

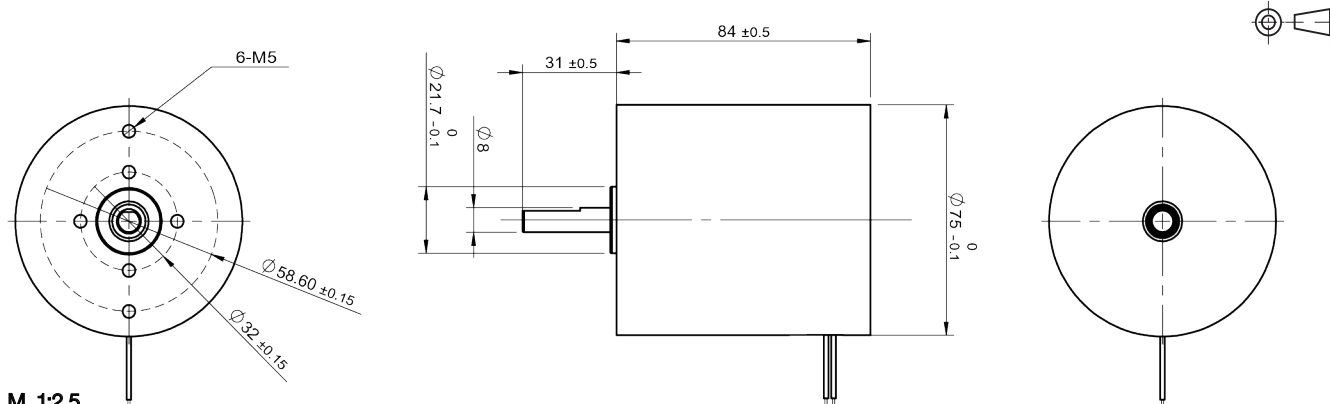
### 主要技术指标 | Characteristics

			63-24.0-0001	80-24.0-0002	50-24.0-0002
1	电压	Voltage	V	24	24
2	使用电压范围	Operating Voltage	V	12~26	12~26
3	端电阻	Terminal resistance	Ω	2.8	2.2
4	空载转速	No-load speed	rpm	6300	8000
5	空载电流	No-load current	A	0.3	0.3
6	堵转转矩	Stall torque	mNm	290	295
7	堵转电流	Stall current	A	8.6	10.9
8	额定转矩	Nominal torque	mNm	106	106
9	额定转速	Nominal speed	rpm	4000	5100
10	额定电流	Nominal current	A	3.2	4.1
11	最大输出功率	Max. output power	W	49	62
12	最大效率	Max. efficiency	%	66	69
13	反电势常数	Back-EMF constant	mV/rpm	3.7	2.9
14	转矩常数	Torque constant	mNm/A	35	27
15	KV 值	KV Value	rpm/V	263	333
16	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	22	27
17	转子惯量	Rotor inertia	gcm <sup>2</sup>	28	22
18	重量	Weight	g	1160	1160
19	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		2
20	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		3
21	热时常数 (电机)	Thermal time constant motor	s		112
22	热时常数 (线圈)	Thermal time constant winding	s		8.9
23	工作温度范围	Operating temperature range	°C		-40~+100
24	绕组耐温等级	Thermal class of winding	°C		130
25	轴向间隙	Axial play	mm		4
26	径向间隙	Radial play	mm		0.3
27	动态轴向载荷	Axial load dynamic	N		10
28	静态轴向载荷	Axial load static	N		300
29	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		215
30	极对数	No. of pole pairs			2
31	轴承	Bearings		2 枚滚动轴承/2 ball bearings	
32	换向结构	Commutation		霍尔传感器/Hall Sensor	
33	防护等级	Protection class		IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

齿轮箱 Gearheads 轴承类型 Bearing type

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## BS2838NB2B | 内转子有槽无传感器 Inner Rotor, Slotted, Sensorless

应用领域：医疗器械、工业设备等精密驱动领域。

Applications: precision drives in medical equipment, industrial automation fields.

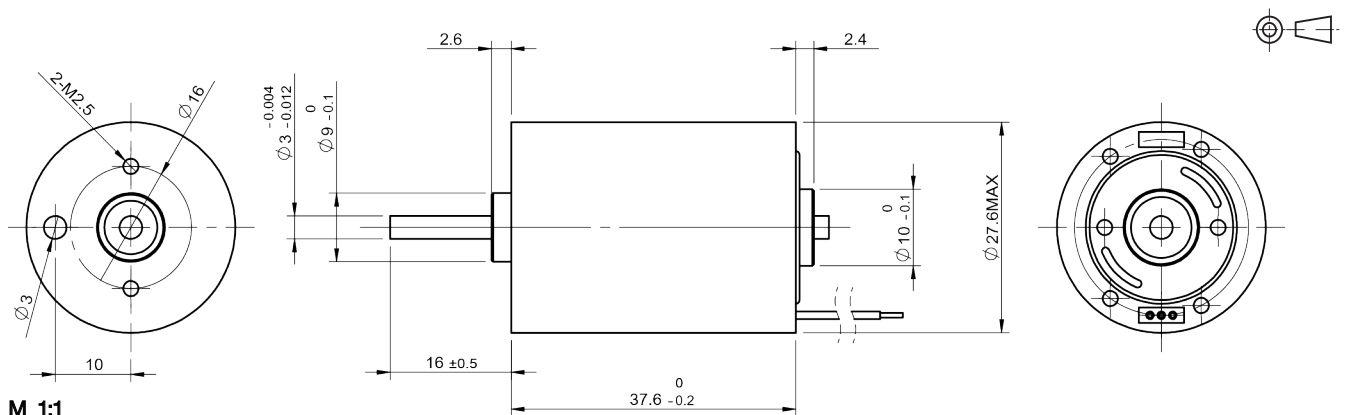
### 主要技术指标 | Characteristics

			01-66-12.0	02-66-24.0	03-45-16.0
1	电压	Voltage	V	12.0	16.0
2	端电阻	Terminal resistance	$\Omega$	2.3	14
3	空载转速	No-load speed	rpm	6600	4500
4	空载电流	No-load current	A	0.25	0.1
5	堵转转矩	Stall torque	mNm	83	32
6	堵转电流	Stall current	A	5	1.1
7	额定转矩	Nominal torque	mNm	10.0	10.0
8	额定转速	Nominal speed	rpm	5550	3000
9	额定电流	Nominal current	A	0.9	0.5
10	最大输出功率	Max. output power	W	14	3.8
11	最大效率	Max. efficiency	%	61	50
12	反电势常数	Back-EMF constant	mV/rpm	1.7	3
13	转矩常数	Torque constant	mNm/A	16.5	30.9
14	KV 值	KV Value	rpm/V	550	281
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	80	139
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	13	13
17	重量	Weight	g	80	80
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		17.3
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		4
20	热时常数 (电机)	Thermal time constant motor	s		600
21	热时常数 (线圈)	Thermal time constant winding	s		3
22	工作温度范围	Operating temperature range	°C		-40~+100
23	绕组耐温等级	Thermal class of winding	°C		155
24	轴向间隙	Axial play	mm		0.012
25	径向间隙	Radial play	mm		0.008
26	动态轴向载荷	Axial load dynamic	N		5
27	静态轴向载荷	Axial load static	N		80
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		29
29	极对数	No. of pole pairs			2
30	轴承	Bearings		2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation		无传感器/Sensorless	
32	防护等级	Protection class		IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



M 1:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## BS3246NBH2B | 内转子有槽带传感器 Inner Rotor, Slotted, Sensored

应用领域：医疗器械、工业设备等精密驱动领域。

Applications: precision drives in medical equipment, industrial automation fields.

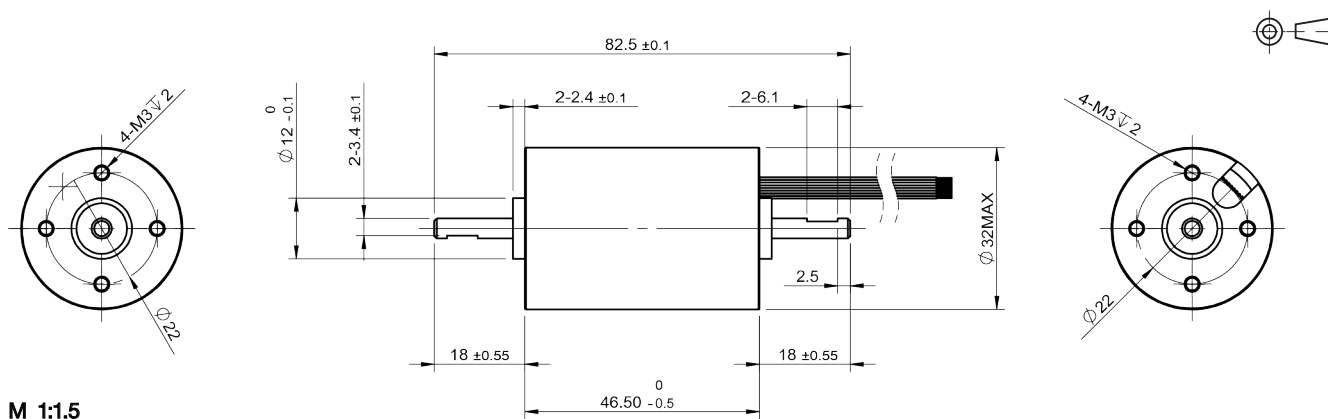
### 主要技术指标 | Characteristics

			01-51-12.0	02-80-12.0	03-40-12.0
1	电压	Voltage	V	12.0	12.0
2	端电阻	Terminal resistance	$\Omega$	2.4	1.5
3	空载转速	No-load speed	rpm	5100	8000
4	空载电流	No-load current	A	0.2	0.20
5	堵转转矩	Stall torque	mNm	103	108.0
6	堵转电流	Stall current	A	5.0	8.0
7	额定转矩	Nominal torque	mNm	24.0	24.0
8	额定转速	Nominal speed	rpm	4000	6000
9	额定电流	Nominal current	A	1.3	2
10	最大输出功率	Max. output power	W	12	22.8
11	最大效率	Max. efficiency	%	60	70.8
12	反电势常数	Back-EMF constant	mV/rpm	2.2	1.5
13	转矩常数	Torque constant	mNm/A	21.5	14
14	KV 值	KV Value	rpm/V	420	666
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	48	73
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	26	26
17	重量	Weight	g	130	130
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		16
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		3.5
20	热时常数 (电机)	Thermal time constant motor	s		620
21	热时常数 (线圈)	Thermal time constant winding	s		4
22	工作温度范围	Operating temperature range	°C		-40~+120
23	绕组耐温等级	Thermal class of winding	°C		155
24	轴向间隙	Axial play	mm		0.012
25	径向间隙	Radial play	mm		0.008
26	动态轴向载荷	Axial load dynamic	N		5
27	静态轴向载荷	Axial load static	N		80
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		29
29	极对数	No. of pole pairs			2
30	轴承	Bearings		2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation		霍尔传感器/Hall Sensor	
32	防护等级	Protection class		IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## BO1012N2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机、航模等驱动领域。

Applications: UAV, aeromodelling, etc.

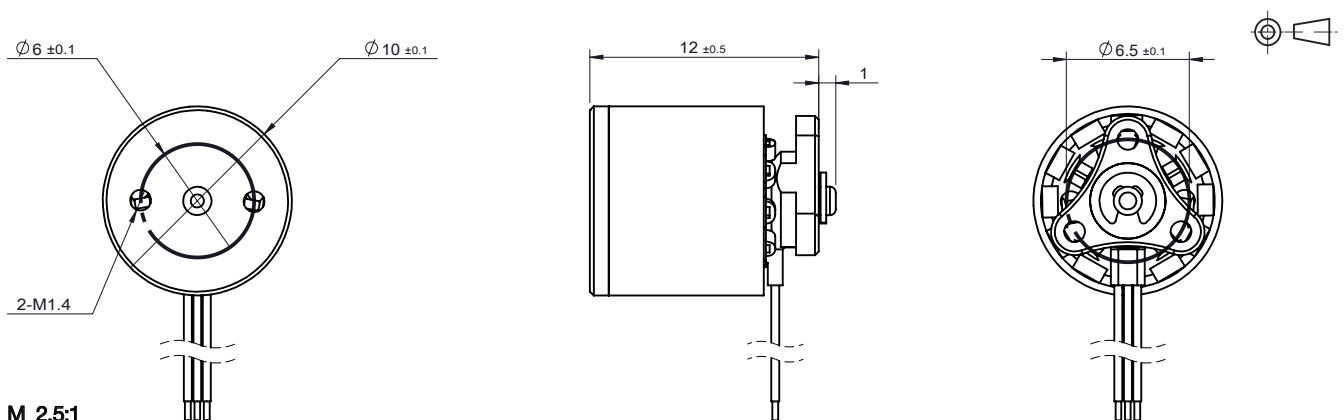
### 主要技术指标 | Characteristics

			02-330-4.5	
1	电压	Voltage	V	4.5
2	端电阻	Terminal resistance	$\Omega$	0.65
3	空载转速	No-load speed	rpm	33300
4	空载电流	No-load current	A	0.35
5	堵转转矩	Stall torque	mNm	8.0
6	堵转电流	Stall current	A	6.9
7	额定转矩	Nominal torque	mNm	1.5
8	额定转速	Nominal speed	rpm	27100
9	额定电流	Nominal current	A	1.56
10	最大输出功率	Max. output power	W	7
11	最大效率	Max. efficiency	%	60
12	反电势常数	Back-EMF constant	mV/rpm	0.13
13	转矩常数	Torque constant	mNm/A	1.2
14	KV 值	KV Value	rpm/V	7400
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	4160.0
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.37
17	重量	Weight	g	3.4
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W	45.9
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W	18.5
20	热时常数 (电机)	Thermal time constant motor	s	105
21	热时常数 (线圈)	Thermal time constant winding	s	80
22	工作温度范围	Operating temperature range	°C	-40~+120
23	绕组耐温等级	Thermal class of winding	°C	155
24	轴向间隙	Axial play	mm	0.012
25	径向间隙	Radial play	mm	0.008
26	动态轴向载荷	Axial load dynamic	N	1.5
27	静态轴向载荷	Axial load static	N	37
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N	12
29	极对数	No. of pole pairs		6
30	轴承	Bearings	2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation	无传感器 /Sensorless	
32	防护等级	Protection class	IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## BO1410NB2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域: 无人机云台、手持云台。

Applications: UAV gimbals and handheld gimbals.

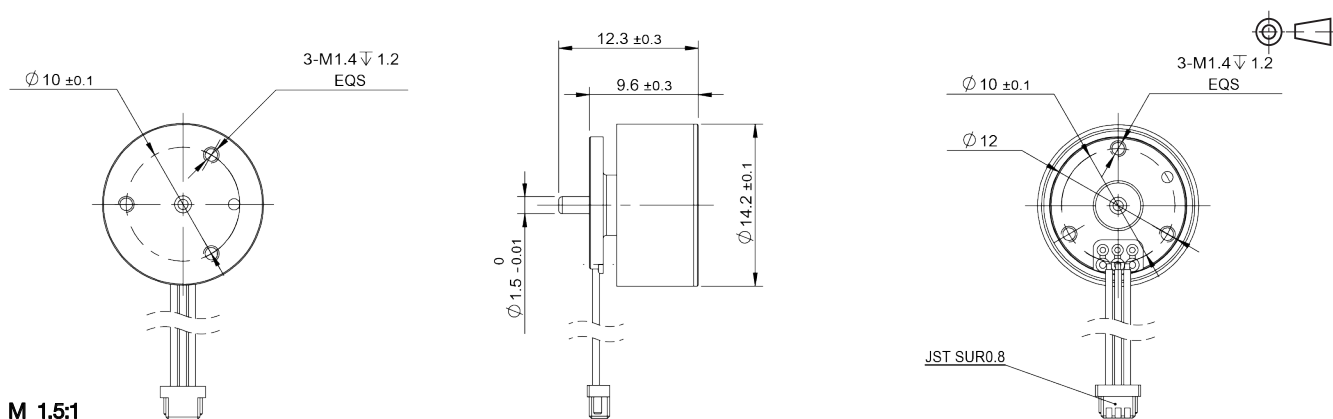
### 主要技术指标 | Characteristics

02-81-6.0

1	电压	Voltage	V	6.0
2	端电阻	Terminal resistance	$\Omega$	13.4
3	电感	Terminal inductance	mH	0.74
4	空载转速	No-load speed	rpm	8100
5	空载电流	No-load current	A	0.04
6	堵转转矩	Stall torque	mNm	2.6
7	堵转电流	Stall current	A	0.45
8	额定转矩	Nominal torque	mNm	1.7
9	额定转速	Nominal speed	rpm	--
10	额定电流	Nominal current	A	0.32
11	最大输出功率	Max. output power	W	0.6
12	最大效率	Max. efficiency	%	52
13	反电势常数	Back-EMF constant	mV/rpm	0.7
14	转矩常数	Torque constant	mNm/A	6.5
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	3010
16	转子惯量	Rotor inertia	$\text{gcm}^2$	1.0
17	重量	Weight	g	5.1
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W	16
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W	15.3
20	热时常数 (电机)	Thermal time constant motor	s	105
21	热时常数 (线圈)	Thermal time constant winding	s	28
22	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-40~+120
23	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$	155
24	轴向间隙	Axial play	mm	0.012
25	径向间隙	Radial play	mm	0.008
26	动态轴向载荷	Axial load dynamic	N	1
27	静态轴向载荷	Axial load static	N	25
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N	6.3
29	极对数	No. of pole pairs		4
30	轴承	Bearings		2 枚滚动轴承/2 ball bearings
31	换向结构	Commutation		无传感器 /Sensorless
32	防护等级	Protection class		IP 30

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## BO1412N2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机、航模等驱动领域。

Applications: UAV, aeromodelling, etc.

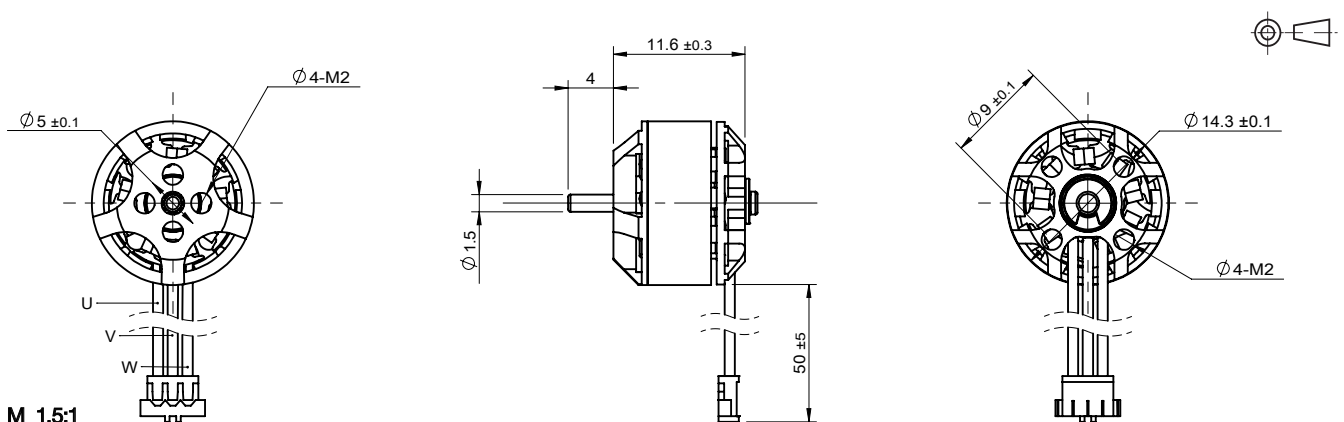
### 主要技术指标 | Characteristics

			04-308-5.0	05-309-7.4	06-330-12.0	
1	电压	Voltage	V	5.0	7.4	12.0
2	端电阻	Terminal resistance	$\Omega$	0.18	0.4	0.82
3	空载转速	No-load speed	rpm	30800	30900	33000
4	空载电流	No-load current	A	0.50	0.28	0.2
5	堵转转矩	Stall torque	mNm	41	41	49
6	堵转电流	Stall current	A	27.0	18.00	15
7	额定转矩	Nominal torque	mNm	5	8	9
8	额定转速	Nominal speed	rpm	22600	21200	24200
9	额定电流	Nominal current	A	3.4	3.4	2.5
10	最大输出功率	Max. output power	W	33	33	42
11	最大效率	Max. efficiency	%	74	76	77
12	反电势常数	Back-EMF constant	mV/rpm	0.16	0.23	0.35
13	转矩常数	Torque constant	mNm/A	1.50	2.25	3.42
14	KV 值	KV Value	rpm/V	6160	4180	2750
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	751	753	673
16	转子惯量	Rotor inertia	$\text{gcm}^2$	0.98	0.98	0.98
17	重量	Weight	g	6	6	6
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		26.8	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		0.52	
20	热时常数 (电机)	Thermal time constant motor	s		226	
21	热时常数 (线圈)	Thermal time constant winding	s		200	
22	工作温度范围	Operating temperature range	$^{\circ}\text{C}$		-40~+100	
23	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$		180	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		1.5	
27	静态轴向载荷	Axial load static	N		37	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		12	
29	极对数	No. of pole pairs			6	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器/Sensorless	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

BO1509NBH2B | 外转子带线性霍尔传感器 Outer Rotor, with Linear Hall Sensor

应用领域: 无人机云台、手持云台。

Applications: UAV gimbals and handheld gimbals.

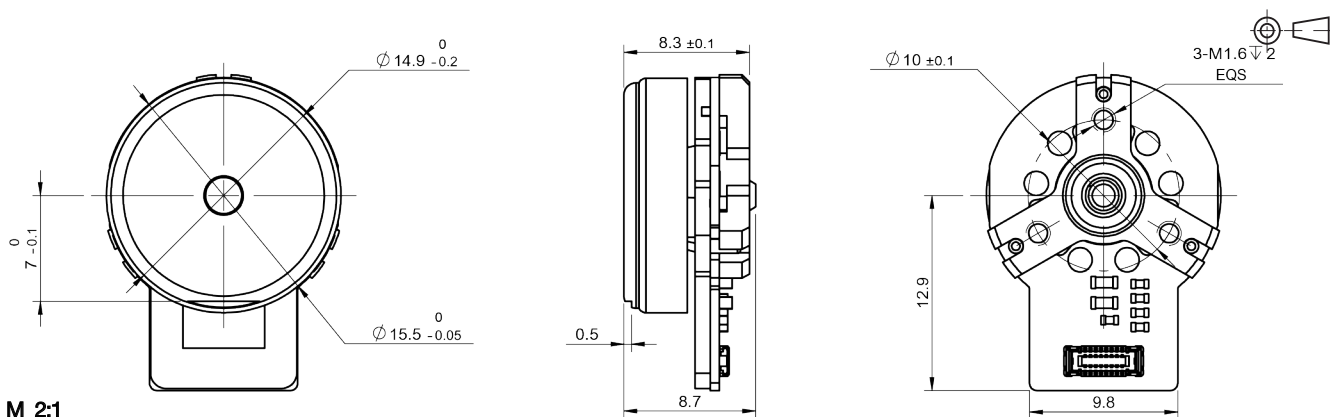
主要技术指标 | Characteristics

			01-280-7.6	
1	电压	Voltage	V	7.6
2	端电阻	Terminal resistance	$\Omega$	4.0
3	电感	Terminal inductance	mH	0.21
4	空载转速	No-load speed	rpm	28000
5	空载电流	No-load current	A	0.10
6	堵转转矩	Stall torque	mNm	4.4
7	堵转电流	Stall current	A	2
8	额定转矩	Nominal torque	mNm	1.7
9	额定转速	Nominal speed	rpm	12200
10	额定电流	Nominal current	A	0.8
11	最大输出功率	Max. output power	W	3.2
12	最大效率	Max. efficiency	%	59
13	反电势常数	Back-EMF constant	mV/rpm	0.2
14	转矩常数	Torque constant	mNm/A	2.4
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	6334
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.5
17	重量	Weight	g	4.4
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W	16.1
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W	10.2
20	热时常数 (电机)	Thermal time constant motor	s	87
21	热时常数 (线圈)	Thermal time constant winding	s	30
22	工作温度范围	Operating temperature range	°C	-40~+120
23	绕组耐温等级	Thermal class of winding	°C	155
24	轴向间隙	Axial play	mm	0.012
25	径向间隙	Radial play	mm	0.008
26	动态轴向载荷	Axial load dynamic	N	1.5
27	静态轴向载荷	Axial load static	N	37
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N	12
29	极对数	No. of pole pairs		4
30	轴承	Bearings	2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation	无传感器 /Sensorless	
32	防护等级	Protection class	IP 30	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor

编码器 Encoder 驱动器 Driver

外观图 | Outline Drawing





## BO1511N2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机、航模等驱动领域。

Applications: UAV, aeromodelling, etc.

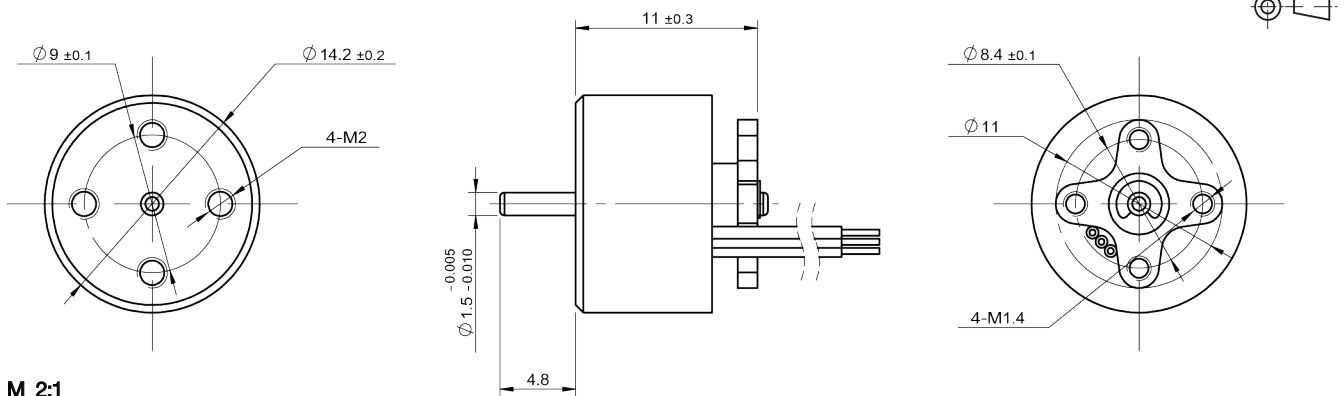
### 主要技术指标 | Characteristics

			01-350-7.4	02-350-6.0	
1	电压	Voltage	V	7.4	6.0
2	端电阻	Terminal resistance	$\Omega$	0.45	0.31
3	空载转速	No-load speed	rpm	35000	35000
4	空载电流	No-load current	A	0.4	0.5
5	堵转转矩	Stall torque	mNm	31.6	30
6	堵转电流	Stall current	A	16.4	19.4
7	额定转矩	Nominal torque	mNm	4.0	4.0
8	额定转速	Nominal speed	rpm	25100	25000
9	额定电流	Nominal current	A	2.1	2.6
10	最大输出功率	Max. output power	W	29	28
11	最大效率	Max. efficiency	%	71.2	70.4
12	反电势常数	Back-EMF constant	mV/rpm	0.21	0.17
13	转矩常数	Torque constant	mNm/A	1.97	1.60
14	KV 值	KV Value	rpm/V	4730	5833
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1107	1164
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	1.1	1.1
17	重量	Weight	g	5.8	5.8
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		10
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		8.7
20	热时常数 (电机)	Thermal time constant motor	s		110
21	热时常数 (线圈)	Thermal time constant winding	s		71
22	工作温度范围	Operating temperature range	$^{\circ}\text{C}$		-40~+120
23	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$		180
24	轴向间隙	Axial play	mm		0.012
25	径向间隙	Radial play	mm		0.008
26	动态轴向载荷	Axial load dynamic	N		1
27	静态轴向载荷	Axial load static	N		25
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		6.3
29	极对数	No. of pole pairs			6
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings
31	换向结构	Commutation			无传感器/Sensorless
32	防护等级	Protection class			IP 20

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



M 2:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

BO1613N2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机、航模等驱动领域。

Applications: UAV, aeromodelling, etc.

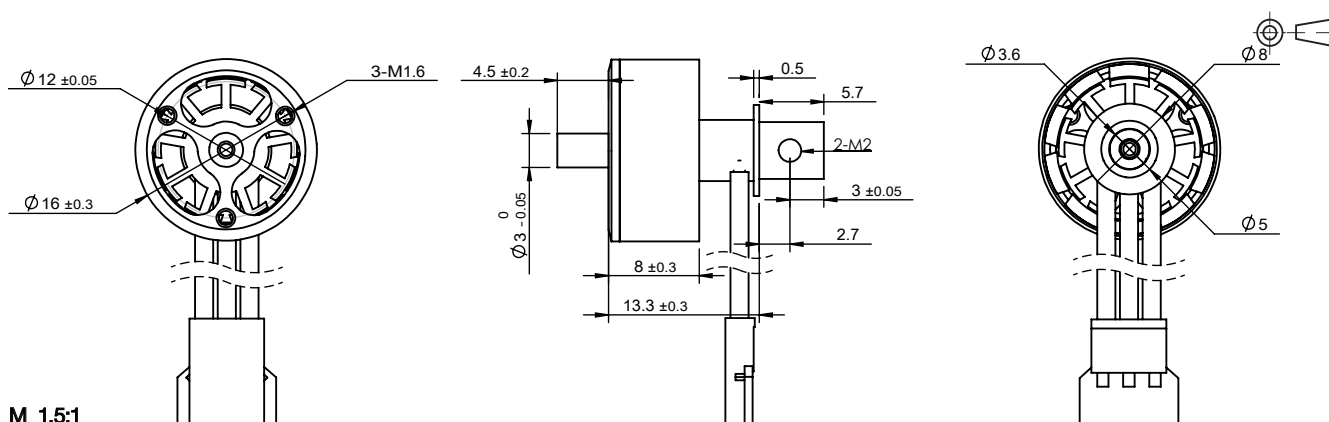
主要技术指标 | Characteristics

			01-158-3.0	02-158-6.0	03-158-9.0
1	电压	Voltage	V	3.0	9.0
2	端电阻	Terminal resistance	Ω	0.18	1.69
3	空载转速	No-load speed	rpm	15800	15800
4	空载电流	No-load current	A	0.29	0.10
5	堵转转矩	Stall torque	mNm	29	28
6	堵转电流	Stall current	A	16.6	5.3
7	额定转矩	Nominal torque	mNm	7.9	11.5
8	额定转速	Nominal speed	rpm	4250	6540
9	额定电流	Nominal current	A	4.2	1.8
10	最大输出功率	Max. output power	W	12	11
11	最大效率	Max. efficiency	%	75.2	74.7
12	反电势常数	Back-EMF constant	mV/rpm	0.2	0.6
13	转矩常数	Torque constant	mNm/A	1.8	5.3
14	KV 值	KV Value	rpm/V	5290	1758
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	549.5	567.9
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	1.7	1.7
17	重量	Weight	g	7.8	7.8
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		7.9
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		6.4
20	热时常数 (电机)	Thermal time constant motor	s		123
21	热时常数 (线圈)	Thermal time constant winding	s		100
22	工作温度范围	Operating temperature range	°C		-40~+120
23	绕组耐温等级	Thermal class of winding	°C		155
24	轴向间隙	Axial play	mm		0.012
25	径向间隙	Radial play	mm		0.008
26	动态轴向载荷	Axial load dynamic	N		1
27	静态轴向载荷	Axial load static	N		25
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		6.3
29	极对数	No. of pole pairs			5
30	轴承	Bearings		2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation		无传感器 /Sensorless	
32	防护等级	Protection class		IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

外观图 | Outline Drawing



## BO1709NB2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机云台、手持云台。

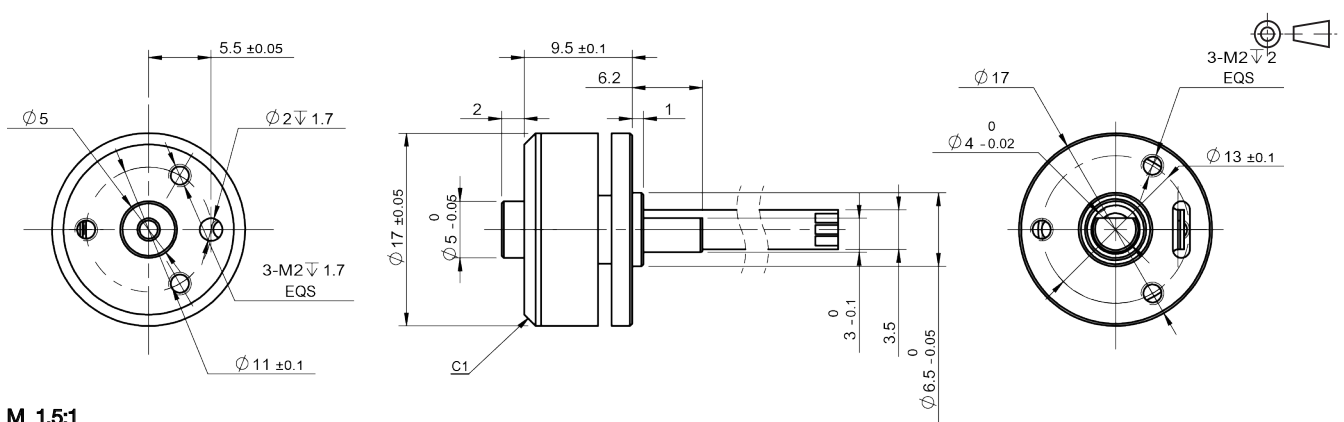
Applications: UAV gimbals and handheld gimbals.

### 主要技术指标 | Characteristics

			01-260-10.0	02-142-10.0
1	电压	Voltage	V	10.0
2	端电阻	Terminal resistance	$\Omega$	4.3
3	电感	Terminal inductance	mH	0.46
4	空载转速	No-load speed	rpm	26000
5	空载电流	No-load current	A	0.12
6	堵转转矩	Stall torque	mNm	7.7
7	堵转电流	Stall current	A	2.3
8	额定转矩	Nominal torque	mNm	1.9
9	额定转速	Nominal speed	rpm	16380
10	额定电流	Nominal current	A	0.7
11	最大输出功率	Max. output power	W	5.2
12	最大效率	Max. efficiency	%	60
13	反电势常数	Back-EMF constant	mV/rpm	0.4
14	转矩常数	Torque constant	mNm/A	3.5
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	3384
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	1.2
17	重量	Weight	g	7.5
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W	15.4
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W	13.6
20	热时常数 (电机)	Thermal time constant motor	s	128
21	热时常数 (线圈)	Thermal time constant winding	s	43
22	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-40~+120
23	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$	155
24	轴向间隙	Axial play	mm	0.012
25	径向间隙	Radial play	mm	0.008
26	动态轴向载荷	Axial load dynamic	N	1.5
27	静态轴向载荷	Axial load static	N	37
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N	12
29	极对数	No. of pole pairs		4
30	轴承	Bearings		2 枚滚动轴承/2 ball bearings
31	换向结构	Commutation		无传感器/Sensorless
32	防护等级	Protection class		IP 30

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



M 1.5:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## BO1808NBH2B | 外转子带线性霍尔传感器 Outer Rotor, with Linear Hall Sensor

应用领域：无人机云台、手持云台。

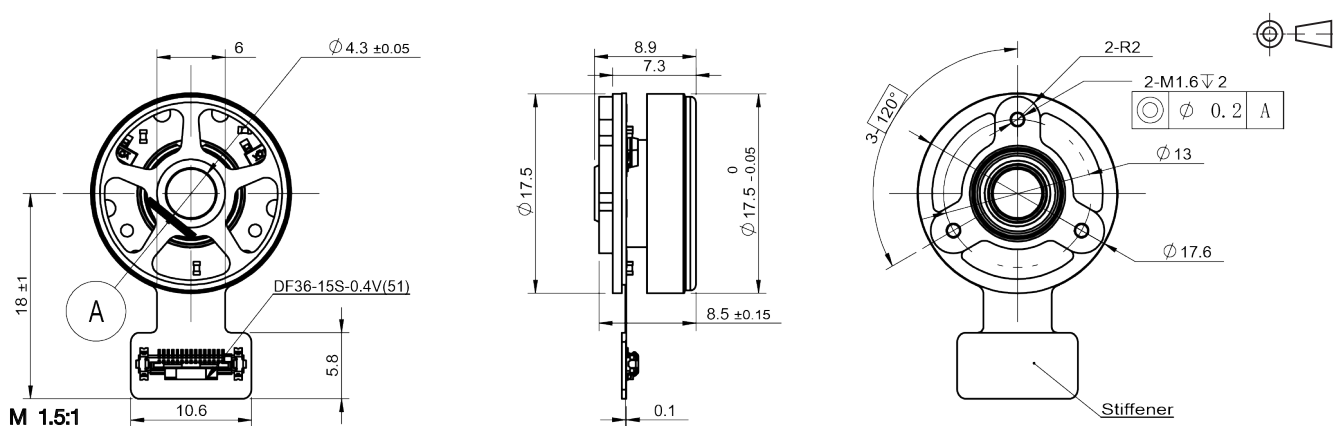
Applications: UAV gimbals and handheld gimbals.

### 主要技术指标 | Characteristics

			01-140-11.4	
1	电压	Voltage	V	11.4
2	端电阻	Terminal resistance	$\Omega$	14.5
3	电感	Terminal inductance	mH	0.8
4	空载转速	No-load speed	rpm	14300
5	空载电流	No-load current	A	0.12
6	堵转转矩	Stall torque	mNm	4.3
7	堵转电流	Stall current	A	0.8
8	额定转矩	Nominal torque	mNm	1.2
9	额定转速	Nominal speed	rpm	7790
10	额定电流	Nominal current	A	0.3
11	最大输出功率	Max. output power	W	1.6
12	最大效率	Max. efficiency	%	37.1
13	反电势常数	Back-EMF constant	mV/rpm	0.7
14	转矩常数	Torque constant	mNm/A	6.5
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	3327
16	转子惯量	Rotor inertia	$\text{gcm}^2$	1.4
17	重量	Weight	g	6.5
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W	36.8
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W	2.4
20	热时常数 (电机)	Thermal time constant motor	s	110
21	热时常数 (线圈)	Thermal time constant winding	s	115
22	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-40~+120
23	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$	155
24	轴向间隙	Axial play	mm	0.012
25	径向间隙	Radial play	mm	0.008
26	动态轴向载荷	Axial load dynamic	N	1.8
27	静态轴向载荷	Axial load static	N	45
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N	9
29	极对数	No. of pole pairs		4
30	轴承	Bearings	2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation	无传感器 /Sensorless	
32	防护等级	Protection class	IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## BO1812N2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机、航模等驱动领域。

Applications: UAV, aeromodelling, etc.

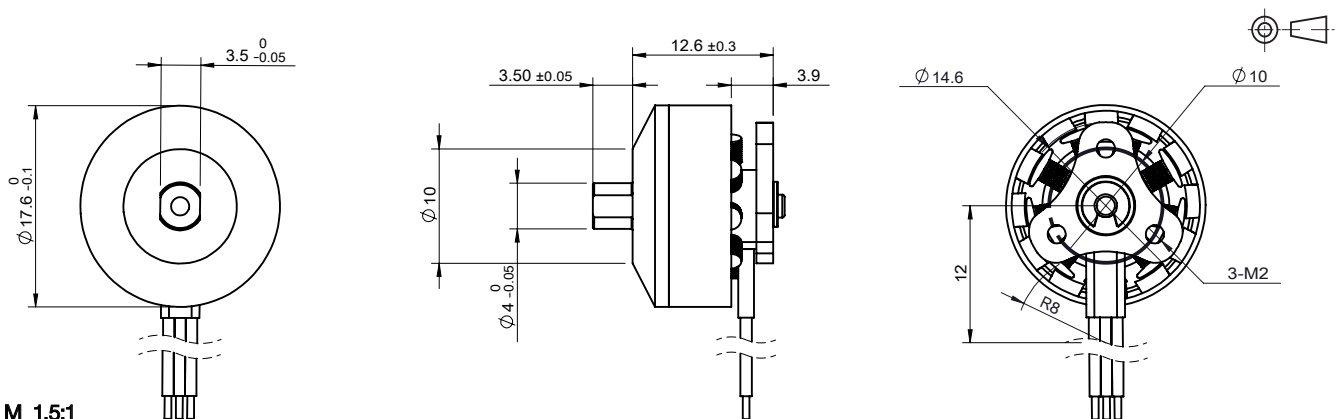
### 主要技术指标 | Characteristics

			01-158-6.0	02-158-9.0	03-158-12.0	
1	电压	Voltage	V	6.0	9.0	12.0
2	端电阻	Terminal resistance	$\Omega$	0.43	0.96	1.70
3	空载转速	No-load speed	rpm	15800	15800	15800
4	空载电流	No-load current	A	0.14	0.10	0.08
5	堵转转矩	Stall torque	mNm	49.6	49.9	50.1
6	堵转电流	Stall current	A	14.0	9.4	7.1
7	额定转矩	Nominal torque	mNm	9.4	10.3	9.9
8	额定转速	Nominal speed	rpm	9690	9580	10200
9	额定电流	Nominal current	A	2.1	2.1	1.5
10	最大输出功率	Max. output power	W	20.6	20.7	20.7
11	最大效率	Max. efficiency	%	81.2	80.0	80.2
12	反电势常数	Back-EMF constant	mV/rpm	0.38	0.56	0.75
13	转矩常数	Torque constant	mNm/A	3.6	5.4	7.2
14	KV 值	KV Value	rpm/V	2630	1750	1320
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	318.4	316.8	315.5
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	2.1	2.1	2.1
17	重量	Weight	g	11	11	11
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		10.6	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		14.6	
20	热时常数 (电机)	Thermal time constant motor	s		142	
21	热时常数 (线圈)	Thermal time constant winding	s		99	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		180	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		1.5	
27	静态轴向载荷	Axial load static	N		37	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		12	
29	极对数	No. of pole pairs			6	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器/Sensorless	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## BO1815N2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机、航模等驱动领域。

Applications: UAV, aeromodelling, etc.

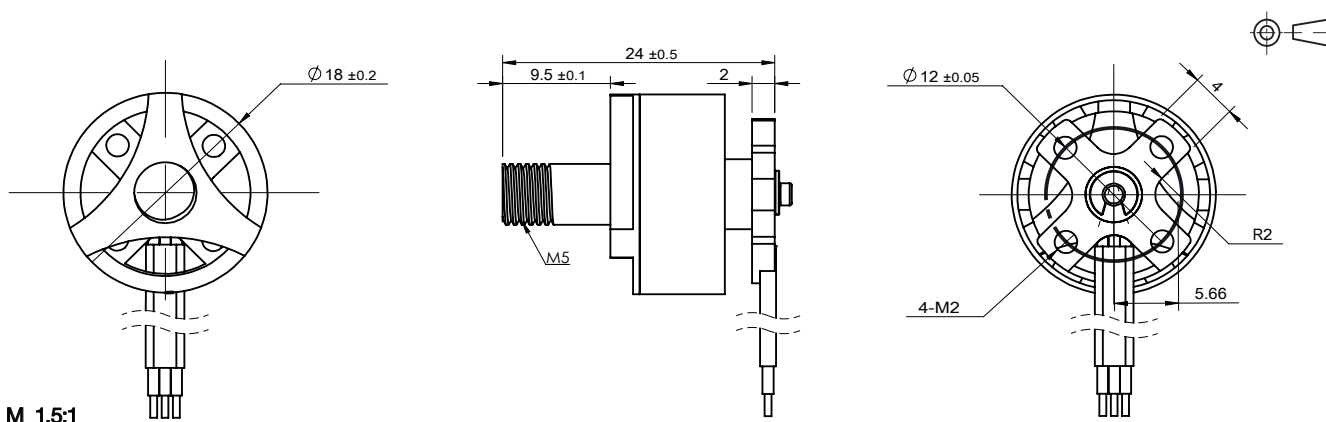
### 主要技术指标 | Characteristics

			01-199-6.0	02-199-9.0	03-199-12.0	
1	电压	Voltage	V	6.0	9.0	12.0
2	端电阻	Terminal resistance	$\Omega$	0.21	0.43	0.72
3	空载转速	No-load speed	rpm	19900	19900	19900
4	空载电流	No-load current	A	0.32	0.21	0.14
5	堵转转矩	Stall torque	mNm	81	89	94
6	堵转电流	Stall current	A	28.9	21.1	16.7
7	额定转矩	Nominal torque	mNm	18.0	17.1	18.5
8	额定转速	Nominal speed	rpm	9550	11100	11070
9	额定电流	Nominal current	A	6.1	4.6	3.7
10	最大输出功率	Max. output power	W	42	47	49
11	最大效率	Max. efficiency	%	80.0	81.1	82.6
12	反电势常数	Back-EMF constant	mV/rpm	0.3	0.4	0.6
13	转矩常数	Torque constant	mNm/A	2.9	4.3	5.7
14	KV 值	KV Value	rpm/V	3307	2212	1664
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	243.5	223.2	212.0
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	2.8	2.8	2.8
17	重量	Weight	g	11	11	11
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		2.8	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		2.4	
20	热时常数 (电机)	Thermal time constant motor	s		173	
21	热时常数 (线圈)	Thermal time constant winding	s		112	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		180	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		1.5	
27	静态轴向载荷	Axial load static	N		37	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		12	
29	极对数	No. of pole pairs			6	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器/Sensorless	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



M 1.5:1

## BO2008NBH2B | 外转子带线性霍尔传感器 Outer Rotor, with Linear Hall Sensor

应用领域: 无人机云台、手持云台。

Applications: UAV gimbals and handheld gimbals.

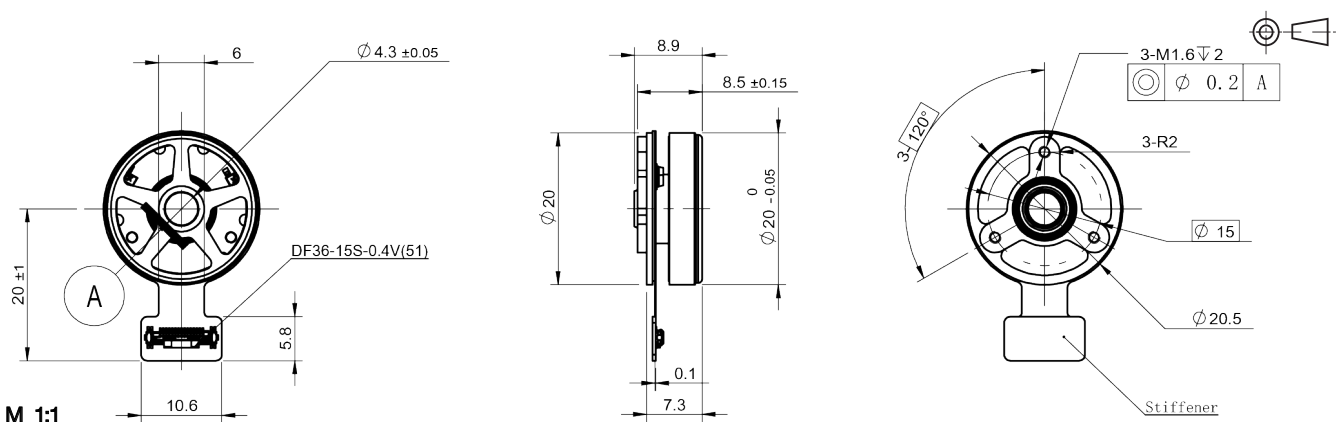
### 主要技术指标 | Characteristics

			01-73-11.4	
1	电压	Voltage	V	11.4
2	端电阻	Terminal resistance	$\Omega$	26.0
3	电感	Terminal inductance	mH	2.30
4	空载转速	No-load speed	rpm	7200
5	空载电流	No-load current	A	0.05
6	堵转转矩	Stall torque	mNm	5.2
7	堵转电流	Stall current	A	0.4
8	额定转矩	Nominal torque	mNm	2.8
9	额定转速	Nominal speed	rpm	1080
10	额定电流	Nominal current	A	0.3
11	最大输出功率	Max. output power	W	1.0
12	最大效率	Max. efficiency	%	43.8
13	反电势常数	Back-EMF constant	mV/rpm	1.4
14	转矩常数	Torque constant	mNm/A	13.4
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1384
16	转子惯量	Rotor inertia	$\text{gcm}^2$	2.0
17	重量	Weight	g	6.8
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W	28.9
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W	8.6
20	热时常数 (电机)	Thermal time constant motor	s	135
21	热时常数 (线圈)	Thermal time constant winding	s	165
22	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-40~+120
23	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$	155
24	轴向间隙	Axial play	mm	0.012
25	径向间隙	Radial play	mm	0.008
26	动态轴向载荷	Axial load dynamic	N	1.8
27	静态轴向载荷	Axial load static	N	45
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N	9
29	极对数	No. of pole pairs		4
30	轴承	Bearings	2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation	无传感器 /Sensorless	
32	防护等级	Protection class	IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



规格如有变更, 恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## BO2010NB2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机云台、手持云台。

Applications: UAV gimbals and handheld gimbals.

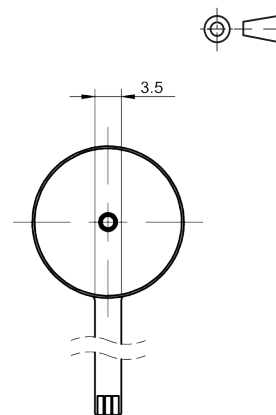
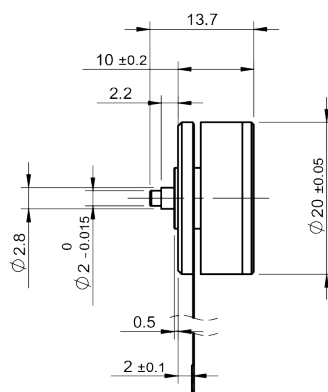
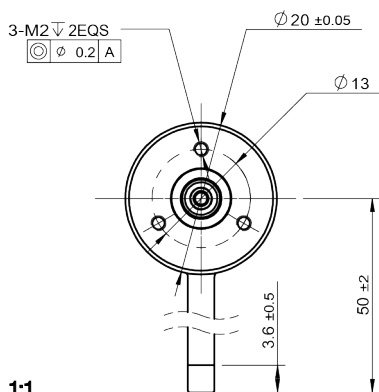
### 主要技术指标 | Characteristics

			03-280-12.0	05-178-10.0	12-108-9.0
1	电压	Voltage	V	12.0	9.0
2	端电阻	Terminal resistance	$\Omega$	2.2	9.0
3	电感	Terminal inductance	mH	0.29	1.2
4	空载转速	No-load speed	rpm	28000	10800
5	空载电流	No-load current	A	0.2	0.05
6	堵转转矩	Stall torque	mNm	21.4	7.1
7	堵转电流	Stall current	A	5.5	1.0
8	额定转矩	Nominal torque	mNm	3.5	4.0
9	额定转速	Nominal speed	rpm	21420	4230
10	额定电流	Nominal current	A	1.0	0.52
11	最大输出功率	Max. output power	W	15.0	2.0
12	最大效率	Max. efficiency	%	72	60
13	反电势常数	Back-EMF constant	mV/rpm	0.4	0.8
14	转矩常数	Torque constant	mNm/A	4.0	7.5
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1311	1503
16	转子惯量	Rotor inertia	$\text{gcm}^2$	2.8	2.8
17	重量	Weight	g	9.6	9.6
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		12.5
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		12
20	热时常数 (电机)	Thermal time constant motor	s		354
21	热时常数 (线圈)	Thermal time constant winding	s		15
22	工作温度范围	Operating temperature range	$^{\circ}\text{C}$		-40~+120
23	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$		155
24	轴向间隙	Axial play	mm		0.012
25	径向间隙	Radial play	mm		0.008
26	动态轴向载荷	Axial load dynamic	N		1.5
27	静态轴向载荷	Axial load static	N		37
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		12
29	极对数	No. of pole pairs			4
30	轴承	Bearings		2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation		无传感器/Sensorless	
32	防护等级	Protection class		IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing





## BO2015NB2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域: 无人机云台、手持云台。

Applications: UAV gimbals and handheld gimbals.

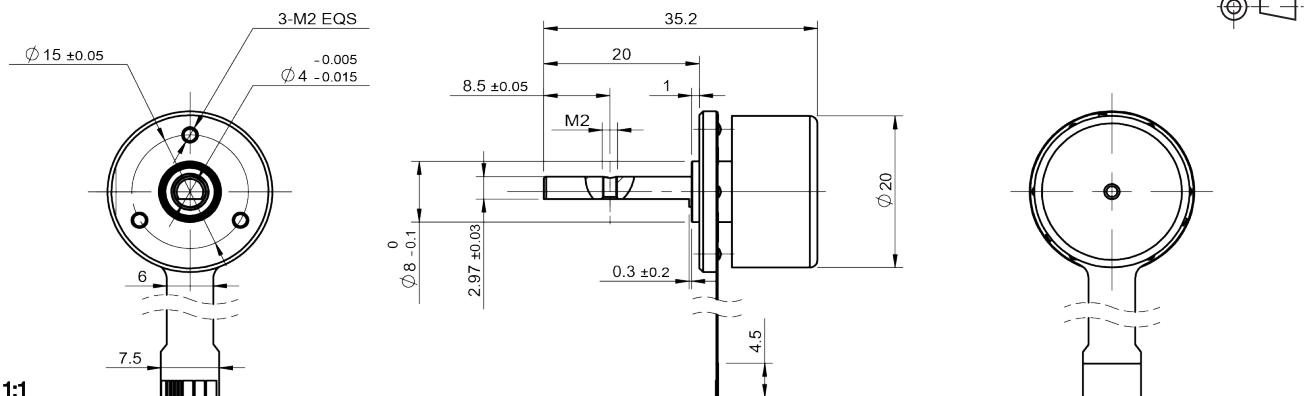
### 主要技术指标 | Characteristics

			03-113-12.0	12-137-5.0	04-135-24.0	
1	电压	Voltage	V	12.0	5.0	24.0
2	端电阻	Terminal resistance	$\Omega$	3.8	0.65	11
3	电感	Terminal inductance	mH	0.61	0.063	1.7
4	空载转速	No-load speed	rpm	11300	13700	13500
5	空载电流	No-load current	A	0.08	0.2	0.04
6	堵转转矩	Stall torque	mNm	30.4	25.4	35.6
7	堵转电流	Stall current	A	3.2	7.7	2.1
8	额定转矩	Nominal torque	mNm	9.1	7.4	14.5
9	额定转速	Nominal speed	rpm	6440	7940	6400
10	额定电流	Nominal current	A	1.01	2.40	0.93
11	最大输出功率	Max. output power	W	9	9.1	12.6
12	最大效率	Max. efficiency	%	71	70	74
13	反电势常数	Back-EMF constant	mV/rpm	1	0.4	1.7
14	转矩常数	Torque constant	mNm/A	9.9	3.4	16.6
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	370	539	378
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	6.7	6.7	6.7
17	重量	Weight	g	21	21	21
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		9.5	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		8	
20	热时常数 (电机)	Thermal time constant motor	s		354	
21	热时常数 (线圈)	Thermal time constant winding	s		23	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		155	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.08	
26	动态轴向载荷	Axial load dynamic	N		1.5	
27	静态轴向载荷	Axial load static	N		37	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		12	
29	极对数	No. of pole pairs			4	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器/Sensorless	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



规格如有变更, 恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## BO2316N2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机、航模等驱动领域。

Applications: UAV, aeromodelling, etc.

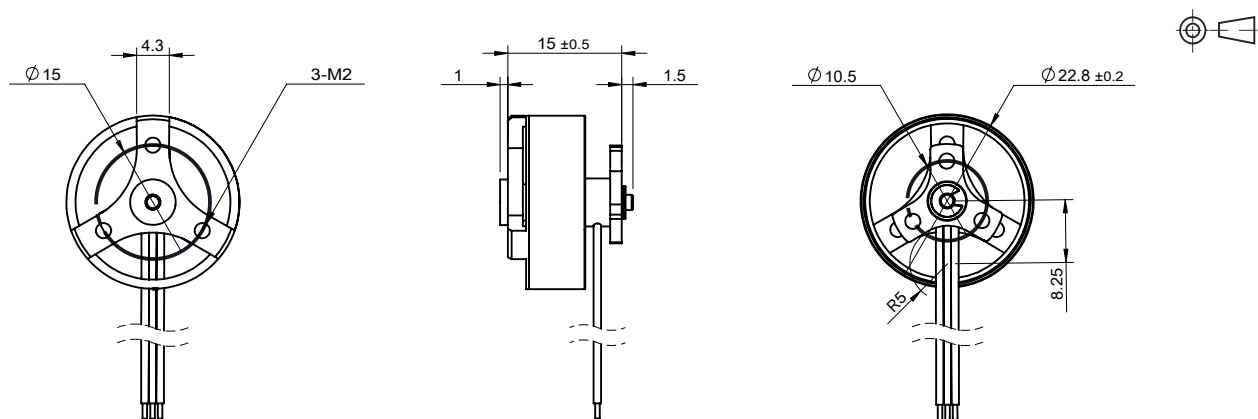
### 主要技术指标 | Characteristics

			01-170-6.0	02-170-9.0	03-170-12.0	
1	电压	Voltage	V	6.0	9.0	12.0
2	端电阻	Terminal resistance	$\Omega$	0.13	0.28	0.45
3	空载转速	No-load speed	rpm	17000	17000	17000
4	空载电流	No-load current	A	0.34	0.24	0.19
5	堵转转矩	Stall torque	mNm	158	160	177
6	堵转电流	Stall current	A	47.2	32.1	26.7
7	额定转矩	Nominal torque	mNm	30.4	30.0	30.3
8	额定转速	Nominal speed	rpm	7310	9920	10560
9	额定电流	Nominal current	A	8.1	6.3	4.9
10	最大输出功率	Max. output power	W	70	71	79
11	最大效率	Max. efficiency	%	83.6	83.5	83.6
12	反电势常数	Back-EMF constant	mV/rpm	0.4	0.5	0.7
13	转矩常数	Torque constant	mNm/A	3.4	5.0	6.7
14	KV 值	KV Value	rpm/V	2810	1887	1420
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	106.6	105.9	96.4
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	6.3	6.3	6.3
17	重量	Weight	g	15	15	15
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		3	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		2.5	
20	热时常数 (电机)	Thermal time constant motor	s		160	
21	热时常数 (线圈)	Thermal time constant winding	s		26	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		180	
24	轴向间隙	Axial play	mm		0.014	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		5	
27	静态轴向载荷	Axial load static	N		80	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		29	
29	极对数	No. of pole pairs			6	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器/Sensorless	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



M 1:1

## BO2414NB2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机云台、手持云台。

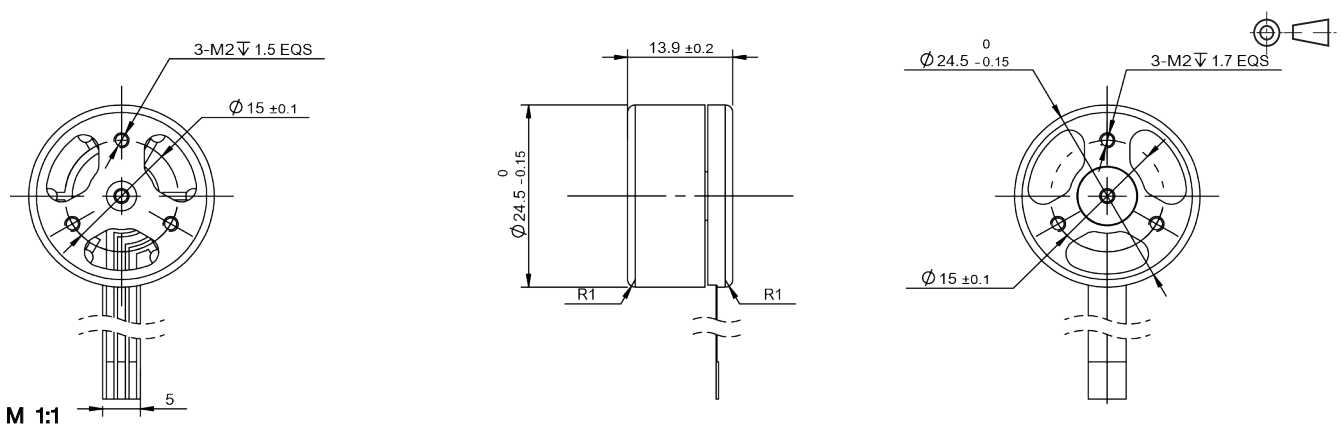
Applications: UAV gimbals and handheld gimbals.

### 主要技术指标 | Characteristics

			05-80-12.0	
1	电压	Voltage	V	12.0
2	端电阻	Terminal resistance	$\Omega$	4.3
3	电感	Terminal inductance	mH	1.3
4	空载转速	No-load speed	rpm	8000
5	空载电流	No-load current	A	0.09
6	堵转转矩	Stall torque	mNm	37.4
7	堵转电流	Stall current	A	2.8
8	额定转矩	Nominal torque	mNm	12.3
9	额定转速	Nominal speed	rpm	4480
10	额定电流	Nominal current	A	0.9
11	最大输出功率	Max. output power	W	7.8
12	最大效率	Max. efficiency	%	67.3
13	反电势常数	Back-EMF constant	mV/rpm	1.45
14	转矩常数	Torque constant	mNm/A	13.9
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	214
16	转子惯量	Rotor inertia	$\text{gcm}^2$	7.2
17	重量	Weight	g	15
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W	13.7
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W	7.6
20	热时常数 (电机)	Thermal time constant motor	s	120
21	热时常数 (线圈)	Thermal time constant winding	s	12
22	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-40~+120
23	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$	155
24	轴向间隙	Axial play	mm	0.012
25	径向间隙	Radial play	mm	0.08
26	动态轴向载荷	Axial load dynamic	N	1.5
27	静态轴向载荷	Axial load static	N	37
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N	12
29	极对数	No. of pole pairs		6
30	轴承	Bearings	2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation	无传感器 /Sensorless	
32	防护等级	Protection class	IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## BO2814N2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机、航模等驱动领域。

Applications: UAV, aeromodelling, etc.

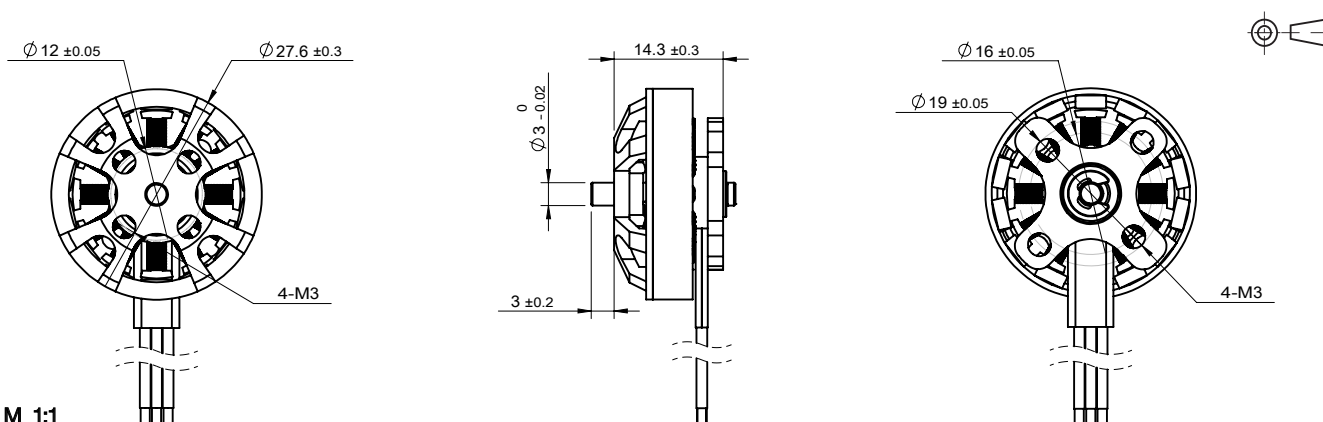
### 主要技术指标 | Characteristics

			01-153-12.0	02-153-24.0	03-153-36.0	
1	电压	Voltage	V	12.0	24.0	36.0
2	端电阻	Terminal resistance	$\Omega$	0.50	1.70	3.77
3	空载转速	No-load speed	rpm	15300	15300	15300
4	空载电流	No-load current	A	0.26	0.12	0.12
5	堵转转矩	Stall torque	mNm	179	207	209
6	堵转电流	Stall current	A	24.2	14.1	9.6
7	额定转矩	Nominal torque	mNm	34.1	35.0	30.6
8	额定转速	Nominal speed	rpm	9330	10390	10980
9	额定电流	Nominal current	A	4.8	2.4	1.5
10	最大输出功率	Max. output power	W	71	83	84
11	最大效率	Max. efficiency	%	80.4	82.0	78.8
12	反电势常数	Back-EMF constant	mV/rpm	0.8	1.5	2.3
13	转矩常数	Torque constant	mNm/A	7.5	14.8	22.2
14	KV 值	KV Value	rpm/V	1268	642	425
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	85.2	74.5	73.0
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	12	12	12
17	重量	Weight	g	21	21	21
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		2.5	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		2	
20	热时常数 (电机)	Thermal time constant motor	s		180	
21	热时常数 (线圈)	Thermal time constant winding	s		25	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		180	
24	轴向间隙	Axial play	mm		0.014	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		5	
27	静态轴向载荷	Axial load static	N		80	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		29	
29	极对数	No. of pole pairs			7	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器/Sensorless	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



M 1:1

## BO2820N2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机、航模等驱动领域。

Applications: UAV, aeromodelling, etc.

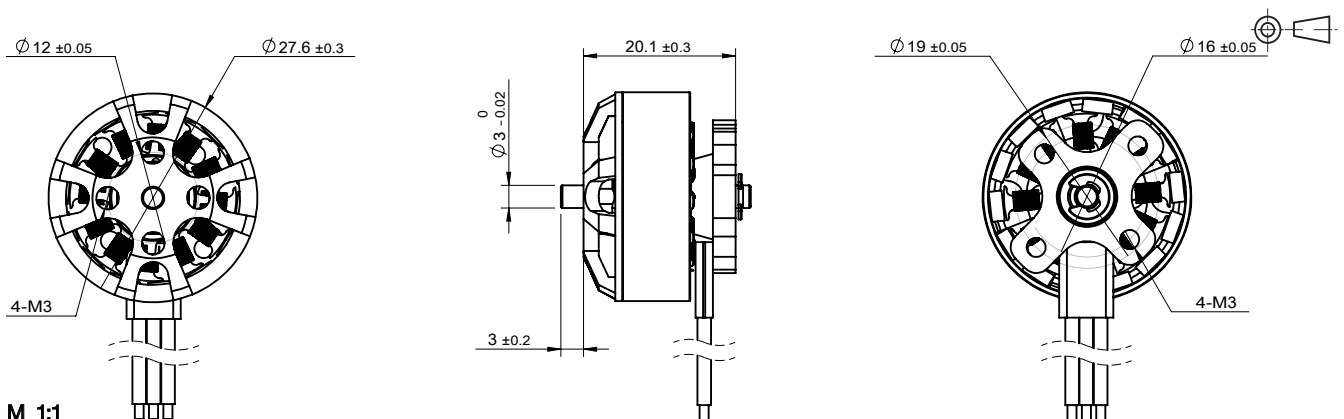
### 主要技术指标 | Characteristics

			01-140-12.0	02-140-24.0	03-140-36.0	
1	电压	Voltage	V	12.0	24.0	36.0
2	端电阻	Terminal resistance	$\Omega$	0.14	0.58	1.22
3	空载转速	No-load speed	rpm	14000	14000	14000
4	空载电流	No-load current	A	0.48	0.24	0.16
5	堵转转矩	Stall torque	mNm	698	664	718
6	堵转电流	Stall current	A	86.3	41.2	29.6
7	额定转矩	Nominal torque	mNm	68.5	75.1	73.0
8	额定转速	Nominal speed	rpm	10350	10680	11310
9	额定电流	Nominal current	A	9.1	4.7	3.0
10	最大输出功率	Max. output power	W	256	244	263
11	最大效率	Max. efficiency	%	85.6	85.1	85.9
12	反电势常数	Back-EMF constant	mV/rpm	0.9	1.7	2.6
13	转矩常数	Torque constant	mNm/A	8.1	16.2	24.4
14	KV 值	KV Value	rpm/V	1168	585	389
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	20.1	21.2	19.5
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	19	19	19
17	重量	Weight	g	41	41	41
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		2.3	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		2	
20	热时常数 (电机)	Thermal time constant motor	s		280	
21	热时常数 (线圈)	Thermal time constant winding	s		37	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		180	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		5	
27	静态轴向载荷	Axial load static	N		80	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		29	
29	极对数	No. of pole pairs			7	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器/Sensorless	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## BO2824N2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机、航模等驱动领域。

Applications: UAV, aeromodelling, etc.

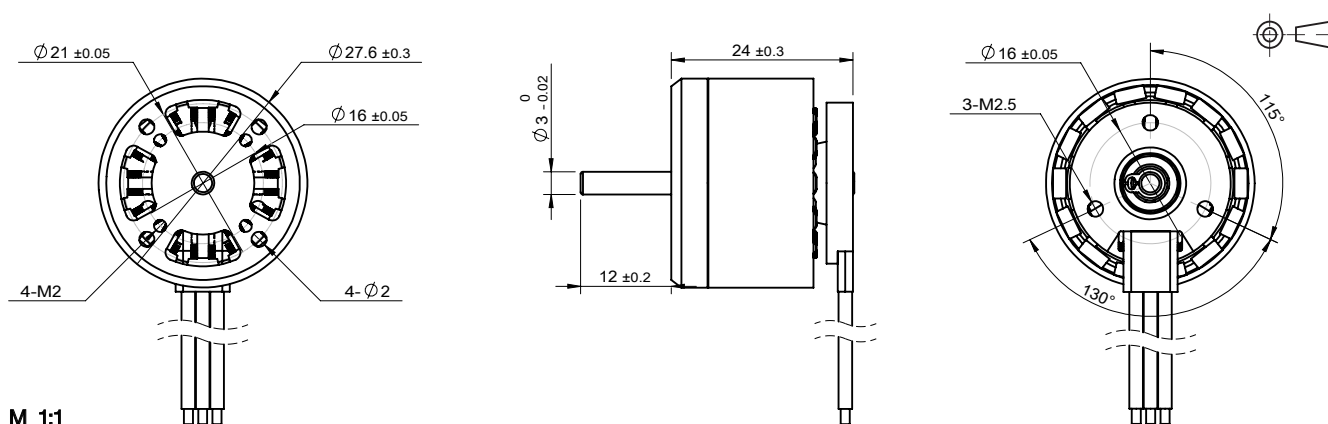
### 主要技术指标 | Characteristics

			01-98-12.0	02-98-24.0	03-98-36.0
1	电压	Voltage	V	12.0	36.0
2	端电阻	Terminal resistance	$\Omega$	0.18	1.62
3	空载转速	No-load speed	rpm	9800	9800
4	空载电流	No-load current	A	0.37	0.19
5	堵转转矩	Stall torque	mNm	752	749
6	堵转电流	Stall current	A	65.2	32.7
7	额定转矩	Nominal torque	mNm	79.9	75.5
8	额定转速	Nominal speed	rpm	7430	8040
9	额定电流	Nominal current	A	6.9	3.3
10	最大输出功率	Max. output power	W	193	194
11	最大效率	Max. efficiency	%	85.5	85.3
12	反电势常数	Back-EMF constant	mV/rpm	1.2	2.4
13	转矩常数	Torque constant	mNm/A	11.6	23.1
14	KV 值	KV Value	rpm/V	819	412
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	13.1	13.2
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	27	27
17	重量	Weight	g	47	47
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		2
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		2
20	热时常数 (电机)	Thermal time constant motor	s		290
21	热时常数 (线圈)	Thermal time constant winding	s		41
22	工作温度范围	Operating temperature range	°C		-40~+120
23	绕组耐温等级	Thermal class of winding	°C		180
24	轴向间隙	Axial play	mm		0.014
25	径向间隙	Radial play	mm		0.008
26	动态轴向载荷	Axial load dynamic	N		5
27	静态轴向载荷	Axial load static	N		80
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		29
29	极对数	No. of pole pairs			7
30	轴承	Bearings		2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation		无传感器/Sensorless	
32	防护等级	Protection class		IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## BO2826N2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机、航模等驱动领域。

Applications: UAV, aeromodelling, etc.

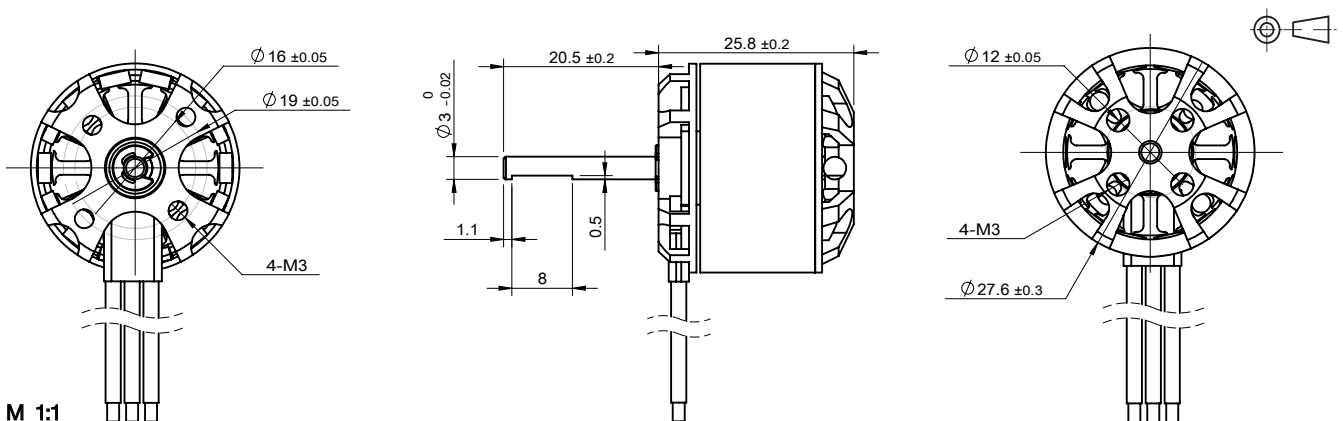
### 主要技术指标 | Characteristics

			01-104-12.0	02-104-24.0	03-104-36.0	
1	电压	Voltage	V	12.0	24.0	36.0
2	端电阻	Terminal resistance	$\Omega$	0.14	0.58	1.26
3	空载转速	No-load speed	rpm	10400	10400	10400
4	空载电流	No-load current	A	0.44	0.23	0.15
5	堵转转矩	Stall torque	mNm	904	912	931
6	堵转电流	Stall current	A	83.3	41.7	28.6
7	额定转矩	Nominal torque	mNm	86.7	89.5	89.6
8	额定转速	Nominal speed	rpm	7820	8040	8500
9	额定电流	Nominal current	A	8.1	4.1	2.7
10	最大输出功率	Max. output power	W	247	248	254
11	最大效率	Max. efficiency	%	86.0	85.7	86.2
12	反电势常数	Back-EMF constant	mV/rpm	1.1	2.3	3.4
13	转矩常数	Torque constant	mNm/A	10.9	22.0	32.8
14	KV 值	KV Value	rpm/V	871	433	290
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	11.6	11.4	11.2
16	转子惯量	Rotor inertia	$\text{gcm}^2$	31	31	31
17	重量	Weight	g	53	53	53
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		1.7	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		1.8	
20	热时常数 (电机)	Thermal time constant motor	s		300	
21	热时常数 (线圈)	Thermal time constant winding	s		43	
22	工作温度范围	Operating temperature range	$^{\circ}\text{C}$		-40~+120	
23	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$		180	
24	轴向间隙	Axial play	mm		0.014	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		5	
27	静态轴向载荷	Axial load static	N		80	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		29	
29	极对数	No. of pole pairs			7	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器/Sensorless	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

BO2828N2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机、航模等驱动领域。

Applications: UAV, aeromodelling, etc.

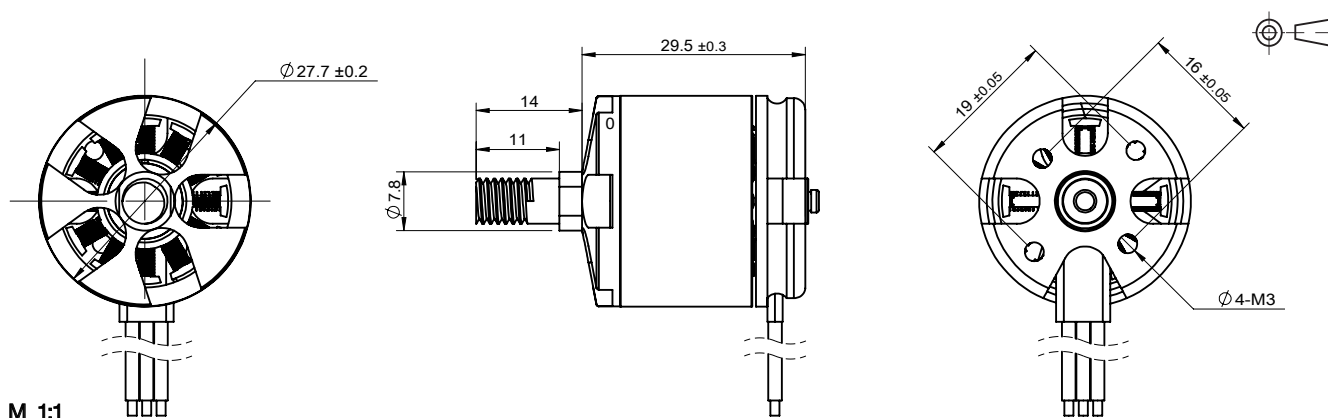
主要技术指标 | Characteristics

			01-112-12.0	02-112-24.0	03-112-36.0	
1	电压	Voltage	V	12.0	24.0	36.0
2	端电阻	Terminal resistance	$\Omega$	0.09	0.38	0.81
3	空载转速	No-load speed	rpm	11200	11200	11200
4	空载电流	No-load current	A	0.63	0.32	0.20
5	堵转转矩	Stall torque	mNm	1301	1289	1357
6	堵转电流	Stall current	A	127.7	64.0	44.3
7	额定转矩	Nominal torque	mNm	122.7	119.9	156.8
8	额定转速	Nominal speed	rpm	7320	8750	8540
9	额定电流	Nominal current	A	11.3	5.9	4.8
10	最大输出功率	Max. output power	W	379	380	395
11	最大效率	Max. efficiency	%	86.4	86.3	87.1
12	反电势常数	Back-EMF constant	mV/rpm	1.1	2.1	3.2
13	转矩常数	Torque constant	mNm/A	10.2	20.2	30.8
14	KV 值	KV Value	rpm/V	928	470	309
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	8.6	8.7	8.2
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	35	35	35
17	重量	Weight	g	61	61	61
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		1.6	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		1.4	
20	热时常数 (电机)	Thermal time constant motor	s		315	
21	热时常数 (线圈)	Thermal time constant winding	s		45	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		180	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		8	
27	静态轴向载荷	Axial load static	N		85	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		26	
29	极对数	No. of pole pairs			7	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器 /Sensorless	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

外观图 | Outline Drawing





## BO2914NBH2B | 外转子带传感器 Outer Rotor, Sensored

应用领域：医疗器械、工业设备等精密驱动领域。

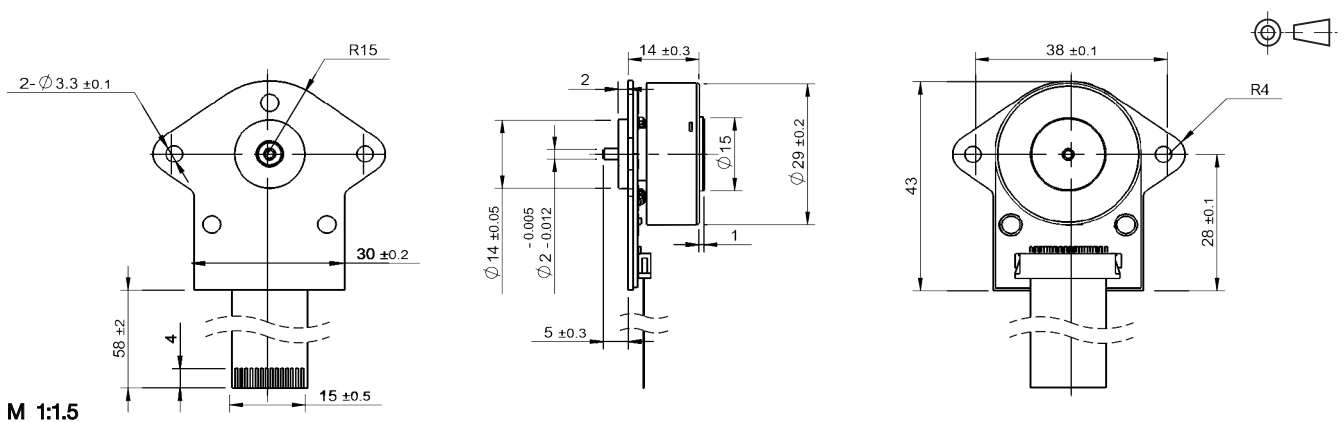
Applications: precision drives in medical equipment, industrial automation fields.

### 主要技术指标 | Characteristics

			01-63-24.0	02-63-18.0	03-63-12.0	
1	电压	Voltage	V	24.0	18.0	12.0
2	端电阻	Terminal resistance	$\Omega$	9.7	5.6	2.5
3	空载转速	No-load speed	rpm	6300	6300	6300
4	空载电流	No-load current	A	0.1	0.12	0.15
5	堵转转矩	Stall torque	mNm	83	81	82
6	堵转电流	Stall current	A	2.5	3.2	4.8
7	额定转矩	Nominal torque	mNm	19.1	19.7	20.0
8	额定转速	Nominal speed	rpm	4000	4000	4000
9	额定电流	Nominal current	A	0.56	0.75	1.12
10	最大输出功率	Max. output power	W	13.7	13.4	13.5
11	最大效率	Max. efficiency	%	63.8	65	67.7
12	反电势常数	Back-EMF constant	mV/rpm	3.7	2.8	1.8
13	转矩常数	Torque constant	mNm/A	34.9	26.3	17.6
14	KV 值	KV Value	rpm/V	263	350	525
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	76	78	77
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	21	21	21
17	重量	Weight	g	48	48	48
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		13.5	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		4.5	
20	热时常数 (电机)	Thermal time constant motor	s		160	
21	热时常数 (线圈)	Thermal time constant winding	s		60	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		155	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.02	
26	动态轴向载荷	Axial load dynamic	N		1.5	
27	静态轴向载荷	Axial load static	N		37	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		12	
29	极对数	No. of pole pairs			6	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			霍尔传感器/Hall Sensor	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## BO3216NB2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机云台、手持云台。

Applications: UAV gimbals and handheld gimbals.

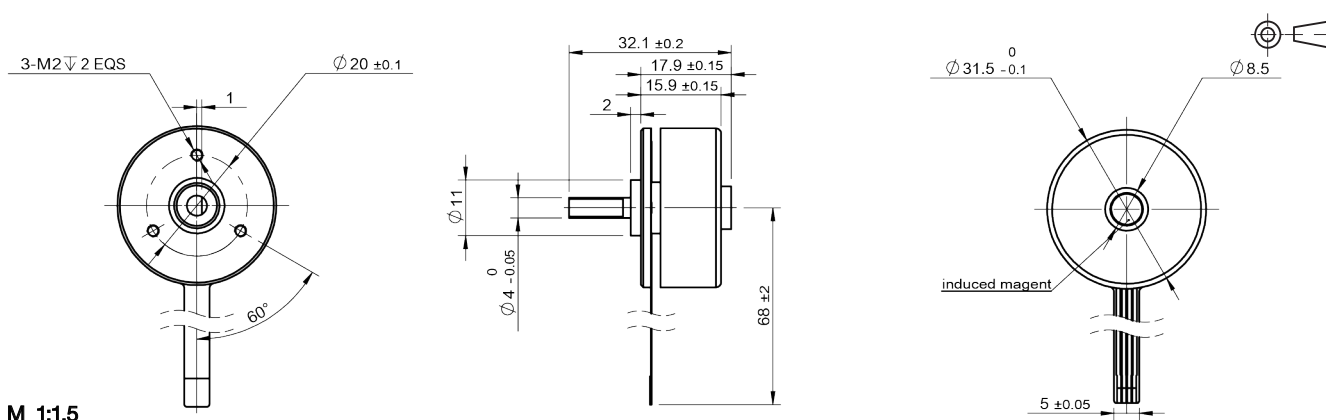
### 主要技术指标 | Characteristics

			02-66-24.0	06-100-12.0
1	电压	Voltage	V	24.0
2	端电阻	Terminal resistance	$\Omega$	4.2
3	电感	Terminal Inductance	mH	1.34
4	空载转速	No-load speed	rpm	6600
5	空载电流	No-load current	A	0.1
6	堵转转矩	Stall torque	mNm	189.5
7	堵转电流	Stall current	A	5.7
8	额定转矩	Nominal torque	mNm	41.6
9	额定转速	Nominal speed	rpm	4520
10	额定电流	Nominal current	A	1.4
11	最大输出功率	Max. output power	W	32.7
12	最大效率	Max. efficiency	%	73
13	反电势常数	Back-EMF constant	mV/rpm	3.55
14	转矩常数	Torque constant	mNm/A	34
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	35
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	32
17	重量	Weight	g	56
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W	3.8
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W	4
20	热时常数 (电机)	Thermal time constant motor	s	110
21	热时常数 (线圈)	Thermal time constant winding	s	6.9
22	工作温度范围	Operating temperature range	°C	-40~+120
23	绕组耐温等级	Thermal class of winding	°C	155
24	轴向间隙	Axial play	mm	0.08
25	径向间隙	Radial play	mm	0.006
26	动态轴向载荷	Axial load dynamic	N	5
27	静态轴向载荷	Axial load static	N	80
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N	29
29	极对数	No. of pole pairs		7
30	轴承	Bearings		2 枚滚动轴承/2 ball bearings
31	换向结构	Commutation		无传感器/Sensorless
32	防护等级	Protection class		IP 20

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## BO3823N2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机、工业设备等精密驱动领域。

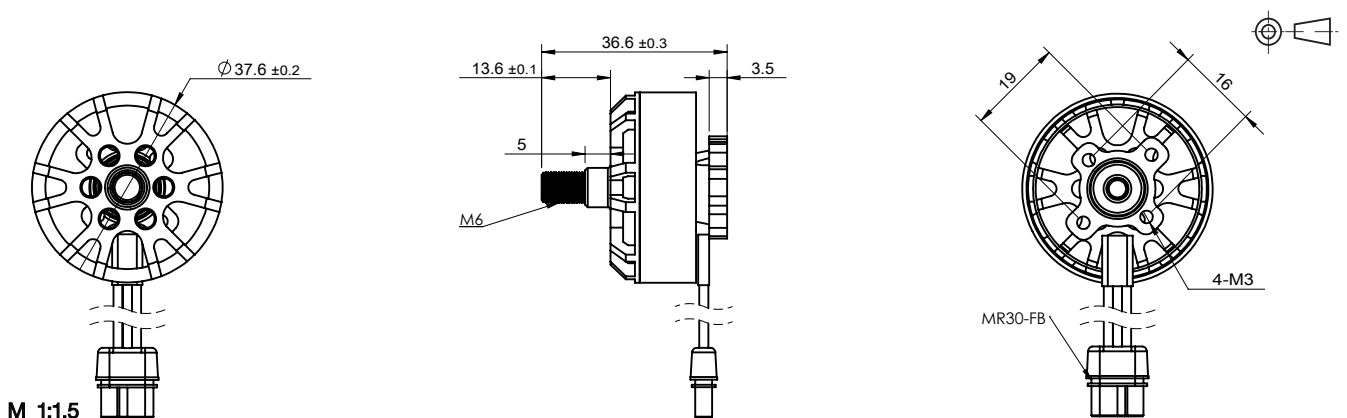
Applications: UAV, industrial automation fields, etc.

### 主要技术指标 | Characteristics

			01-79-12.0	02-79-24.0	03-79-36.0	
1	电压	Voltage	V	12.0	24.0	36.0
2	端电阻	Terminal resistance	$\Omega$	0.11	0.47	1.01
3	空载转速	No-load speed	rpm	7900	7900	7900
4	空载电流	No-load current	A	0.49	0.26	0.18
5	堵转转矩	Stall torque	mNm	1534	1439	1529
6	堵转电流	Stall current	A	107.1	50.6	35.6
7	额定转矩	Nominal torque	mNm	173.5	163.1	164.2
8	额定转速	Nominal speed	rpm	5690	6210	6300
9	额定电流	Nominal current	A	12.3	5.8	3.8
10	最大输出功率	Max. output power	W	318	301	317
11	最大效率	Max. efficiency	%	86.9	86.2	86.4
12	反电势常数	Back-EMF constant	mV/rpm	1.5	3.0	4.5
13	转矩常数	Torque constant	mNm/A	14.4	28.6	43.2
14	KV 值	KV Value	rpm/V	661	333	220
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	5.2	5.5	5.2
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	42	42	42
17	重量	Weight	g	73	73	73
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		1.3	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		1.2	
20	热时常数 (电机)	Thermal time constant motor	s		300	
21	热时常数 (线圈)	Thermal time constant winding	s		69	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		180	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		8	
27	静态轴向载荷	Axial load static	N		110	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		31	
29	极对数	No. of pole pairs			7	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器 /Sensorless	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## BO3828N2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：医疗器械、工业设备等精密驱动领域。

Applications: precision drives in medical equipment, industrial automation fields.

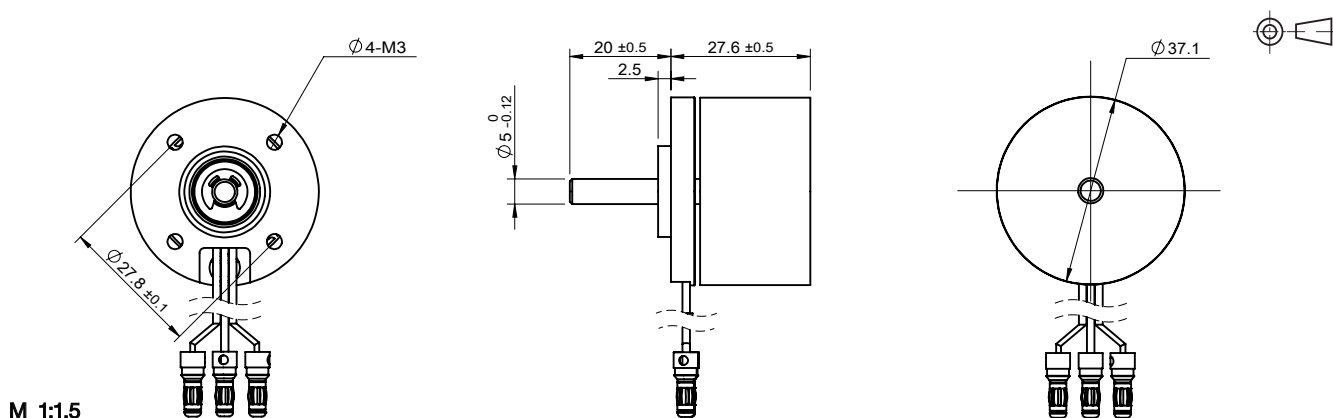
### 主要技术指标 | Characteristics

			01-145-12.0	02-145-24.0	03-145-36.0	
1	电压	Voltage	V	12.0	24.0	36.0
2	端电阻	Terminal resistance	$\Omega$	0.38	1.55	3.41
3	空载转速	No-load speed	rpm	14500	14500	14500
4	空载电流	No-load current	A	0.33	0.17	0.11
5	堵转转矩	Stall torque	mNm	241	239	245
6	堵转电流	Stall current	A	31.3	15.5	10.5
7	额定转矩	Nominal torque	mNm	31.4	37.9	38.9
8	额定转速	Nominal speed	rpm	9730	10430	9910
9	额定电流	Nominal current	A	4.6	2.6	1.9
10	最大输出功率	Max. output power	W	92	91	93
11	最大效率	Max. efficiency	%	80.4	80.0	81.0
12	反电势常数	Back-EMF constant	mV/rpm	0.8	1.6	2.5
13	转矩常数	Torque constant	mNm/A	7.8	15.6	23.4
14	KV 值	KV Value	rpm/V	1213	606	403
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	60.5	60.9	59.3
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	96	96	96
17	重量	Weight	g	105	105	105
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		2.3	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		1.8	
20	热时常数 (电机)	Thermal time constant motor	s		110	
21	热时常数 (线圈)	Thermal time constant winding	s		35	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		155	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		10	
27	静态轴向载荷	Axial load static	N		110	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		42	
29	极对数	No. of pole pairs			2	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器 /Sensorless	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## BO3846NH2B | 外转子带传感器 Outer Rotor, Sensored

应用领域：机器人、工业设备等精密驱动领域。

Applications: robotics, industrial automation, etc.

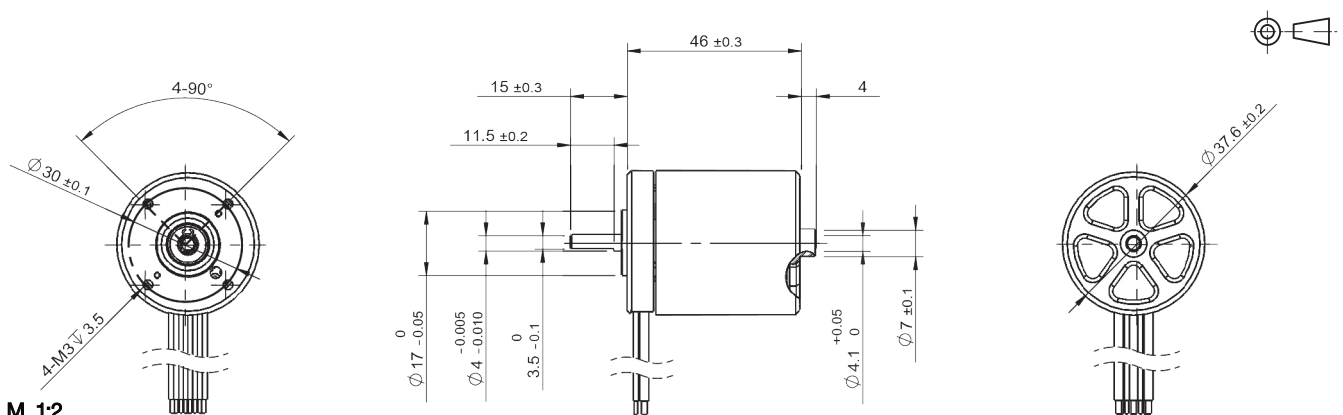
### 主要技术指标 | Characteristics

			01-85-48.0	01-85-36.0	01-85-24.0	
1	电压	Voltage	V	48.0	36.0	24.0
2	端电阻	Terminal resistance	$\Omega$	0.39	0.23	0.1
3	空载转速	No-load speed	rpm	8800	8800	8800
4	空载电流	No-load current	A	0.5	0.7	1.0
5	堵转转矩	Stall torque	mNm	6358	6060	6198
6	堵转电流	Stall current	A	123.1	156.5	240.0
7	额定转矩	Nominal torque	mNm	347	345	346
8	额定转速	Nominal speed	rpm	7850	7480	7650
9	额定电流	Nominal current	A	6.7	8.5	13.1
10	最大输出功率	Max. output power	W	1464	1395	1427
11	最大效率	Max. efficiency	%	87.6	87.0	87.5
12	反电势常数	Back-EMF constant	mV/rpm	5.4	4.1	2.7
13	转矩常数	Torque constant	mNm/A	51.9	38.9	25.9
14	KV 值	KV Value	rpm/V	183	244	367.0
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1.38	1.45	1.42
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	228	228	228
17	重量	Weight	g	198	198	198
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		1.1	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		1.2	
20	热时常数 (电机)	Thermal time constant motor	s		350	
21	热时常数 (线圈)	Thermal time constant winding	s		63	
22	工作温度范围	Operating temperature range	$^{\circ}\text{C}$		-40~+120	
23	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$		180	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		8	
27	静态轴向载荷	Axial load static	N		110	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		31	
29	极对数	No. of pole pairs			7	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			霍尔传感器/Hall Sensor	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## BO4316NB2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机云台、手持云台。

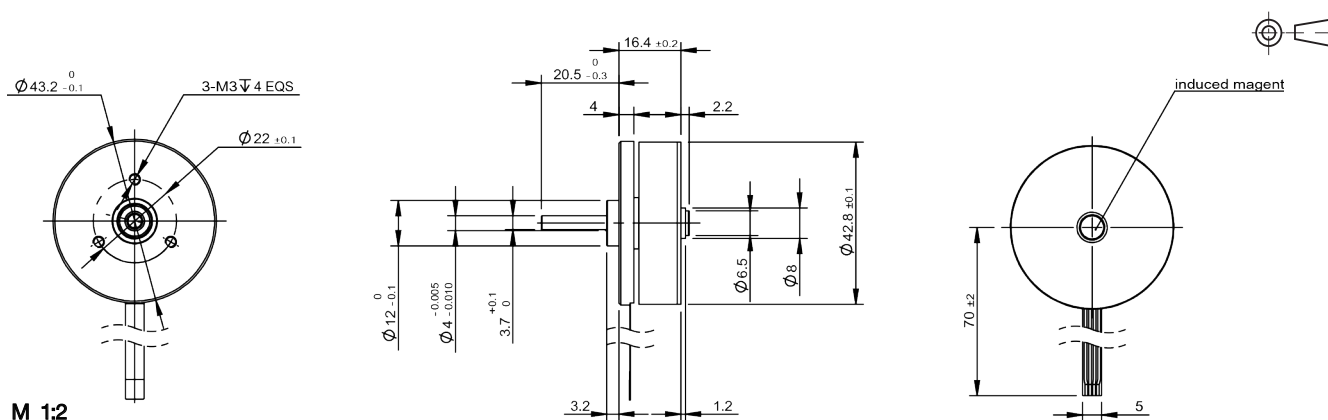
Applications: UAV gimbals and handheld gimbals.

### 主要技术指标 | Characteristics

			05-38-24.0	10-36-12.0
1	电压	Voltage	V	24.0
2	端电阻	Terminal resistance	$\Omega$	3.8
3	电感	Terminal inductance	mH	2.8
4	空载转速	No-load speed	rpm	3800
5	空载电流	No-load current	A	0.08
6	堵转转矩	Stall torque	mNm	371
7	堵转电流	Stall current	A	6.3
8	额定转矩	Nominal torque	mNm	79.7
9	额定转速	Nominal speed	rpm	2640
10	额定电流	Nominal current	A	1.43
11	最大输出功率	Max. output power	W	37
12	最大效率	Max. efficiency	%	78.7
13	反电势常数	Back-EMF constant	mV/rpm	6.24
14	转矩常数	Torque constant	mNm/A	59.5
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	10.2
16	转子惯量	Rotor inertia	$\text{gcm}^2$	97
17	重量	Weight	g	71.5
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W	5.8
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W	2.8
20	热时常数 (电机)	Thermal time constant motor	s	400
21	热时常数 (线圈)	Thermal time constant winding	s	13
22	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-40~+120
23	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$	155
24	轴向间隙	Axial play	mm	0.012
25	径向间隙	Radial play	mm	0.008
26	动态轴向载荷	Axial load dynamic	N	8
27	静态轴向载荷	Axial load static	N	85
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N	26
29	极对数	No. of pole pairs		8
30	轴承	Bearings		2 枚滚动轴承/2 ball bearings
31	换向结构	Commutation		无传感器/Sensorless
32	防护等级	Protection class		IP 30

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## BO4326NBH2B | 外转子带传感器 Outer Rotor, Sensored

应用领域：机器人、工业设备等精密驱动领域。

Applications: robotics, industrial automation, etc.

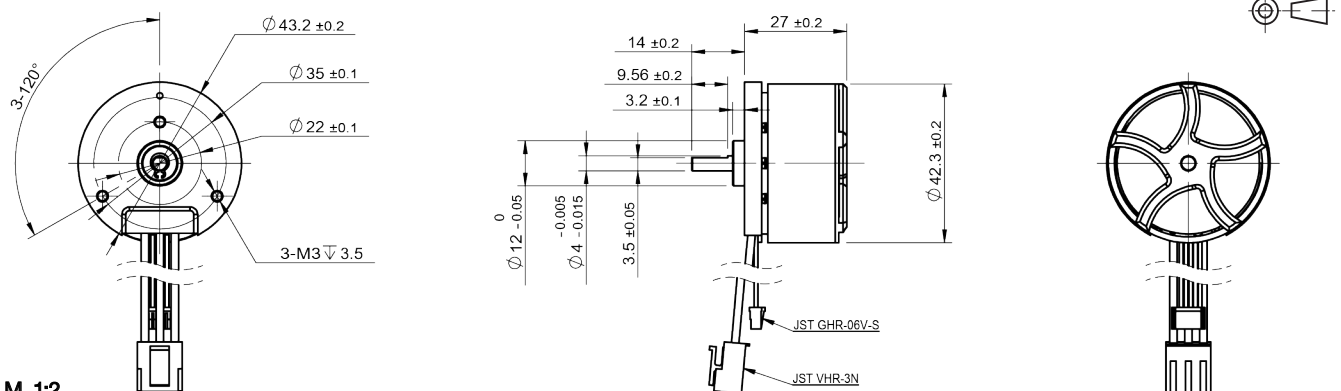
### 主要技术指标 | Characteristics

			01-92-48.0	02-92-36.0	03-92-24.0	
1	电压	Voltage	V	48.0	36.0	24.0
2	端电阻	Terminal resistance	$\Omega$	1.0	0.45	0.21
3	空载转速	No-load speed	rpm	9200	9200	9200
4	空载电流	No-load current	A	0.3	0.5	0.6
5	堵转转矩	Stall torque	mNm	2361	2952	2817
6	堵转电流	Stall current	A	48	80	114
7	额定转矩	Nominal torque	mNm	192	190	194
8	额定转速	Nominal speed	rpm	7000	7000	7000
9	额定电流	Nominal current	A	3.6	4.8	7.2
10	最大输出功率	Max. output power	W	569	711	678
11	最大效率	Max. efficiency	%	84.8	84.8	86.0
12	反电势常数	Back-EMF constant	mV/rpm	5.18	3.89	2.60
13	转矩常数	Torque constant	mNm/A	49.5	37.1	24.8
14	KV 值	KV Value	rpm/V	192	256	383
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	3.9	3.1	3.3
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	153	153	153
17	重量	Weight	g	132	132	132
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		2.19	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		0.73	
20	热时常数 (电机)	Thermal time constant motor	s		360	
21	热时常数 (线圈)	Thermal time constant winding	s		69	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		155	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		8	
27	静态轴向载荷	Axial load static	N		110	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		31	
29	极对数	No. of pole pairs			8	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			霍尔传感器/Hall Sensor	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## BO4416N2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：智能家居、工业设备等精密驱动领域。

Applications: Smart home, industrial automation, etc.

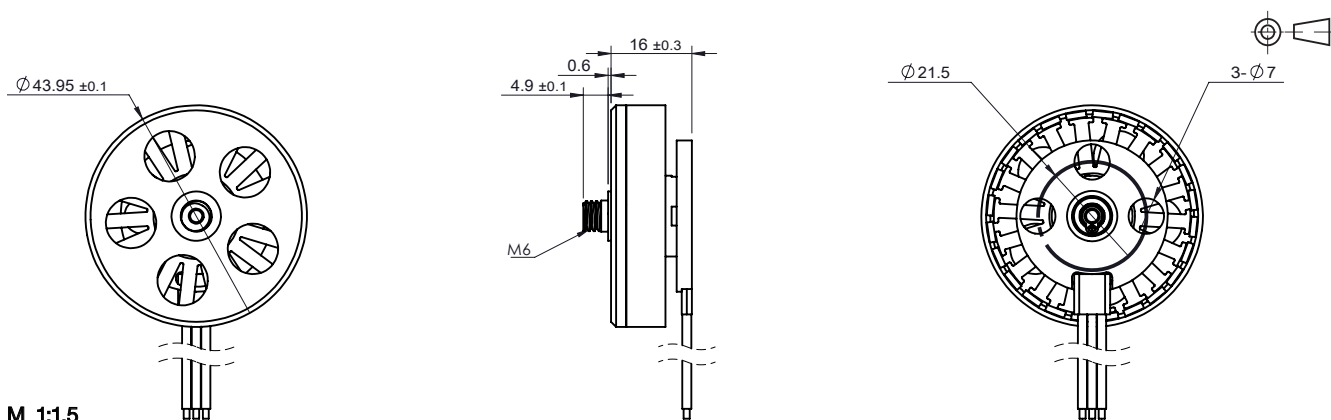
### 主要技术指标 | Characteristics

			02-34-12.0	03-34-18.0	04-24-24.0	
1	电压	Voltage	V	12.0	18.0	24.0
2	端电阻	Terminal resistance	$\Omega$	0.37	0.75	3.00
3	空载转速	No-load speed	rpm	3450	3450	2360
4	空载电流	No-load current	A	0.30	0.17	0.09
5	堵转转矩	Stall torque	mNm	1057	1178	759
6	堵转电流	Stall current	A	32.0	24.0	8.0
7	额定转矩	Nominal torque	mNm	95	150	80
8	额定转速	Nominal speed	rpm	3100	2800	2060
9	额定电流	Nominal current	A	3.2	2.4	0.7
10	最大输出功率	Max. output power	W	95	106	46
11	最大效率	Max. efficiency	%	81	83	79
12	反电势常数	Back-EMF constant	mV/rpm	3.4	5.2	10.0
13	转矩常数	Torque constant	mNm/A	33	49.5	96
14	KV 值	KV Value	rpm/V	290	190	98
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	3.3	2.9	3.1
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	70	70	70
17	重量	Weight	g	66	66	66
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		8.9	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		2.7	
20	热时常数 (电机)	Thermal time constant motor	s		325	
21	热时常数 (线圈)	Thermal time constant winding	s		252	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		180	
24	轴向间隙	Axial play	mm		0.014	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		5	
27	静态轴向载荷	Axial load static	N		80	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		29	
29	极对数	No. of pole pairs			12	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器 /Sensorless	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing





## BO4831NH2B | 外转子带传感器 Outer Rotor, Sensored

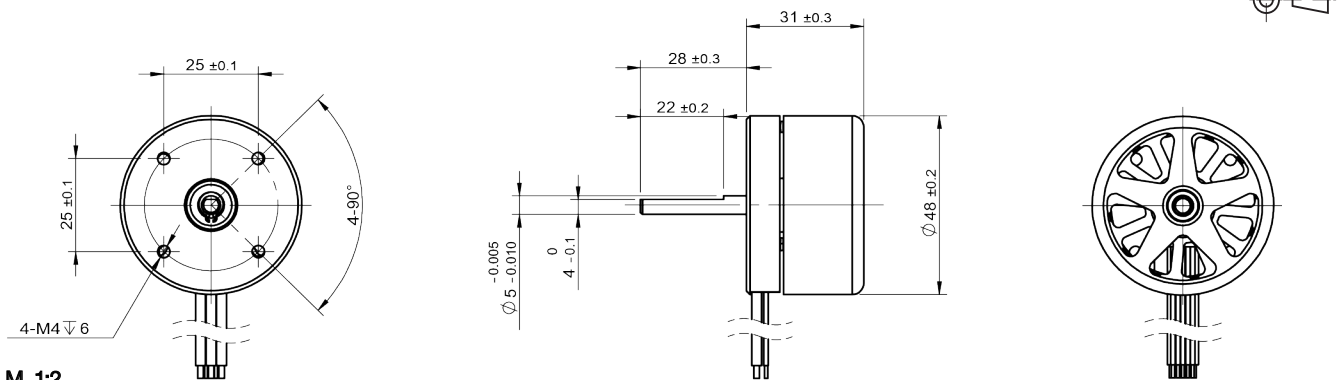
应用领域：无人机、工业设备等精密驱动领域。  
Applications: UAV, industrial automation, etc.

### 主要技术指标 | Characteristics

			01-101-18.0	02-101-24.0	03-101-36.0	
1	电压	Voltage	V	18.0	24.0	36.0
2	端电阻	Terminal resistance	$\Omega$	0.05	0.08	0.18
3	空载转速	No-load speed	rpm	10160	10160	10160
4	空载电流	No-load current	A	1.1	0.9	0.6
5	堵转转矩	Stall torque	mNm	6053	6726	6727
6	堵转电流	Stall current	A	360.0	300.0	200.0
7	额定转矩	Nominal torque	mNm	449	447	457
8	额定转速	Nominal speed	rpm	7600	7700	7700
9	额定电流	Nominal current	A	23.5	17.6	12
10	最大输出功率	Max. output power	W	1609	1788	1788
11	最大效率	Max. efficiency	%	89.2	89.3	89.3
12	反电势常数	Back-EMF constant	mV/rpm	1.8	2.4	3.5
13	转矩常数	Torque constant	mNm/A	16.9	22.5	33.7
14	KV 值	KV Value	rpm/V	564	423	282
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1.68	1.51	1.51
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	306	306	306
17	重量	Weight	g	211	211	211
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		1.14	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		0.38	
20	热时常数 (电机)	Thermal time constant motor	s		350	
21	热时常数 (线圈)	Thermal time constant winding	s		60	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		180	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		10	
27	静态轴向载荷	Axial load static	N		110	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		42	
29	极对数	No. of pole pairs			7	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			霍尔传感器/Hall Sensor	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承 Bearing type  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## BO4840NH2B | 外转子带传感器 Outer Rotor, Sensored

应用领域：无人机、工业设备等精密驱动领域。  
Applications: UAV, industrial automation, etc.

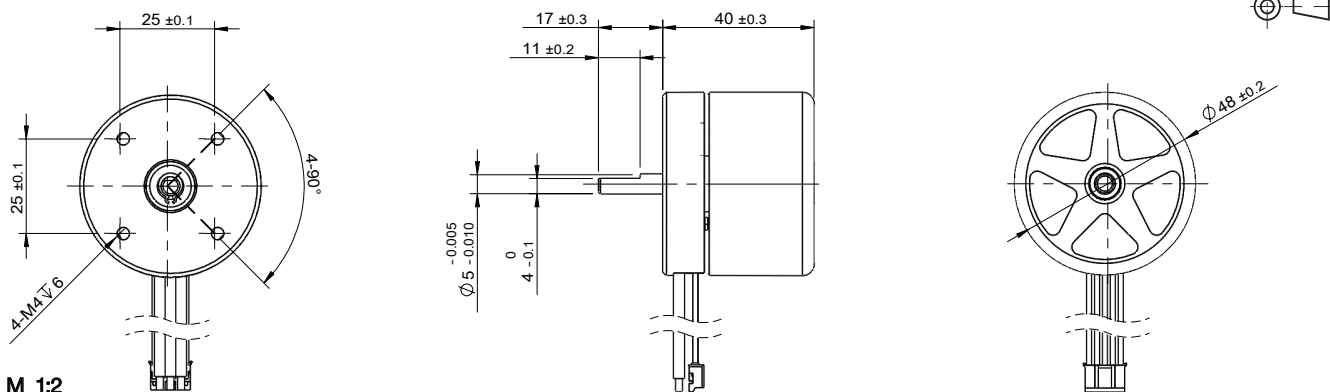
### 主要技术指标 | Characteristics

			01-105-18.0	02-105-24.0	03-105-36.0	
1	电压	Voltage	V	18.0	24.0	36.0
2	端电阻	Terminal resistance	Ω	0.034	0.053	0.11
3	空载转速	No-load speed	rpm	10500	10500	10500
4	空载电流	No-load current	A	1.6	1.2	0.9
5	堵转转矩	Stall torque	mNm	8614	9831	10656
6	堵转电流	Stall current	A	529.4	452.8	327.3
7	额定转矩	Nominal torque	mNm	423	427	420
8	额定转速	Nominal speed	rpm	9350	9400	9440
9	额定电流	Nominal current	A	25.7	19.5	12.9
10	最大输出功率	Max. output power	W	2367	2701	2928
11	最大效率	Max. efficiency	%	89.2	89.9	89.7
12	反电势常数	Back-EMF constant	mV/rpm	1.7	2.3	3.4
13	转矩常数	Torque constant	mNm/A	16.3	21.8	32.7
14	KV 值	KV Value	rpm/V	583	437.5	292.0
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1.22	1.07	0.99
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	398	398	398
17	重量	Weight	g	267	267	267
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		0.9	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		1.0	
20	热时常数 (电机)	Thermal time constant motor	s		300	
21	热时常数 (线圈)	Thermal time constant winding	s		60	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		180	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		10	
27	静态轴向载荷	Axial load static	N		110	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		42	
29	极对数	No. of pole pairs			7	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			霍尔传感器/Hall Sensor	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承 Bearing type

编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## BO6133N2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机、工业设备等精密驱动领域。  
Applications: UAV, industrial automation, etc.

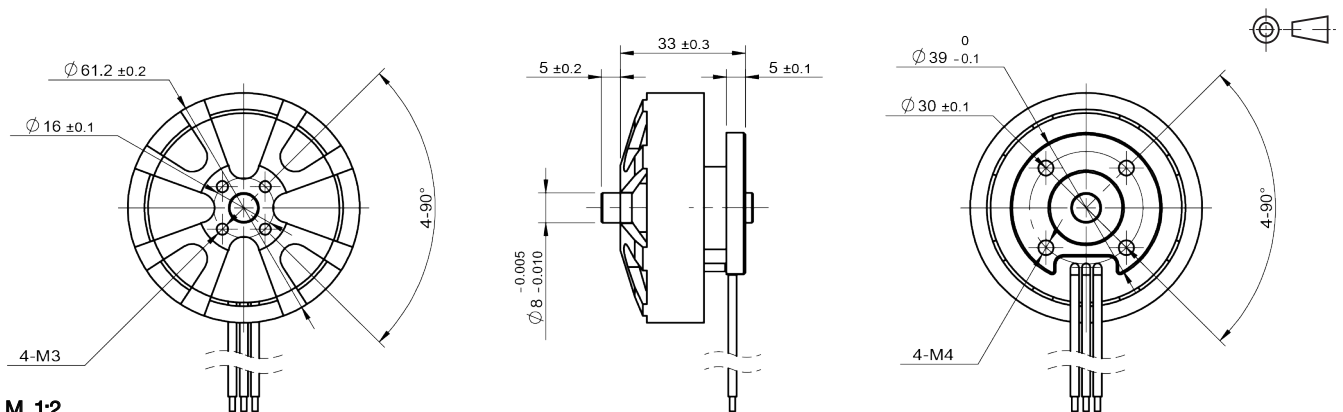
### 主要技术指标 | Characteristics

			01-50-48.0	02-50-36.0	03-50-24.0	
1	电压	Voltage	V	48.0	36.0	24.0
2	端电阻	Terminal resistance	$\Omega$	0.78	0.43	0.19
3	空载转速	No-load speed	rpm	5000	5000	5000
4	空载电流	No-load current	A	0.35	0.5	0.7
5	堵转转矩	Stall torque	mNm	5577	5687	5725
6	堵转电流	Stall current	A	61.5	83.7	126.3
7	额定转矩	Nominal torque	mNm	558	553	558
8	额定转速	Nominal speed	rpm	3700	3700	3700
9	额定电流	Nominal current	A	5.5	7.3	11
10	最大输出功率	Max. output power	W	730	744	749
11	最大效率	Max. efficiency	%	85.4	85.1	85.6
12	反电势常数	Back-EMF constant	mV/rpm	9.5	7.2	4.8
13	转矩常数	Torque constant	mNm/A	91.2	68.3	45.6
14	KV 值	KV Value	rpm/V	104	139	208
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	0.9	0.9	0.9
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	599	599	599
17	重量	Weight	g	230	230	230
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		1.47	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		0.49	
20	热时常数 (电机)	Thermal time constant motor	s		300	
21	热时常数 (线圈)	Thermal time constant winding	s		80	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		180	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		12	
27	静态轴向载荷	Axial load static	N		235	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		146	
29	极对数	No. of pole pairs			7	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器/Sensorless	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

轴承类型 Bearing type 驱动器 Driver

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

BO6452N3B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机、工业设备等精密驱动领域。  
Applications: UAV, industrial automation, etc.

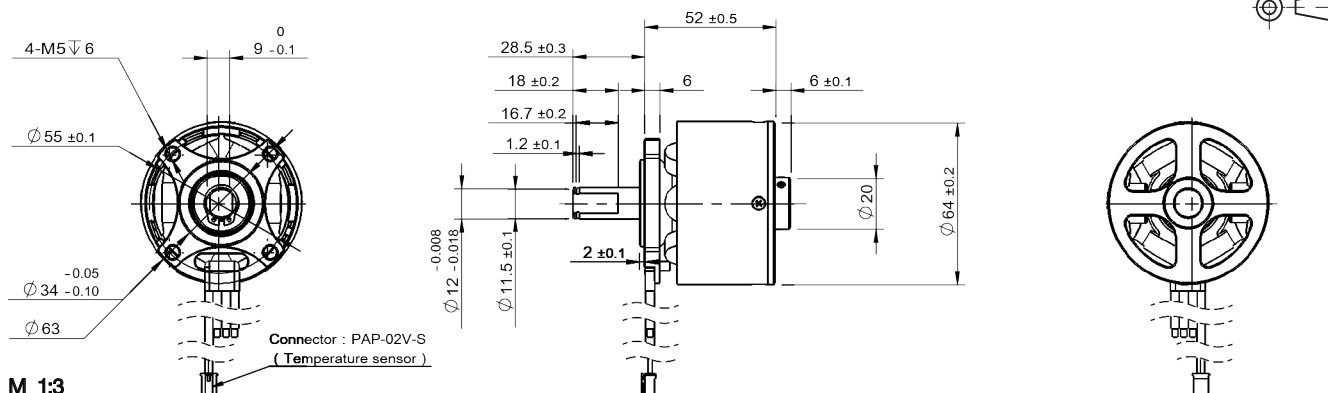
主要技术指标 | Characteristics

			01-95-48.0	02-95-36.0	03-95-24.0	
1	电压	Voltage	V	48.0	36.0	24.0
2	端电阻	Terminal resistance	Ω	0.08	0.045	0.02
3	空载转速	No-load speed	rpm	9500	9500	9500
4	空载电流	No-load current	A	1.3	1.8	2.6
5	堵转转矩	Stall torque	mNm	28824	28819	28824
6	堵转电流	Stall current	A	600	800	1200
7	额定转矩	Nominal torque	mNm	985	983	985
8	额定转速	Nominal speed	rpm	7400	7400	7400
9	额定电流	Nominal current	A	18.5	24.7	37.0
10	最大输出功率	Max. output power	W	7165	7163	7165
11	最大效率	Max. efficiency	%	90.9	90.7	90.9
12	反电势常数	Back-EMF constant	mV/rpm	5.0	3.8	2.5
13	转矩常数	Torque constant	mNm/A	48.1	36.1	24.1
14	KV 值	KV Value	rpm/V	198	264	396
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	0.33	0.33	0.33
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	1750	1750	1750
17	重量	Weight	g	625	625	625
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		0.58	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		0.19	
20	热时常数 (电机)	Thermal time constant motor	s		180	
21	热时常数 (线圈)	Thermal time constant winding	s		60	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		180	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		12	
27	静态轴向载荷	Axial load static	N		235	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		146	
29	极对数	No. of pole pairs			4	
30	轴承	Bearings			3 枚滚动轴承/3 ball bearings	
31	换向结构	Commutation			无传感器/Sensorless	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

轴承类型 Bearing type 驱动器 Driver

外观图 | Outline Drawing



## BO8724N2B | 外转子无传感器 Outer Rotor, Sensorless

应用领域：无人机、电动自行车、工业设备等精密驱动领域。

Applications: UAV, E-bike, industrial automation, etc.

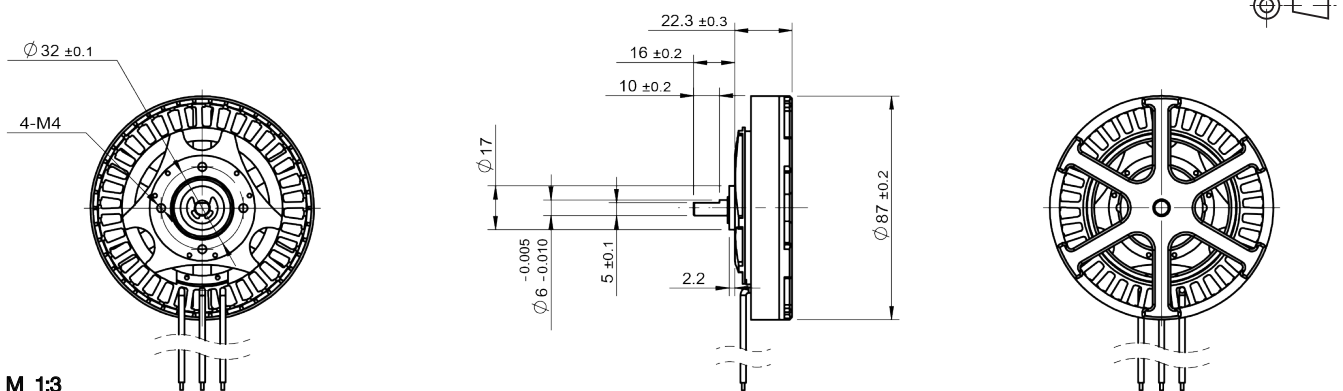
### 主要技术指标 | Characteristics

			01-36-48.0	02-36-36.0	03-36-24.0	
1	电压	Voltage	V	48.0	36.0	24.0
2	端电阻	Terminal resistance	$\Omega$	0.33	0.17	0.085
3	空载转速	No-load speed	rpm	3600	3600	3600
4	空载电流	No-load current	A	0.5	0.7	1.0
5	堵转转矩	Stall torque	mNm	18393	20089	17848
6	堵转电流	Stall current	A	145.5	211.8	282.3
7	额定转矩	Nominal torque	mNm	1210	1210	1210
8	额定转速	Nominal speed	rpm	3200	3200	3200
9	额定电流	Nominal current	A	9.7	13	19.5
10	最大输出功率	Max. output power	W	1732	1892	1681
11	最大效率	Max. efficiency	%	88.6	88.8	88.4
12	反电势常数	Back-EMF constant	mV/rpm	13.3	10.0	6.6
13	转矩常数	Torque constant	mNm/A	126.9	95.2	64.3
14	KV 值	KV Value	rpm/V	75	100	133.3
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	0.2	0.2	0.2
16	转子惯量	Rotor inertia	gcm <sup>2</sup>	510	510	510
17	重量	Weight	g	270	270	270
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W		1.1	
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W		0.48	
20	热时常数 (电机)	Thermal time constant motor	s		340	
21	热时常数 (线圈)	Thermal time constant winding	s		50	
22	工作温度范围	Operating temperature range	°C		-40~+120	
23	绕组耐温等级	Thermal class of winding	°C		180	
24	轴向间隙	Axial play	mm		0.012	
25	径向间隙	Radial play	mm		0.008	
26	动态轴向载荷	Axial load dynamic	N		10	
27	静态轴向载荷	Axial load static	N		140	
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N		145	
29	极对数	No. of pole pairs			21	
30	轴承	Bearings			2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation			无传感器/Sensorless	
32	防护等级	Protection class			IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

轴承类型 Bearing type 驱动器 Driver

### 外观图 | Outline Drawing



M 1:3

## BF3211N2B | 扁平无刷电机 Flat BLDC Motor

应用领域：精密视觉设备领域。

Applications: precision visual equipment.

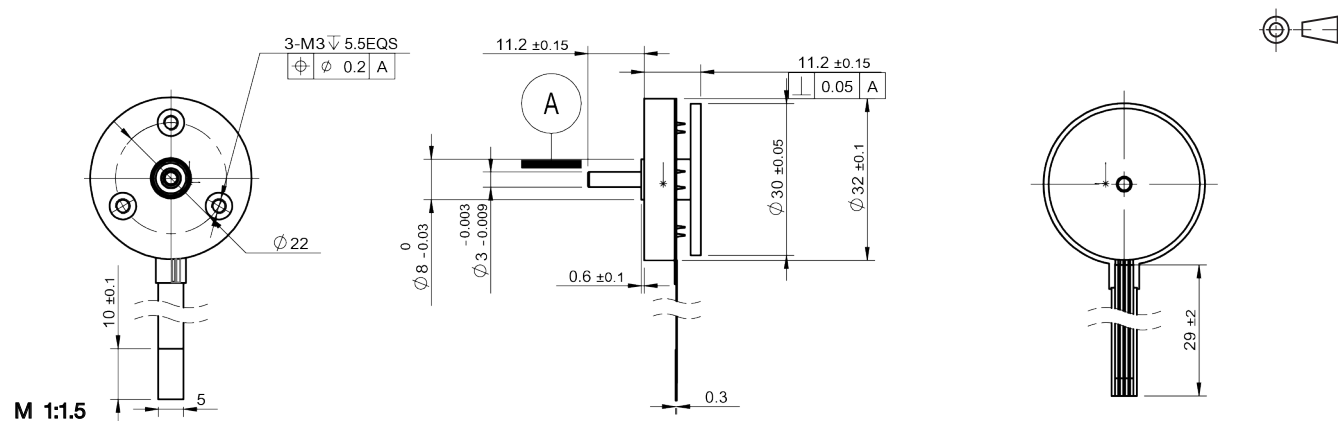
### 主要技术指标 | Characteristics

02-145-12.0

1	电压	Voltage	V	12.0
2	端电阻	Terminal resistance	$\Omega$	4.2
3	电感	Terminal inductance	mH	0.27
4	空载转速	No-load speed	rpm	14500
5	空载电流	No-load current	A	0.1
6	堵转转矩	Stall torque	mNm	21.0
7	堵转电流	Stall current	A	2.9
8	额定转矩	Nominal torque	mNm	8.1
9	额定转速	Nominal speed	rpm	6163
10	额定电流	Nominal current	A	1.224
11	最大输出功率	Max. output power	W	7.99
12	最大效率	Max. efficiency	%	66
13	反电势常数	Back-EMF constant	mV/rpm	0.8
14	转矩常数	Torque constant	mNm/A	7.6
15	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	689.6
16	转子惯量	Rotor inertia	$\text{gcm}^2$	12.4
17	重量	Weight	g	27
18	热阻 (机壳 - 环境)	Thermal resistance housing-ambient	K/W	6
19	热阻 (线圈 - 机壳)	Thermal resistance winding-housing	K/W	5
20	热时常数 (电机)	Thermal time constant motor	s	450
21	热时常数 (线圈)	Thermal time constant winding	s	224
22	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-40~+120
23	绕组耐温等级	Thermal class of winding	$^{\circ}\text{C}$	155
24	轴向间隙	Axial play	mm	0.01
25	径向间隙	Radial play	mm	0.008
26	动态轴向载荷	Axial load dynamic	N	8
27	静态轴向载荷	Axial load static	N	85
28	径向载荷 (距安装面 3mm)	Radial load at 3 mm from mounting face	N	26
29	极对数	No. of pole pairs		4
30	轴承	Bearings	2 枚滚动轴承/2 ball bearings	
31	换向结构	Commutation	无传感器 /Sensorless	
32	防护等级	Protection class	IP 20	

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils 齿轮箱 Gearheads 轴承类型 Bearing type 霍尔传感器 Hall sensor  
编码器 Encoder 驱动器 Driver

### 外观图 | Outline Drawing



## 7054ZWF | 无刷风机 Brushless DC Blower

应用领域：医疗器械等精密驱动领域。

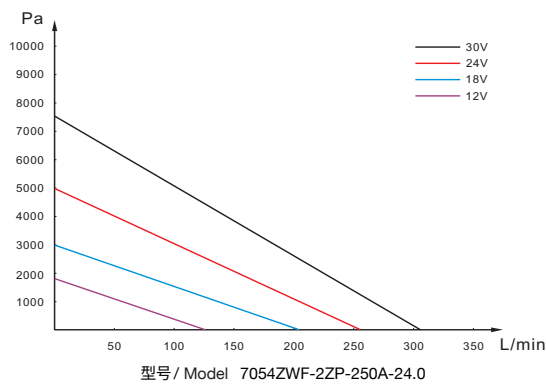
Applications: precision drives in medical equipment fields.

工作温度范围 | Operating temperature range: 10~70°C

### 主要技术指标 | Characteristics

		-Z2P-250A-24.0		
1	电压	Voltage	V	24.0
2	端电阻	Terminal resistance	Ω	2.0
3	相数	NO. of phase	--	3
4	输入功率	Input power	W	20
5	额定负载	Rated Load	--	风叶 /Blades (出气孔 /Blow hole: 4mm)
6	负载转速	Load speed	rpm	33000
7	负载电流	Load current	A	1.4
8	风压	Air pressure	Pa	4000
9	流量	Air flow	m³/h	4.4
10	噪音	Noise	dB	≤40
11	重量	Weight	g	237

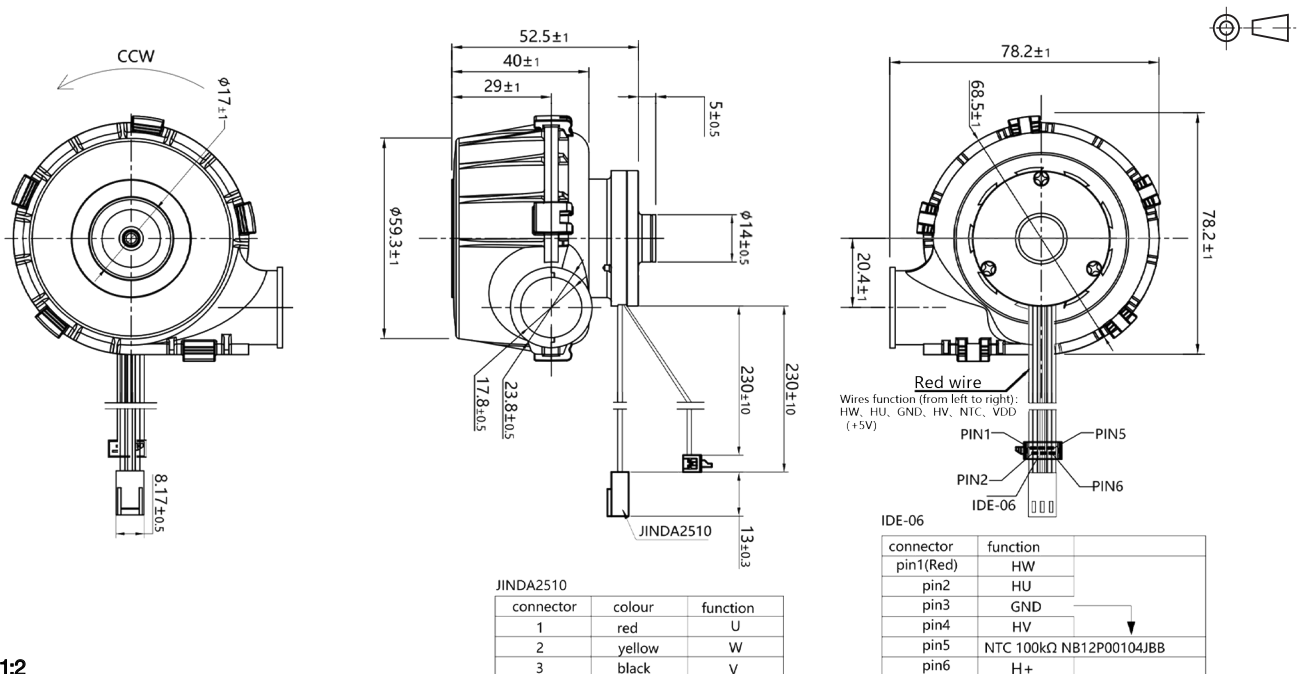
### 特性曲线 | Characteristics Curve



### 可选参数 | Options

导线长度	Lead wires
性能	Special coils
驱动器	Driver

### 外观图 | Outline Drawing





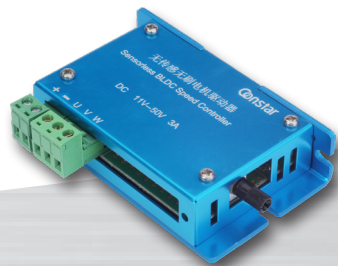
CONSTAR

## **ELECTRONIC SPEED CONTROLLER** **无刷电机驱动器**

Constar 无刷电机驱动器软件精心设计，硬件采用优质材料和元器件制作，产品智能化程度高、操作简便，效率高、温升低，干扰小，速度调节细腻平滑，有多种保护功能可选；针对本公司出品电机做了特殊优化，匹配性更好。我们可根据客户需要提供定制化产品，包括闭环控制功能。

The electronic speed controller has specifically designed software and hardware utilizing high quality materials and components. It is a high efficiency SMART controller that is easy to operate. The product has low temperature rise, low EMI and is designed for optimum use with our motors. The controller can also be provided with customized ESC including closed-loop control.





# CONTENT 目录

## 无刷电机驱动器

ELECTRONIC SPEED CONTROLLER

### 有感无刷电机通用 驱动器

UNIVERSAL ESC FOR  
SENSORED BLDC MOTOR

	驱动器型号 ESC No.	尺寸 Size	持续电流 Contant Current	页码 Page
1	S17-112503H	99*72*25 mm	3A	114
2	S17-075020H	99*72*25 mm	20A	114
3	S25-112503H-7054	99*72*25 mm	3A	114

### 无感无刷电机通用 驱动器

UNIVERSAL ESC FOR  
SENSORLESS BLDC MOTOR

	驱动器型号 ESC No.	尺寸 Size	持续电流 Contant Current	页码 Page
1	S17-112503	99*72*25 mm	3A	115
2	S17-075020	99*72*25 mm	20A	115

### 有感无刷电机紧凑型 驱动器

COMPACT ESC FOR  
SENSORED BLDC MOTOR

	驱动器型号 ESC No.	尺寸 Size	持续电流 Contant Current	页码 Page
1	S13-071502H	28.5*20*6.1 mm	2A	116
2	A18-154820H	78*55*29.4 mm	20A	116

### 无感无刷电机紧凑型 驱动器

COMPACT ESC FOR  
SENSORLESS BLDC MOTOR

	驱动器型号 ESC No.	尺寸 Size	持续电流 Contant Current	页码 Page
1	S13-071502	28.5*20*6.1 mm	2A	117
2	S15-072510	45*23*10 mm	10A	117
3	S20-076015	92*27*17.5 mm	15A	117

### 多旋翼无人机电调

ESC FOR MULTI-ROTOR

	电调型号 ESC No.	尺寸 Size	持续电流 Contant Current	页码 Page
1	Xs420	26*14.5*5.5 mm	20A	118
2	Xs630	32*15*6.6 mm	30A	118



# 无刷电机驱动器 ELECTRONIC SPEED CONTROLLER

## 有感无刷电机通用驱动器 Universal ESC for Sensored BLDC Motor

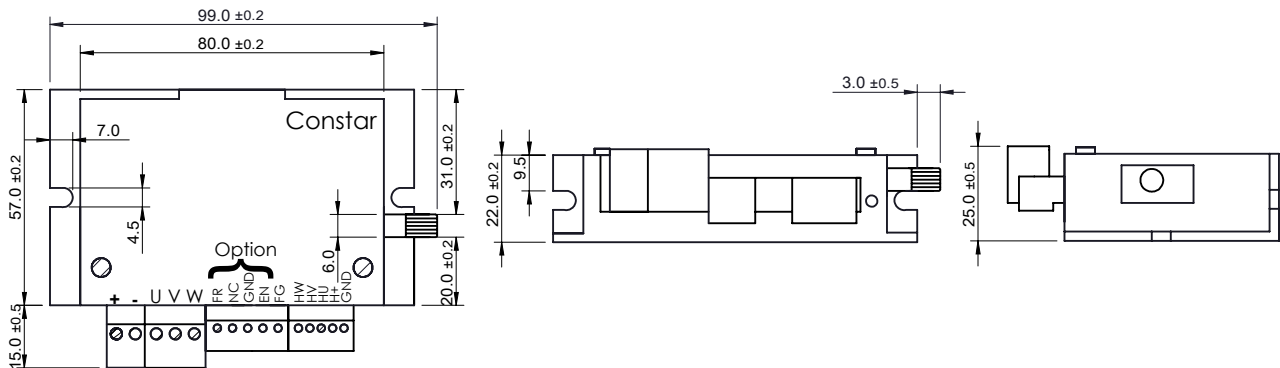
应用领域：风机、电动工具、泵类等领域。

Applications: blowers, electrical tools, pumps, etc.

### 主要技术指标 | Characteristics

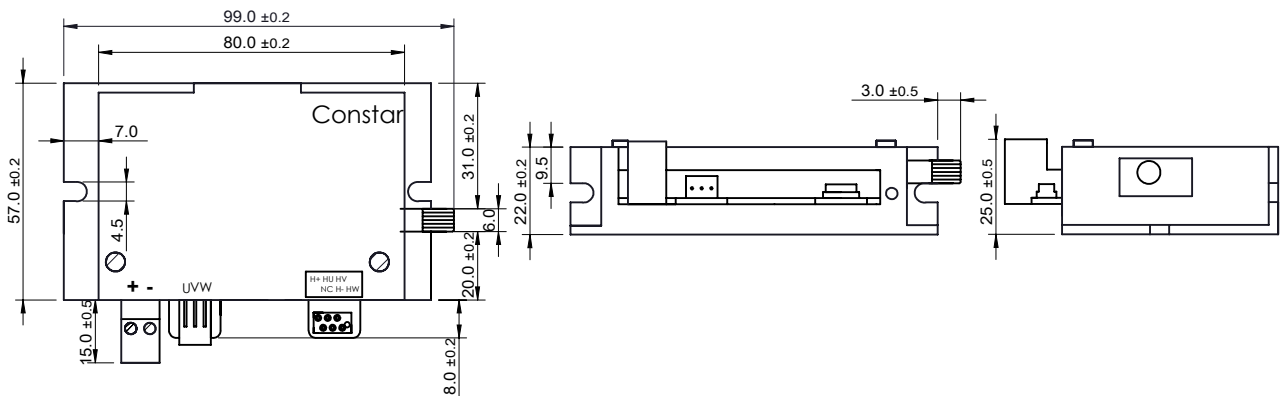
		S17-112503H	S17-114820H	S25-112503H-7054		
1	持续电流	Contant current	A	3	20	3
2	峰值电流	Peak current(10s)	A	4.5	26	4.5
3	输入电压范围	Input voltage range	V	11~25	11~48	11~25
4	尺寸	Size	mm	99*72*25	99*72*25	99*72*25
5	速度控制信号	Speed control signal		Analog voltage/PWM	Analog voltage/PWM	Analog voltage/PWM
6	过载保护	Overload protection		Yes	Yes	Yes
7	堵转保护	Blockage protection		No	No	No
8	过热保护	Thermal overload protection		Yes	Yes	Yes
9	反接保护	Inverse-polarity protection		Yes	Yes	Yes
10	正反转控制	Sense of direction		Optional	Optional	Optional
11	使能控制	Enable		Optional	Optional	Optional
12	速度信号输出	Speed feedback output(6 pulses*pole pairs)		Optional	Optional	Optional
13	工作环境温度	Operating temperature	°C	-20~+60	-20~+60	-20~+60
14	换向方式	Sensorless or sensored		Sensored	Sensored	Sensored

### 外观图 | Outline Drawing



M 1:2

型号 / Model S17-112503H/S17-114820H



M 1:2

型号 / Model S25-112503H-7054

## 无感无刷电机通用驱动器 Universal ESC for Sensorless BLDC Motor

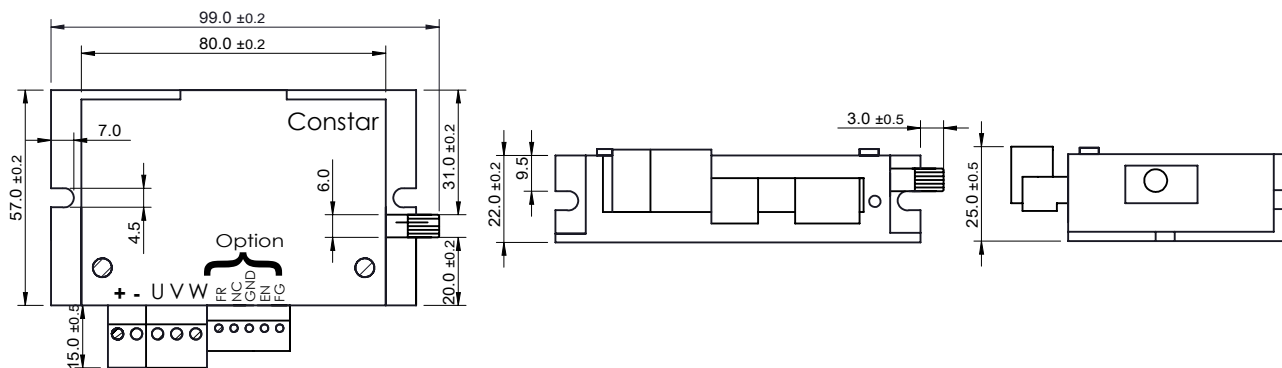
应用领域：风机、电动工具、泵类等领域。

Applications: blowers, electrical tools, pumps, etc.

### 主要技术指标 | Characteristics

		S17-112503		S17-114820	
1	持续电流	Contant current	A	3	20
2	峰值电流	Peak current(10s)	A	4.5	26
3	输入电压范围	Input voltage range	V	11~25	11~48
4	尺寸	Size	mm	99*72*25	99*72*25
5	速度控制信号	Speed control signal		Analog voltage/PWM	Analog voltage/PWM
6	过载保护	Overload protection		Yes	Yes
7	堵转保护	Blockage protection		Yes	Yes
8	过热保护	Thermal overload protection		Yes	Yes
9	反接保护	Inverse-polarity protection		Yes	Yes
10	正反转控制	Sense of direction		Optional	Optional
11	使能控制	Enable		Optional	Optional
12	速度信号输出	Speed feedback output(6 pulses*pole pairs)		Optional	Optional
13	工作环境温度	Operating temperature	°C	-20~+60	-20~+60
14	换向方式	Sensorless or sensed		Sensorless	Sensorless

### 外观图 | Outline Drawing



M 1:2

型号 / Model S17-112503/S17-114820

有感无刷电机紧凑型驱动器 Compact ESC for Sensored BLDC Motor

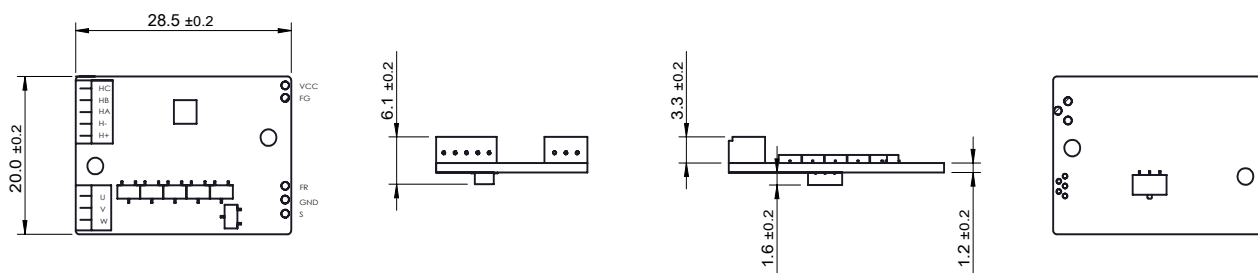
应用领域：风机、电动工具、泵类等领域。

Applications: blowers, electrical tools, pumps, etc.

主要技术指标 | Characteristics

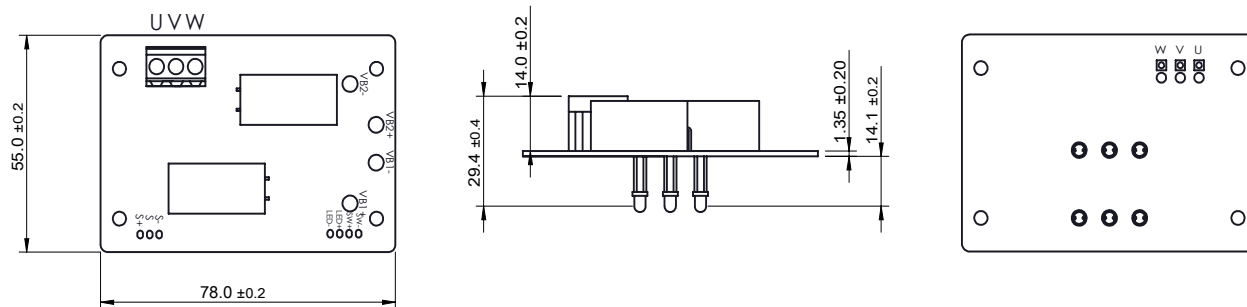
		S13-071502H		A18-154820H	
1	持续电流	Contant current	A	2	20
2	峰值电流	Peak current(10s)	A	3	30
3	输入电压范围	Input voltage range	V	7~15	15~48
4	尺寸	Size	mm	28.5*20*6.1	78*55*29.4
5	速度控制信号	Speed control signal		Analog voltage/PWM	Analog voltage/PWM
6	过载保护	Overload protection		No	Yes
7	堵转保护	Blockage protection		Yes	Yes
8	过热保护	Thermal overload protection		Yes	Yes
9	反接保护	Inverse-polarity protection		No	No
10	正反转控制	Sense of direction		Optional	Optional
11	使能控制	Enable		Optional	Optional
12	速度信号输出	Speed feedback output(6 pulses*pole pairs)		Optional	Optional
13	工作环境温度	Operating temperature	°C	-20~+60	-20~+60
14	换向方式	Sensorless or sensored		Sensored	Sensored

外观图 | Outline Drawing



M 1:1

型号 / Model S13-071502H



M 1:2

型号 / Model A18-154820H

## 无感无刷电机紧凑型驱动器 Compact ESC For Sensorless BLDC motor

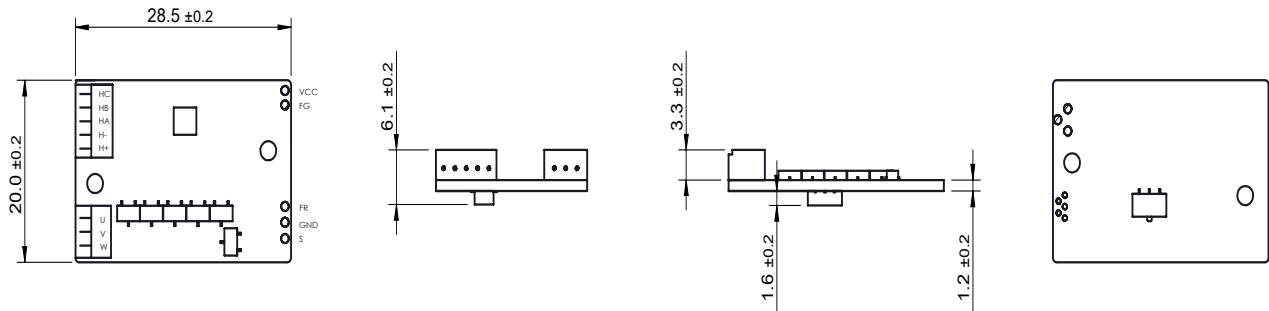
应用领域：风机、电动工具、泵类等领域。

Applications: blowers, electrical tools, pumps, etc.

### 主要技术指标 | Characteristics

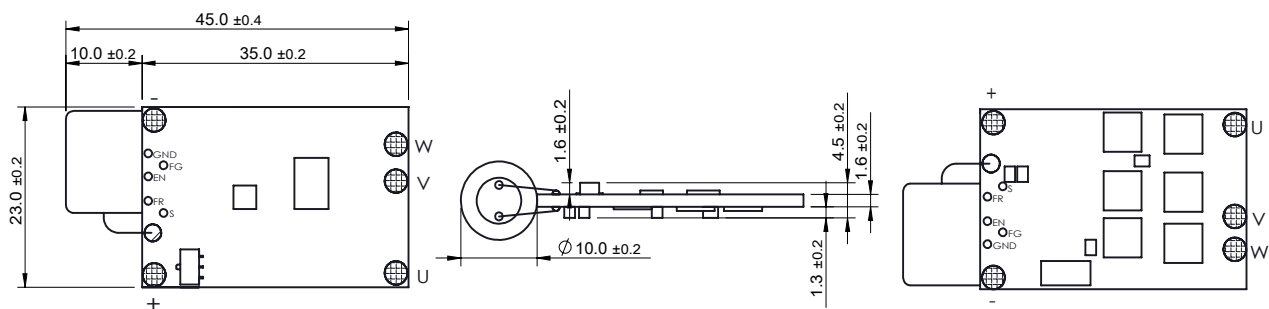
				S13-071502	S15-072510	S20-076015
1	持续电流	Contant current	A	2	10	15
2	峰值电流	Peak current(10s)	A	3	15	25
3	输入电压范围	Input voltage range	V	7~15	7~25	7~25/15~60
4	尺寸	Size	mm	28.5*20*6.1	45*23*10	92*27*17.5
5	速度控制信号	Speed control signal		Analog voltage/PWM	Analog voltage/PWM	Analog voltage/PWM
6	过载保护	Overload protection		No	Yes	Yes
7	堵转保护	Blockage protection		Yes	Yes	Yes
8	过热保护	Thermal overload protection		Yes	Yes	Yes
9	反接保护	Inverse-polarity protection		No	No	Yes
10	正反转控制	Sense of direction		Optional	Optional	Optional
11	使能控制	Enable		Optional	Optional	Optional
12	速度信号输出	Speed feedback output(6 pulses*pole pairs)		Optional	Optional	Optional
13	工作环境温度	Operating temperature	°C	-20~+60	-20~+60	-20~+60
14	换向方式	Sensorless or sensed		Sensorless	Sensorless	Sensorless

### 外观图 | Outline Drawing



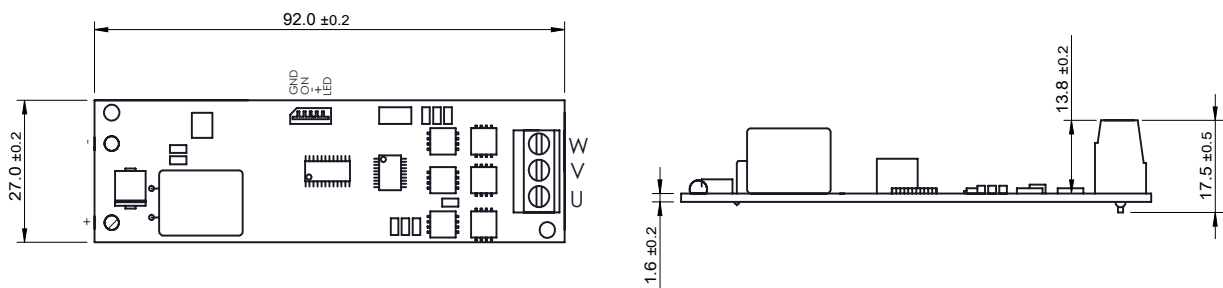
M 1:1

型号 / Model S13-071502



M 1:1

型号 / Model S15-072510



M 1:1.5

型号 / Model S20-076015

多旋翼无人机电调 ESC for Multi-Rotor

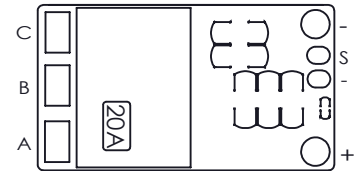
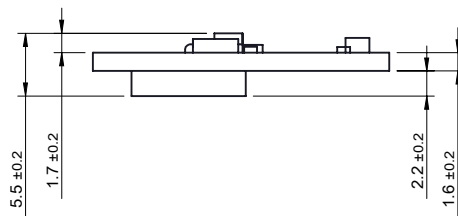
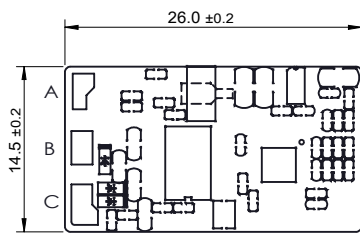
应用领域：多旋翼无人机等领域。

Applications: multi-rotor drones.

主要技术指标 | Characteristics

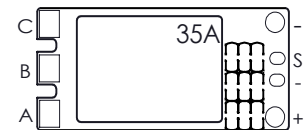
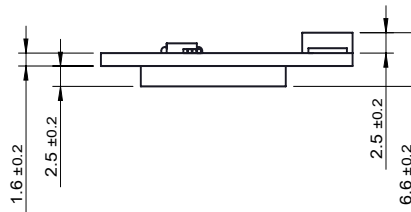
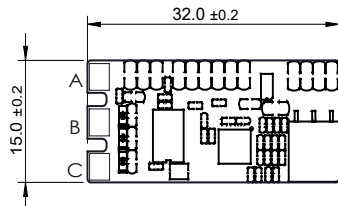
			Xs420	Xs630	
1	持续电流	Contant Current	A	20	30
2	峰值电流	Peak Current(10s)	A	26	39
3	电池节数	LiPo	-	2~4S	2~6S
4	BEC	BEC	No	No	
5	重量	Weight	g	<18.2	<45
6	尺寸	Size	mm	26*14.5*5.5	32*15*6.6

外观图 | Outline Drawing



M 1.5:1

型号 / Model Xs420

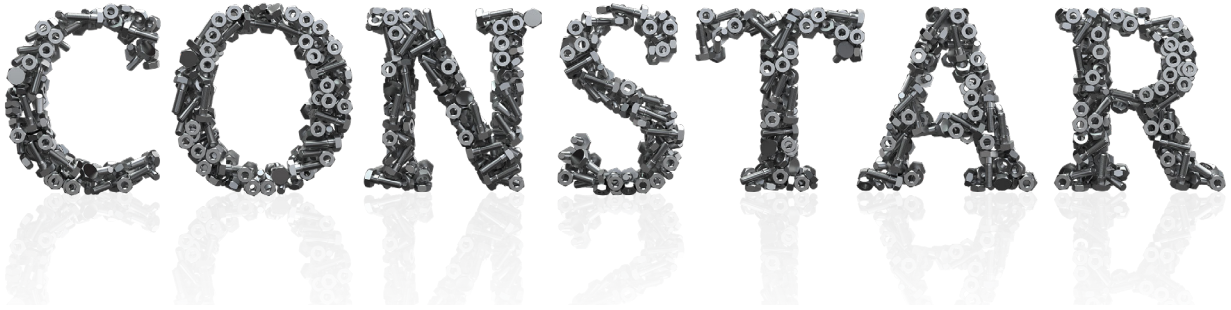


M 1:1

型号 / Model Xs630







## PRECISION GEARMOTOR 精密齿轮减速电机

Constar 驱动电机可配备多种结构、多种减速比的精密减速齿轮组，满足高转矩、低转速场合下的使用要求；产品具有体积小、减速比大、转速低、力矩大的特点，广泛应用于医疗器械、精密仪器、工业设备、安防设备、视像产品、个人保健产品、高端玩具等领域。

A selected drive motor can be equipped with various precision gearboxes resulting in a Precision Gearmotor. The gearboxes are available in several structural configurations and a range of gear ratios, providing speed reduction at increased torque. These precision gearmotors are widely used in the fields of medical equipment, scientific instruments, industrial equipment, security systems and locks, audio and visual products, personal healthcare products, and high-end hobby products.



# CONTENT 目录

## 精密齿轮减速电机 PRECISION GEARMOTOR

### 行星齿轮系列 PLANETARY GEARBOX SERIES

	电机型号 Motor No.	直径 Gearbox Diameter	减速比 Reduction Ratio	页码 Page
1	06**...06*P...	φ6 mm	23 ~ 1275	124
2	08**...08*P...	φ8 mm	13 ~ 809	125
3	10**...10*P...	φ10 mm	4 ~ 4096	126
4	B10**...10*P...	φ10 mm	4 ~ 4096	126
5	C10**...10*P...	φ10 mm	4 ~ 4096	126
6	12**...12*P...	φ12 mm	4 ~ 4096	127
7	B12**...12*P...	φ12 mm	4 ~ 4096	127
8	13**...13*P...	φ13 mm	4 ~ 4096	128
9	16**...16*P...	φ16 mm	4 ~ 3027	129
10	B16**...16*P...	φ16 mm	4 ~ 3027	129
11	19**...20*P...	φ20.3 mm	16 ~ 1296	130
12	B20**...20*P...	φ20.3mm	16 ~ 1296	130
13	C20**...20*P...	φ20.3 mm	16 ~ 1296	130
14	22**...22*P...	φ22 mm	5 ~ 3968	131
15	24**...24*P...	φ24.4 mm	16 ~ 1296	132
16	B20**...24*P...	φ24.4 mm	16 ~ 1296	132
17	C24**...24*P...	φ24.4 mm	16 ~ 1296	132
18	25**...25MP...	φ25mm	3.6 ~ 1386	133
19	25**...26MP...	φ25 mm	3.7 ~ 352	134
20	30**...28*P...	φ27.7 mm	4 ~ 939	135
21	B29**...28*P...	φ27.7 mm	4 ~ 939	135
22	C28**...28*P...	φ27.7mm	4 ~ 939	135
23	32**...32MP...	φ32mm	16 ~ 1076	136
24	BO43**...42MP...	φ42.3 mm	3.65 ~ 393	137
25	BO48**...52MP...	φ52 mm	3.65 ~ 393	138
26	BO61**...62MP...	φ62 mm	3.65 ~ 393	139
27	LO616...06PP...	φ6 mm	25	140
28	C1020...10PP... (1)	φ10 mm	171	141

30	C1020...10PP... ( 2 )	φ10 mm	171	142
31	C1019...10PRC... ( 2 )	φ10 mm	171	142
32	C1020...10PP... ( 3 )	φ10 mm	171	143
33	C1019...10PP... ( 3 )	φ10 mm	171	143
34	C1019...10PRC... ( 3 )	φ10 mm	171	143
35	C1222...12PP...	φ12 mm	120	144
36	C1222...12PRC...	φ12 mm	120	144

**正齿轮系列**  
SPUR GEARBOX SERIES

	电机型号 Motor No.	直径 Gearbox Diameter	减速比 Reduction Ratio	页码 Page
1	S15**...12MS...	φ12 mm	3 ~ 1000	145
2	C12**...12MS...	φ12 mm	3 ~ 1000	146
3	C12**...14MS...	φ14 mm	3 ~ 1000	147
4	C16**...13MS...	φ13 mm	3 ~ 360	148
5	C1631...14MS...	φ14 mm	63 ~ 350	149
6	C1630...16MS...	φ15.5 mm	3 ~ 360	150
7	1526...16MS...	φ15.5 mm	3 ~ 360	151
8	1638...16MS...	φ15.4 mm	10 ~ 360	152

# 精密齿轮减速电机 PRECISION GEARMOTOR

## 06\*\*...06\*P... | 行星齿轮系列 Planetary Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input type="checkbox"/> 无刷电机 BLDC motor <input checked="" type="checkbox"/> 空心杯电机 Coreless motor <input type="checkbox"/> 铁芯电机 Cored motor	<input type="checkbox"/> 金属加工 Metal CNC <input checked="" type="checkbox"/> 金属注塑 Metal injection <input type="checkbox"/> 粉末冶金 Powder metallurgy <input checked="" type="checkbox"/> 塑胶注塑 Plastic injection	<input checked="" type="checkbox"/> 含油轴承 Slewing bearing <input type="checkbox"/> 滚珠轴承 Ball bearing

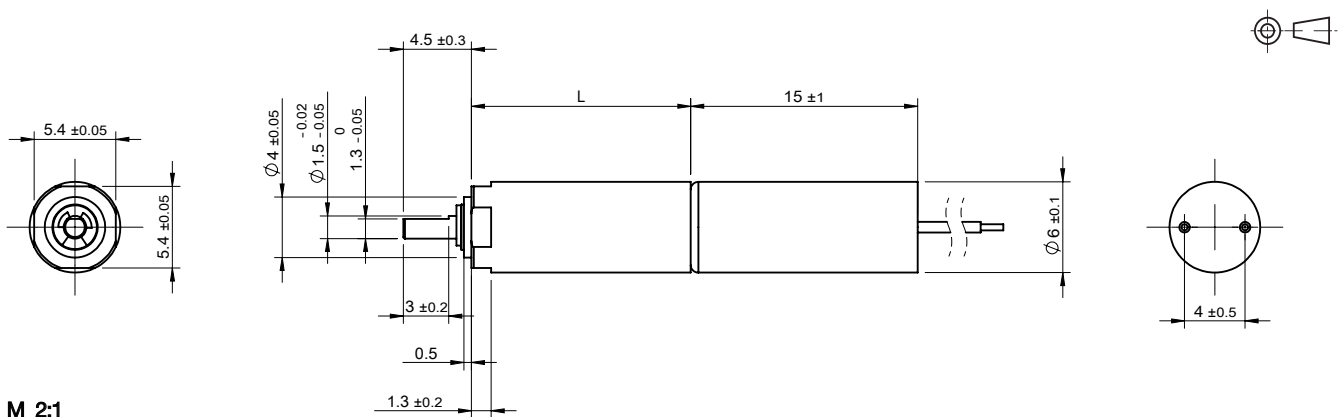
### 电机主要技术指标 | Motor Characteristics

		0615N5M01-122-3.0	0615N5M02-185-3.0	0615N5M03-295-6.0	
1 电压	Voltage	V	3.0	3.0	6.0
2 端电阻	Terminal resistance	Ω	19.0	18.5	10.1
3 空载转速	No-load speed	rpm	12200	18500	29500
4 空载电流	No-load current	mA	10	18	20
5 堵转转矩	Stall torque	mNm	0.33	0.20	1.07
6 堵转电流	Stall current	mA	160	160	590
7 额定转矩	Nominal torque	mNm	0.10	0.05	0.30
8 额定转速	Nominal speed	rpm	8500	13770	21230
9 额定电流	Nominal current	mA	60	50	180
10 最大输出功率	Max. output power	W	0.11	0.09	0.83
11 最大效率	Max. efficiency	%	56	44	67
12 反电势常数	Back-EMF constant	mV/rpm	0.2	0.1	0.2
13 转矩常数	Torque constant	mNm/A	2.2	1.4	1.9
14 转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	37000	94600	27600
15 转子惯量	Rotor inertia	gcm <sup>2</sup>	0.015	0.015	0.015
16 重量	Weight	g	2.5	2.5	2.5

### 齿轮组主要技术指标 (金属注塑) | Gearbox Characteristics (Metal Injection)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	--	--	--	--
2	23~41	33	50	12.1
3	110~226	33	50	14.5
4	531~1708	33	50	16.9
5	--	--	--	--
6	--	--	--	--

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## 08\*\*...08\*P... | 行星齿轮系列 Planetary Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input type="checkbox"/> 无刷电机 BLDC motor <input checked="" type="checkbox"/> 空心杯电机 Coreless motor <input type="checkbox"/> 铁芯电机 Cored motor	<input checked="" type="checkbox"/> 金属加工 Metal CNC <input checked="" type="checkbox"/> 金属注塑 Metal injection <input type="checkbox"/> 粉末冶金 Powder metallurgy <input checked="" type="checkbox"/> 塑胶注塑 Plastic injection	<input checked="" type="checkbox"/> 含油轴承 Slewing bearing <input type="checkbox"/> 滚珠轴承 Ball bearing

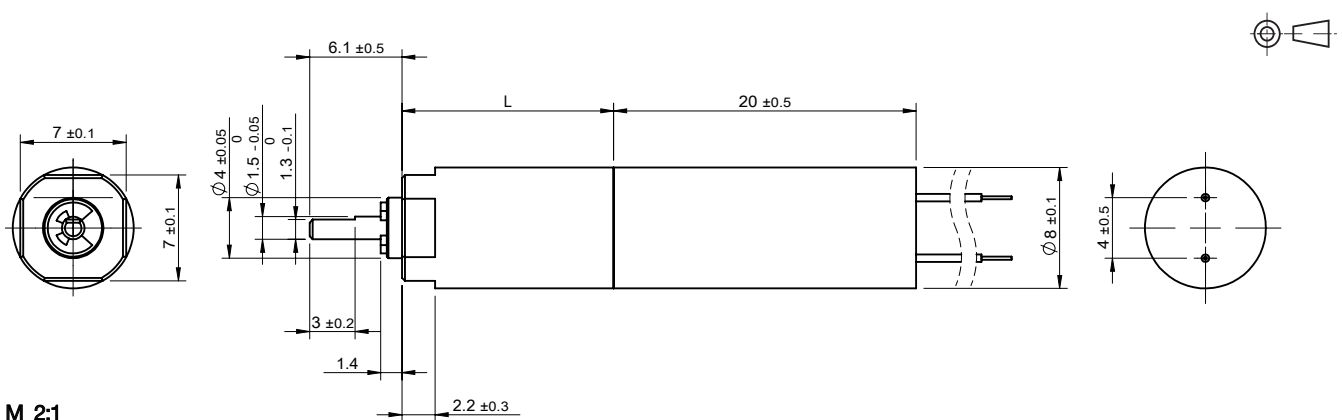
### 电机主要技术指标 | Motor Characteristics

		0816N5M02-137-4.2	0816N5M11-148-6.0	0816N5M01-155-8.0	
1 电压	Voltage	V	4.2	6.0	8.0
2 端电阻	Terminal resistance	Ω	13.5	25.3	60.0
3 空载转速	No-load speed	rpm	13700	14800	15500
4 空载电流	No-load current	mA	15	7	6
5 堵转转矩	Stall torque	mNm	0.82	0.88	0.58
6 堵转电流	Stall current	mA	310	240	130
7 额定转矩	Nominal torque	mNm	0.25	0.30	0.15
8 额定转速	Nominal speed	rpm	9530	9730	11520
9 额定电流	Nominal current	mA	100	90	40
10 最大输出功率	Max. output power	W	0.30	0.34	0.24
11 最大效率	Max. efficiency	%	61	69	62
12 反电势常数	Back-EMF constant	mV/rpm	0.3	0.4	0.5
13 转矩常数	Torque constant	mNm/A	2.8	3.8	4.7
14 转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	16700	16900	26600
15 转子惯量	Rotor inertia	gcm <sup>2</sup>	0.04	0.04	0.04
16 重量	Weight	g	3.6	3.6	3.6

### 齿轮组主要技术指标 (塑胶注塑) | Gearbox Characteristics (Plastic injection)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	--	--	--	--
2	13~28	10	30	12.1
3	47~152	20	60	14.5
4	158~809	30	90	16.9
5	--	--	--	--
6	--	--	--	--

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

# 精密齿轮减速电机 PRECISION GEARMOTOR

## 10\*\*...10\*P... | B10\*\*...10\*P... | C10\*\*...10\*P... | 行星齿轮系列 Planetary Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input checked="" type="checkbox"/> 无刷电机 BLDC motor <input checked="" type="checkbox"/> 空心杯电机 Coreless motor <input checked="" type="checkbox"/> 铁芯电机 Cored motor	<input checked="" type="checkbox"/> 金属加工 Metal CNC <input checked="" type="checkbox"/> 金属注塑 Metal injection <input type="checkbox"/> 粉末冶金 Powder metallurgy <input checked="" type="checkbox"/> 塑胶注塑 Plastic injection	<input checked="" type="checkbox"/> 含油轴承 Slewing bearing <input type="checkbox"/> 滚珠轴承 Ball bearing

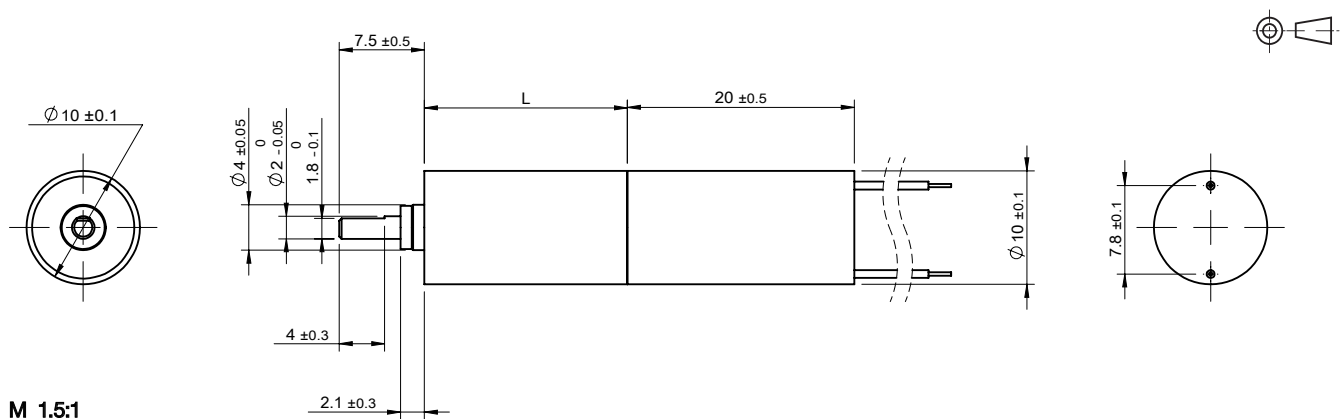
### 电机主要技术指标 | Motor Characteristics

			1020N5M52-115-3.0	B1020N03-85-3.7	C1012F43-0113	
1	电压	Voltage	V	3.0	3.7	3.0
2	端电阻	Terminal resistance	Ω	3.8	6.2	11.1
3	空载转速	No-load speed	rpm	11500	8500	12900
4	空载电流	No-load current	mA	16	70	30
5	堵转转矩	Stall torque	mNm	1.89	1.90	0.50
6	堵转电流	Stall current	mA	790	600	288
7	额定转矩	Nominal torque	mNm	0.50	1.00	0.17
8	额定转速	Nominal speed	rpm	8460	4300	8400
9	额定电流	Nominal current	mA	220	350	120
10	最大输出功率	Max. output power	W	0.57	0.40	0.17
11	最大效率	Max. efficiency	%	74	43	45
12	反电势常数	Back-EMF constant	mV/rpm	0.26	0.38	0.21
13	转矩常数	Torque constant	mNm/A	2.44	3.67	1.94
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	6088	4474	25800
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.07	0.06	--
16	重量	Weight	g	6.1	6.8	3

### 齿轮组主要技术指标 (金属加工) | Gearbox Characteristics (Metal CNC)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	4	5	15	11.7
2	16	10	30	14.8
3	64	30	90	17.9
4	256	40	120	21
5	1024	50	150	24.1
6	4096	60	180	27.2

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com



## 12\*\*...12\*P... | B12\*\*...12\*P... | 行星齿轮系列 Planetary Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<ul style="list-style-type: none"> <li>■ 无刷电机 BLDC motor</li> <li>■ 空心杯电机 Coreless motor</li> <li>■ 铁芯电机 Cored motor</li> </ul>	<ul style="list-style-type: none"> <li>■ 金属加工 Metal CNC</li> <li>■ 金属注塑 Metal injection</li> <li>□ 粉末冶金 Powder metallurgy</li> <li>■ 塑胶注塑 Plastic injection</li> </ul>	<ul style="list-style-type: none"> <li>■ 含油轴承 Slewing bearing</li> <li>■ 滚珠轴承 Ball bearing</li> </ul>

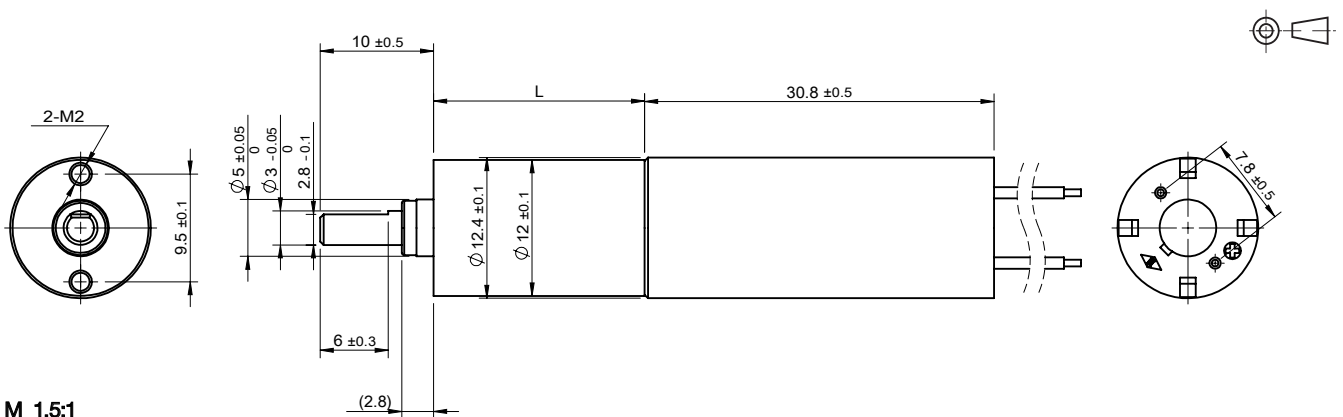
### 电机主要技术指标 | Motor Characteristics

			1230N5M15-113-12.0	1230N7M04-79-3.0	B1220N2B01-175-5.0
1	电压	Voltage	V	12.0	5.0
2	端电阻	Terminal resistance	Ω	10.4	2.0
3	空载转速	No-load speed	rpm	11300	17500
4	空载电流	No-load current	mA	15	180
5	堵转转矩	Stall torque	mNm	11.4	5.9
6	堵转电流	Stall current	mA	1150	2500
7	额定转矩	Nominal torque	mNm	3.0	1.4
8	额定转速	Nominal speed	rpm	8320	13330
9	额定电流	Nominal current	mA	310	730
10	最大输出功率	Max. output power	W	3.37	2.69
11	最大效率	Max. efficiency	%	78	54
12	反电势常数	Back-EMF constant	mV/rpm	1.05	0.27
13	转矩常数	Torque constant	mNm/A	10.01	2.53
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	995	2979
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.25	0.17
16	重量	Weight	g	17.7	9.5

### 齿轮组主要技术指标 (金属加工) | Gearbox Characteristics (Metal CNC)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	4	80	240	12.8
2	16	120	360	14.7
3	64	160	480	16.8
4	256	180	540	18.9
5	1024	200	600	21
6	4096	200	600	23.1

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

# 精密齿轮减速电机 PRECISION GEARMOTOR

## 13\*\*...13\*P... | 行星齿轮系列 Planetary Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input checked="" type="checkbox"/> 无刷电机 BLDC motor <input checked="" type="checkbox"/> 空心杯电机 Coreless motor <input checked="" type="checkbox"/> 铁芯电机 Cored motor	<input checked="" type="checkbox"/> 金属加工 Metal CNC <input type="checkbox"/> 金属注塑 Metal injection <input type="checkbox"/> 粉末冶金 Powder metallurgy <input type="checkbox"/> 塑胶注塑 Plastic injection	<input checked="" type="checkbox"/> 含油轴承 Slewing bearing <input type="checkbox"/> 滚珠轴承 Ball bearing

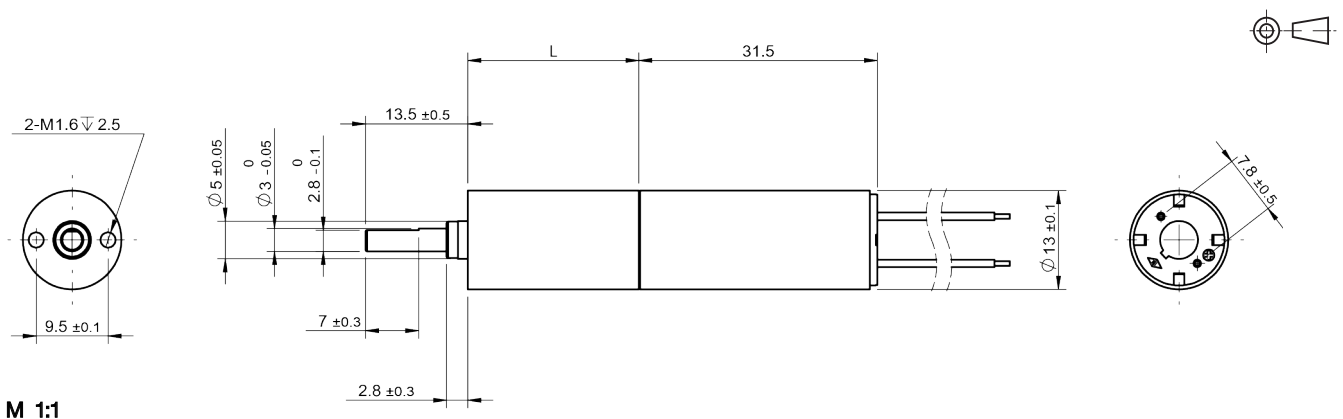
### 电机主要技术指标 | Motor Characteristics

		1331N5M09-87-12.0	1331N7M02-110-6.0	1331N7M01-96-24.0	
1 电压	Voltage	V	12.0	6.0	24.0
2 端电阻	Terminal resistance	Ω	15.7	2.6	39.8
3 空载转速	No-load speed	rpm	8700	11000	9600
4 空载电流	No-load current	mA	8	25	4
5 堵转转矩	Stall torque	mNm	9.8	11.8	14.1
6 堵转电流	Stall current	mA	760	2310	600
7 额定转矩	Nominal torque	mNm	3.0	3.0	3.5
8 额定转速	Nominal speed	rpm	6040	8200	7220
9 额定电流	Nominal current	mA	240	610	150
10 最大输出功率	Max. output power	W	2.23	3.39	3.56
11 最大效率	Max. efficiency	%	81	80	84
12 反电势常数	Back-EMF constant	mV/rpm	1.4	0.5	2.5
13 转矩常数	Torque constant	mNm/A	13	5.2	23.7
14 转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	890	930	680
15 转子惯量	Rotor inertia	gcm <sup>2</sup>	0.52	0.52	0.52
16 重量	Weight	g	19	19	19

### 齿轮组主要技术指标 (金属加工) | Gearbox Characteristics (Metal CNC)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	4	80	240	10.3
2	16	120	360	13.6
3	64	160	480	16.9
4	256	180	540	20.2
5	1024	200	600	23.5
6	4096	200	600	26.8

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## 16\*\*...16\*\*P... | B16\*\*...16\*\*P... | 行星齿轮系列 Planetary Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<ul style="list-style-type: none"> <li>■ 无刷电机 BLDC motor</li> <li>■ 空心杯电机 Coreless motor</li> <li>■ 铁芯电机 Cored motor</li> </ul>	<ul style="list-style-type: none"> <li>■ 金属加工 Metal CNC</li> <li>■ 金属注塑 Metal injection</li> <li>■ 粉末冶金 Powder metallurgy</li> <li>■ 塑胶注塑 Plastic injection</li> </ul>	<ul style="list-style-type: none"> <li>■ 含油轴承 Slewing bearing</li> <li>■ 滚珠轴承 Ball bearing</li> </ul>

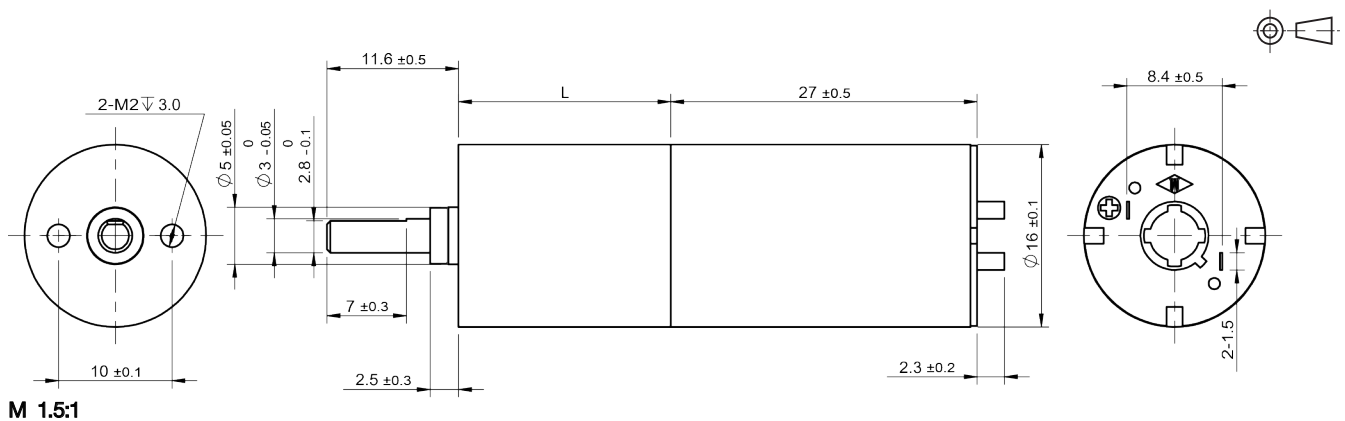
### 电机主要技术指标 | Motor Characteristics

		1627N5M21-113-12.0	1625N9M01-115-3.0	B1635N2B01-112-3.0
1 电压	Voltage	V	12.0	3.0
2 端电阻	Terminal resistance	Ω	11.8	1.1
3 空载转速	No-load speed	rpm	11300	11500
4 空载电流	No-load current	mA	13	50
5 堵转转矩	Stall torque	mNm	10.1	6.6
6 堵转电流	Stall current	mA	1020	2730
7 额定转矩	Nominal torque	mNm	3.0	1.0
8 额定转速	Nominal speed	rpm	7940	9750
9 额定电流	Nominal current	mA	310	460
10 最大输出功率	Max. output power	W	3.0	2.0
11 最大效率	Max. efficiency	%	79	75
12 反电势常数	Back-EMF constant	mV/rpm	1.0	0.26
13 转矩常数	Torque constant	mNm/A	10.0	2.45
14 转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1120	1750
15 转子惯量	Rotor inertia	gcm <sup>2</sup>	0.6	0.78
16 重量	Weight	g	25	21.8

### 齿轮组主要技术指标 (粉末冶金) | Gearbox Characteristics (Powder metallurgy)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	4	80	240	15.05
2	14~29	120	360	18.7
3	35~157	160	480	22.35
4	231~690	200	600	26
5	1014~3027	240	720	29.65
6	--	--	--	--

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

# 精密齿轮减速电机

## PRECISION GEARMOTOR

### 19\*\*...20\*P... | B20\*\*...20\*P... | C20\*\*...20\*P... | 行星齿轮系列 Planetary Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input checked="" type="checkbox"/> 无刷电机 BLDC motor <input checked="" type="checkbox"/> 空心杯电机 Coreless motor <input checked="" type="checkbox"/> 铁芯电机 Cored motor	<input type="checkbox"/> 金属加工 Metal CNC <input checked="" type="checkbox"/> 金属注塑 Metal injection <input type="checkbox"/> 粉末冶金 Powder metallurgy <input checked="" type="checkbox"/> 塑胶注塑 Plastic injection	<input checked="" type="checkbox"/> 含油轴承 Slewing bearing <input type="checkbox"/> 滚珠轴承 Ball bearing

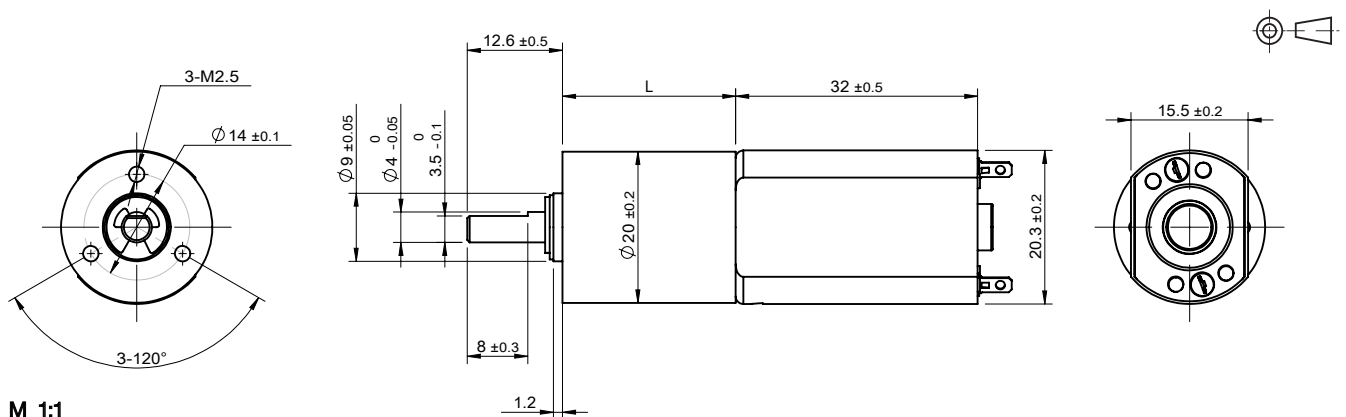
### 电机主要技术指标 | Motor Characteristics

		1925N9M02-80-12.0	B2040NH2B02-80-12.0	C2032F41-0141
1 电压	Voltage	V	12.0	12.0
2 端电阻	Terminal resistance	Ω	9.6	3.6
3 空载转速	No-load speed	rpm	8000	8000
4 空载电流	No-load current	mA	15	220
5 堵转转矩	Stall torque	mNm	17.5	41.6
6 堵转电流	Stall current	mA	1250	3330
7 额定转矩	Nominal torque	mNm	4.00	7.60
8 额定转速	Nominal speed	rpm	6170	6540
9 额定电流	Nominal current	mA	300	790
10 最大输出功率	Max. output power	W	3.66	8.72
11 最大效率	Max. efficiency	%	79	55
12 反电势常数	Back-EMF constant	mV/rpm	1.48	1.40
13 转矩常数	Torque constant	mNm/A	14.15	13.38
14 转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	460	190
15 转子惯量	Rotor inertia	gcm <sup>2</sup>	0.6	2
16 重量	Weight	g	30	80

### 齿轮组主要技术指标 ( 塑胶注塑 ) | Gearbox Characteristics ( Plastic injection )

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length ( L )
		mNm	mNm	mm
1	--	--	--	--
2	16~36	150	450	22.9
3	64~216	300	900	28.2
4	256~1296	500	1500	33.5
5	--	--	--	--
6	--	--	--	--

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## 22\*\*...22\*P... | 行星齿轮系列 Planetary Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<ul style="list-style-type: none"> <li>■ 无刷电机 BLDC motor</li> <li>■ 空心杯电机 Coreless motor</li> <li>■ 铁芯电机 Cored motor</li> </ul>	<ul style="list-style-type: none"> <li>■ 金属加工 Metal CNC</li> <li>■ 金属注塑 Metal injection</li> <li>■ 粉末冶金 Powder metallurgy</li> <li>■ 塑胶注塑 Plastic injection</li> </ul>	<ul style="list-style-type: none"> <li>■ 含油轴承 Slewing bearing</li> <li>■ 滚珠轴承 Ball bearing</li> </ul>

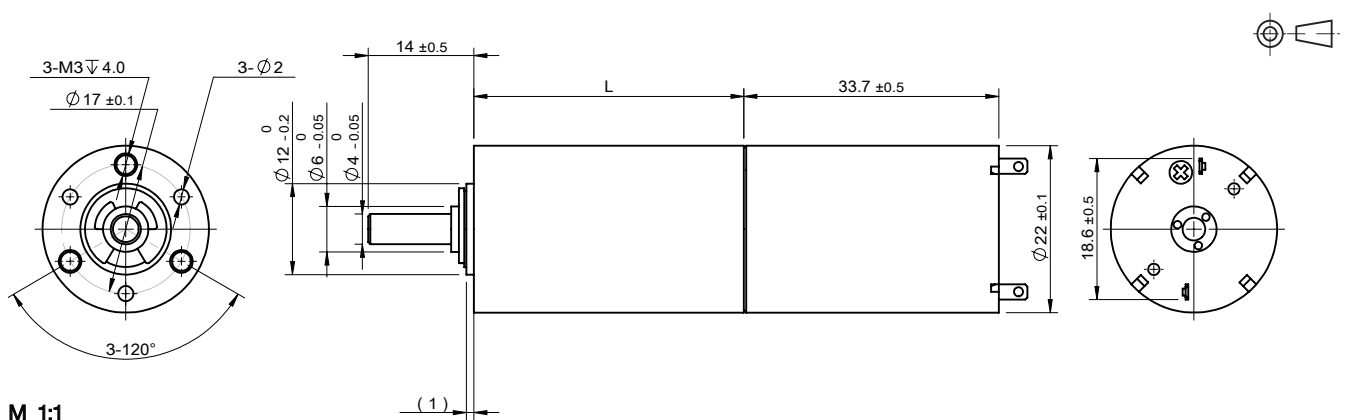
### 电机主要技术指标 | Motor Characteristics

		2232N5M2B03-81-6.0	2232N9M02-60-6.8	2232N9M01-110-24.0	
1 电压	Voltage	V	6.0	6.8	24.0
2 端电阻	Terminal resistance	Ω	2.0	3.0	17.2
3 空载转速	No-load speed	rpm	8100	6000	11000
4 空载电流	No-load current	mA	20	15	8
5 堵转转矩	Stall torque	mNm	20.9	24.2	28.8
6 堵转电流	Stall current	mA	3000	2270	1400
7 额定转矩	Nominal torque	mNm	4.0	5.0	7.0
8 额定转速	Nominal speed	rpm	6550	4760	8330
9 额定电流	Nominal current	mA	590	480	350
10 最大输出功率	Max. output power	W	4.44	3.81	8.31
11 最大效率	Max. efficiency	%	84	84	86
12 反电势常数	Back-EMF constant	mV/rpm	0.74	1.13	2.17
13 转矩常数	Torque constant	mNm/A	7.03	10.75	20.72
14 转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	387	250	380
15 转子惯量	Rotor inertia	gcm <sup>2</sup>	4.4	4.4	4.4
16 重量	Weight	g	55.8	55.8	55.8

### 齿轮组主要技术指标 (粉末冶金) | Gearbox Characteristics (Powder metallurgy)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length ( L )
		mNm	mNm	mm
1	5	100	300	23.3
2	18-25	300	900	29.5
3	66-136	400	1200	35.7
4	246-735	500	1500	41.9
5	1475-3968	600	1800	48.1
6	--	--	--	--

### 外观图 | Outline Drawing



M 1:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

# 精密齿轮减速电机

## PRECISION GEARMOTOR

### 24\*\*...24\*P... | B20\*\*...24\*P... | C24\*\*...24\*P... | 行星齿轮系列 Planetary Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input checked="" type="checkbox"/> 无刷电机 BLDC motor <input checked="" type="checkbox"/> 空心杯电机 Coreless motor <input checked="" type="checkbox"/> 铁芯电机 Cored motor	<input type="checkbox"/> 金属加工 Metal CNC <input checked="" type="checkbox"/> 金属注塑 Metal injection <input type="checkbox"/> 粉末冶金 Powder metallurgy <input checked="" type="checkbox"/> 塑胶注塑 Plastic injection	<input checked="" type="checkbox"/> 含油轴承 Slewing bearing <input type="checkbox"/> 滚珠轴承 Ball bearing

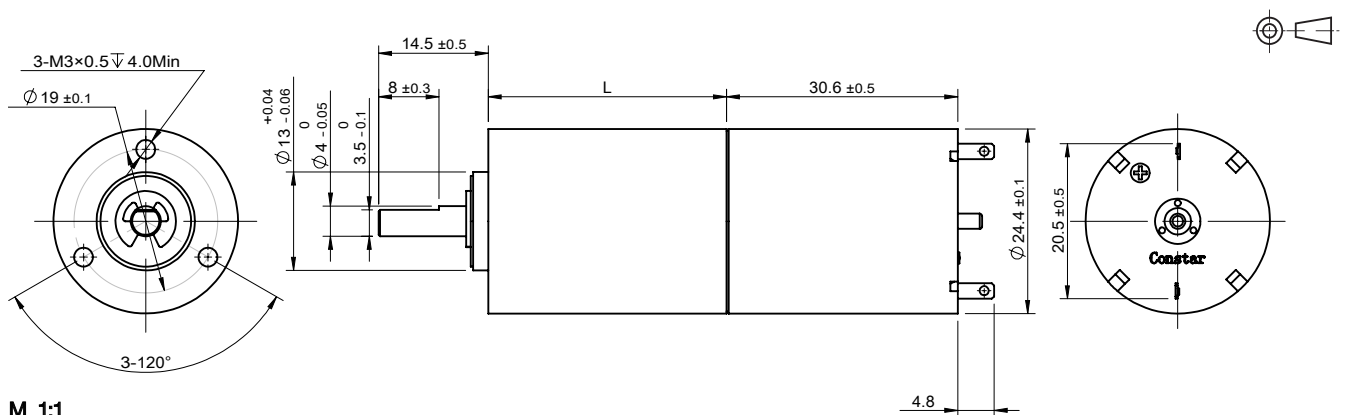
### 电机主要技术指标 | Motor Characteristics

		2433N5M2B01-78-4.5	B2040NH2B-120-24.0	C2430R23-0010-12.0
1 电压	Voltage	V	4.5	24.0
2 端电阻	Terminal resistance	Ω	0.5	3.54
3 空载转速	No-load speed	rpm	7800	12000
4 空载电流	No-load current	mA	30	140
5 堵转转矩	Stall torque	mNm	49.3	124.2
6 堵转电流	Stall current	mA	9000	6780
7 额定转矩	Nominal torque	mNm	10.10	18.20
8 额定转速	Nominal speed	rpm	6200	10240
9 额定电流	Nominal current	mA	1870	1110
10 最大输出功率	Max. output power	W	10.06	39.02
11 最大效率	Max. efficiency	%	89	73
12 反电势常数	Back-EMF constant	mV/rpm	0.58	1.96
13 转矩常数	Torque constant	mNm/A	5.49	18.70
14 转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	158	96.6
15 转子惯量	Rotor inertia	gcm <sup>2</sup>	2.2	2.2
16 重量	Weight	g	68	68

### 齿轮组主要技术指标 ( 塑胶注塑 ) | Gearbox Characteristics ( Plastic injection )

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length ( L )
1	--	mNm	mNm	mm
2	16~36	300	600	24.7
3	64~216	600	1200	31.7
4	256~1296	1000	2000	38.7
5	--	--	--	--
6	--	--	--	--

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## 25\*\*...25MP... | 行星齿轮系列 Planetary Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input checked="" type="checkbox"/> 无刷电机 BLDC motor <input checked="" type="checkbox"/> 空心杯电机 Coreless motor <input checked="" type="checkbox"/> 铁芯电机 Cored motor	<input type="checkbox"/> 金属加工 Metal CNC <input type="checkbox"/> 金属注塑 Metal injection <input checked="" type="checkbox"/> 粉末冶金 Powder metallurgy <input type="checkbox"/> 塑胶注塑 Plastic injection	<input checked="" type="checkbox"/> 含油轴承 Slewing bearing <input checked="" type="checkbox"/> 滚珠轴承 Ball bearing

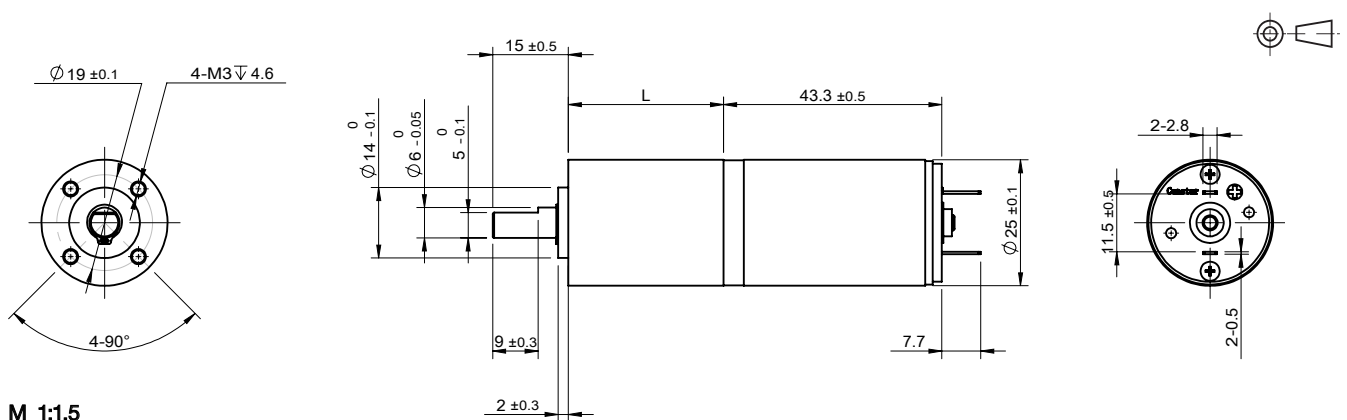
### 电机主要技术指标 | Motor Characteristics

		2543N9C2B01-65-48.0	2554N9C2B04-82-24.0	2543N9C2B03-65-24.0
1 电压	Voltage	V	48.0	24.0
2 端电阻	Terminal resistance	Ω	23.0	3.1
3 空载转速	No-load speed	rpm	6500	8200
4 空载电流	No-load current	mA	20	35
5 堵转转矩	Stall torque	mNm	144.6	214.4
6 堵转电流	Stall current	mA	2090	7740
7 额定转矩	Nominal torque	mNm	42.6	32.4
8 额定转速	Nominal speed	rpm	4580	6960
9 额定电流	Nominal current	mA	630	1200
10 最大输出功率	Max. output power	W	24.6	46.1
11 最大效率	Max. efficiency	%	81	87
12 反电势常数	Back-EMF constant	mV/rpm	7.3	2.9
13 转矩常数	Torque constant	mNm/A	69.8	27.8
14 转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	45	38.3
15 转子惯量	Rotor inertia	gcm <sup>2</sup>	13.2	14.2
16 重量	Weight	g	98	120

### 齿轮组主要技术指标 (粉末冶金) | Gearbox Characteristics (Powder metallurgy)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	3.6,4.25	300	900	18.3
2	13~18	500	1500	25
3	36~77	1000	3000	30.8
4	114~326	1000	3000	36.6
5	467~1386	1000	3000	42.4
6	--	--	--	--

### 外观图 | Outline Drawing



M 1:1.5

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

# 精密齿轮减速电机

## PRECISION GEARMOTOR

### 25\*\*...26MP... | 行星齿轮系列 Planetary Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input checked="" type="checkbox"/> 无刷电机 BLDC motor <input checked="" type="checkbox"/> 空心杯电机 Coreless motor <input checked="" type="checkbox"/> 铁芯电机 Cored motor	<input checked="" type="checkbox"/> 金属加工 Metal CNC <input type="checkbox"/> 金属注塑 Metal injection <input type="checkbox"/> 粉末冶金 Powder metallurgy <input type="checkbox"/> 塑胶注塑 Plastic injection	<input type="checkbox"/> 含油轴承 Slewing bearing <input checked="" type="checkbox"/> 滚珠轴承 Ball bearing

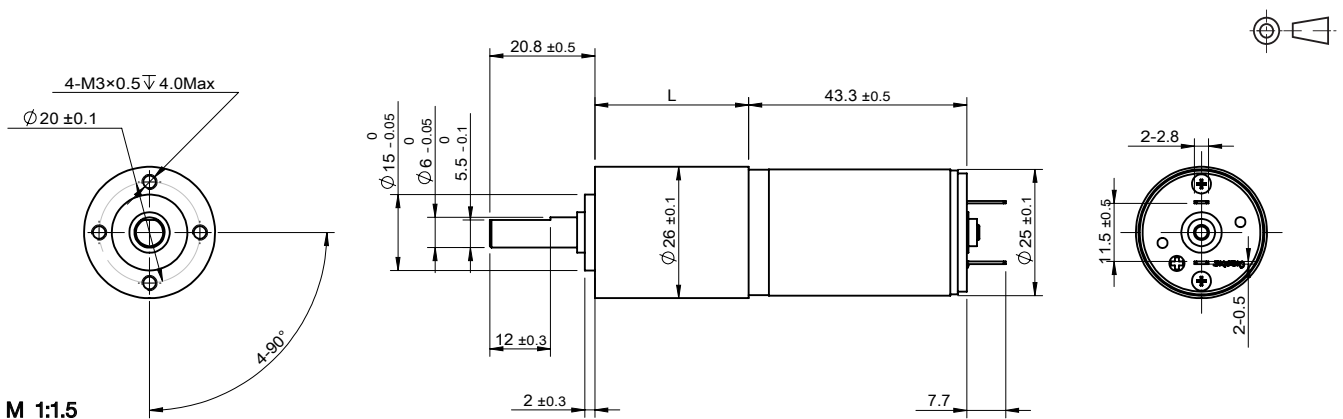
### 电机主要技术指标 | Motor Characteristics

		2543N9C2B01-65-48.0	2554N9C2B04-82-24.0	2543N9C2B03-65-24.0
1 电压	Voltage	V	48.0	24.0
2 端电阻	Terminal resistance	Ω	23.0	3.1
3 空载转速	No-load speed	rpm	6500	8200
4 空载电流	No-load current	mA	20	35
5 堵转转矩	Stall torque	mNm	144.6	214.4
6 堵转电流	Stall current	mA	2090	7740
7 额定转矩	Nominal torque	mNm	42.6	32.4
8 额定转速	Nominal speed	rpm	4580	6960
9 额定电流	Nominal current	mA	630	1200
10 最大输出功率	Max. output power	W	24.6	46.0
11 最大效率	Max. efficiency	%	81	87
12 反电势常数	Back-EMF constant	mV/rpm	7.3	2.9
13 转矩常数	Torque constant	mNm/A	69.8	27.8
14 转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	45	38
15 转子惯量	Rotor inertia	gcm <sup>2</sup>	13.2	14.2
16 重量	Weight	g	98	120

### 齿轮组主要技术指标 (金属加工) | Gearbox Characteristics (Metal CNC)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	3.7,5,2	500	750	21.5
2	13~27	750	1100	30.5
3	50~140	2000	3000	39.5
4	187~352	2500	3750	48.5
5	--	--	--	--
6	--	--	--	--

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com



### 30\*\*...28\*P... | B29\*\*...28\*P... | C28\*\*...28\*P... | 行星齿轮系列 Planetary Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<ul style="list-style-type: none"> <li>■ 无刷电机 BLDC motor</li> <li>■ 空心杯电机 Coreless motor</li> <li>■ 铁芯电机 Cored motor</li> </ul>	<ul style="list-style-type: none"> <li>■ 金属加工 Metal CNC</li> <li>■ 金属注塑 Metal injection</li> <li>■ 粉末冶金 Powder metallurgy</li> <li>■ 塑胶注塑 Plastic injection</li> </ul>	<ul style="list-style-type: none"> <li>■ 含油轴承 Slewing bearing</li> <li>■ 滚珠轴承 Ball bearing</li> </ul>

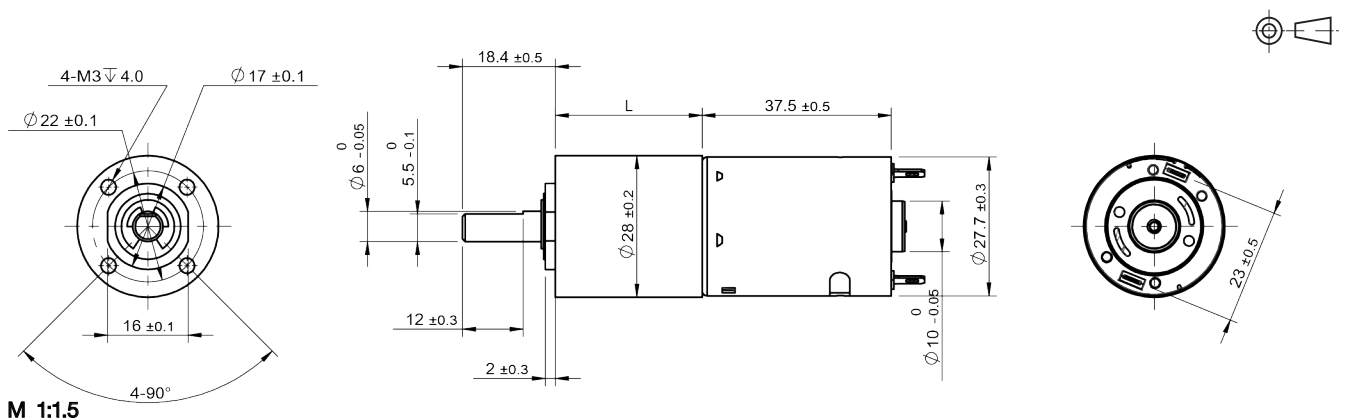
#### 电机主要技术指标 | Motor Characteristics

		3068N9C2B01-85-24.0	B2950NH2B01-130-24.0	C2838R-41-9.0
1 电压	Voltage	V	24.0	24.0
2 端电阻	Terminal resistance	Ω	0.9	1.32
3 空载转速	No-load speed	rpm	8500	13000
4 空载电流	No-load current	mA	150	300
5 堵转转矩	Stall torque	mNm	711	310
6 堵转电流	Stall current	mA	26670	18180
7 额定转矩	Nominal torque	mNm	60	28
8 额定转速	Nominal speed	rpm	7780	11830
9 额定电流	Nominal current	mA	2390	1910
10 最大输出功率	Max. output power	W	158.21	105.52
11 最大效率	Max. efficiency	%	86	76
12 反电势常数	Back-EMF constant	mV/rpm	2.81	1.82
13 转矩常数	Torque constant	mNm/A	26.81	17.34
14 转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	11.95	41.93
15 转子惯量	Rotor inertia	gcm <sup>2</sup>	33	5
16 重量	Weight	g	250	140

#### 齿轮组主要技术指标 (粉末冶金) | Gearbox Characteristics (Powder metallurgy)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	4,5	200	600	24.5
2	14~35	300	900	30.9
3	51~139	600	1800	37.3
4	246~939	1000	3000	43.7
5	--	--	--	--
6	--	--	--	--

#### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

# 精密齿轮减速电机 PRECISION GEARMOTOR

## 32\*\* ...32MP... | 行星齿轮系列 Planetary Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input checked="" type="checkbox"/> 无刷电机 BLDC motor <input checked="" type="checkbox"/> 空心杯电机 Coreless motor <input type="checkbox"/> 铁芯电机 Cored motor	<input checked="" type="checkbox"/> 金属加工 Metal CNC <input checked="" type="checkbox"/> 金属注塑 Metal injection <input checked="" type="checkbox"/> 粉末冶金 Powder metallurgy <input checked="" type="checkbox"/> 塑胶注塑 Plastic injection	<input checked="" type="checkbox"/> 含油轴承 Slewing bearing <input checked="" type="checkbox"/> 滚珠轴承 Ball bearing

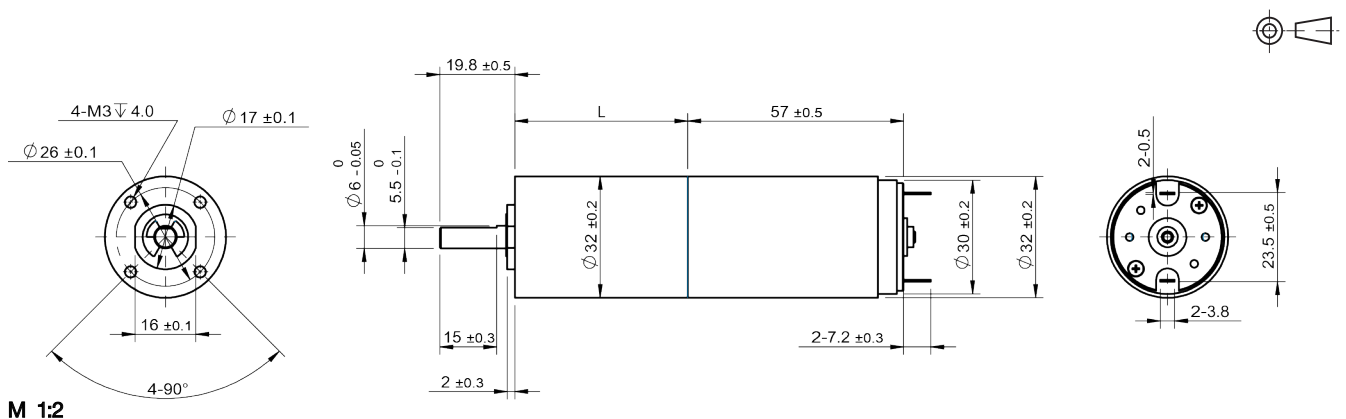
### 电机主要技术指标 | Motor Characteristics

		3257N9C2B01-54-12.0	3257N9C2B02-64-24.0	3257N9C2B08-74-12.0	
1 电压	Voltage	V	12.0	24.0	12.0
2 端电阻	Terminal resistance	Ω	0.44	2.3	1.84
3 空载转速	No-load speed	rpm	5440	6400	7400
4 空载电流	No-load current	mA	150	100	100
5 堵转转矩	Stall torque	mNm	568.1	366.4	397.7
6 堵转电流	Stall current	mA	27270	10430	13040
7 额定转矩	Nominal torque	mNm	45.5	38.5	31.8
8 额定转速	Nominal speed	rpm	5000	5730	6810
9 额定电流	Nominal current	mA	2320	1190	1130
10 最大输出功率	Max. output power	W	81	61	77
11 最大效率	Max. efficiency	%	86	81	83
12 反电势常数	Back-EMF constant	mV/rpm	2.2	3.7	3.2
13 转矩常数	Torque constant	mNm/A	20.9	35.5	30.7
14 转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	9.6	17.5	18.6
15 转子惯量	Rotor inertia	gcm <sup>2</sup>	42	42	42
16 重量	Weight	g	230	230	230

### 齿轮组主要技术指标 (塑胶注塑) | Gearbox Characteristics (Plastic injection)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
1	--	mNm	mNm	mm
2	16~33	400	1200	35.7
3	67~188	800	2400	45.7
4	272~1076	1200	3600	55.7
5	--	--	--	--
6	--	--	--	--

### 外观图 | Outline Drawing



M 1:2

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## BO43\*\*...42MP... | 行星齿轮系列 Planetary Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input checked="" type="checkbox"/> 无刷电机 BLDC motor <input type="checkbox"/> 空心杯电机 Coreless motor <input type="checkbox"/> 铁芯电机 Cored motor	<input checked="" type="checkbox"/> 金属加工 Metal CNC <input type="checkbox"/> 金属注塑 Metal injection <input type="checkbox"/> 粉末冶金 Powder metallurgy <input type="checkbox"/> 塑胶注塑 Plastic injection	<input type="checkbox"/> 含油轴承 Slewing bearing <input checked="" type="checkbox"/> 滚珠轴承 Ball bearing

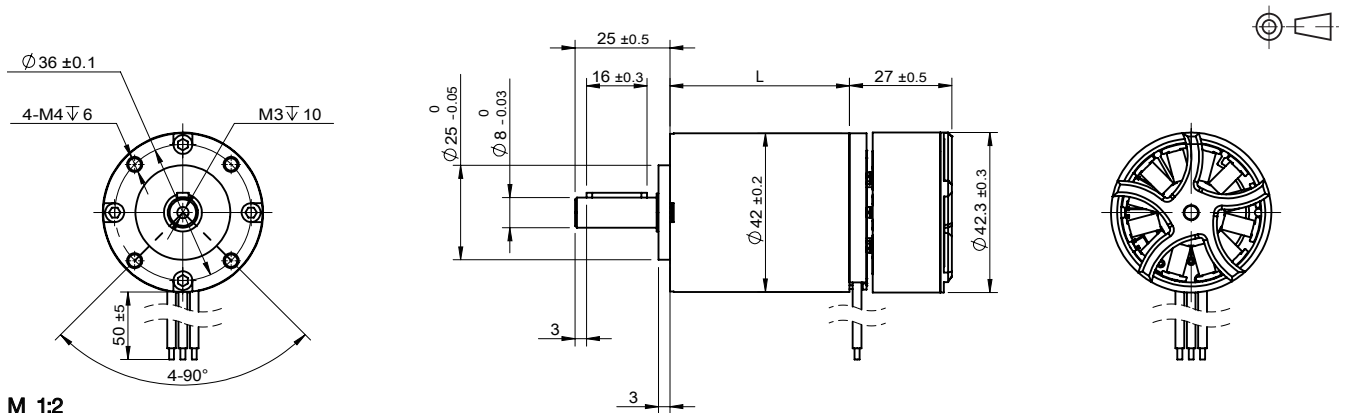
### 电机主要技术指标 | Motor Characteristics

		BO4326NBH2B01-92-48.0		BO4326NBH2B02-92-36.0		BO4326NBH2B03-92-24.0	
1	电压	Voltage	V	48.0	36.0	24.0	
2	端电阻	Terminal resistance	Ω	1.0	0.45	0.21	
3	空载转速	No-load speed	rpm	9200	9200	9200	
4	空载电流	No-load current	A	0.3	0.5	0.6	
5	堵转转矩	Stall torque	mNm	2361	2952	2817	
6	堵转电流	Stall current	A	48	80	114	
7	额定转矩	Nominal torque	mNm	192	190	194	
8	额定转速	Nominal speed	rpm	7000	7000	7000	
9	额定电流	Nominal current	A	3.6	4.8	7.2	
10	最大输出功率	Max. output power	W	569	711	678	
11	最大效率	Max. efficiency	%	84.8	84.8	86.0	
12	反电势常数	Back-EMF constant	mV/rpm	5.18	3.89	2.60	
13	转矩常数	Torque constant	mNm/A	49.5	37.1	24.8	
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	3.9	3.1	3.3	
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	153	153	153	
16	重量	Weight	g	132	132	132	

### 齿轮组主要技术指标 (金属加工) | Gearbox Characteristics (Metal CNC)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	3.65~8.63	3	6	33.8
2	28~58	7.5	15	47.4
3	67~393	15	30	61
4	--	--	--	--
5	--	--	--	--
6	--	--	--	--

### 外观图 | Outline Drawing



M 1:2

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

# 精密齿轮减速电机 PRECISION GEARMOTOR

## BO48\*\*...52MP... | 行星齿轮系列 Planetary Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input checked="" type="checkbox"/> 无刷电机 BLDC motor <input type="checkbox"/> 空心杯电机 Coreless motor <input type="checkbox"/> 铁芯电机 Cored motor	<input checked="" type="checkbox"/> 金属加工 Metal CNC <input type="checkbox"/> 金属注塑 Metal injection <input type="checkbox"/> 粉末冶金 Powder metallurgy <input type="checkbox"/> 塑胶注塑 Plastic injection	<input type="checkbox"/> 含油轴承 Slewing bearing <input checked="" type="checkbox"/> 滚珠轴承 Ball bearing

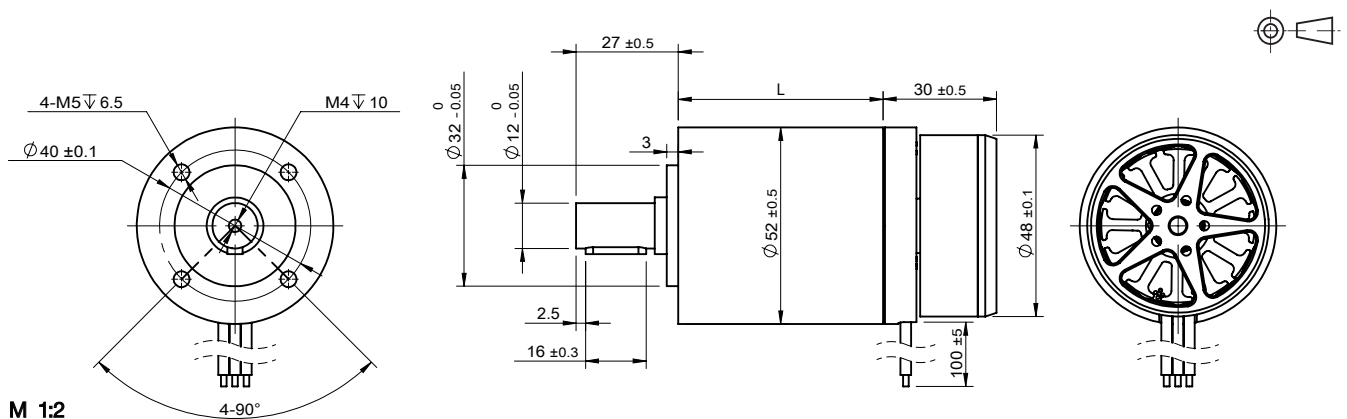
### 电机主要技术指标 | Motor Characteristics

		BO4831NH2B01-101-18.0		BO4831NH2B02-101-24.0		BO4831NH2B03-101-36.0	
1	电压	Voltage	V	18.0	24.0	36.0	
2	端电阻	Terminal resistance	Ω	0.05	0.08	0.18	
3	空载转速	No-load speed	rpm	10160	10160	10160	
4	空载电流	No-load current	A	1.1	0.9	0.6	
5	堵转转矩	Stall torque	mNm	6053	6726	6727	
6	堵转电流	Stall current	A	360	300	200	
7	额定转矩	Nominal torque	mNm	449	447	457	
8	额定转速	Nominal speed	rpm	7600	7700	7700	
9	额定电流	Nominal current	A	23.5	17.6	12.0	
10	最大输出功率	Max. output power	W	1609	1788	1788	
11	最大效率	Max. efficiency	%	89.2	89.3	89.3	
12	反电势常数	Back-EMF constant	mV/rpm	1.8	2.4	3.5	
13	转矩常数	Torque constant	mNm/A	16.9	22.5	33.7	
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1.68	1.51	1.51	
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	306	306	306	
16	重量	Weight	g	211	211	211	

### 齿轮组主要技术指标 (金属加工) | Gearbox Characteristics (Metal CNC)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	3.65~8.63	4	8	38.6
2	28~58	12	24	54.6
3	67~393	25	50	69.8
4	--	--	--	--
5	--	--	--	--
6	--	--	--	--

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## BO61\*\*...62MP... | 行星齿轮系列 Planetary Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input checked="" type="checkbox"/> 无刷电机 BLDC motor <input type="checkbox"/> 空心杯电机 Coreless motor <input type="checkbox"/> 铁芯电机 Cored motor	<input checked="" type="checkbox"/> 金属加工 Metal CNC <input type="checkbox"/> 金属注塑 Metal injection <input type="checkbox"/> 粉末冶金 Powder metallurgy <input type="checkbox"/> 塑胶注塑 Plastic injection	<input type="checkbox"/> 含油轴承 Slewing bearing <input checked="" type="checkbox"/> 滚珠轴承 Ball bearing

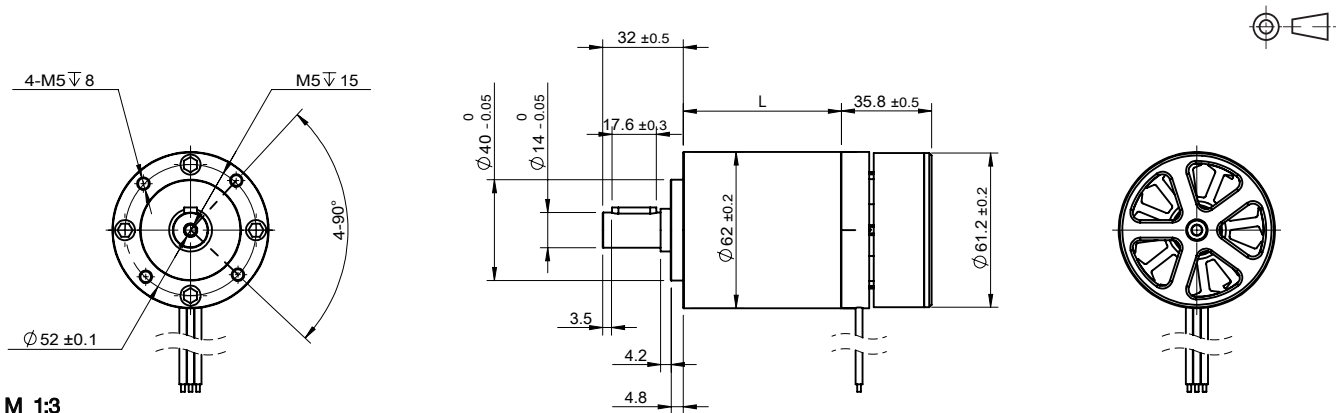
### 电机主要技术指标 | Motor Characteristics

			BO6133N2B01-50-48.0	BO6133N2B02-50-36.0	BO6133N2B03-50-24.0	
1	电压	Voltage	V	48.0	36.0	24.0
2	端电阻	Terminal resistance	Ω	0.78	0.43	0.19
3	空载转速	No-load speed	rpm	5000	5000	5000
4	空载电流	No-load current	A	0.35	0.5	0.7
5	堵转转矩	Stall torque	mNm	5577	5687	5725
6	堵转电流	Stall current	A	61.5	83.7	126.3
7	额定转矩	Nominal torque	mNm	558	553	558
8	额定转速	Nominal speed	rpm	3700	3700	3700
9	额定电流	Nominal current	A	5.5	7.3	11.0
10	最大输出功率	Max. output power	W	730	744	749
11	最大效率	Max. efficiency	%	85.4	85.1	85.6
12	反电势常数	Back-EMF constant	mV/rpm	9.5	7.2	4.8
13	转矩常数	Torque constant	mNm/A	91.2	68.3	45.6
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	0.9	0.9	0.9
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	599	599	599
16	重量	Weight	g	230	230	230

### 齿轮组主要技术指标 (金属加工) | Gearbox Characteristics (Metal CNC)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	3.65~8.63	8	16	45.1
2	28~58	25	50	62.7
3	67~393	50	100	80.3
4	--	--	--	--
5	--	--	--	--
6	--	--	--	--

### 外观图 | Outline Drawing



M 1:3

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## L0616...06PP... | 行星齿轮系列 Planetary Gearbox Series

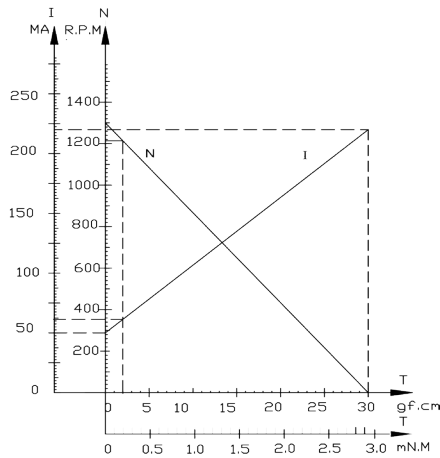
应用领域：医疗器械、安防设备、视像产品、高端智能电玩、个人保健产品等领域。

Applications: medical equipment, security systems and locks, audio and visual products, personal healthcare products, and high-end hobby products.

### 电机主要技术指标 | Motor Characteristics

			L0616-1300-3.0-06PP25-0001	L0615-1300-3.0-06PF25-0025	L0615-1800-3.0-06PR25-0035	
1	电压	Voltage	V	3.0	3.0	3.0
2	端电阻	Terminal resistance	$\Omega$	13.7	13.7	7.8
3	空载转速	No-load speed	rpm	1300	1300	1750
4	空载电流	No-load current	mA	50	50	55
5	最大转矩	Max torque	mNm	2.94	2.94	3.4
6	负载转矩	Load torque	mNm	0.2	0.2	0.2
7	负载转速	Load speed	rpm	1210	1200	1680
8	负载电流	Load current	mA	60	60	65
9	减速比	Reduction ratio		1/25	1/25	1/25
10	重量	Weight	g	1.2	1.2	1.2
11	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+70	-10~+70	-10~+70

### 特性曲线 | Characteristics Curve



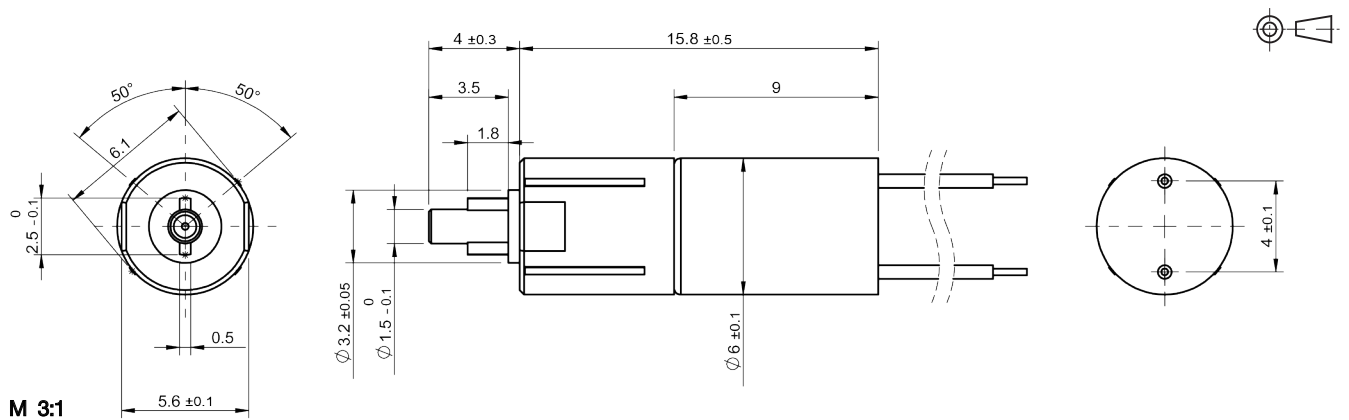
型号 / Model L0616-1300-3.0-06PP25-0001

### 可选参数 | Options

导线长度  
性能

Lead wires length  
Special coils

### 外观图 | Outline Drawing



## C1020...10PP...(1) | 行星齿轮系列 Planetary Gearbox Series

应用领域：医疗器械、安防设备、视像产品、高端智能电玩、个人保健产品等领域。

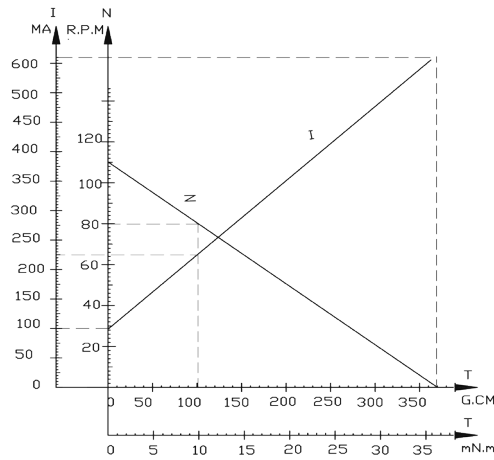
Applications: medical equipment, security systems and locks, audio and visual products, personal healthcare products, and high-end hobby products.

### 电机主要技术指标 | Motor Characteristics

C1020-110-2.5-10PP171-0051

1	电压	Voltage	V	2.5
2	端电阻	Terminal resistance	$\Omega$	3.7
3	空载转速	No-load speed	rpm	110
4	空载电流	No-load current	mA	100
5	最大转矩	Max torque	mNm	37.2
6	负载转矩	Load torque	mNm	9.8
7	负载转速	Load speed	rpm	80
8	负载电流	Load current	mA	230
9	减速比	Reduction ratio		1/171
10	重量	Weight	g	3.8
11	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+70

### 特性曲线 | Characteristics Curve



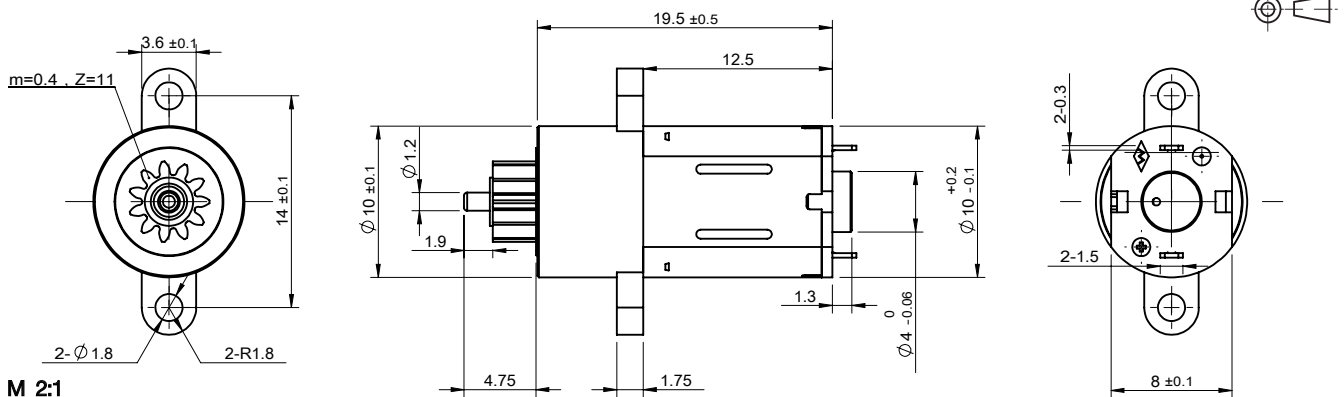
型号 / Model C1020-110-2.5-10PP171-0051

### 可选参数 | Options

导线长度  
性能

Lead wires length  
Special coils

### 外观图 | Outline Drawing



## C1020...10PP... | C1019...10PRC... (2) | 行星齿轮系列 Planetary Gearbox Series

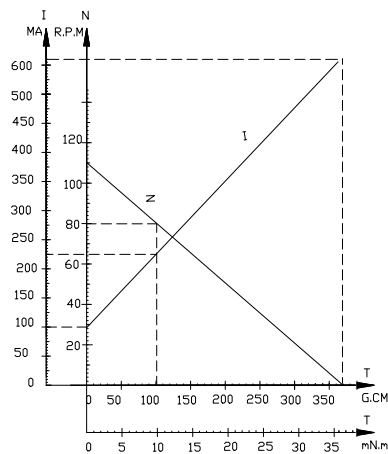
应用领域：医疗器械、安防设备、视像产品、高端智能电玩、个人保健产品等领域。

Applications: medical equipment, security systems and locks, audio and visual products, personal healthcare products, and high-end hobby products.

### 电机主要技术指标 | Motor Characteristics

			C1020-110-2.5-10PP171-0053	C1019-80-3.0-10PRC171-0108	C1019-110-3.0-10PRC171-0078
1	电压	Voltage	V	2.5	3.0
2	端电阻	Terminal resistance	$\Omega$	3.7	10.5
3	空载转速	No-load speed	rpm	110	80
4	空载电流	No-load current	mA	100	40
5	最大转矩	Max torque	mNm	37.2	25
6	负载转矩	Load torque	mNm	9.8	9.8
7	负载转速	Load speed	rpm	80	48
8	负载电流	Load current	mA	230	140
9	减速比	Reduction ratio		1/171	1/171
10	重量	Weight	g	3.8	3.8
11	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+70	-10~+70

### 特性曲线 | Characteristics Curve



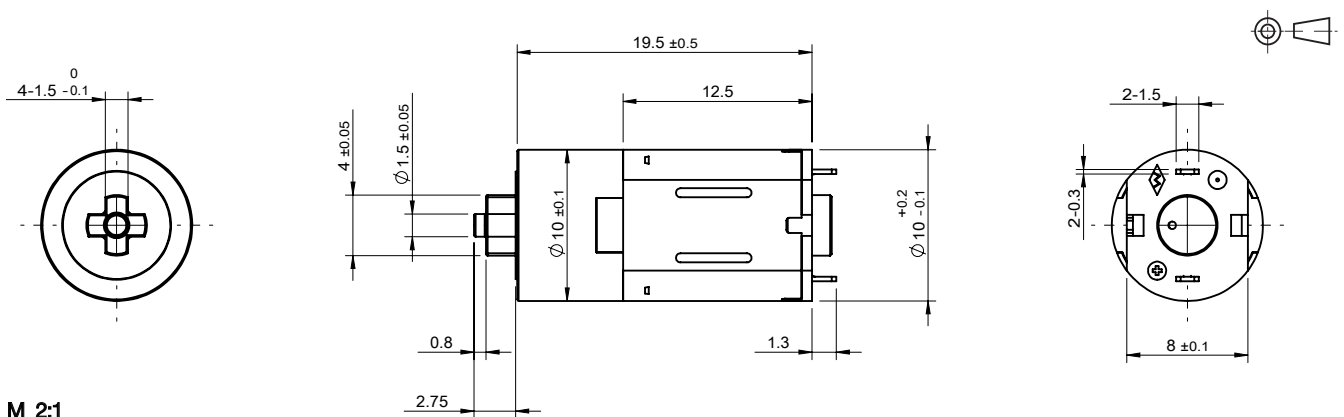
型号 / Model C1020-110-2.5-10PP171-0053

### 可选参数 | Options

导线长度  
性能

Lead wires length  
Special coils

### 外观图 | Outline Drawing





## C1020...10PP... | C1019...10PP... | C1019...10PFC... (3) | 行星齿轮系列 Planetary Gearbox Series

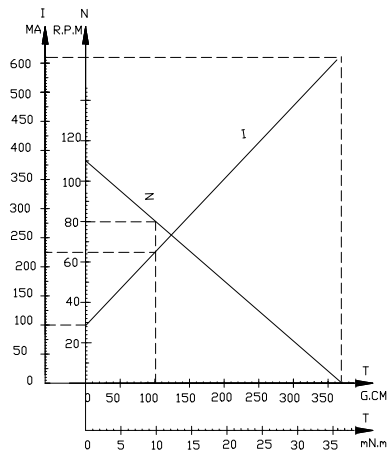
应用领域：医疗器械、安防设备、视像产品、高端智能电玩、个人保健产品等领域。

Applications: medical equipment, security systems and locks, audio and visual products, personal healthcare products, and high-end hobby products.

### 电机主要技术指标 | Motor Characteristics

			C1020-110-2.5-10PP171-0052	C1019-110-2.5-10PP171-0050	C1019-180-3.0-10PFC171-0097
1	电压	Voltage	V	2.5	2.5
2	端电阻	Terminal resistance	$\Omega$	3.7	3.5
3	空载转速	No-load speed	rpm	110	110
4	空载电流	No-load current	mA	100	80
5	最大转矩	Max torque	mNm	37.2	37.2
6	负载转矩	Load torque	mNm	9.8	9.8
7	负载转速	Load speed	rpm	80	80
8	负载电流	Load current	mA	230	240
9	减速比	Reduction ratio		1/171	1/171
10	重量	Weight	g	3.8	3.8
11	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+70	-10~+70

### 特性曲线 | Characteristics Curve

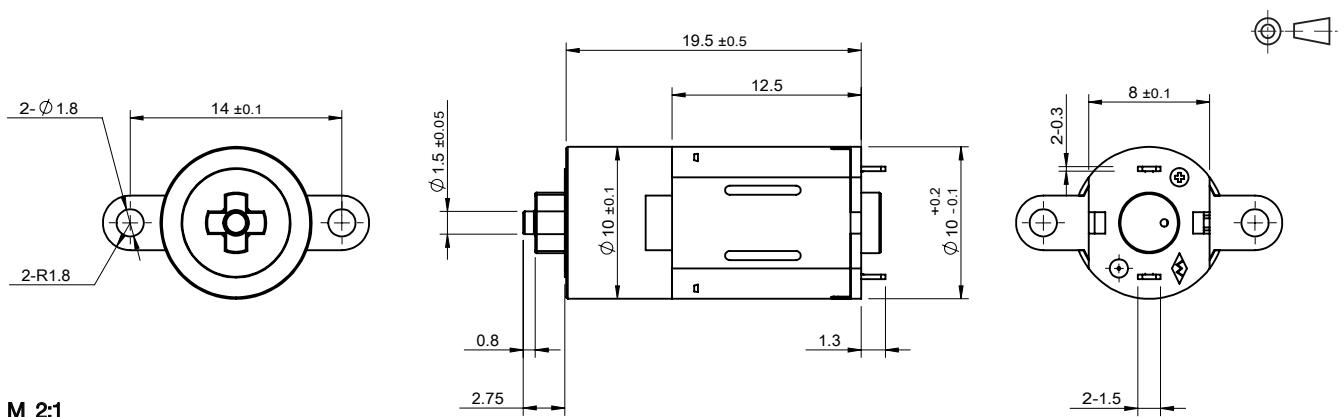


型号 / Model C1020-110-2.5-10PP171-0052

### 可选参数 | Options

导线长度 Lead wires length  
性能 Special coils

### 外观图 | Outline Drawing



C1222...12PP... | C1222...12PFC... | 行星齿轮系列 Planetary Gearbox Series

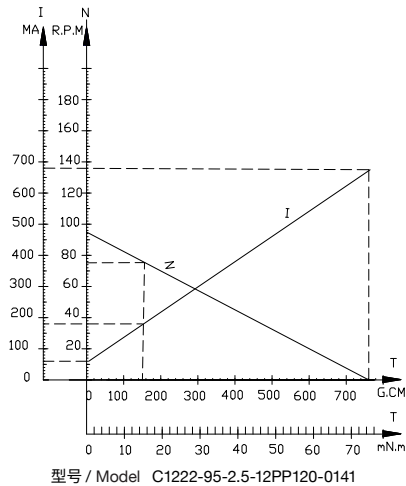
应用领域：医疗器械、安防设备、视像产品、高端智能电玩、个人保健产品等领域。

Applications: medical equipment, security systems and locks, audio and visual products, personal healthcare products, and high-end hobby products.

电机主要技术指标 | Motor Characteristics

			C1222-95-2.5-12PP120-0141	C1222-88-5.0-12PP120-0142	C1222-80-2.5-12PFC120-0228
1	电压	Voltage	V	2.5	5.0
2	端电阻	Terminal resistance	$\Omega$	3.5	17.8
3	空载转速	No-load speed	rpm	95	88
4	空载电流	No-load current	mA	60	35
5	最大转矩	Max torque	mNm	68.6	62.7
6	负载转矩	Load torque	mNm	14.7	14.7
7	负载转速	Load speed	rpm	75	66
8	负载电流	Load current	mA	180	100
9	减速比	Reduction ratio		1/120	1/120
10	重量	Weight	g	6.5	6.5
11	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+70	-10~+70

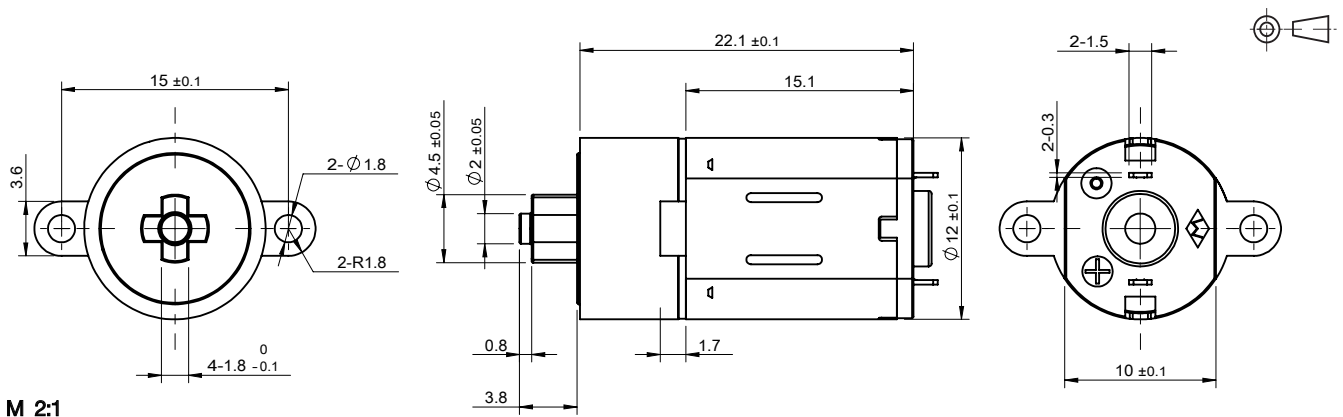
特性曲线 | Characteristics Curve



可选参数 | Options

导线长度      Lead wires length  
性能              Special coils

外观图 | Outline Drawing



## S15\*\*...12MS... | 正齿轮系列 Spur Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input type="checkbox"/> 无刷电机 BLDC motor	<input checked="" type="checkbox"/> 金属加工 Metal CNC	<input checked="" type="checkbox"/> 含油轴承 Slewing bearing
<input type="checkbox"/> 空心杯电机 Coreless motor	<input checked="" type="checkbox"/> 金属注塑 Metal injection	<input type="checkbox"/> 滚珠轴承 Ball bearing
<input type="checkbox"/> 铁芯电机 Cored motor	<input type="checkbox"/> 粉末冶金 Powder metallurgy	
<input checked="" type="checkbox"/> 步进电机 Step motor	<input type="checkbox"/> 塑胶注塑 Plastic injection	

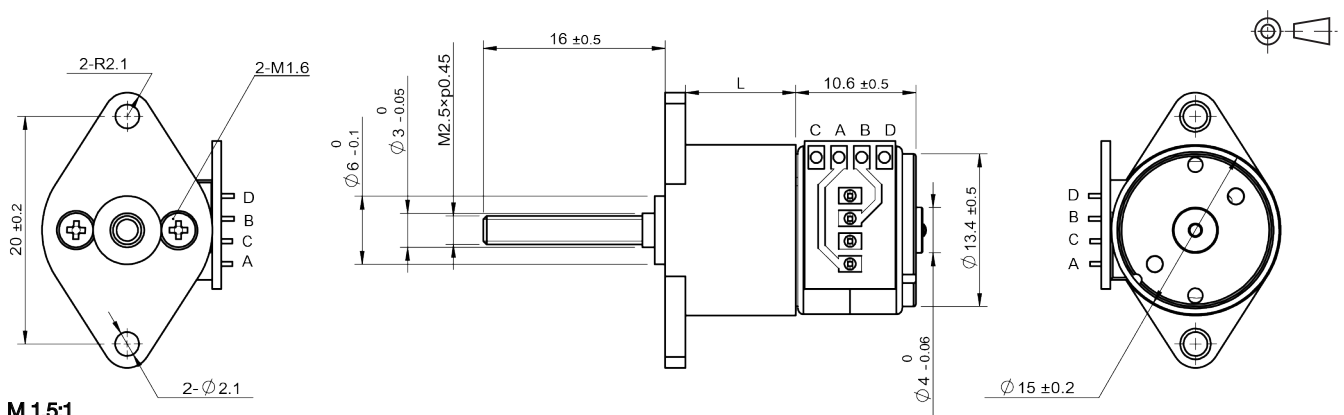
### 电机主要技术指标 | Motor Characteristics

		1511P0209-013-5.0-0008		1511P0209-013-5.0-002		1511P0209-013-6.5-0019	
1	相数	No. of phase	2	2	2	2	2
2	运行方式	Excitation Mode	1-2	2-2	2-2	2-2	2-2
3	电压	Voltage	V	5.0	5.0	5.0	6.5
4	直流电阻	Resistance	Ω	12.6	12.6	12.6	12.6
5	步距角	Step Angle	Deg	9°	18°	18°	18°
6	电流	Current	A	0.4	0.4	0.4	0.5
7	空载牵入频率	No-load Pull-in Frequency	pps	≥1500	≥1200	≥1200	≥1200
8	空载牵出频率	No-load Pull-out Frequency	pps	≥2200	≥1300	≥1300	≥1300
9	自定位转矩	Detent Torque	mNm	0.40	0.40	0.40	0.4
10	牵入转矩	Pull-in Torque	mNm	1	1	1	1
11	负载牵入频率	Load pull-in Frequency	pps	≥1000	≥800	≥800	≥500
12	重量	Weight	g	9	9	9	8.8

### 齿轮组主要技术指标 (金属加工) | Gearbox Characteristics (Metal CNC)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length ( L )
		mNm	mNm	mm
2	3, 5, 10	20	60	9
4	17, 20, 30, 36	30	90	9
4	50, 63, 100	40	120	9
5	110, 150	50	150	9
5	210, 250, 298, 380	80	240	9
7	372, 625, 1000	100	300	12
--	--	--	--	--

### 外观图 | Outline Drawing



# 精密齿轮减速电机 PRECISION GEARMOTOR

## C12\*\*...12MS... | 正齿轮系列 Spur Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input type="checkbox"/> 无刷电机 BLDC motor	<input checked="" type="checkbox"/> 金属加工 Metal CNC	<input checked="" type="checkbox"/> 含油轴承 Slewing bearing
<input type="checkbox"/> 空心杯电机 Coreless motor	<input checked="" type="checkbox"/> 金属注塑 Metal injection	<input type="checkbox"/> 滚珠轴承 Ball bearing
<input checked="" type="checkbox"/> 铁芯电机 Cored motor	<input type="checkbox"/> 粉末冶金 Powder metallurgy	
<input type="checkbox"/> 步进电机 Step motor	<input type="checkbox"/> 塑胶注塑 Plastic injection	

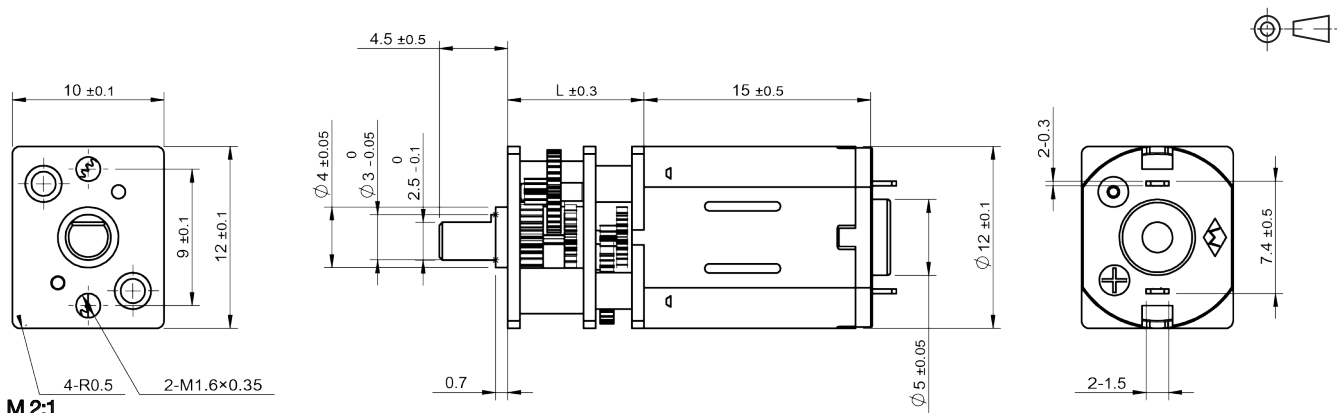
### 电机主要技术指标 | Motor Characteristics

			C1215F33-0128	C1215F13-0462	C1215F13-0260	
1	电压	Voltage	V	6.0	1.5	3.0
2	端电阻	Terminal resistance	Ω	40.0	1.2	10.8
3	空载转速	No-load speed	rpm	8300	11800	9600
4	空载电流	No-load current	mA	25	100	40
5	堵转转矩	Stall torque	mNm	0.72	1.28	0.7
6	堵转电流	Stall current	mA	150	1250	274
7	额定转矩	Nominal torque	mNm	0.35	0.60	0.3
8	额定转速	Nominal speed	rpm	4260	6287	5500
9	额定电流	Nominal current	mA	90	640	140
10	最大输出功率	Max. output power	W	0.16	0.40	0.18
11	最大效率	Max. efficiency	%	35	51	44.8
12	反电势常数	Back-EMF constant	mV/rpm	0.60	0.12	0.27
13	转矩常数	Torque constant	mNm/A	5.75	1.12	2.99
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	11543	9188	13714
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.3	0.3	0.3
16	重量	Weight	g	5.4	5.4	5.4

### 齿轮组主要技术指标 (金属加工) | Gearbox Characteristics (Metal CNC)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
2	3, 5, 10	20	60	9
4	17, 20, 30, 36	30	90	9
4	50, 63, 100	40	120	9
5	110, 150	50	150	9
5	210, 250, 298, 380	80	240	9
7	372, 625, 1000	100	300	12
--	--	--	--	--

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## C12\*\*...14MS... | 正齿轮系列 Spur Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input type="checkbox"/> 无刷电机 BLDC motor	<input checked="" type="checkbox"/> 金属加工 Metal CNC	<input checked="" type="checkbox"/> 含油轴承 Slewing bearing
<input type="checkbox"/> 空心杯电机 Coreless motor	<input checked="" type="checkbox"/> 金属注塑 Metal injection	<input type="checkbox"/> 滚珠轴承 Ball bearing
<input checked="" type="checkbox"/> 铁芯电机 Cored motor	<input type="checkbox"/> 粉末冶金 Powder metallurgy	
<input type="checkbox"/> 步进电机 Step motor	<input type="checkbox"/> 塑胶注塑 Plastic injection	

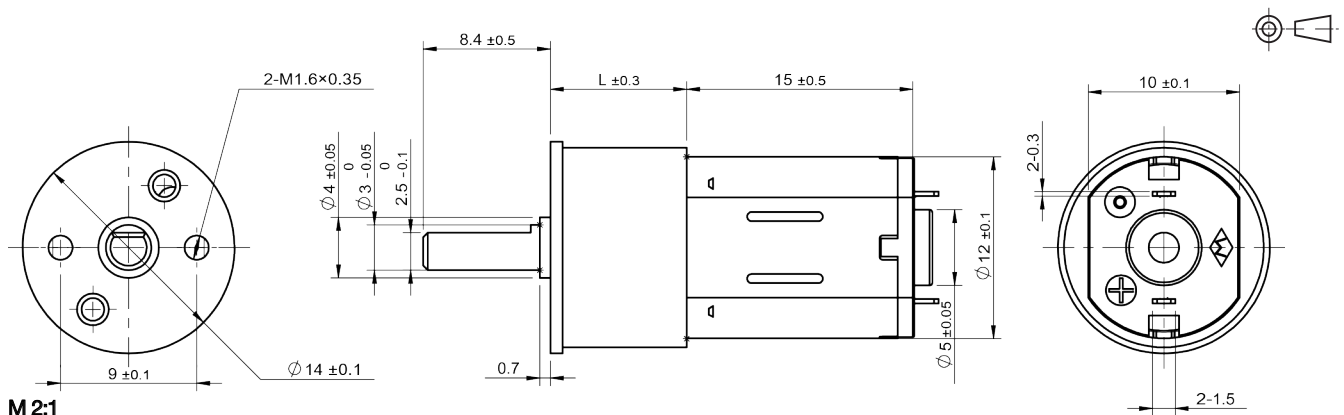
### 电机主要技术指标 | Motor Characteristics

			C1215F33-0128	C1215F13-0462	C1215F13-0260
1 电压	Voltage	V	6.0	1.5	3.0
2 端电阻	Terminal resistance	Ω	40.0	1.2	10.8
3 空载转速	No-load speed	rpm	8300	11800	9600
4 空载电流	No-load current	mA	25	100	40
5 堵转转矩	Stall torque	mNm	0.72	1.28	0.7
6 堵转电流	Stall current	mA	150	1250	274
7 额定转矩	Nominal torque	mNm	0.35	0.60	0.3
8 额定转速	Nominal speed	rpm	4260	6287	5500
9 额定电流	Nominal current	mA	90	640	140
10 最大输出功率	Max. output power	W	0.16	0.40	0.18
11 最大效率	Max. efficiency	%	35	51	44.8
12 反电势常数	Back-EMF constant	mV/rpm	0.60	0.12	0.27
13 转矩常数	Torque constant	mNm/A	5.75	1.12	2.99
14 转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	11543	9188	13714
15 转子惯量	Rotor inertia	gcm <sup>2</sup>	0.3	0.3	0.3
16 重量	Weight	g	5.4	5.4	5.4

### 齿轮组主要技术指标 (金属加工) | Gearbox Characteristics (Metal CNC)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
2	3, 5, 10	20	60	9
4	17, 20, 30, 36	30	90	9
4	50, 63	40	120	9
5	100, 150, 210	60	180	9
5	250, 298, 380	80	240	9
7	372, 625, 1000	100	300	12
--	--	--	--	--

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

# 精密齿轮减速电机 PRECISION GEARMOTOR

## C16\*\*...13MS... | 正齿轮系列 Spur Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input type="checkbox"/> 无刷电机 BLDC motor	<input checked="" type="checkbox"/> 金属加工 Metal CNC	<input checked="" type="checkbox"/> 含油轴承 Slewing bearing
<input type="checkbox"/> 空心杯电机 Coreless motor	<input checked="" type="checkbox"/> 金属注塑 Metal injection	<input type="checkbox"/> 滚珠轴承 Ball bearing
<input checked="" type="checkbox"/> 铁芯电机 Cored motor	<input type="checkbox"/> 粉末冶金 Powder metallurgy	
<input type="checkbox"/> 步进电机 Step motor	<input type="checkbox"/> 塑胶注塑 Plastic injection	

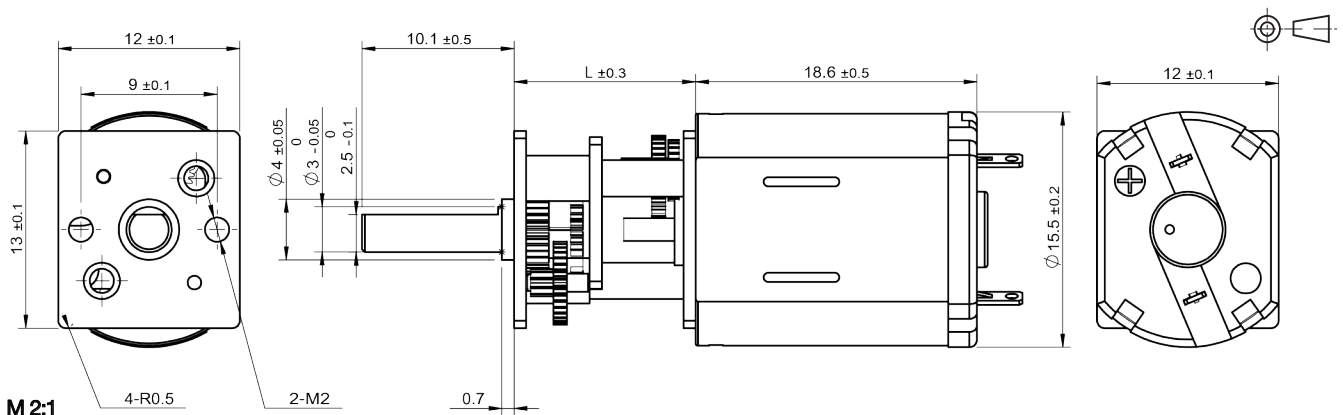
### 电机主要技术指标 | Motor Characteristics

			C1627F34AH-0055	C1620F13-0032
1	电压	Voltage	V	6.0
2	端电阻	Terminal resistance	Ω	8.8
3	空载转速	No-load speed	rpm	8600
4	空载电流	No-load current	mA	55
5	堵转转矩	Stall torque	mNm	3.75
6	堵转电流	Stall current	mA	652
7	额定转矩	Nominal torque	mNm	0.79
8	额定转速	Nominal speed	rpm	6800
9	额定电流	Nominal current	mA	180
10	最大输出功率	Max. output power	W	0.85
11	最大效率	Max. efficiency	%	51.9
12	反电势常数	Back-EMF constant	mV/rpm	0.64
13	转矩常数	Torque constant	mNm/A	6.28
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	2293
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.5
16	重量	Weight	g	16.7

### 齿轮组主要技术指标 (金属加工) | Gearbox Characteristics (Metal CNC)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
2	3, 7, 10	20	60	11
4	16, 17, 20, 30, 35	30	90	11
4	50, 63	40	120	11
4	70, 86	50	150	11
5	115, 150	60	180	11
5	210, 250	70	210	11
5	360	80	240	12

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## C1631...14MS... | 正齿轮系列 Spur Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input type="checkbox"/> 无刷电机 BLDC motor	<input checked="" type="checkbox"/> 金属加工 Metal CNC	<input checked="" type="checkbox"/> 含油轴承 Slewing bearing
<input type="checkbox"/> 空心杯电机 Coreless motor	<input checked="" type="checkbox"/> 金属注塑 Metal injection	<input type="checkbox"/> 滚珠轴承 Ball bearing
<input checked="" type="checkbox"/> 铁芯电机 Cored motor	<input type="checkbox"/> 粉末冶金 Powder metallurgy	
<input type="checkbox"/> 步进电机 Step motor	<input type="checkbox"/> 塑胶注塑 Plastic injection	

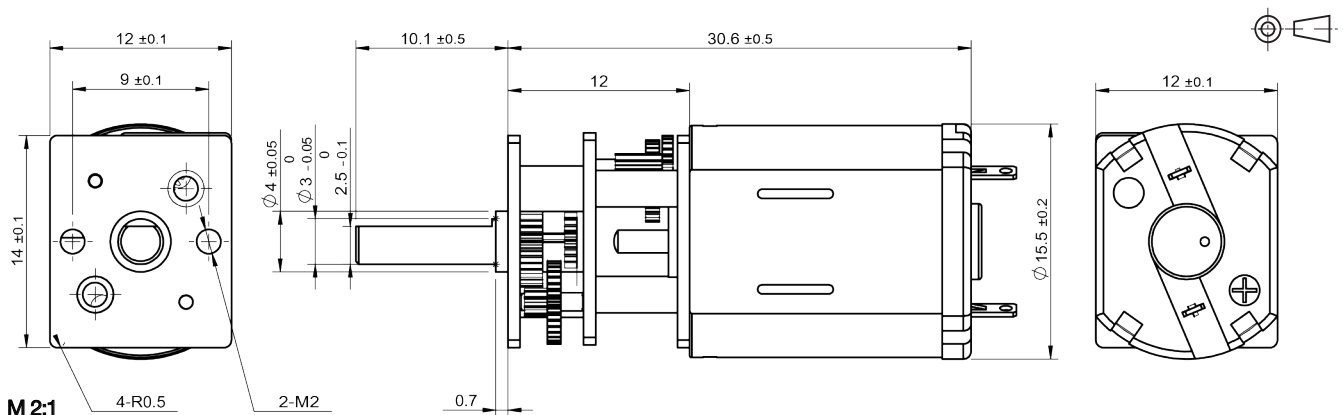
### 电机主要技术指标 | Motor Characteristics

			C1620F13-0032	C1627F13-0013	C1627F13-0050	
1	电压	Voltage	V	6.0	12.0	4.5
2	端电阻	Terminal resistance	Ω	10.3	28.2	5.5
3	空载转速	No-load speed	rpm	11700	12100	10500
4	空载电流	No-load current	mA	51	25	60
5	堵转转矩	Stall torque	mNm	2.36	3.23	2.78
6	堵转电流	Stall current	mA	580	447	790
7	额定转矩	Nominal torque	mNm	2.10	0.88	0.686
8	额定转速	Nominal speed	rpm	1305	8800	7910
9	额定电流	Nominal current	mA	520	140	240
10	最大输出功率	Max. output power	W	0.73	1.02	0.77
11	最大效率	Max. efficiency	%	50	49.9	52.9
12	反电势常数	Back-EMF constant	mV/rpm	0.47	0.93	0.4
13	转矩常数	Torque constant	mNm/A	4.47	7.65	3.81
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	4950	3750	3776
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.5	0.5	0.5
16	重量	Weight	g	10.7	10.7	10.7

### 齿轮组主要技术指标 (金属加工) | Gearbox Characteristics (Metal CNC)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
2	63	60	180	12
2	115, 130, 150, 180	70	210	12
4	210, 250, 260	80	240	12
4	300, 350	100	300	12
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## C1630...16MS... | 正齿轮系列 Spur Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input type="checkbox"/> 无刷电机 BLDC motor	<input checked="" type="checkbox"/> 金属加工 Metal CNC	<input checked="" type="checkbox"/> 含油轴承 Slewing bearing
<input type="checkbox"/> 空心杯电机 Coreless motor	<input checked="" type="checkbox"/> 金属注塑 Metal injection	<input type="checkbox"/> 滚珠轴承 Ball bearing
<input checked="" type="checkbox"/> 铁芯电机 Cored motor	<input type="checkbox"/> 粉末冶金 Powder metallurgy	
<input type="checkbox"/> 步进电机 Step motor	<input type="checkbox"/> 塑胶注塑 Plastic injection	

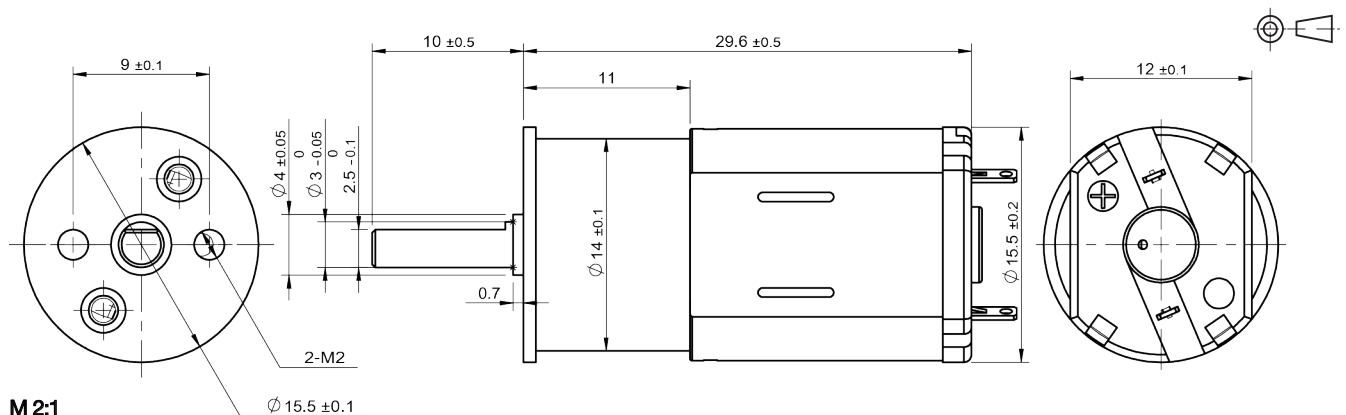
### 电机主要技术指标 | Motor Characteristics

			C1620F13-0032	C1627F13-0013	C1627F13-0050
1 电压	Voltage	V	6.0	12.0	4.5
2 端电阻	Terminal resistance	Ω	10.3	28.2	5.5
3 空载转速	No-load speed	rpm	11700	12100	10500
4 空载电流	No-load current	mA	51	25	60
5 堵转转矩	Stall torque	mNm	2.36	3.23	2.78
6 堵转电流	Stall current	mA	580	447	790
7 额定转矩	Nominal torque	mNm	2.10	0.88	0.686
8 额定转速	Nominal speed	rpm	1305	8800	7910
9 额定电流	Nominal current	mA	520	140	240
10 最大输出功率	Max. output power	W	0.73	1.02	0.77
11 最大效率	Max. efficiency	%	50	49.9	52.9
12 反电势常数	Back-EMF constant	mV/rpm	0.47	0.93	0.4
13 转矩常数	Torque constant	mNm/A	4.47	7.65	3.81
14 转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	4950	3750	3776
15 转子惯量	Rotor inertia	gcm <sup>2</sup>	0.5	0.5	0.5
16 重量	Weight	g	10.7	10.7	10.7

### 齿轮组主要技术指标 (金属加工) | Gearbox Characteristics (Metal CNC)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
2	3, 7, 10	20	60	11
4	16, 17, 20, 30, 35	30	90	11
4	50, 63	40	120	11
4	70, 86	50	150	11
5	115, 150	60	180	11
5	210, 250	70	210	11
5	360	80	240	11

### 外观图 | Outline Drawing



规格如有变更, 恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com



## 1526...16MS... | 正齿轮系列 Spur Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input type="checkbox"/> 无刷电机 BLDC motor	<input checked="" type="checkbox"/> 金属加工 Metal CNC	<input checked="" type="checkbox"/> 含油轴承 Slewing bearing
<input checked="" type="checkbox"/> 空心杯电机 Coreless motor	<input checked="" type="checkbox"/> 金属注塑 Metal injection	<input type="checkbox"/> 滚珠轴承 Ball bearing
<input type="checkbox"/> 铁芯电机 Cored motor	<input type="checkbox"/> 粉末冶金 Powder metallurgy	
<input type="checkbox"/> 步进电机 Step motor	<input type="checkbox"/> 塑胶注塑 Plastic injection	

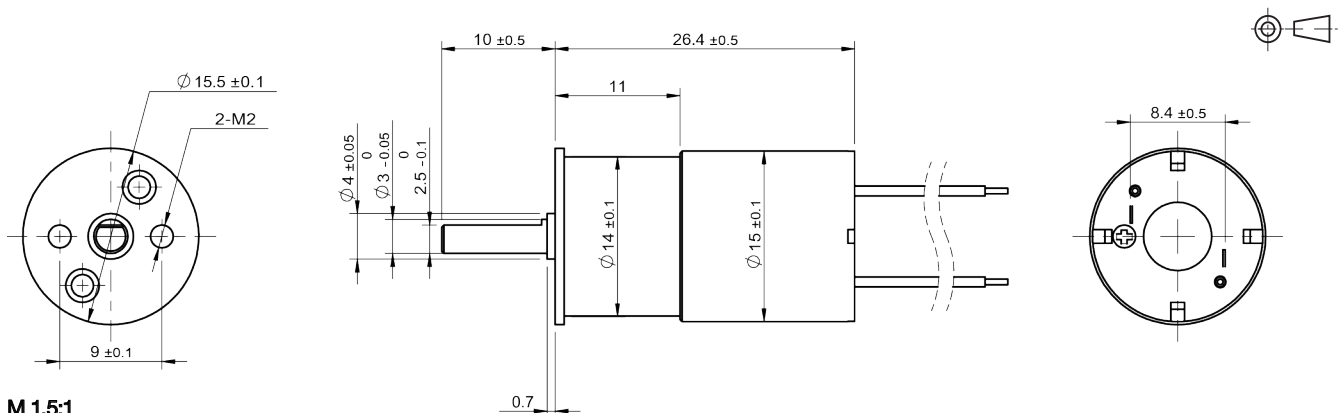
### 电机主要技术指标 | Motor Characteristics

			1515N5M07-220-18.0	1515N5M10-220-12.0
1 电压	Voltage	V	18.0	12.0
2 端电阻	Terminal resistance	Ω	30.8	8.1
3 空载转速	No-load speed	rpm	22000	24000
4 空载电流	No-load current	mA	15	50
5 堵转转矩	Stall torque	mNm	4.3	6.6
6 堵转电流	Stall current	mA	580	1480
7 额定转矩	Nominal torque	mNm	1.0	1.5
8 额定转速	Nominal speed	rpm	16890	18540
9 额定电流	Nominal current	mA	150	380
10 最大输出功率	Max. output power	W	2.48	4.15
11 最大效率	Max. efficiency	%	71	67
12 反电势常数	Back-EMF constant	mV/rpm	0.8	0.5
13 转矩常数	Torque constant	mNm/A	7.6	4.6
14 转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	5110	3640
15 转子惯量	Rotor inertia	gcm <sup>2</sup>	0.21	0.21
16 重量	Weight	g	14.2	14.2

### 齿轮组主要技术指标 (金属加工) | Gearbox Characteristics (Metal CNC)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
2	3, 7, 10	20	60	11
4	16, 17, 20, 30, 35	30	90	11
4	50, 63	40	120	11
4	70, 86	50	150	11
5	115, 150	60	180	11
5	210, 250	70	210	11
5	360	80	240	11

### 外观图 | Outline Drawing



M 1.5:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## 1638...16MS... | 正齿轮系列 Spur Gearbox Series

应用领域：医疗器械、精密仪器、工业设备等领域。

Applications: medical equipment, scientific instruments, industrial equipment, etc.

工作温度范围 | Operating temperature range: -10~+80°C

配合电机类型   Matched Motor Type	齿轮工艺   Gear Processing Technology	齿轮组输出轴承   Gearbox Output Bearing
<input type="checkbox"/> 无刷电机 BLDC motor	<input checked="" type="checkbox"/> 金属加工 Metal CNC	<input checked="" type="checkbox"/> 含油轴承 Slewing bearing
<input checked="" type="checkbox"/> 空心杯电机 Coreless motor	<input checked="" type="checkbox"/> 金属注塑 Metal injection	<input type="checkbox"/> 滚珠轴承 Ball bearing
<input type="checkbox"/> 铁芯电机 Cored motor	<input type="checkbox"/> 粉末冶金 Powder metallurgy	
<input type="checkbox"/> 步进电机 Step motor	<input type="checkbox"/> 塑胶注塑 Plastic injection	

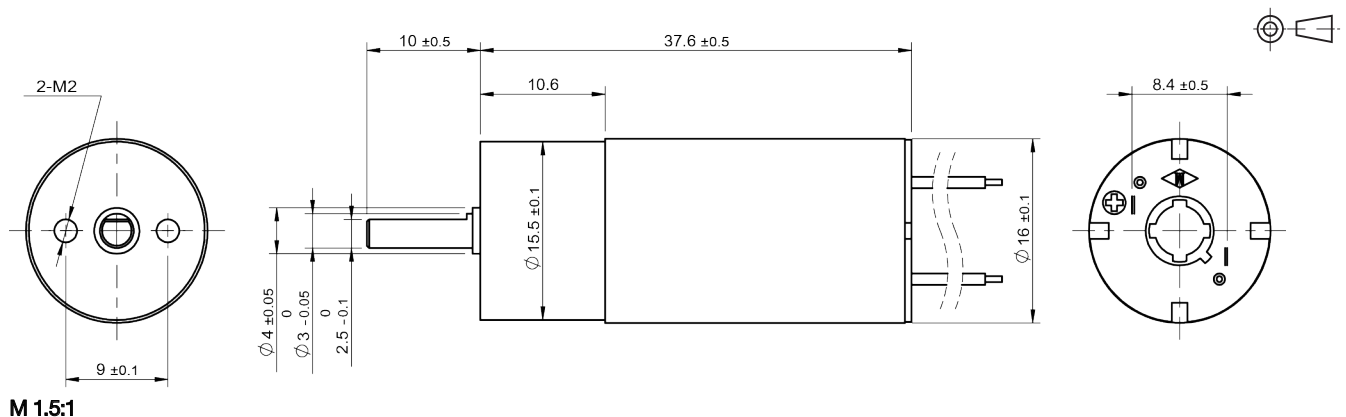
### 电机主要技术指标 | Motor Characteristics

		1627N5M21-113-12.0		1627N5M27-66-6.0	
1	电压	Voltage	V	12.0	6.0
2	端电阻	Terminal resistance	Ω	11.8	8.2
3	空载转速	No-load speed	rpm	11300	6600
4	空载电流	No-load current	mA	13	11
5	堵转转矩	Stall torque	mNm	10.1	6.1
6	堵转电流	Stall current	mA	1020	730
7	额定转矩	Nominal torque	mNm	3.0	1.5
8	额定转速	Nominal speed	rpm	7940	4990
9	额定电流	Nominal current	mA	310	190
10	最大输出功率	Max. output power	W	3.0	1.1
11	最大效率	Max. efficiency	%	79	77
12	反电势常数	Back-EMF constant	mV/rpm	1.0	0.9
13	转矩常数	Torque constant	mNm/A	10.0	8.6
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1120	1070
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.6	0.7
16	重量	Weight	g	25	25

### 齿轮组主要技术指标 (金属加工) | Gearbox Characteristics (Metal CNC)

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
2	10	20	60	10.6
3	21, 34	30	90	10.6
4	59, 75	50	150	10.6
4	105, 146	80	240	10.6
5	203, 257, 294, 360	100	300	10.6
--	--	--	--	--
--	--	--	--	--

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com





CONSTAR

## PRECISION SERVO MOTOR 精密伺服电机

Constar 精密伺服电机寿命长、可靠性高；支持高转速，调速性能好；电磁干扰低，抗干扰能力强；过载能力强，可在恶劣环境中使用；广泛应用于医疗设备、智能假肢、工业机器人等精密控制领域。

The precision servo motor is highly reliable and delivers excellent performance over extremely long lifetime. The motor produces high rotation speed with good speed regulation and low EMI. The motor has high short-term overload capacity and can operate in certain poor environment conditions. It is widely applied in precision control fields such as medical equipment, intelligent prostheses, industrial robots, etc.



# CONTENT 目录

## 精密伺服电机 PRECISION SERVO MOTOR

	电机型号 Motor No.	尺寸 Dimension	换向结构 Commutation Structure	页码 Page
1	08**M5...M...	φ8 mm	贵金属电刷/Precious Metal Commutation	158
2	10**M5...M...	φ10 mm	贵金属电刷/Precious Metal Commutation	159
3	1238M7...M...	φ12 mm	贵金属电刷/Precious Metal Commutation	160
4	12**M7...M...	φ12 mm	贵金属电刷/Precious Metal Commutation	161
5	16**C5...M...	φ16 mm	碳刷/Graphite Brush	162
6	25**C9...M...	φ25 mm	碳刷/Graphite Brush	163



## 08\*\*M5...M... | 贵金属电刷 Precious Metal Commutation

应用领域：医疗设备、智能假肢、工业机器人等精密控制领域。

Applications: medical equipment, intelligent prostheses, industrial robots, etc.

工作温度范围 | Operating temperature range: -20~+85°C

### 电机主要技术指标 | Motor Characteristics

0816N5M10-90-3.0

序号	中文名称	英文名称	单位	数值
1	电压	Voltage	V	3.0
2	端电阻	Terminal resistance	$\Omega$	14.2
3	空载转速	No-load speed	rpm	9000
4	空载电流	No-load current	mA	8
5	堵转转矩	Stall torque	mNm	0.6
6	堵转电流	Stall current	mA	210
7	额定转矩	Nominal torque	mNm	0.3
8	额定转速	Nominal speed	rpm	5490
9	额定电流	Nominal current	mA	88
10	反电势常数	Back-EMF constant	mV/rpm	0.32
11	转矩常数	Torque constant	mNm/A	3.06

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

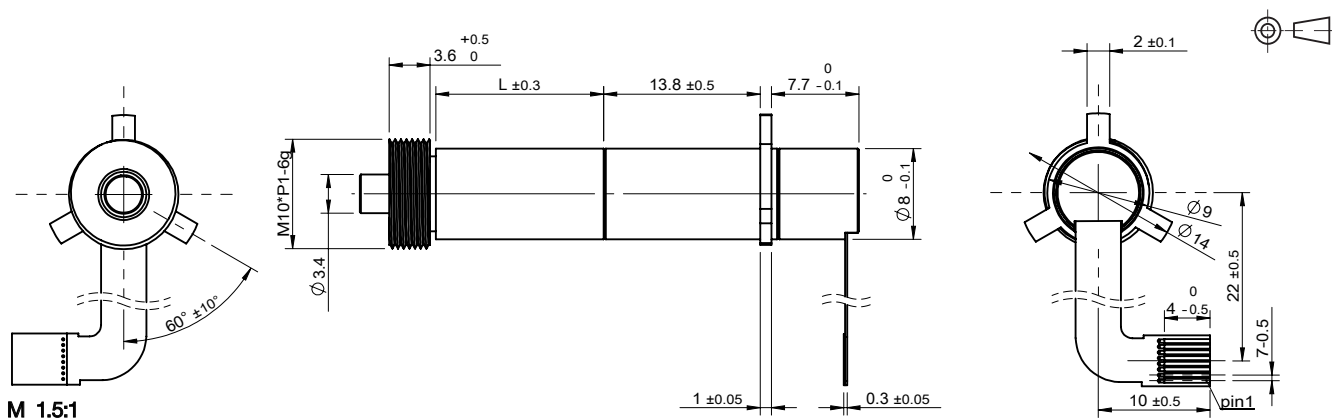
### 编码器主要技术指标 | Encoder Characteristics

序号	中文名称	英文名称	单位	数值	数值
1	通道数	Number of channels		2	3
2	分辨率	Counts per turn	cpt	16, 32, 64	16, 32, 64
3	工作电压	Supply voltage	V	5.0 (5.0)	5.0 (5.0)
4	最大转速	Max. speed	rpm	30000	30000
5	相移	Phase shift	$^{\circ}$ e	90 $\pm$ 45	90 $\pm$ 45
6	信号输出	Output signal		TTL	TTL
7	直径	Diameter	mm	8	8
8	长度	Length	mm	7.1	7.1

### 齿轮组主要技术指标 | Gearbox Characteristics

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	4	5	15	11.7
2	16	10	30	14.8
3	64	30	90	17.9
4	256	40	120	21
5	1024	50	150	24.1
6	4096	60	180	27.2

### 外观图 | Outline Drawing





## 10\*\*M5...M... | 贵金属电刷 Precious Metal Commutation

应用领域：医疗设备、智能假肢、工业机器人等精密控制领域。

Applications: medical equipment, intelligent prostheses, industrial robots, etc.

工作温度范围 | Operating temperature range: -20~+85°C

### 电机主要技术指标 | Motor Characteristics

1025N5M04-115-12.0

1	电压	Voltage	V	12.0
2	端电阻	Terminal resistance	Ω	28.0
3	空载转速	No-load speed	rpm	11500
4	空载电流	No-load current	mA	10
5	堵转转矩	Stall torque	mNm	4.2
6	堵转电流	Stall current	mA	430
7	额定转矩	Nominal torque	mNm	1.0
8	额定转速	Nominal speed	rpm	8100
9	额定电流	Nominal current	mA	140
10	反电势常数	Back-EMF constant	mV/rpm	1.02
11	转矩常数	Torque constant	mNm/A	9.73

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

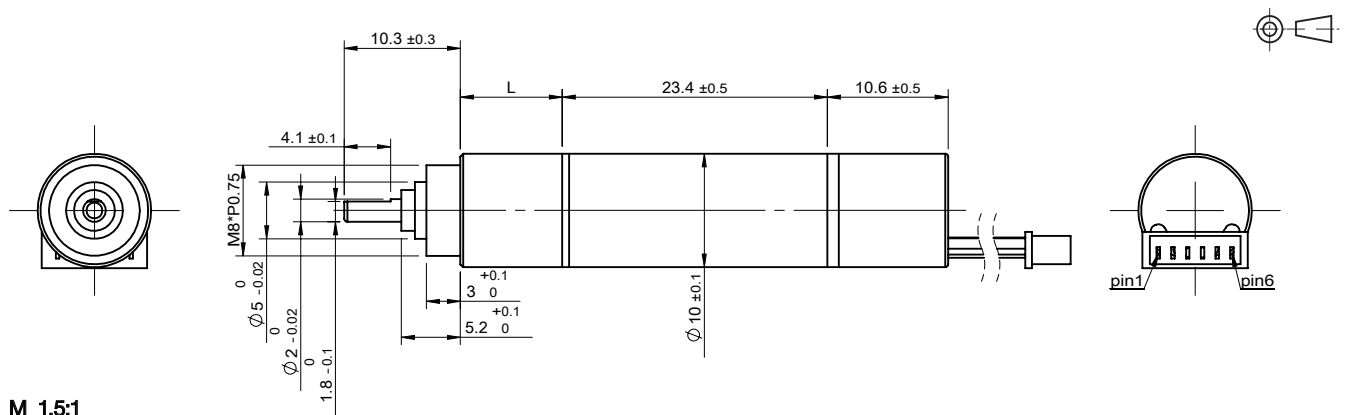
### 编码器主要技术指标 | Encoder Characteristics

1	通道数	Number of channels		2	3
2	分辨率	Counts per turn	cpt	16, 32, 64	16, 32, 64
3	工作电压	Supply voltage	V	5.0 (5.0)	5.0 (5.0)
4	最大转速	Max. speed	rpm	30000	30000
5	相移	Phase shift	°e	90±45	90±45
6	信号输出	Output signal		TTL	TTL
7	直径	Diameter	mm	10	10
8	长度	Length	mm	8.5	8.5

### 齿轮组主要技术指标 | Gearbox Characteristics

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	4	5	15	11.7
2	16	10	30	14.8
3	64	30	90	17.9
4	256	40	120	21
5	1024	50	150	24.1
6	4096	60	180	27.2

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## 1238M7...M... | 贵金属电刷 Precious Metal Commutation

应用领域：医疗设备、智能假肢、工业机器人等精密控制领域。

Applications: medical equipment, intelligent prostheses, industrial robots, etc.

工作温度范围 | Operating temperature range: -20~+85°C

### 电机主要技术指标 | Motor Characteristics

1230N7M\*\*-48-4.5

序号	中文名称	英文名称	单位	数值
1	电压	Voltage	V	4.5
2	端电阻	Terminal resistance	Ω	8.5
3	空载转速	No-load speed	rpm	4800
4	空载电流	No-load current	mA	15
5	堵转转矩	Stall torque	mNm	4.6
6	堵转电流	Stall current	mA	530
7	额定转矩	Nominal torque	mNm	2.0
8	额定转速	Nominal speed	rpm	2760
9	额定电流	Nominal current	mA	235
10	反电势常数	Back-EMF constant	mV/rpm	0.91
11	转矩常数	Torque constant	mNm/A	8.70

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

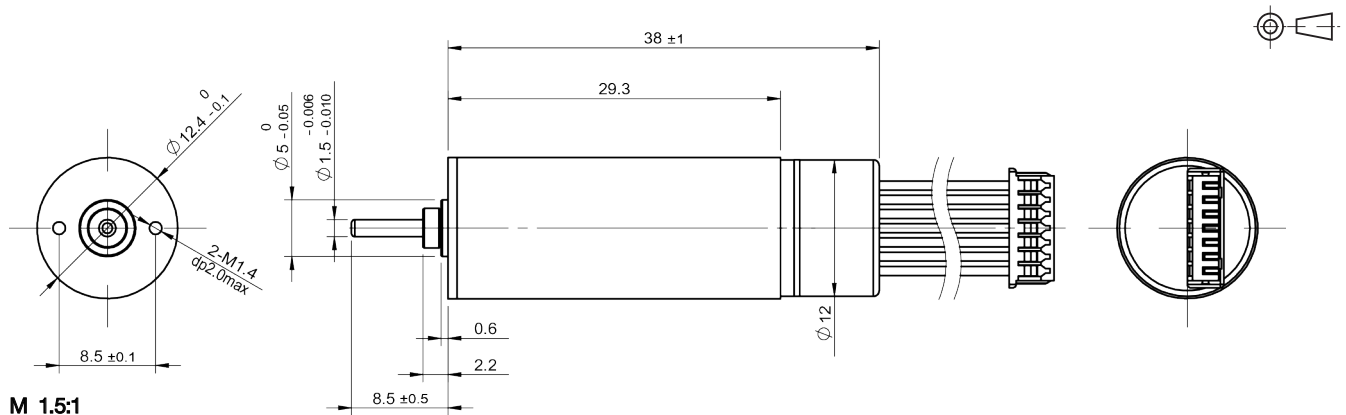
### 编码器主要技术指标 | Encoder Characteristics

序号	中文名称	英文名称	单位	数值	备注
1	通道数	Number of channels		2	3
2	分辨率	Counts per turn	cpt	16, 32, 64	16, 32, 64
3	工作电压	Supply voltage	V	5.0 (5.0)	5.0 (5.0)
4	最大转速	Max. speed	rpm	30000	30000
5	相移	Phase shift	°e	90±45	90±45
6	信号输出	Output signal		TTL	TTL
7	直径	Diameter	mm	12	12
8	长度	Length	mm	8.5	8.5

### 齿轮组主要技术指标 | Gearbox Characteristics

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	4	80	240	12.1
2	16	120	360	14.2
3	64	160	480	16.3
4	256	180	540	18.4
5	1024	200	600	20.5
6	4096	200	600	22.6

### 外观图 | Outline Drawing



## 12\*\*M7...M... | 贵金属电刷 Precious Metal Commutation

应用领域：医疗设备、智能假肢、工业机器人等精密控制领域。

Applications: medical equipment, intelligent prostheses, industrial robots, etc.

工作温度范围 | Operating temperature range: -20~+85°C

### 电机主要技术指标 | Motor Characteristics

1230N7M\*\*-48-4.5

1	电压	Voltage	V	4.5
2	端电阻	Terminal resistance	$\Omega$	8.5
3	空载转速	No-load speed	rpm	4800
4	空载电流	No-load current	mA	15
5	堵转转矩	Stall torque	mNm	4.6
6	堵转电流	Stall current	mA	530
7	额定转矩	Nominal torque	mNm	2.0
8	额定转速	Nominal speed	rpm	2760
9	额定电流	Nominal current	mA	235
10	反电势常数	Back-EMF constant	mV/rpm	0.91
11	转矩常数	Torque constant	mNm/A	8.70

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

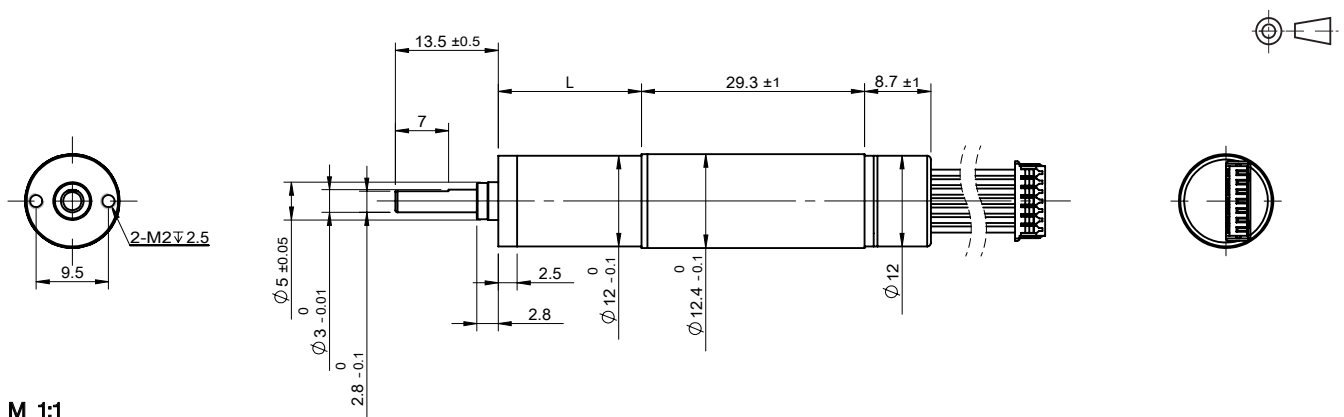
### 编码器主要技术指标 | Encoder Characteristics

1	通道数	Number of channels		2	3
2	分辨率	Counts per turn	cpt	16, 32, 64	16, 32, 64
3	工作电压	Supply voltage	V	5.0 (5.0)	5.0 (5.0)
4	最大转速	Max. speed	rpm	30000	30000
5	相移	Phase shift	$^{\circ}$ e	90 $\pm$ 45	90 $\pm$ 45
6	信号输出	Output signal		TTL	TTL
7	直径	Diameter	mm	12	12
8	长度	Length	mm	8.5	8.5

### 齿轮组主要技术指标 | Gearbox Characteristics

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	4	80	240	12.1
2	16	120	360	14.2
3	64	160	480	16.3
4	256	180	540	18.4
5	1024	200	600	20.5
6	4096	200	600	22.6

### 外观图 | Outline Drawing



# 精密伺服电机

## PRECISION SERVO MOTOR

### 16\*\*C5...M... | 碳刷 Graphite Brush

应用领域：医疗设备、智能假肢、工业机器人等精密控制领域。

Applications: medical equipment, intelligent prostheses, industrial robots, etc.

工作温度范围 | Operating temperature range: -20~+85°C

#### 电机主要技术指标 | Motor Characteristics

1625N5C02-150-12.0

1	电压	Voltage	V	12.0
2	转子电阻	Rotor resistance	$\Omega$	13.0
3	空载转速	No-load speed	rpm	15000
4	空载电流	No-load current	mA	25
5	堵转转矩	Stall torque	mNm	6.8
6	堵转电流	Stall current	mA	920
7	额定转矩	Nominal torque	mNm	3.2
8	额定转速	Nominal speed	rpm	7800
9	额定电流	Nominal current	mA	455
10	反电势常数	Back-EMF constant	mV/rpm	0.78
11	转矩常数	Torque constant	mNm/A	7.43

★ 可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

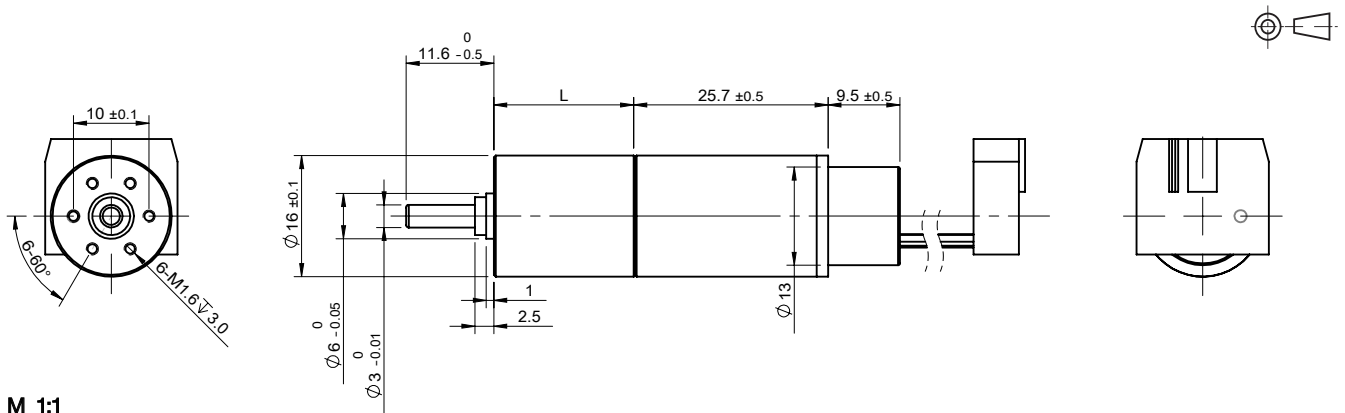
#### 编码器主要技术指标 | Encoder Characteristics

1	通道数	Number of channels		2	3
2	分辨率	Counts per turn	cpt	16, 32, 64	16, 32, 64
3	工作电压	Supply voltage	V	5.0 (5.0)	5.0 (5.0)
4	最大转速	Max. speed	rpm	30000	30000
5	相移	Phase shift	$^{\circ}$ e	90 $\pm$ 45	90 $\pm$ 45
6	信号输出	Output signal		TTL	TTL
7	直径	Diameter	mm	13	13
8	长度	Length	mm	8.5	8.5

#### 齿轮组主要技术指标 | Gearbox Characteristics

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	4	80	240	15.05
2	14, 16, 19, 29	120	360	18.7
3	53, 72, 84, 104, 128, 157	160	480	22.35
4	231, 316, 370, 455, 561, 690	200	600	26
5	1014, 1621, 1996, 3027	240	720	29.65
6	--	--	--	--

#### 外观图 | Outline Drawing



M 1:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## 25\*\*C9...M... | 碳刷 Graphite Brush

应用领域：医疗设备、智能假肢、工业机器人等精密控制领域。

Applications: medical equipment, intelligent prostheses, industrial robots, etc.

工作温度范围 | Operating temperature range: -20~+85°C

### 电机主要技术指标 | Motor Characteristics

2543N9C2B03-65-24.0

1	电压	Voltage	V	24.0
2	转子电阻	Rotor resistance	Ω	6.5
3	空载转速	No-load speed	rpm	6500
4	空载电流	No-load current	mA	15
5	堵转转矩	Stall torque	mNm	129.6
6	堵转电流	Stall current	mA	3690
7	额定转矩	Nominal torque	mNm	37.6
8	额定转速	Nominal speed	rpm	4570
9	额定电流	Nominal current	mA	1070
10	反电势常数	Back-EMF constant	mV/rpm	3.68
11	转矩常数	Torque constant	mNm/A	35.12

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

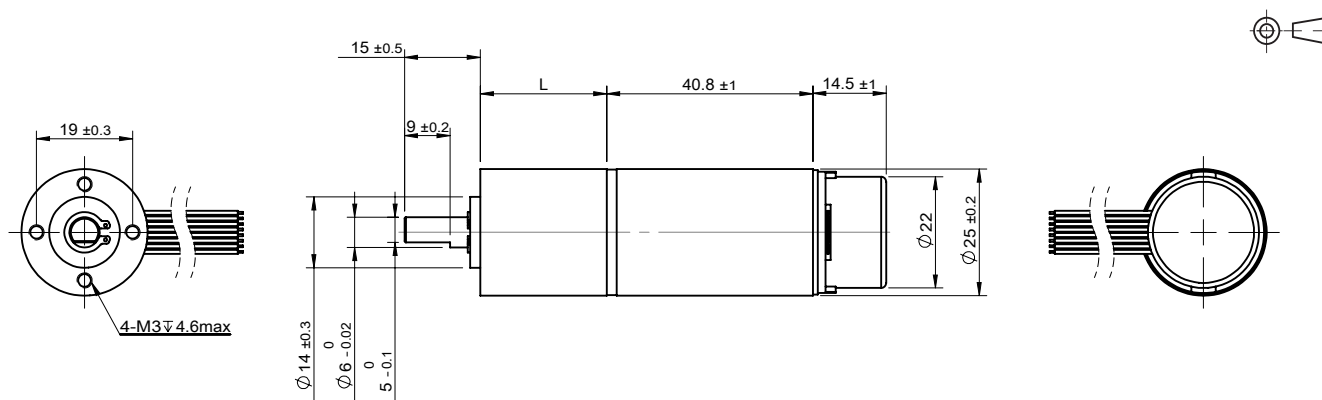
### 编码器主要技术指标 | Encoder Characteristics

1	通道数	Number of channels		2	3
2	分辨率	Counts per turn	cpt	16, 32, 64, 128, 256, 512, 1024	16, 32, 64, 128, 256, 512, 1024
3	工作电压	Supply voltage	V	5.0 (5.0)	5.0 (5.0)
4	最大转速	Max. speed	rpm	30000	30000
5	相移	Phase shift	°e	90±45	90±45
6	信号输出	Output signal		TTL	TTL
7	直径	Diameter	mm	22	22
8	长度	Length	mm	12	12

### 齿轮组主要技术指标 | Gearbox Characteristics

齿轮级数 Gearbox stages	减速比 Reduction ratio	最大额定转矩 Max. rated torque	瞬间允许转矩 Max. momentary torque	长度 Length (L)
		mNm	mNm	mm
1	3.6,4.25	300	900	18.3
2	13,15.3,18	500	1500	25
3	36,46.7,55,65,76.8	1000	3000	30.8
4	114,130,168,198,234,276,326	1000	3000	36.6
5	467,604,713,842,994,1174,1386	1000	3000	42.4
6	--	--	--	--

### 外观图 | Outline Drawing



M 1:1.5

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com



## DC CORELESS MOTOR 直流空心杯电机

Constar 直流空心杯电机,采用贵金属电刷、高性能钕铁硼稀土磁体、高强度细微漆包线,产品体积小,重量轻,结构精密,操控灵敏、启动电压低、耗电小、效率高。作为驱动功能,大量应用于微型无人机、智能电玩、小家电产品等;作为振动功能,大量应用于穿戴设备、手机、平板电脑、保健器材等。

Utilizing precious metal brushes, high performance Nd-Fe-B magnet, small gauge high strength enamelled winding wire, the motor is a compact, light weight precision product. This high efficiency motor features low starting voltage and low power consumption. As a drive motor, some typical applications include small household appliances, mini UAV's, and remote control hobby products. The motor also provides the vibration function in wearable products, health care products, mobile phones and tablet PC's.



# CONTENT 目录

## 直流空心杯电机 DC CORELESS MOTOR

驱动系列 DRIVING SERIES	电机型号 Motor No.	尺寸 Dimension	换向结构 Commutation Structure	页码 Page	
	1	L0408N3M	φ4.08×8.2 mm	贵金属电刷/Precious Metal Commutation	168
	2	L0410N3M	φ4.08×10.1 mm	贵金属电刷/Precious Metal Commutation	169
	3	L0412N3M	φ4.08×12.1 mm	贵金属电刷/Precious Metal Commutation	170
	4	L0510N3M	φ5×9.8 mm	贵金属电刷/Precious Metal Commutation	171
	5	L0609N3M	φ6×9 mm	贵金属电刷/Precious Metal Commutation	172
	6	L0610N5M	φ6×10.4 mm	贵金属电刷/Precious Metal Commutation	173
	7	L0612N3M	φ6×12.2 mm	贵金属电刷/Precious Metal Commutation	174
	8	L0612N5M	φ6×12.2 mm	贵金属电刷/Precious Metal Commutation	175
	9	L0614N5M	φ6×13.9 mm	贵金属电刷/Precious Metal Commutation	176
	10	L0615N5M	φ6×15 mm	贵金属电刷/Precious Metal Commutation	177
	11	L0710N5M	φ7×10.2 mm	贵金属电刷/Precious Metal Commutation	178
	12	L0714N5M	φ7×14.1 mm	贵金属电刷/Precious Metal Commutation	179
	13	L0716N5M	φ7×16.7 mm	贵金属电刷/Precious Metal Commutation	180
	14	L0720N5M	φ7×20 mm	贵金属电刷/Precious Metal Commutation	181
	15	L0816N5M	φ8×16 mm	贵金属电刷/Precious Metal Commutation	182
	16	L0816N7M	φ8.1×16.8 mm	贵金属电刷/Precious Metal Commutation	183
	17	L0820N5M	φ8×20 mm	贵金属电刷/Precious Metal Commutation	184
	18	L8.520N5M	φ8.5×20 mm	贵金属电刷/Precious Metal Commutation	185
	19	L8.520N7M	φ8.5×21 mm	贵金属电刷/Precious Metal Commutation	186
	20	L8.523N5M	φ8.5×23.2 mm	贵金属电刷/Precious Metal Commutation	187
	21	L1013N5M	φ10×13 mm	贵金属电刷/Precious Metal Commutation	188
	22	L1015N5M	φ10×15 mm	贵金属电刷/Precious Metal Commutation	189
	23	L1020N5M	φ10×20.7 mm	贵金属电刷/Precious Metal Commutation	190
	24	L1212N5M	φ12×12.3 mm	贵金属电刷/Precious Metal Commutation	191
	25	L1213N5M	φ12×13 mm	贵金属电刷/Precious Metal Commutation	192
	26	L1215N5M	φ12×14.6 mm	贵金属电刷/Precious Metal Commutation	193
	27	L1515N5M	φ15×15.2 mm	贵金属电刷/Precious Metal Commutation	194
	28	L1620N5M	φ16×19.6 mm	贵金属电刷/Precious Metal Commutation	195



**振动系列**  
VIBRATING SERIES

29	L1625N5M	φ16×25.5mm	贵金属电刷/Precious Metal Commutation	196
30	L1630N5M	φ16×30 mm	贵金属电刷/Precious Metal Commutation	197
31	L1718N5M	φ17.4×18.2 mm	贵金属电刷/Precious Metal Commutation	198
32	L1722N5M	φ17.4×22.1 mm	贵金属电刷/Precious Metal Commutation	199

	电机型号 Motor No.	尺寸 Dimension	换向结构 Commutation Structure	页码 Page
1	VL0408N3M	φ4.08×8 mm	贵金属电刷/Precious Metal Commutation	200
2	VL0510N3M	φ5×9.8 mm	贵金属电刷/Precious Metal Commutation	201
3	VL0610N5M	φ6×10.4 mm	贵金属电刷/Precious Metal Commutation	202
4	VL0612N3M	φ6×12.2 mm	贵金属电刷/Precious Metal Commutation	203
5	VL0614N5M	φ6×13.9 mm	贵金属电刷/Precious Metal Commutation	204
6	VL0615N5M	φ6×15.2 mm	贵金属电刷/Precious Metal Commutation	205
7	VL0716N5M	φ7×16.7 mm	贵金属电刷/Precious Metal Commutation	206
8	VL8.520N5M	φ8.5×20 mm	贵金属电刷/Precious Metal Commutation	207
9	VL1013N5M	φ10×13 mm	贵金属电刷/Precious Metal Commutation	208
10	VL1015N5M	φ10×15 mm	贵金属电刷/Precious Metal Commutation	209

## L0408N3M | 贵金属电刷 Precious Metal Commutation

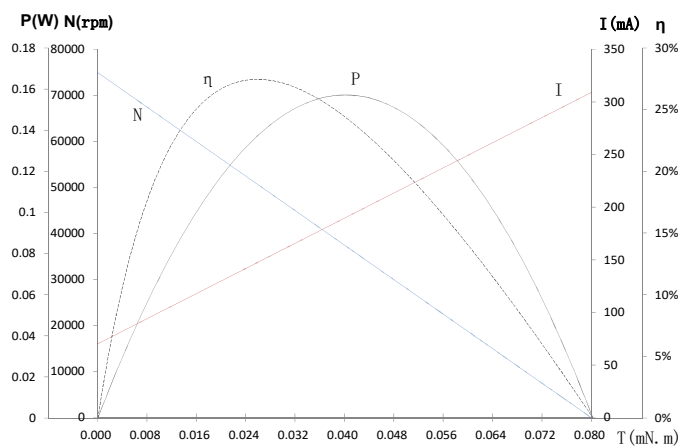
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			08-750-3.4	32-580-3.4	12-785-5.0
1	电压	Voltage	V	3.4	5.0
2	端电阻	Terminal resistance	$\Omega$	11.0	25.0
3	空载转速	No-load speed	rpm	75000	78500
4	空载电流	No-load current	mA	70	50
5	堵转转矩	Stall torque	mNm	0.08	0.07
6	堵转电流	Stall current	mA	309	200
7	负载转矩	Load torque	mNm	0.03	0.03
8	负载转速	Load speed	rpm	46880	43870
9	负载电流	Load current	mA	160	120
10	最大输出功率	Max. output power	W	0.16	0.14
11	最大效率	Max. efficiency	%	27.5	24.9
12	反电势常数	Back-EMF constant	mV/rpm	0.04	0.05
13	转矩常数	Torque constant	mNm/A	0.33	0.46
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	937500	1154412
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.003	0.003
16	重量	Weight	g	0.5	0.5
17	工作温度范围	Operating temperature range	°C	-20~+65	-20~+65

### 特性曲线 | Characteristics Curve

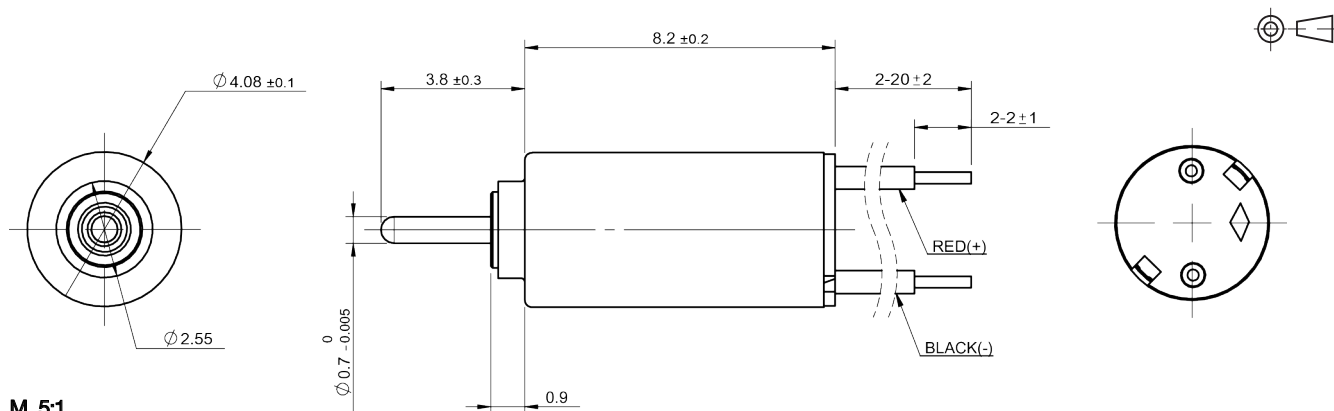


型号 / Model L0408N3M08-750-3.4

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



M 5:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## L0410N3M | 贵金属电刷 Precious Metal Commutation

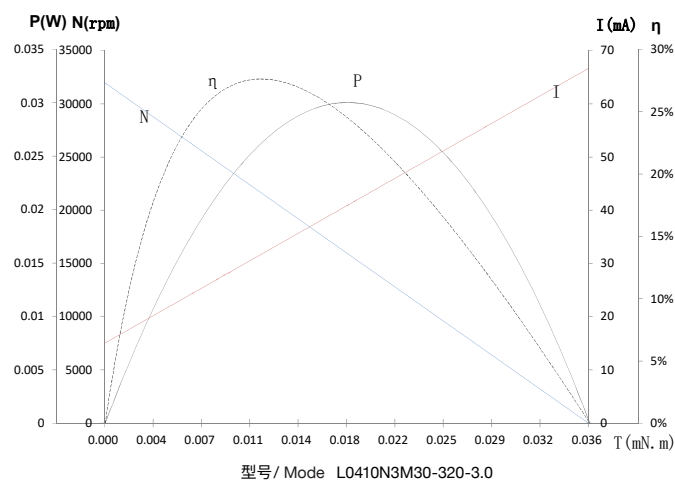
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			30-320-3.0	02-820-3.0	05-750-5.0
1	电压	Voltage	V	3.0	5.0
2	端电阻	Terminal resistance	$\Omega$	45	17.6
3	空载转速	No-load speed	rpm	32000	74000
4	空载电流	No-load current	mA	15	45
5	堵转转矩	Stall torque	mNm	0.04	0.13
6	堵转电流	Stall current	mA	67	280
7	负载转矩	Load torque	mNm	0.01	0.01
8	负载转速	Load speed	rpm	23110	68310
9	负载电流	Load current	mA	30	60
10	最大输出功率	Max. output power	W	0.03	0.25
11	最大效率	Max. efficiency	%	27.8	36.7
12	反电势常数	Back-EMF constant	mV/rpm	0.07	0.03
13	转矩常数	Torque constant	mNm/A	0.69	0.30
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	888889	921348
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.004	0.004
16	重量	Weight	g	0.6	0.55
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+65	-20~+65

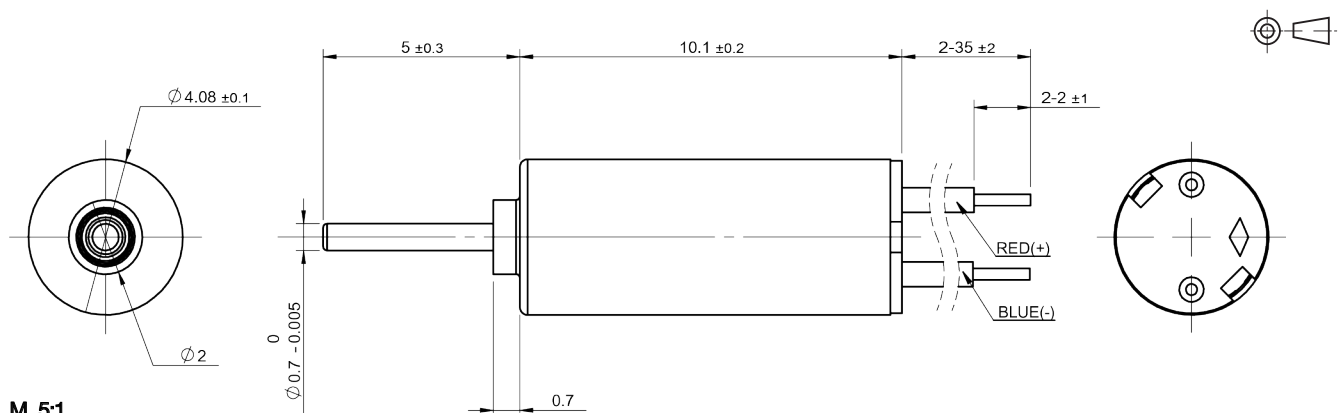
### 特性曲线 | Characteristics Curve



### 可选参数 | Options

导线长度      Lead wires length  
 轴长            Shaft length  
 性能            Special coils  
 齿轮箱         Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
 Specification subject to change without notice

© 2022 CONSTAR  
 www.constarmotor.com

## L0412N3M | 贵金属电刷 Precious Metal Commutation

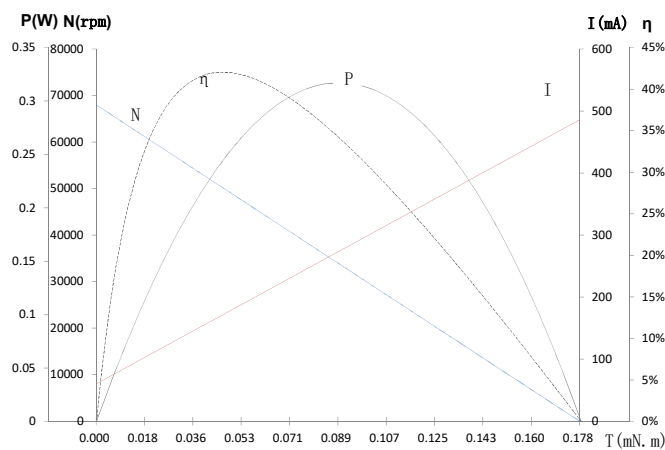
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			71-680-3.4	65-650-3.4	60-600-3.4
1	电压	Voltage	V	3.4	3.4
2	端电阻	Terminal resistance	$\Omega$	7.00	8.30
3	空载转速	No-load speed	rpm	68000	65000
4	空载电流	No-load current	mA	60	55
5	堵转转矩	Stall torque	mNm	0.18	0.15
6	堵转电流	Stall current	mA	486	410
7	负载转矩	Load torque	mNm	0.03	0.03
8	负载转速	Load speed	rpm	56540	52250
9	负载电流	Load current	mA	130	120
10	最大输出功率	Max. output power	W	0.32	0.26
11	最大效率	Max. efficiency	%	42.1	40.1
12	反电势常数	Back-EMF constant	mV/rpm	0.04	0.05
13	转矩常数	Torque constant	mNm/A	0.42	0.43
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	382022	424837
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.005	0.005
16	重量	Weight	g	0.8	0.8
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+65	-20~+65

### 特性曲线 | Characteristics Curve

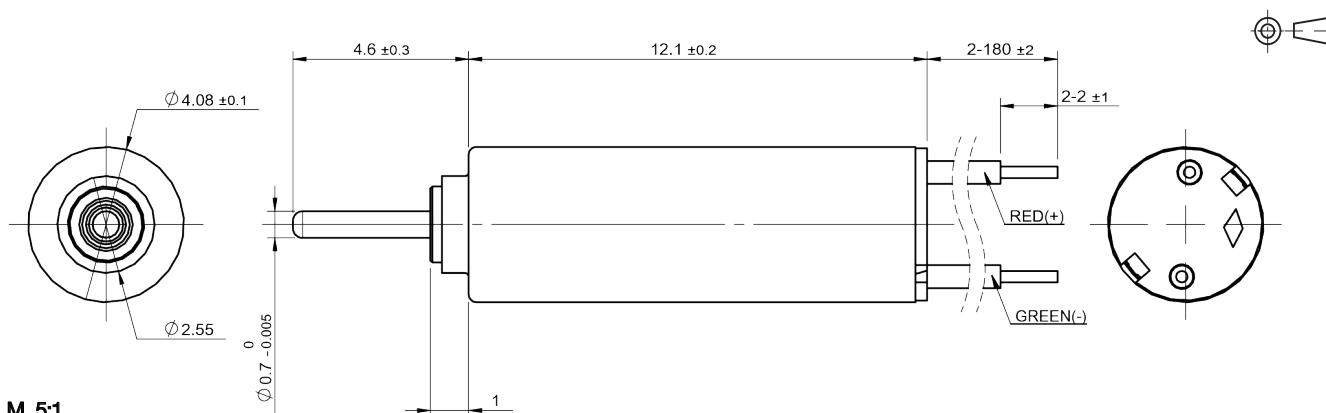


型号 / Model L0412N3M71-680-3.4

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## L0510N3M | 贵金属电刷 Precious Metal Commutation

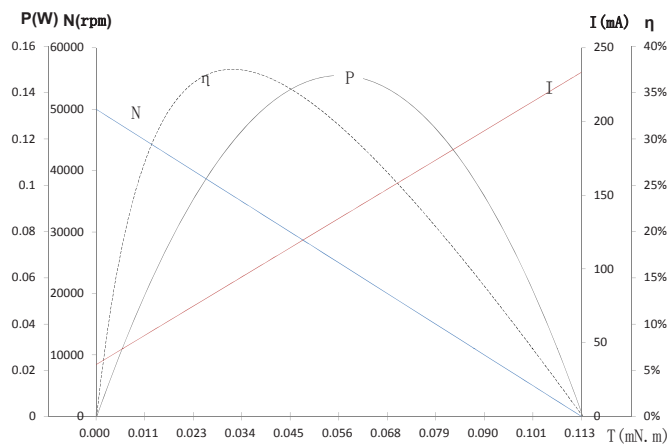
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			01-500-3.5	01-550-4.2	10-900-5.0
1	电压	Voltage	V	3.5	5.0
2	端电阻	Terminal resistance	$\Omega$	15.0	7.6
3	空载转速	No-load speed	rpm	50000	87000
4	空载电流	No-load current	mA	35	70
5	堵转转矩	Stall torque	mNm	0.11	0.28
6	堵转电流	Stall current	mA	233	660
7	负载转矩	Load torque	mNm	0.03	0.03
8	负载转速	Load speed	rpm	36730	77680
9	负载电流	Load current	mA	90	130
10	最大输出功率	Max. output power	W	0.15	0.64
11	最大效率	Max. efficiency	%	37.7	44.0
12	反电势常数	Back-EMF constant	mV/rpm	0.06	0.05
13	转矩常数	Torque constant	mNm/A	0.57	0.49
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	442478	310714
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.006	0.006
16	重量	Weight	g	0.8	0.8
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+65	-20~+65

### 特性曲线 | Characteristics Curve

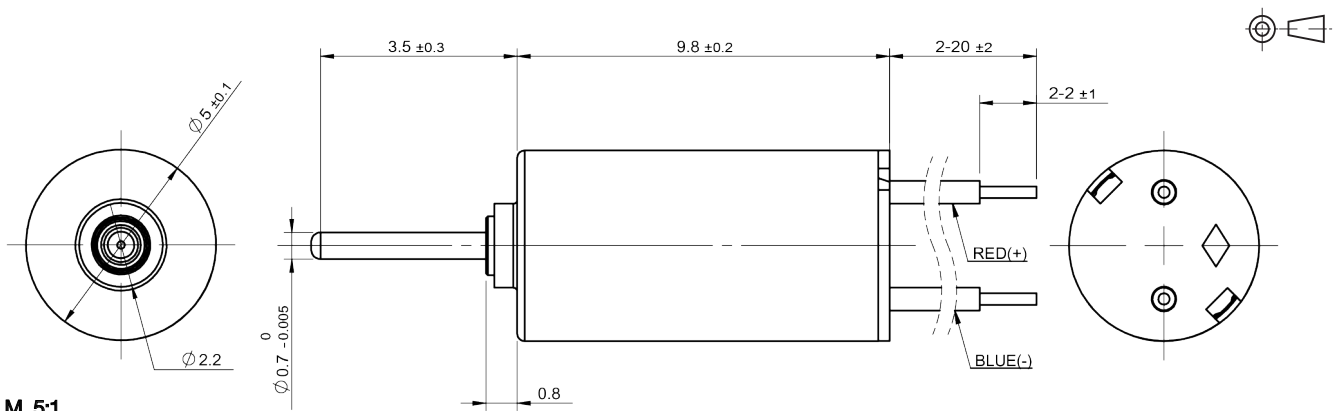


型号 / Mode L0510N3M01-500-3.5

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## L0609N3M | 贵金属电刷 Precious Metal Commutation

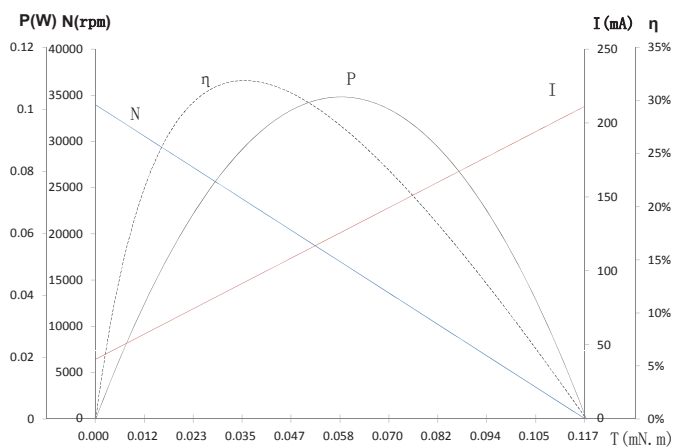
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			58-340-3.0	09-490-3.0	10-435-3.0
1	电压	Voltage	V	3.0	3.0
2	端电阻	Terminal resistance	$\Omega$	14.2	7.8
3	空载转速	No-load speed	rpm	34000	49000
4	空载电流	No-load current	mA	40	50
5	堵转转矩	Stall torque	mNm	0.12	0.17
6	堵转电流	Stall current	mA	211	385
7	负载转矩	Load torque	mNm	0.05	0.05
8	负载转速	Load speed	rpm	19470	34590
9	负载电流	Load current	mA	110	150
10	最大输出功率	Max. output power	W	0.10	0.22
11	最大效率	Max. efficiency	%	31.9	40.9
12	反电势常数	Back-EMF constant	mV/rpm	0.07	0.05
13	转矩常数	Torque constant	mNm/A	0.68	0.51
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	290598	288235
15	转子惯量	Rotor inertia	$\text{gcm}^2$	0.008	0.008
16	重量	Weight	g	1	1
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+65	-20~+65

### 特性曲线 | Characteristics Curve



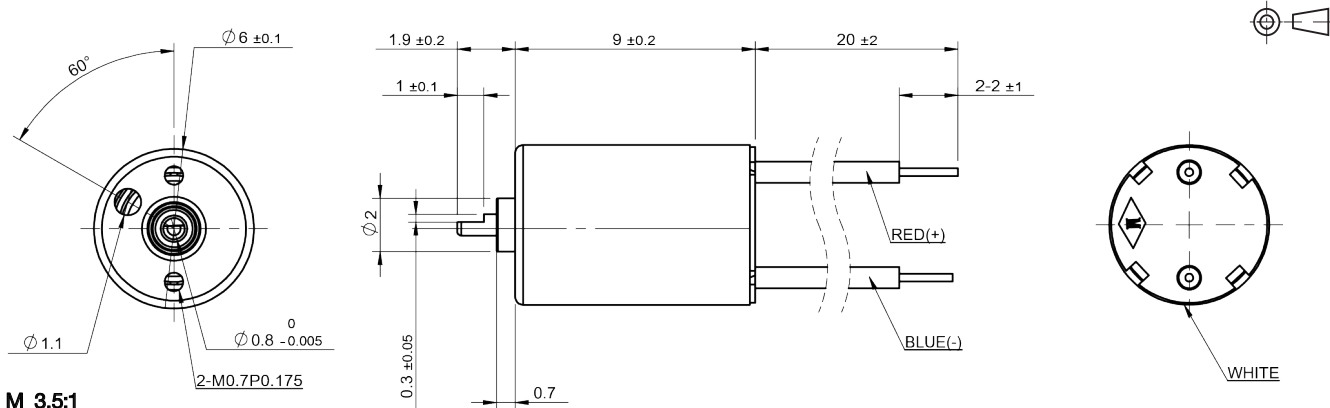
型号 / Model L0609N3M58-340-3.0

### 可选参数 | Options

导线长度  
轴长  
性能  
齿轮箱

Lead wires length  
Shaft length  
Special coils  
Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## L0610N5M | 贵金属电刷 Precious Metal Commutation

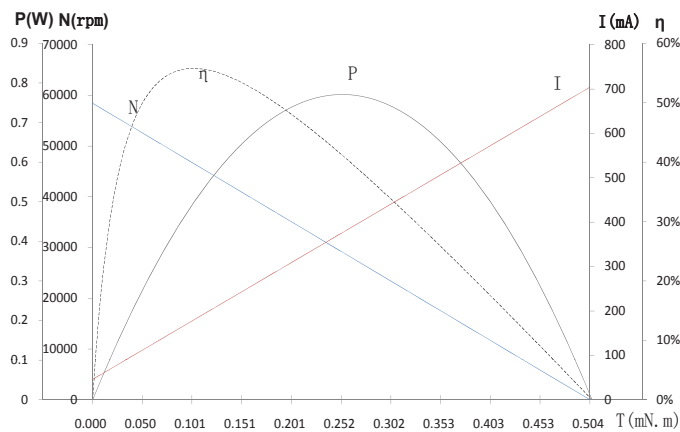
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			11-585-5.0	22-665-3.4	05-550-3.2
1	电压	Voltage	V	5.0	3.2
2	端电阻	Terminal resistance	$\Omega$	7.1	3.8
3	空载转速	No-load speed	rpm	58500	66500
4	空载电流	No-load current	mA	45	100
5	堵转转矩	Stall torque	mNm	0.50	0.52
6	堵转电流	Stall current	mA	704	1259
7	负载转矩	Load torque	mNm	0.05	0.05
8	负载转速	Load speed	rpm	52700	60120
9	负载电流	Load current	mA	110	210
10	最大输出功率	Max. output power	W	0.8	0.9
11	最大效率	Max. efficiency	%	55.9	51.6
12	反电势常数	Back-EMF constant	mV/rpm	0.08	0.05
13	转矩常数	Torque constant	mNm/A	0.76	0.45
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	116071	127639
15	转子惯量	Rotor inertia	$\text{gcm}^2$	0.01	0.01
16	重量	Weight	g	1.2	1.3
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+80	-20~+80

### 特性曲线 | Characteristics Curve

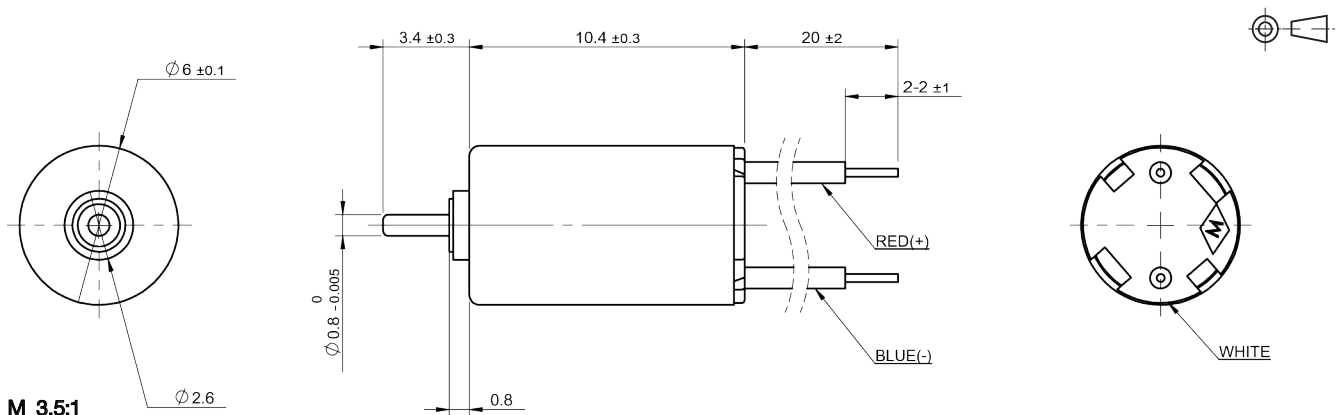


型号 / Mode L0610N5M11-585-5.0

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

### L0612N3M | 贵金属电刷 Precious Metal Commutation

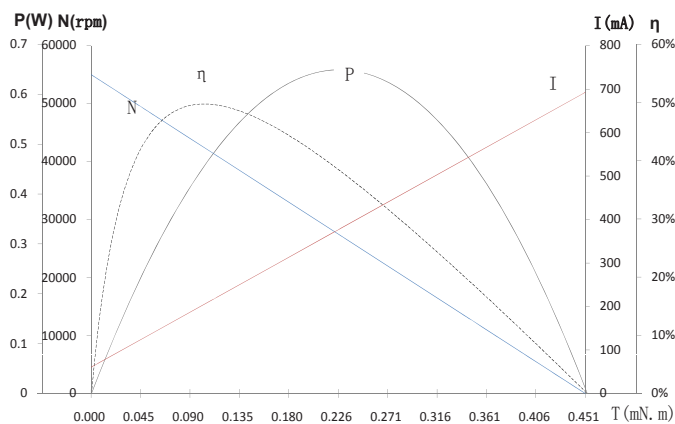
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

#### 主要技术指标 | Characteristics

			08-550-4.5	90-160-3.0	63-250-4.5	
1	电压	Voltage	V	4.5	3.0	4.5
2	端电阻	Terminal resistance	$\Omega$	6.50	39.00	23.30
3	空载转速	No-load speed	rpm	55000	16030	25000
4	空载电流	No-load current	mA	60	8	20
5	堵转转矩	Stall torque	mNm	0.45	0.11	0.27
6	堵转电流	Stall current	mA	692	77	193
7	负载转矩	Load torque	mNm	0.05	0.05	0.05
8	负载转速	Load speed	rpm	48900	8740	20320
9	负载电流	Load current	mA	130	40	50
10	最大输出功率	Max. output power	W	0.7	0.05	0.17
11	最大效率	Max. efficiency	%	49.8	45.8	46.1
12	反电势常数	Back-EMF constant	mV/rpm	0.07	0.17	0.16
13	转矩常数	Torque constant	mNm/A	0.71	1.60	1.54
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	121951	145727	93633
15	转子惯量	Rotor inertia	$\text{gcm}^2$	0.014	0.014	0.014
16	重量	Weight	g	1.3	1.3	1.3
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+80	-20~+65	-20~+65

#### 特性曲线 | Characteristics Curve



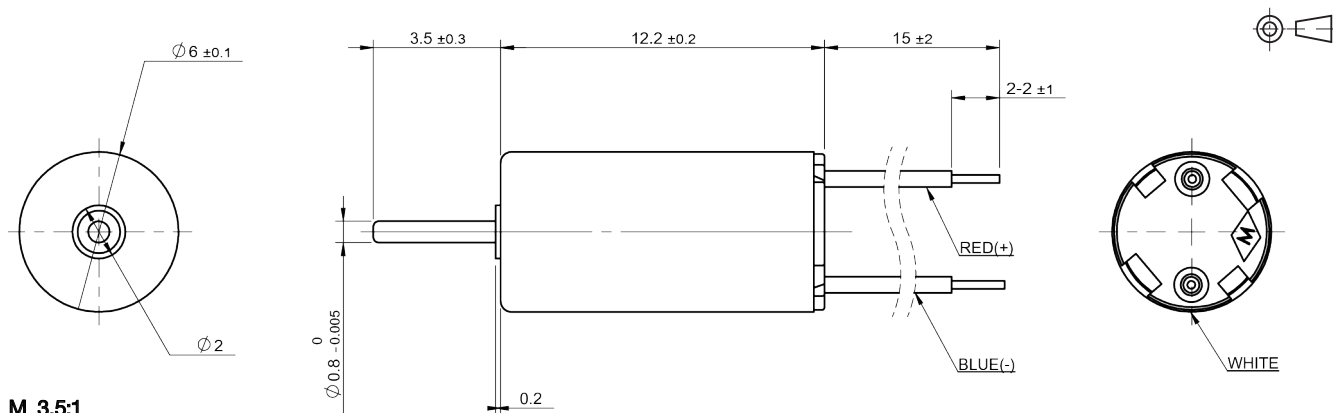
型号 / Model L0612N3M08-550-4.5

#### 可选参数 | Options

导线长度  
轴长  
性能  
齿轮箱

Lead wires length  
Shaft length  
Special coils  
Gearheads

#### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com



## L0612N5M | 贵金属电刷 Precious Metal Commutation

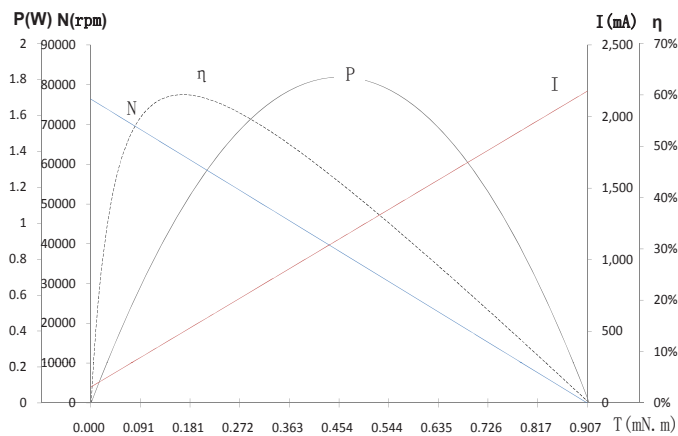
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			55-764-3.7	20-500-3.2	78-730-3.7	
1	电压	Voltage	V	3.7	3.2	3.7
2	端电阻	Terminal resistance	$\Omega$	1.7	2.2	2.0
3	空载转速	No-load speed	rpm	76400	50000	73000
4	空载电流	No-load current	mA	110	80	90
5	堵转转矩	Stall torque	mNm	0.91	0.79	0.81
6	堵转电流	Stall current	mA	2176	1455	1850
7	负载转矩	Load torque	mNm	0.05	0.05	0.05
8	负载转速	Load speed	rpm	72190	46850	68490
9	负载电流	Load current	mA	220	170	200
10	最大输出功率	Max. output power	W	1.8	1.0	1.5
11	最大效率	Max. efficiency	%	60.1	58.7	60.8
12	反电势常数	Back-EMF constant	mV/rpm	0.05	0.06	0.05
13	转矩常数	Torque constant	mNm/A	0.44	0.58	0.46
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	84234	62972	90123
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.014	0.014	0.014
16	重量	Weight	g	1.3	1.3	1.3
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+100	-20~+100	-20~+100

### 特性曲线 | Characteristics Curve

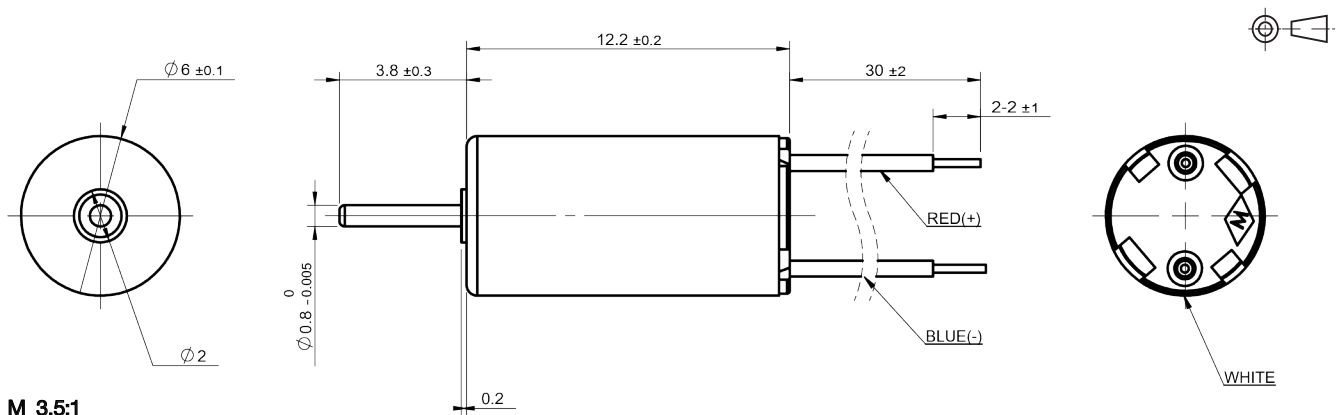


型号 / Mode L0612N5M55-764-3.7

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



M 3.5:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## L0614N5M | 贵金属电刷 Precious Metal Commutation

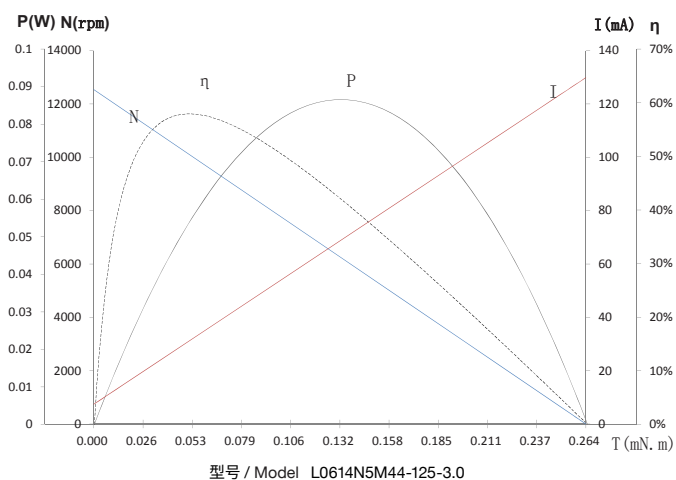
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			44-125-3.0	28-420-3.4	67-500-3.2	
1	电压	Voltage	V	3.0	3.4	3.2
2	端电阻	Terminal resistance	$\Omega$	23.1	2.60	1.70
3	空载转速	No-load speed	rpm	12540	42000	50000
4	空载电流	No-load current	mA	7.4	60	80
5	堵转转矩	Stall torque	mNm	0.26	0.9	1.1
6	堵转电流	Stall current	mA	130	1308	1882
7	负载转矩	Load torque	mNm	0.05	0.1	0.1
8	负载转速	Load speed	rpm	10170	37430	45260
9	负载电流	Load current	mA	30	200	250
10	最大输出功率	Max. output power	W	0.09	1.0	1.4
11	最大效率	Max. efficiency	%	58.1	61.8	63.1
12	反电势常数	Back-EMF constant	mV/rpm	0.23	0.08	0.06
13	转矩常数	Torque constant	mNm/A	2.15	0.74	0.59
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	47500	45652	47393
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.016	0.016	0.016
16	重量	Weight	g	1.7	1.7	1.7
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+65	-20~+80	-20~+120

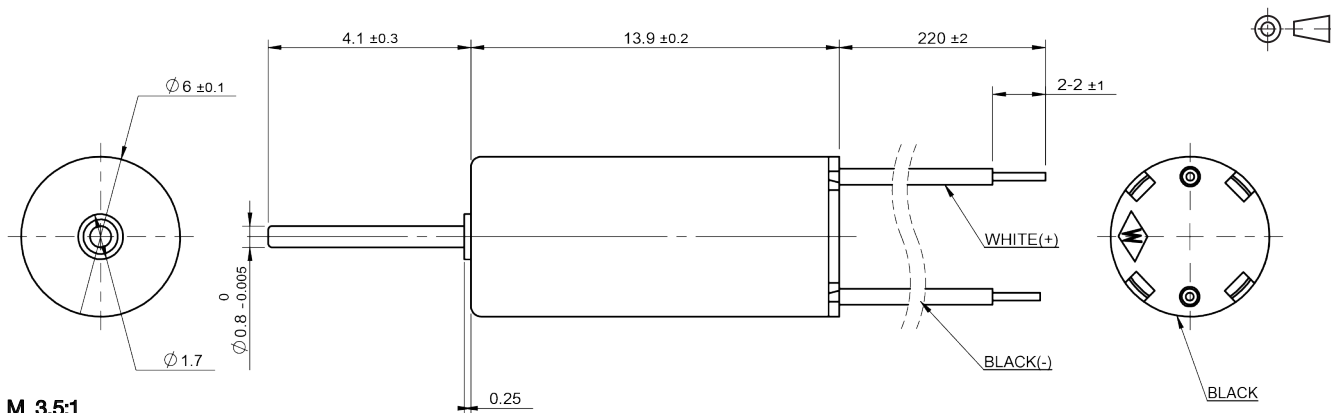
### 特性曲线 | Characteristics Curve



### 可选参数 | Options

导线长度      Lead wires length  
轴长            Shaft length  
性能            Special coils  
齿轮箱         Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## L0615N5M | 贵金属电刷 Precious Metal Commutation

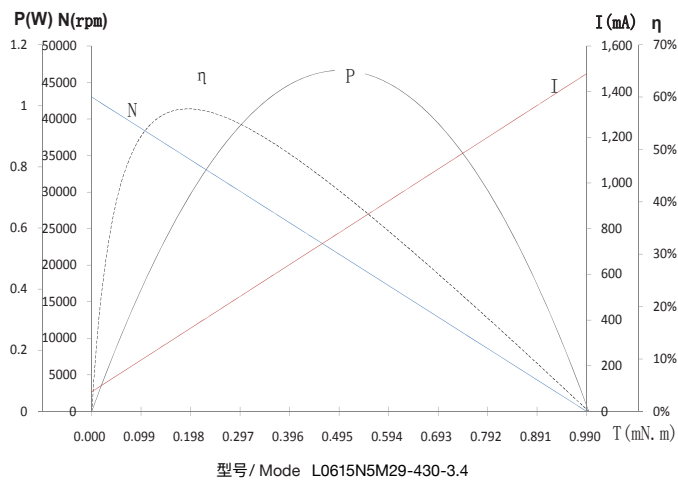
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			29-430-3.4	35-387-2.5	49-360-2.5	
1	电压	Voltage	V	3.4	2.5	2.5
2	端电阻	Terminal resistance	$\Omega$	2.30	1.45	1.40
3	空载转速	No-load speed	rpm	43050	38700	36000
4	空载电流	No-load current	mA	85	80	75
5	堵转转矩	Stall torque	mNm	1.0	1.0	1.1
6	堵转电流	Stall current	mA	1478	1724	1786
7	负载转矩	Load torque	mNm	0.15	0.15	0.15
8	负载转速	Load speed	rpm	36530	32700	31030
9	负载电流	Load current	mA	300	340	310
10	最大输出功率	Max. output power	W	1.1	1.0	1.0
11	最大效率	Max. efficiency	%	57.8	61.6	63.3
12	反电势常数	Back-EMF constant	mV/rpm	0.07	0.06	0.07
13	转矩常数	Torque constant	mNm/A	0.71	0.59	0.64
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	43485	40021	33119
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.016	0.016	0.016
16	重量	Weight	g	1.8	1.8	1.8
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+120	-20~+120	-20~+120

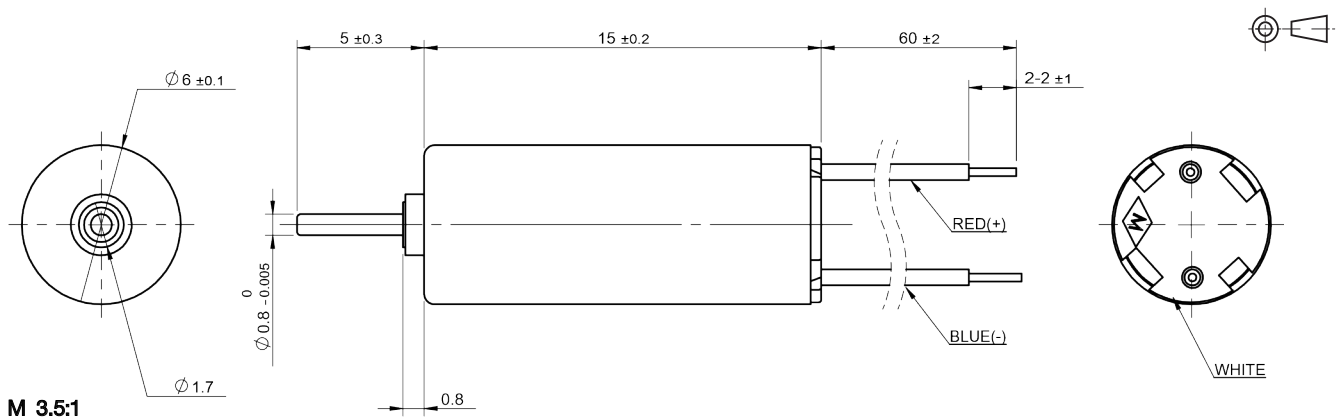
### 特性曲线 | Characteristics Curve



### 可选参数 | Options

导线长度      Lead wires length  
 轴长            Shaft length  
 性能            Special coils  
 齿轮箱         Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
 Specification subject to change without notice

© 2022 CONSTAR  
 www.constarmotor.com

# 直流空心杯电机

## DC CORELESS MOTOR

### L0710N5M | 贵金属电刷 Precious Metal Commutation

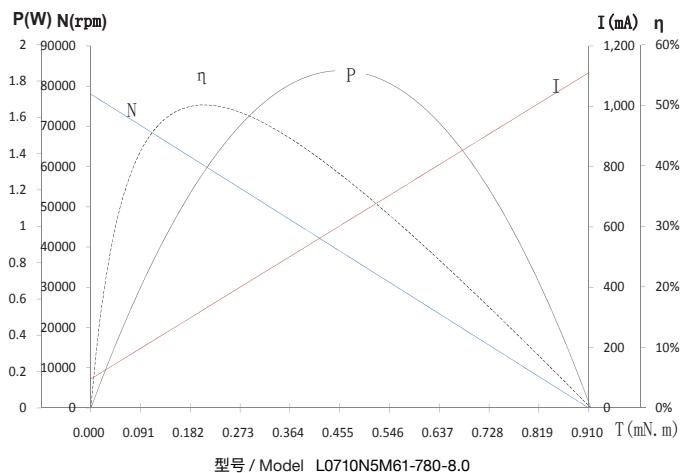
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

#### 主要技术指标 | Characteristics

			61-780-8.0	51-325-3.0	08-618-5.0	
1	电压	Voltage	V	8.0	3.0	5.0
2	端电阻	Terminal resistance	$\Omega$	7.2	6.3	3.4
3	空载转速	No-load speed	rpm	78050	32500	61800
4	空载电流	No-load current	mA	95	50	80
5	堵转转矩	Stall torque	mNm	0.9	0.3	1.0
6	堵转电流	Stall current	mA	1110	480	1470
7	负载转矩	Load torque	mNm	0.55	0.12	0.12
8	负载转速	Load speed	rpm	30880	20890	54500
9	负载电流	Load current	mA	710	200	240
10	最大输出功率	Max. output power	W	1.9	0.29	1.65
11	最大效率	Max. efficiency	%	50.2	45.4	58.9
12	反电势常数	Back-EMF constant	mV/rpm	0.09	0.08	0.08
13	转矩常数	Torque constant	mNm/A	0.90	0.79	0.73
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	85769	96726	60827
15	转子惯量	Rotor inertia	$\text{gcm}^2$	0.02	0.02	0.02
16	重量	Weight	g	1.6	1.6	1.6
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+100	-20~+100	-20~+100

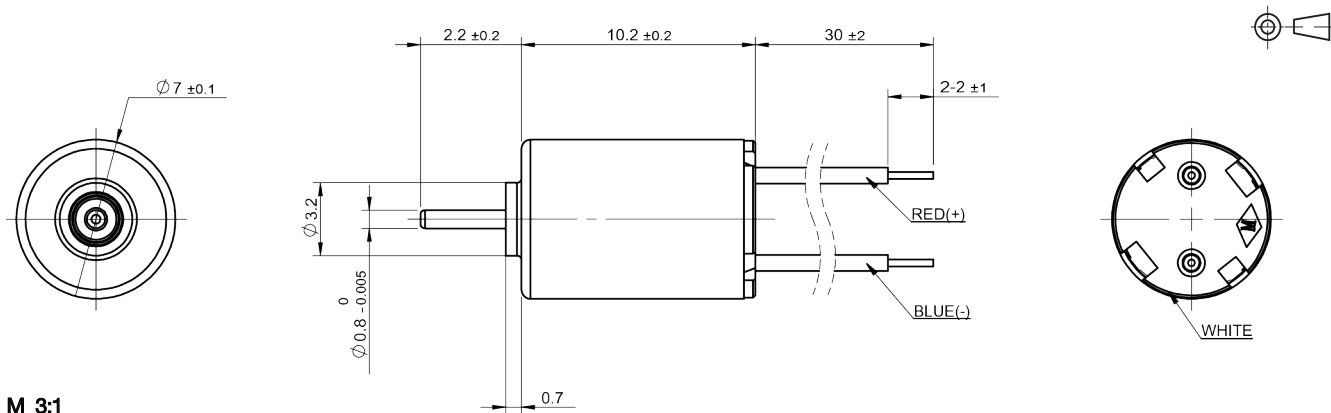
#### 特性曲线 | Characteristics Curve



#### 可选参数 | Options

- 导线长度 | Lead wires length
- 轴长 | Shaft length
- 性能 | Special coils
- 齿轮箱 | Gearheads

#### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## L0714N5M | 贵金属电刷 Precious Metal Commutation

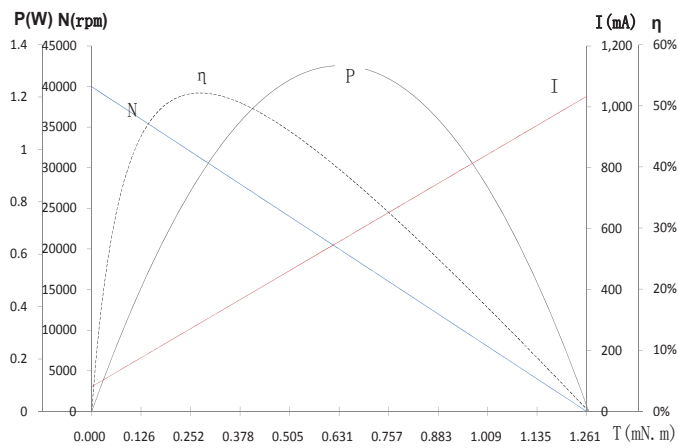
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			15-400-6.0	18-304-7.4	50-270-5.0	
1	电压	Voltage	V	6.0	7.4	5.0
2	端电阻	Terminal resistance	$\Omega$	5.8	12.1	5.7
3	空载转速	No-load speed	rpm	40000	30450	27000
4	空载电流	No-load current	mA	80	30	30
5	堵转转矩	Stall torque	mNm	1.3	1.3	1.4
6	堵转电流	Stall current	mA	1030	610	880
7	负载转矩	Load torque	mNm	0.50	0.50	0.50
8	负载转速	Load speed	rpm	24140	18580	17670
9	负载电流	Load current	mA	460	260	320
10	最大输出功率	Max. output power	W	1.3	1.0	1.0
11	最大效率	Max. efficiency	%	52.3	60.8	66.3
12	反电势常数	Back-EMF constant	mV/rpm	0.14	0.23	0.18
13	转矩常数	Torque constant	mNm/A	1.32	2.21	1.71
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	31721	23733	18659
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.04	0.04	0.04
16	重量	Weight	g	2.2	2.2	2.2
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+100	-20~+100	-20~+100

### 特性曲线 | Characteristics Curve

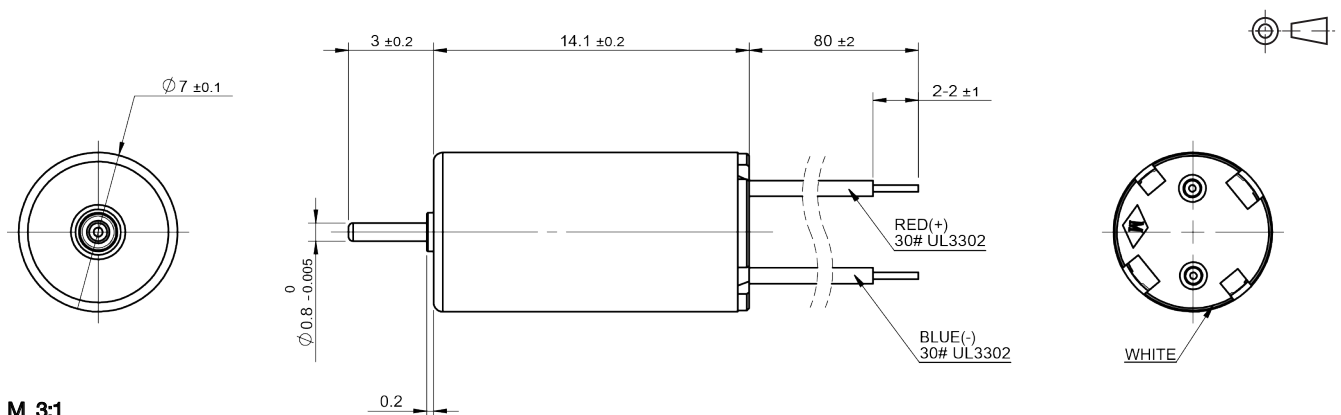


型号 / Mode L0714N5M15-400-6.0

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

### L0716N5M | 贵金属电刷 Precious Metal Commutation

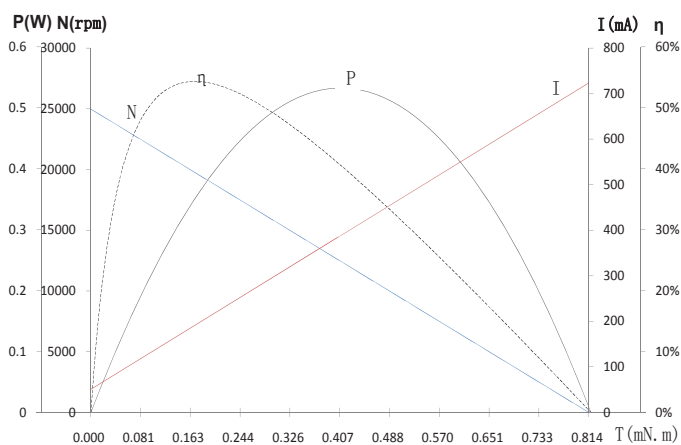
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

#### 主要技术指标 | Characteristics

			64-250-3.4	31-430-3.4	94-430-3.2
1	电压	Voltage	V	3.4	3.2
2	端电阻	Terminal resistance	$\Omega$	4.7	1.1
3	空载转速	No-load speed	rpm	25000	43000
4	空载电流	No-load current	mA	50	90
5	堵转转矩	Stall torque	mNm	0.81	3.8
6	堵转电流	Stall current	mA	720	5150
7	负载转矩	Load torque	mNm	0.50	0.50
8	负载转速	Load speed	rpm	9640	37270
9	负载电流	Load current	mA	460	760
10	最大输出功率	Max. output power	W	0.53	4.2
11	最大效率	Max. efficiency	%	54.6	75.4
12	反电势常数	Back-EMF constant	mV/rpm	0.13	0.08
13	转矩常数	Torque constant	mNm/A	1.21	0.74
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	30713	11451
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.05	0.05
16	重量	Weight	g	2.5	2.5
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+100	-20~+120

#### 特性曲线 | Characteristics Curve

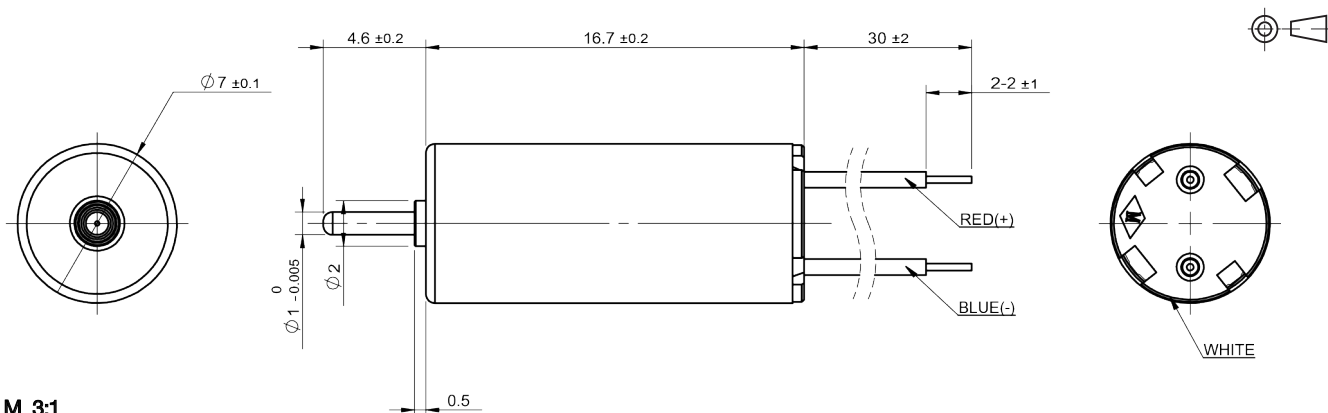


型号 / Model L0716N5M64-250-3.4

#### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

#### 外观图 | Outline Drawing



M 3:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## L0720N5M | 贵金属电刷 Precious Metal Commutation

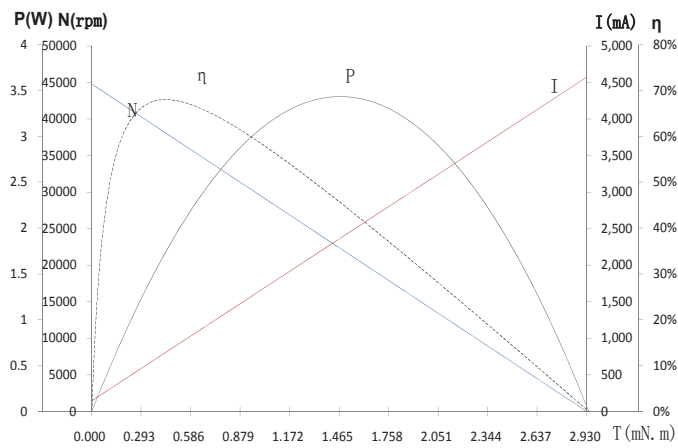
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			55-448-3.2	33-423-3.0	42-448-3.0
1	电压	Voltage	V	3.2	3.0
2	端电阻	Terminal resistance	$\Omega$	0.7	0.67
3	空载转速	No-load speed	rpm	44800	42370
4	空载电流	No-load current	mA	140	100
5	堵转转矩	Stall torque	mNm	2.9	2.9
6	堵转电流	Stall current	mA	4570	4480
7	负载转矩	Load torque	mNm	0.50	0.50
8	负载转速	Load speed	rpm	37150	35050
9	负载电流	Load current	mA	900	860
10	最大输出功率	Max. output power	W	3.4	3.2
11	最大效率	Max. efficiency	%	68.1	72.4
12	反电势常数	Back-EMF constant	mV/rpm	0.07	0.07
13	转矩常数	Torque constant	mNm/A	0.66	0.66
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	15290	14641
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.06	0.06
16	重量	Weight	g	3.3	3.9
17	工作温度范围	Operating temperature range	°C	-20~+120	-20~+120

### 特性曲线 | Characteristics Curve

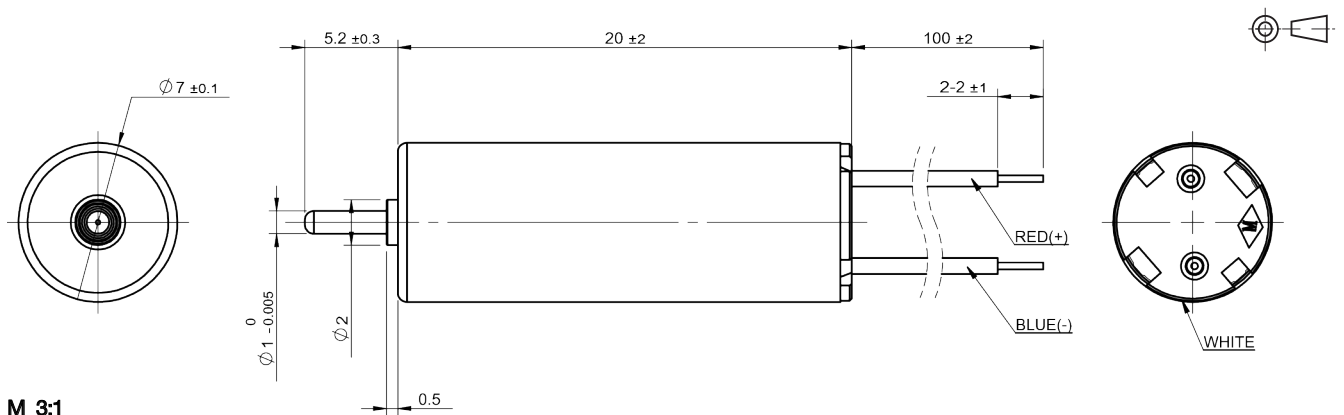


型号 / Mode L0720N5M55-448-3.2

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

# 直流空心杯电机

## DC CORELESS MOTOR

### L0816N5M | 贵金属电刷 Precious Metal Commutation

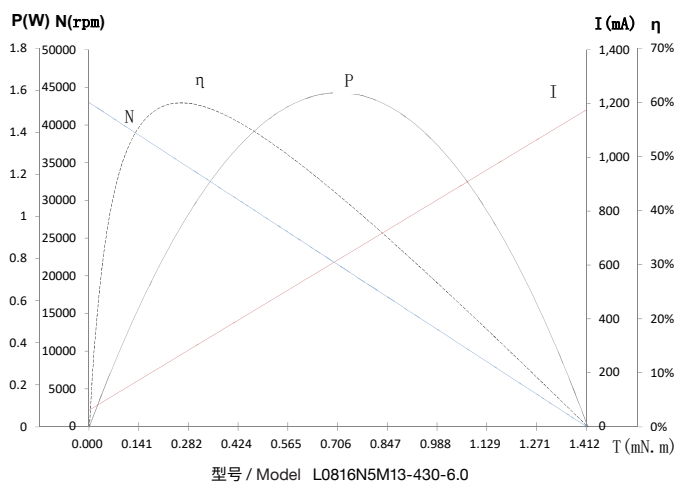
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

#### 主要技术指标 | Characteristics

			13-430-6.0	06-243-3.4	35-262-5.5	
1	电压	Voltage	V	6.0	3.4	5.5
2	端电阻	Terminal resistance	$\Omega$	5.1	2.7	4.95
3	空载转速	No-load speed	rpm	43000	24300	26200
4	空载电流	No-load current	mA	60	40	60
5	堵转转矩	Stall torque	mNm	1.4	1.6	1.99
6	堵转电流	Stall current	mA	1180	1260	1100
7	负载转矩	Load torque	mNm	0.5	0.5	0.5
8	负载转速	Load speed	rpm	27770	16600	19620
9	负载电流	Load current	mA	460	430	320
10	最大输出功率	Max. output power	W	1.59	1	1.37
11	最大效率	Max. efficiency	%	59.9	67.6	59.4
12	反电势常数	Back-EMF constant	mV/rpm	0.13	0.14	0.20
13	转矩常数	Torque constant	mNm/A	1.26	1.29	1.90
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	30453	15409	13166
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.07	0.07	0.07
16	重量	Weight	g	3.1	3.1	3.4
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+80	-20~+80	-20~+80

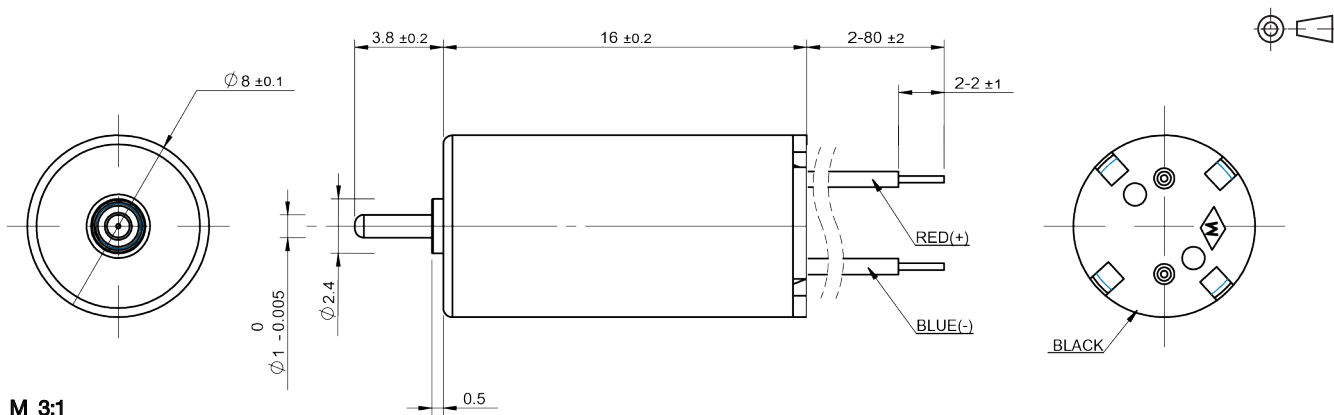
#### 特性曲线 | Characteristics Curve



#### 可选参数 | Options

- 导线长度      Lead wires length
- 轴长            Shaft length
- 性能            Special coils
- 齿轮箱         Gearheads

#### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com



## L0816N7M | 贵金属电刷 Precious Metal Commutation

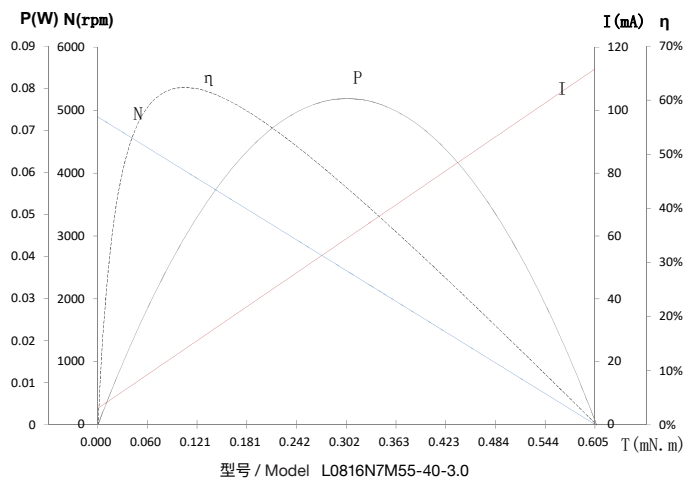
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			55-40-3.0	54-45-3.0	006065-60-3.0
1	电压	Voltage	V	3.0	3.0
2	端电阻	Terminal resistance	$\Omega$	26.5	36.0
3	空载转速	No-load speed	rpm	4900	4500
4	空载电流	No-load current	mA	5	5
5	堵转转矩	Stall torque	mNm	0.60	0.47
6	堵转电流	Stall current	mA	113	83
7	负载转矩	Load torque	mNm	0.30	0.30
8	负载转速	Load speed	rpm	2450	1630
9	负载电流	Load current	mA	60	60
10	最大输出功率	Max. output power	W	0.1	0.1
11	最大效率	Max. efficiency	%	62.0	57.2
12	反电势常数	Back-EMF constant	mV/rpm	0.59	0.63
13	转矩常数	Torque constant	mNm/A	5.59	5.98
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	8167	9574
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.01	0.01
16	重量	Weight	g	3.7	3.7
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+80	-20~+80

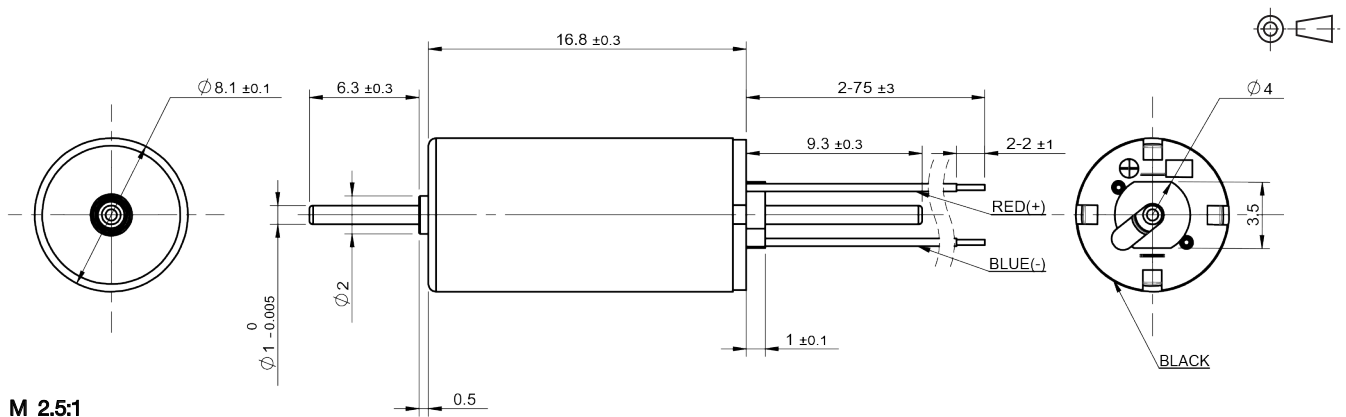
### 特性曲线 | Characteristics Curve



### 可选参数 | Options

导线长度      Lead wires length  
 轴长            Shaft length  
 性能            Special coils  
 齿轮箱         Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
 Specification subject to change without notice

© 2022 CONSTAR  
 www.constarmotor.com

## L0820N5M | 贵金属电刷 Precious Metal Commutation

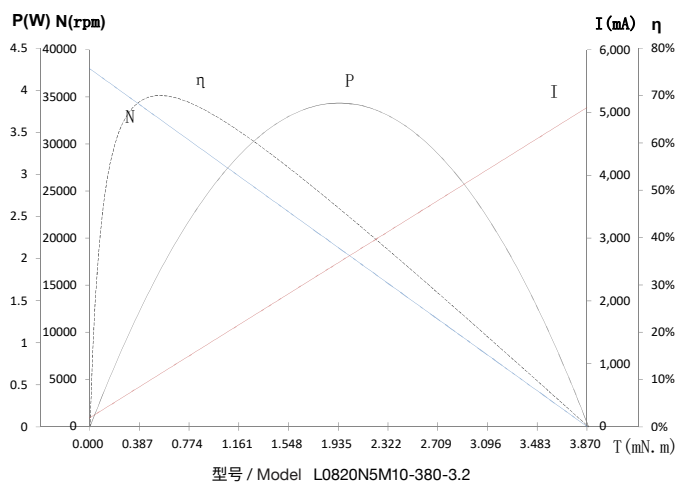
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			10-380-3.2	16-420-3.0	37-460-3.4	
1	电压	Voltage	V	3.2	3.0	3.4
2	端电阻	Terminal resistance	$\Omega$	0.63	0.4	0.39
3	空载转速	No-load speed	rpm	38000	42000	46000
4	空载电流	No-load current	mA	135	160	200
5	堵转转矩	Stall torque	mNm	3.9	4.9	5.9
6	堵转电流	Stall current	mA	5080	7500	8720
7	负载转矩	Load torque	mNm	0.5	0.5	0.5
8	负载转速	Load speed	rpm	33090	37710	42080
9	负载电流	Load current	mA	770	910	930
10	最大输出功率	Max. output power	W	3.85	5.39	7.08
11	最大效率	Max. efficiency	%	70.1	73.0	72.1
12	反电势常数	Back-EMF constant	mV/rpm	0.08	0.07	0.07
13	转矩常数	Torque constant	mNm/A	0.78	0.67	0.69
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	9819	8571	7831
15	转子惯量	Rotor inertia	$\text{gcm}^2$	0.07	0.07	0.07
16	重量	Weight	g	4.2	4.2	4.2
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+120	-20~+120	-20~+120

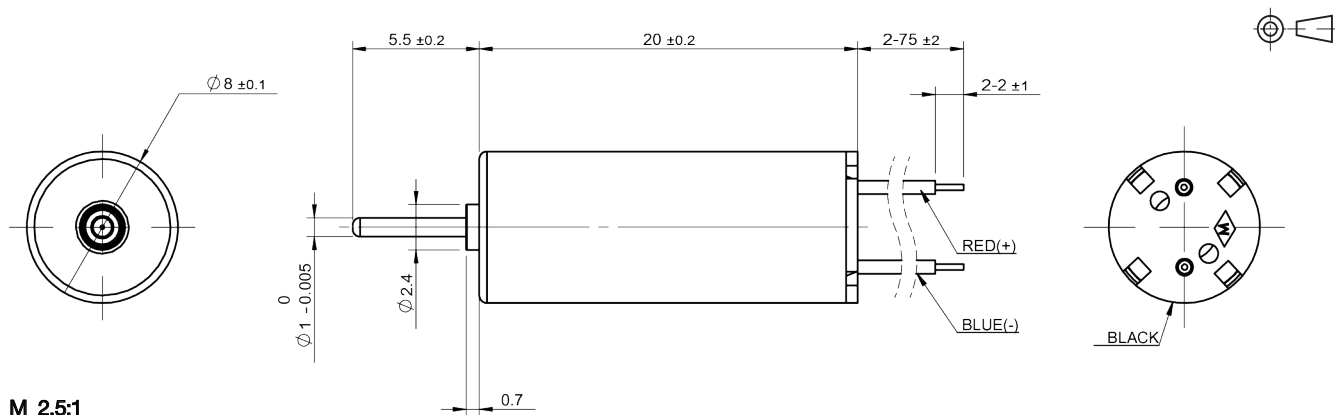
### 特性曲线 | Characteristics Curve



### 可选参数 | Options

导线长度      Lead wires length  
轴长            Shaft length  
性能            Special coils  
齿轮箱         Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## L8.520N5M | 贵金属电刷 Precious Metal Commutation

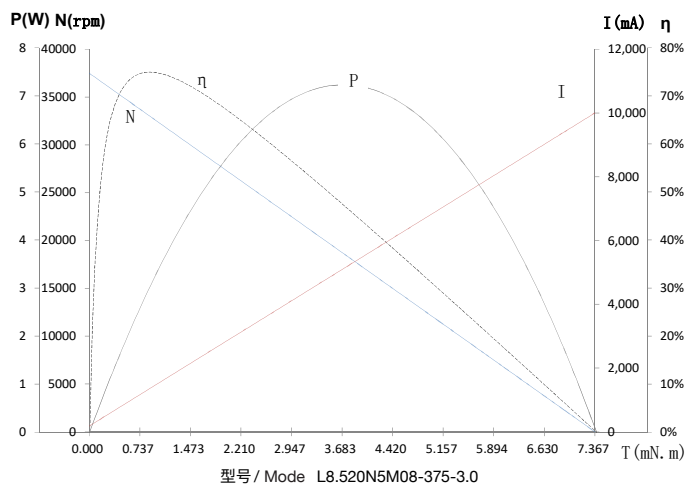
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			08-375-3.0	14-435-3.4	59-367-3.0
1	电压	Voltage	V	3.0	3.0
2	端电阻	Terminal resistance	$\Omega$	0.3	0.45
3	空载转速	No-load speed	rpm	37500	43500
4	空载电流	No-load current	mA	180	200
5	堵转转矩	Stall torque	mNm	7.4	7.0
6	堵转电流	Stall current	mA	10000	9710
7	负载转矩	Load torque	mNm	0.5	0.5
8	负载转速	Load speed	rpm	34950	40370
9	负载电流	Load current	mA	850	880
10	最大输出功率	Max. output power	W	7.24	7.93
11	最大效率	Max. efficiency	%	75.0	73.5
12	反电势常数	Back-EMF constant	mV/rpm	0.08	0.08
13	转矩常数	Torque constant	mNm/A	0.75	0.73
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	5090	6254
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.07	0.07
16	重量	Weight	g	4.2	5.2
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+120	-20~+120

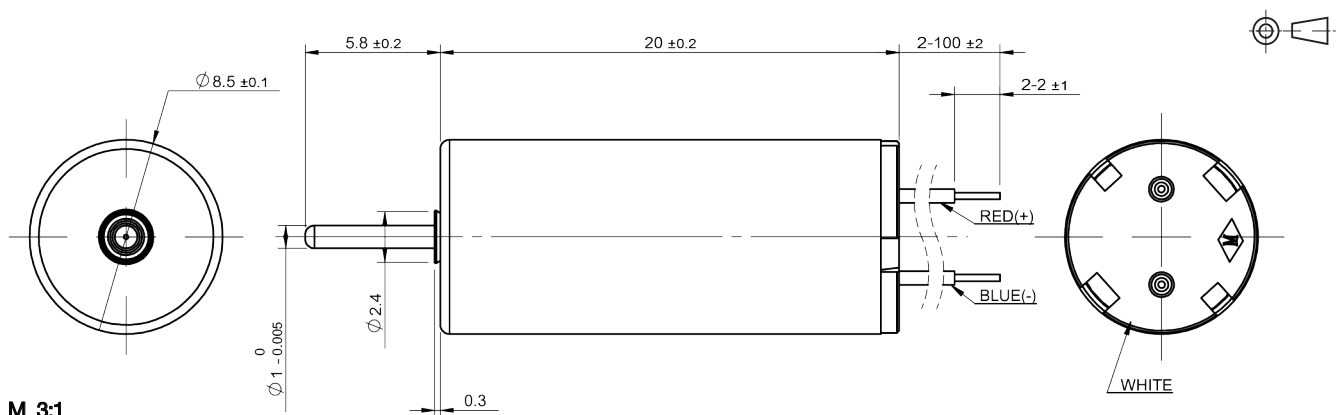
### 特性曲线 | Characteristics Curve



### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

### L8.520N7M | 贵金属电刷 Precious Metal Commutation

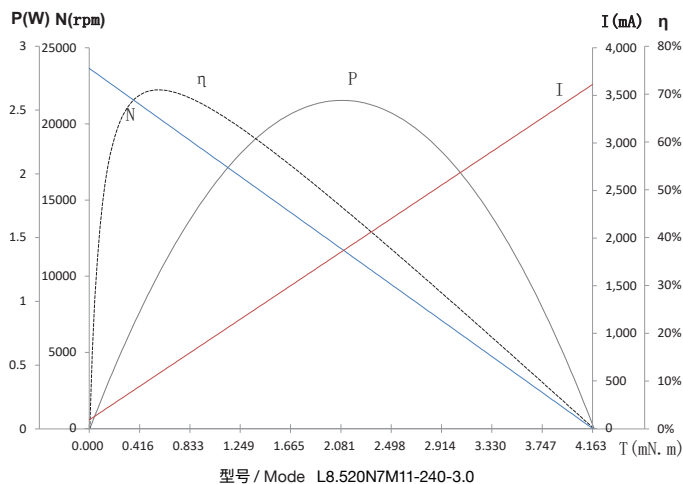
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

#### 主要技术指标 | Characteristics

			11-240-3.0	01-300-7.0	02-200-5.0
1	电压	Voltage	V	3.0	5.0
2	端电阻	Terminal resistance	$\Omega$	0.83	2.9
3	空载转速	No-load speed	rpm	23650	20000
4	空载电流	No-load current	mA	90	70
5	堵转转矩	Stall torque	mNm	4.2	3.8
6	堵转电流	Stall current	mA	3610	1720
7	负载转矩	Load torque	mNm	0.5	1.0
8	负载转速	Load speed	rpm	20810	14710
9	负载电流	Load current	mA	510	510
10	最大输出功率	Max. output power	W	2.58	2.0
11	最大效率	Max. efficiency	%	71.1	64
12	反电势常数	Back-EMF constant	mV/rpm	0.12	0.2
13	转矩常数	Torque constant	mNm/A	1.18	2.3
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	5681	5290
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.07	0.8
16	重量	Weight	g	4.87	4.9
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+120	-20~+80

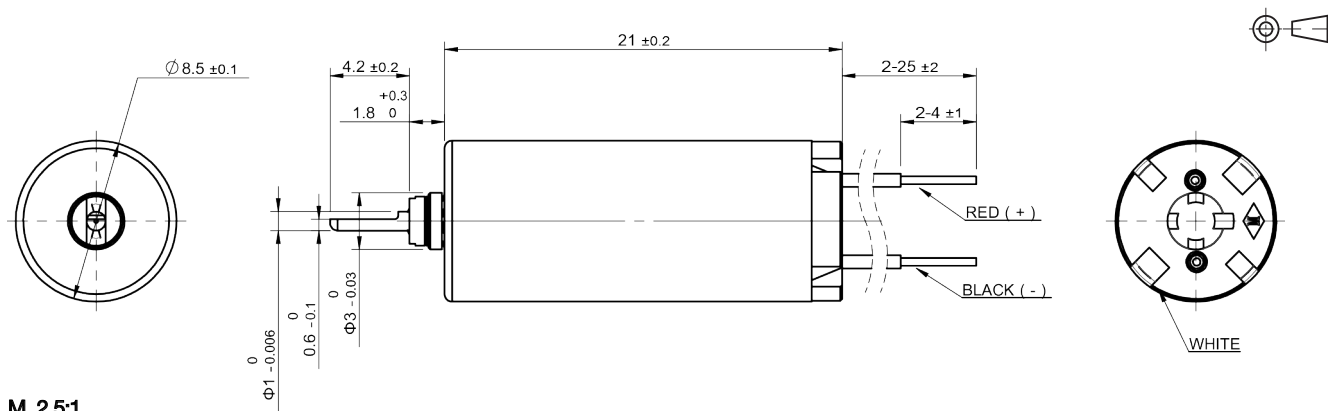
#### 特性曲线 | Characteristics Curve



#### 可选参数 | Options

导线长度      Lead wires length  
 轴长            Shaft length  
 性能            Special coils  
 齿轮箱         Gearheads

#### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
 Specification subject to change without notice

© 2022 CONSTAR  
 www.constarmotor.com

## L8.523N5M | 贵金属电刷 Precious Metal Commutation

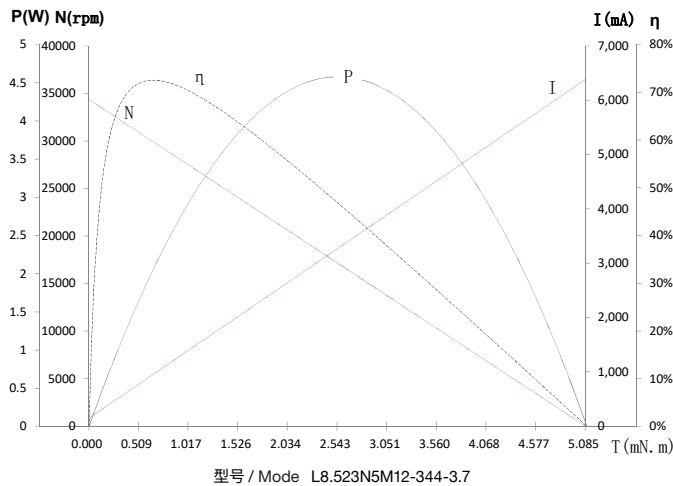
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			12-344-3.7	14-367-3.0	31-460-3.0
1	电压	Voltage	V	3.0	3.0
2	端电阻	Terminal resistance	$\Omega$	0.47	0.45
3	空载转速	No-load speed	rpm	34400	36700
4	空载电流	No-load current	mA	140	160
5	堵转转矩	Stall torque	mNm	5.1	5.0
6	堵转电流	Stall current	mA	6380	6670
7	负载转矩	Load torque	mNm	1.0	1.0
8	负载转速	Load speed	rpm	27640	29300
9	负载电流	Load current	mA	1370	1470
10	最大输出功率	Max. output power	W	4.58	4.77
11	最大效率	Max. efficiency	%	72.7	71.5
12	反电势常数	Back-EMF constant	mV/rpm	0.09	0.08
13	转矩常数	Torque constant	mNm/A	0.81	0.76
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	6765	7404
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.09	0.09
16	重量	Weight	g	5.6	5.6
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+120	-20~+120

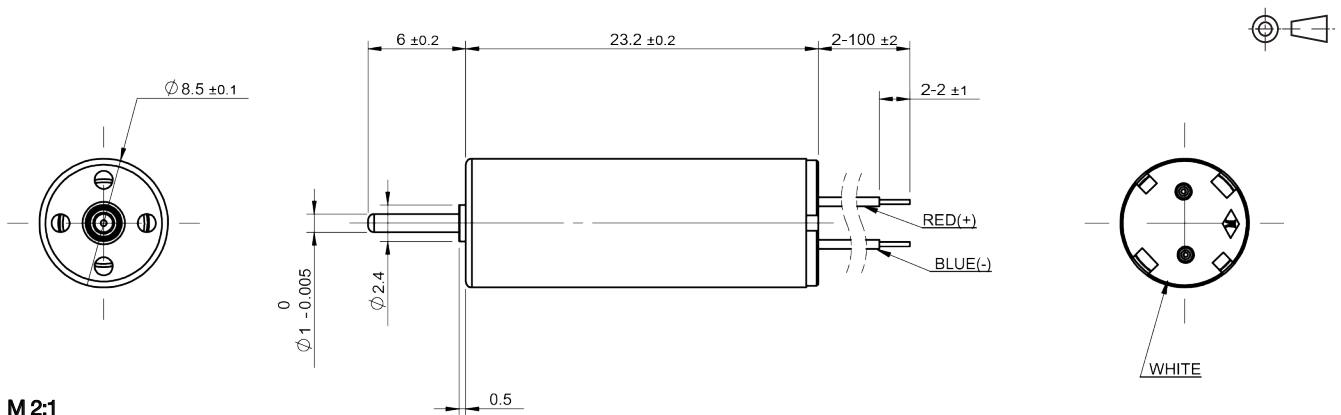
### 特性曲线 | Characteristics Curve



### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

# 直流空心杯电机

## DC CORELESS MOTOR

### L1013N5M | 贵金属电刷 Precious Metal Commutation

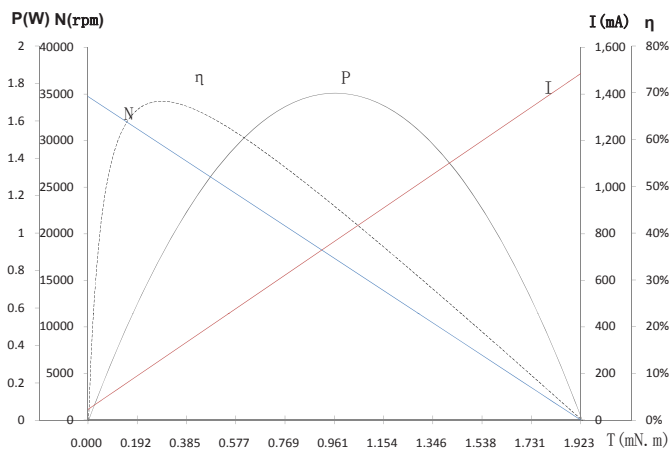
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

#### 主要技术指标 | Characteristics

			06-347-5.0	07-295-5.5	11-100-3.0	
1	电压	Voltage	V	5.0	5.5	3.0
2	端电阻	Terminal resistance	$\Omega$	3.4	3.9	15.5
3	空载转速	No-load speed	rpm	34750	29500	10000
4	空载电流	No-load current	mA	45	37	10
5	堵转转矩	Stall torque	mNm	1.9	2.4	0.5
6	堵转电流	Stall current	mA	1488	1421	194
7	负载转矩	Load torque	mNm	0.3	0.3	0.3
8	负载转速	Load speed	rpm	29330	25810	4000
9	负载电流	Load current	mA	270	210	120
10	最大输出功率	Max. output power	W	1.8	1.9	0.1
11	最大效率	Max. efficiency	%	68	70	60
12	反电势常数	Back-EMF constant	mV/rpm	0.1	0.2	0.3
13	转矩常数	Torque constant	mNm/A	1.3	1.7	2.7
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	18070	12290	20000
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.06	0.06	0.06
16	重量	Weight	g	4.1	4.1	4.1
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+65	-20~+65	-20~+65

#### 特性曲线 | Characteristics Curve

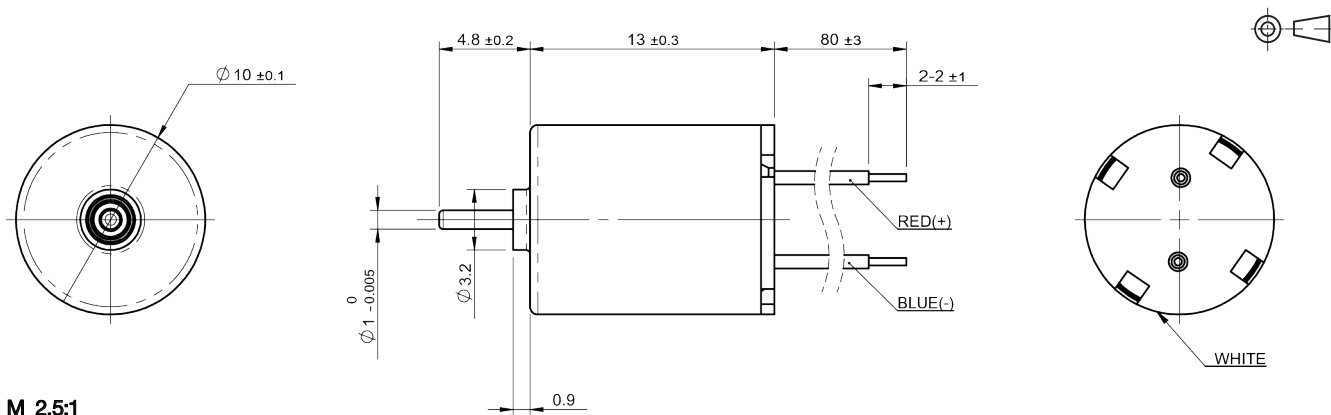


型号 / Model L1013N5M06-347-5.0

#### 可选参数 | Options

导线长度      Lead wires length  
 轴长            Shaft length  
 性能            Special coils  
 齿轮箱         Gearheads

#### 外观图 | Outline Drawing



M 2.5:1

规格如有变更，恕不另行通知  
 Specification subject to change without notice

© 2022 CONSTAR  
 www.constarmotor.com

## L1015N5M | 贵金属电刷 Precious Metal Commutation

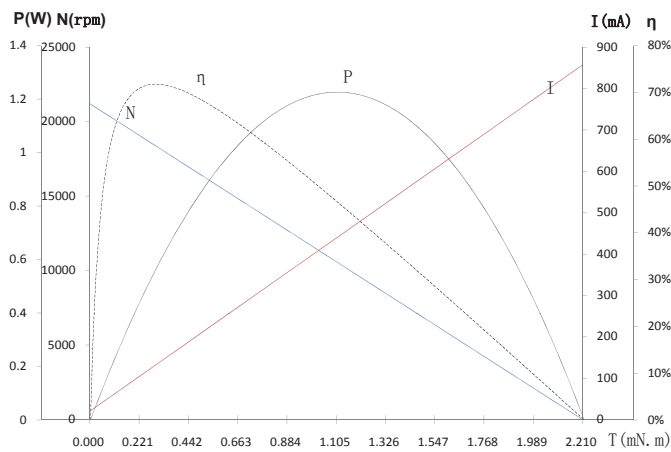
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			22-212-6.0	93-213-3.7	95-267-5.0
1	电压	Voltage	V	6.0	5.0
2	端电阻	Terminal resistance	$\Omega$	7.0	3.9
3	空载转速	No-load speed	rpm	21200	26700
4	空载电流	No-load current	mA	20	35
5	堵转转矩	Stall torque	mNm	2.21	2.17
6	堵转电流	Stall current	mA	860	1280
7	负载转矩	Load torque	mNm	0.5	1.5
8	负载转速	Load speed	rpm	16400	8240
9	负载电流	Load current	mA	210	900
10	最大输出功率	Max. output power	W	1.23	1.52
11	最大效率	Max. efficiency	%	72	70
12	反电势常数	Back-EMF constant	mV/rpm	0.3	0.2
13	转矩常数	Torque constant	mNm/A	2.6	1.7
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	9590	12310
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.07	0.07
16	重量	Weight	g	5.1	5.1
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+65	-20~+65

### 特性曲线 | Characteristics Curve

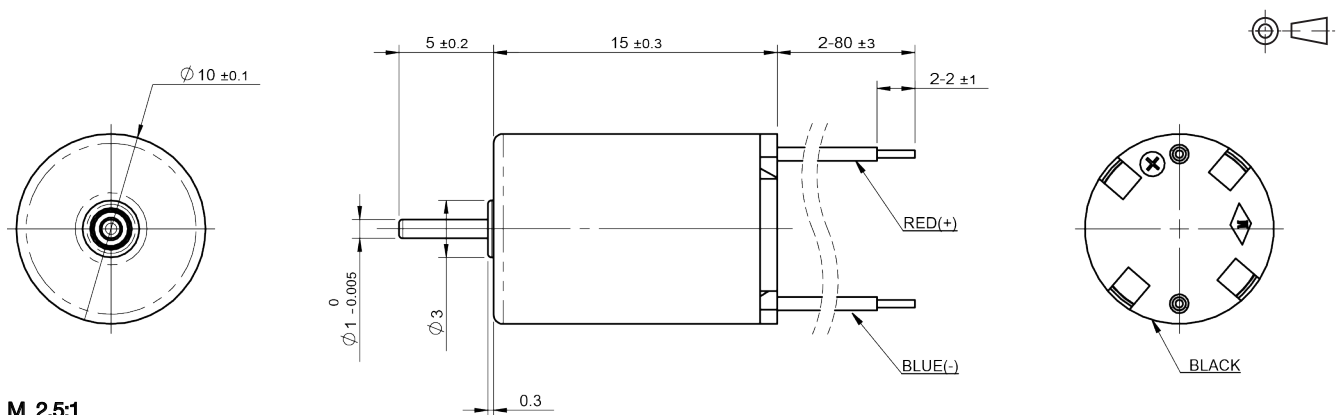


型号 / Mode L1015N5M22-212-6.0

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

### L1020N5M | 贵金属电刷 Precious Metal Commutation

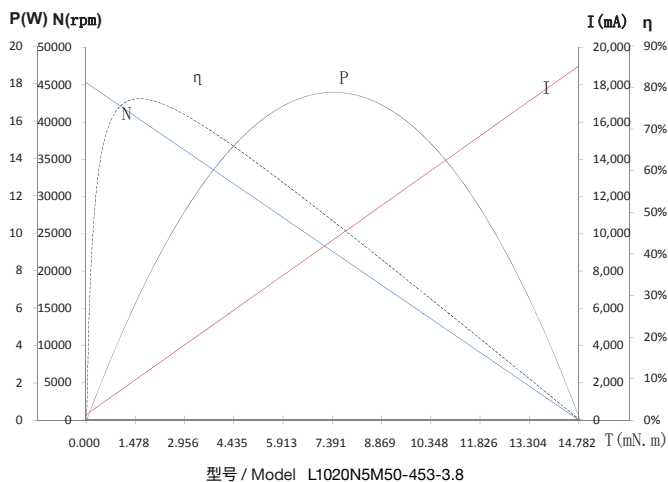
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

#### 主要技术指标 | Characteristics

			50-453-3.8	66-336-7.4	69-291-5.0	
1	电压	Voltage	V	3.8	7.4	5.0
2	端电阻	Terminal resistance	$\Omega$	0.2	1.8	1.4
3	空载转速	No-load speed	rpm	45300	33600	29100
4	空载电流	No-load current	mA	275	65	32
5	堵转转矩	Stall torque	mNm	14.8	8.4	5.8
6	堵转电流	Stall current	mA	18095	4111	3597
7	负载转矩	Load torque	mNm	2.0	2.0	2.0
8	负载转速	Load speed	rpm	39170	25580	18990
9	负载电流	Load current	mA	2690	1030	1270
10	最大输出功率	Max. output power	W	17.5	7.4	4.4
11	最大效率	Max. efficiency	%	81	77	82
12	反电势常数	Back-EMF constant	mV/rpm	0.1	0.2	0.2
13	转矩常数	Torque constant	mNm/A	0.8	2.1	1.6
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	3060	4010	5060
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.15	0.15	0.12
16	重量	Weight	g	7.5	7.5	6.8
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+85	-20~+85	-20~+65

#### 特性曲线 | Characteristics Curve

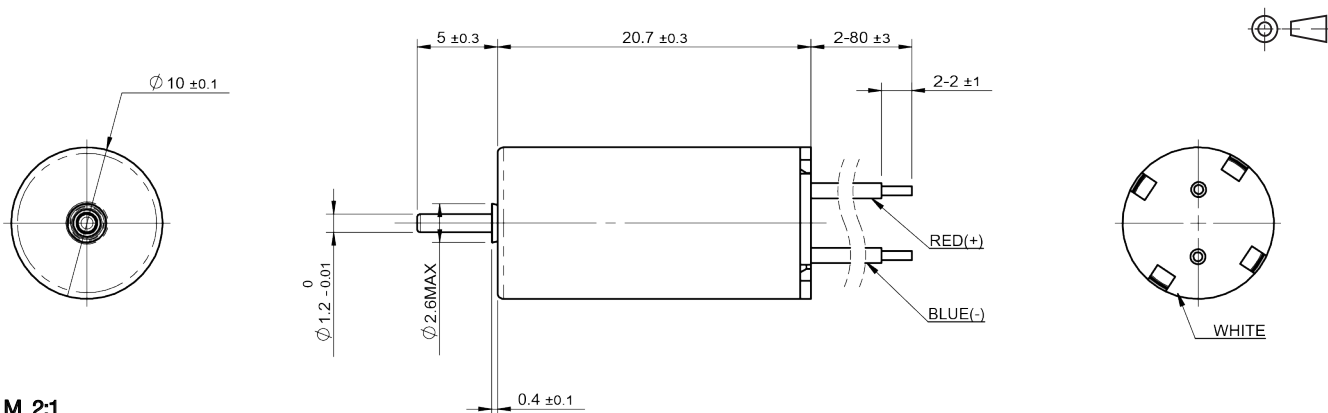


#### 可选参数 | Options

导线长度  
轴长  
性能  
齿轮箱

Lead wires length  
Shaft length  
Special coils  
Gearheads

#### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com



## L1212N5M | 贵金属电刷 Precious Metal Commutation

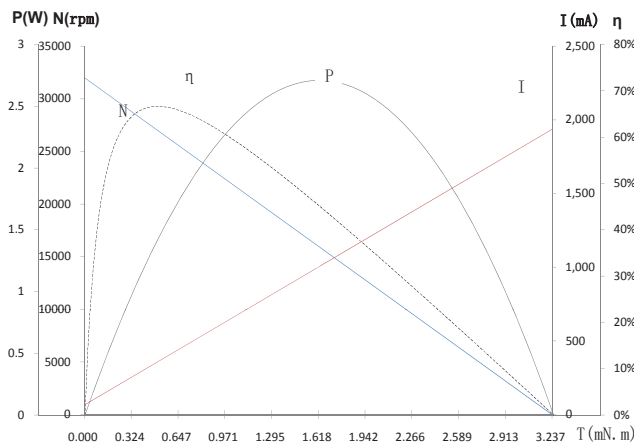
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			05-320-6.0	01-335-6.0	04-375-6.0
1	电压	Voltage	V	6.0	6.0
2	端电阻	Terminal resistance	$\Omega$	3.1	3.9
3	空载转速	No-load speed	rpm	32000	33500
4	空载电流	No-load current	mA	65	65
5	堵转转矩	Stall torque	mNm	3.2	2.4
6	堵转电流	Stall current	mA	1940	1540
7	负载转矩	Load torque	mNm	0.5	0.5
8	负载转速	Load speed	rpm	27070	26570
9	负载电流	Load current	mA	350	370
10	最大输出功率	Max. output power	W	2.7	2.1
11	最大效率	Max. efficiency	%	67	63
12	反电势常数	Back-EMF constant	mV/rpm	0.2	0.2
13	转矩常数	Torque constant	mNm/A	1.7	1.6
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	9860	13870
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.1	0.1
16	重量	Weight	g	5.5	5.5
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+85	-20~+85

### 特性曲线 | Characteristics Curve

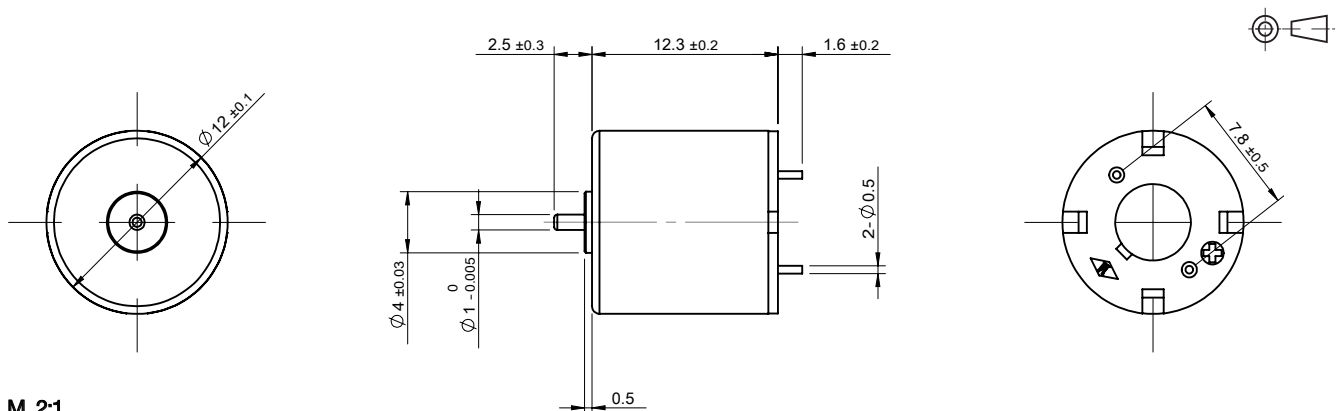


型号 / Mode L1212N5M05-320-6.0

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



M 2:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

### L1213N5M | 贵金属电刷 Precious Metal Commutation

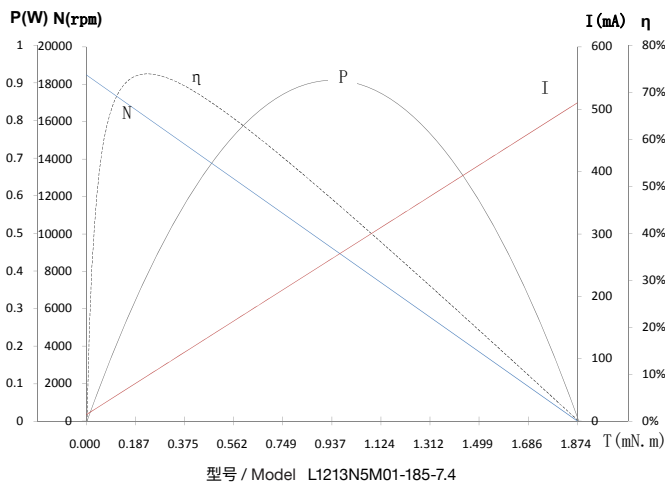
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

#### 主要技术指标 | Characteristics

			01-185-7.4	02-300-6.0	05-400-7.4
1	电压	Voltage	V	7.4	7.4
2	端电阻	Terminal resistance	$\Omega$	14.5	3.2
3	空载转速	No-load speed	rpm	18500	40500
4	空载电流	No-load current	mA	10	120
5	堵转转矩	Stall torque	mNm	1.9	3.7
6	堵转电流	Stall current	mA	510	2350
7	负载转矩	Load torque	mNm	0.5	0.5
8	负载转速	Load speed	rpm	13560	35020
9	负载电流	Load current	mA	140	420
10	最大输出功率	Max. output power	W	0.9	3.9
11	最大效率	Max. efficiency	%	74	60
12	反电势常数	Back-EMF constant	mV/rpm	0.4	0.2
13	转矩常数	Torque constant	mNm/A	3.7	1.9
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	9880	10830
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.1	0.1
16	重量	Weight	g	6.5	5.6
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+85	-20~+85

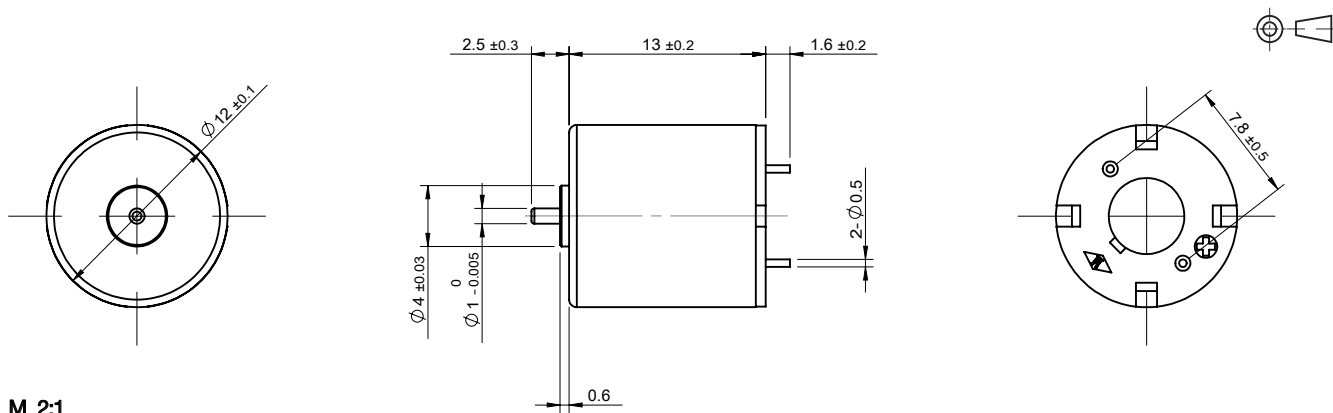
#### 特性曲线 | Characteristics Curve



#### 可选参数 | Options

- 导线长度 | Lead wires length
- 轴长 | Shaft length
- 性能 | Special coils
- 齿轮箱 | Gearheads

#### 外观图 | Outline Drawing



M 2:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## L1215N5M | 贵金属电刷 Precious Metal Commutation

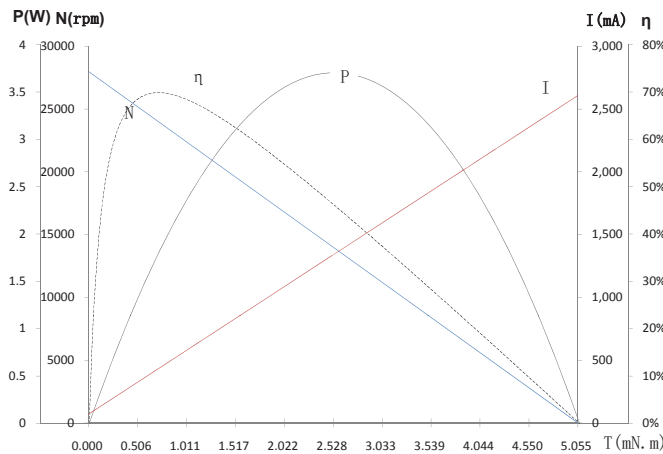
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			43-230-6.0	48-330-8.0	34-280-6.0
1	电压	Voltage	V	6.0	6.0
2	端电阻	Terminal resistance	$\Omega$	3.4	2.3
3	空载转速	No-load speed	rpm	23000	28000
4	空载电流	No-load current	mA	50	70
5	堵转转矩	Stall torque	mNm	4.1	5.1
6	堵转电流	Stall current	mA	1760	2610
7	负载转矩	Load torque	mNm	1	0.5
8	负载转速	Load speed	rpm	20220	25230
9	负载电流	Load current	mA	260	320
10	最大输出功率	Max. output power	W	2	3.7
11	最大效率	Max. efficiency	%	69.2	70
12	反电势常数	Back-EMF constant	mV/rpm	0.3	0.2
13	转矩常数	Torque constant	mNm/A	2.4	2.0
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	5560	5540
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.1	0.1
16	重量	Weight	g	7	6.5
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+85	-20~+85

### 特性曲线 | Characteristics Curve

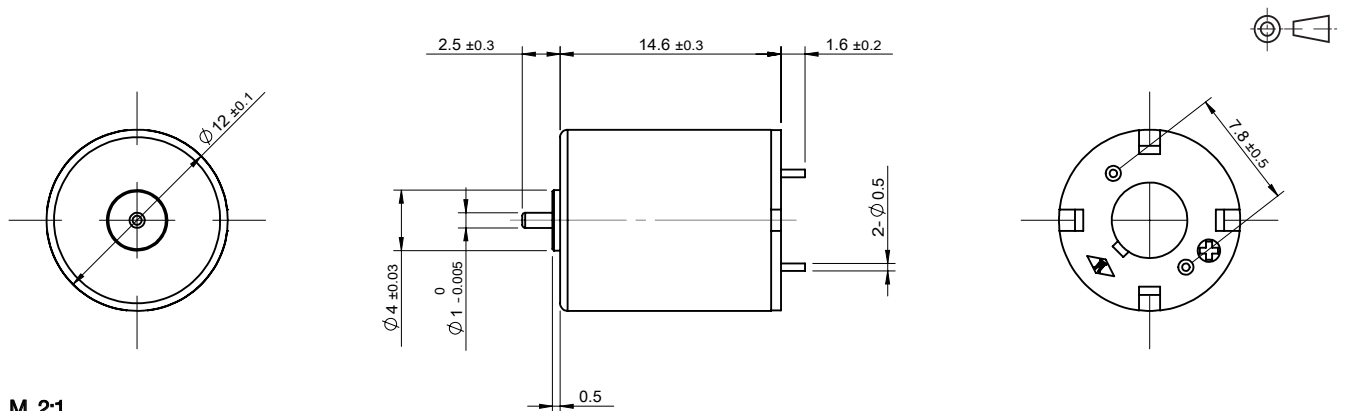


型号 / Mode L1215N5M34-280-6.0

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



M 2:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

### L1515N5M | 贵金属电刷 Precious Metal Commutation

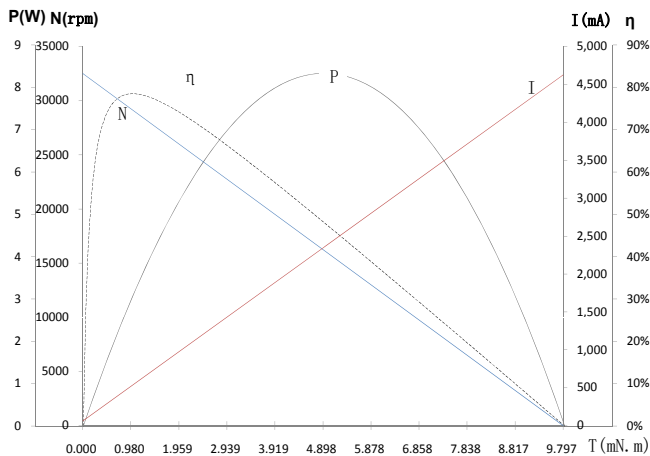
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

#### 主要技术指标 | Characteristics

			12-325-7.4	13-250-12.0	02-260-7.4
1	电压	Voltage	V	7.4	7.4
2	端电阻	Terminal resistance	$\Omega$	1.6	2.5
3	空载转速	No-load speed	rpm	32500	26000
4	空载电流	No-load current	mA	60	70
5	堵转转矩	Stall torque	mNm	9.8	7.7
6	堵转电流	Stall current	mA	4625	2960
7	负载转矩	Load torque	mNm	1.0	1.0
8	负载转速	Load speed	rpm	29180	22610
9	负载电流	Load current	mA	526	600
10	最大输出功率	Max. output power	W	8.3	5.2
11	最大效率	Max. efficiency	%	79	72
12	反电势常数	Back-EMF constant	mV/rpm	0.22	0.47
13	转矩常数	Torque constant	mNm/A	2.15	4.48
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	3320	3660
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.7	0.7
16	重量	Weight	g	12	12.1
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+85	-20~+85

#### 特性曲线 | Characteristics Curve

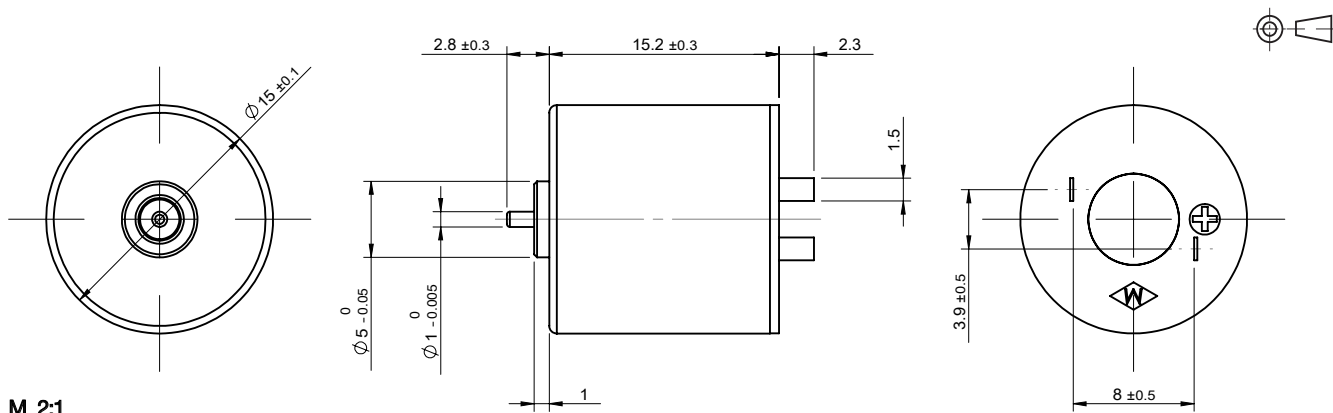


型号 / Model L1515N5M12-325-7.4

#### 可选参数 | Options

- 导线长度      Lead wires length
- 轴长            Shaft length
- 性能            Special coils
- 齿轮箱         Gearheads

#### 外观图 | Outline Drawing



M 2:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## L1620N5M | 贵金属电刷 Precious Metal Commutation

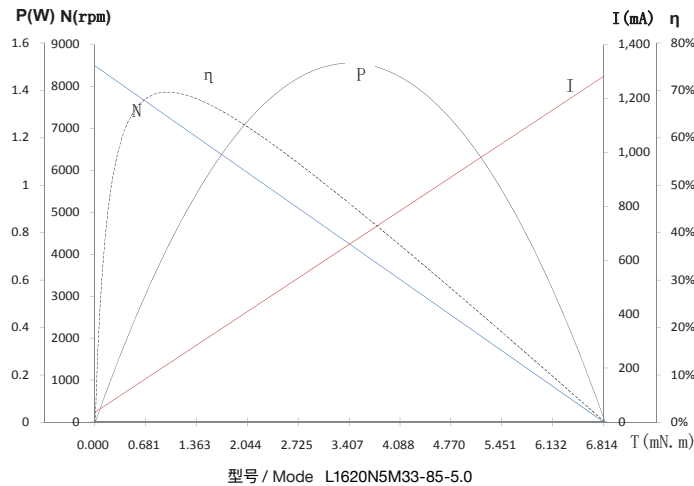
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			33-85-5.0	20-95-5.0	29-80-5.0
1	电压	Voltage	V	5.0	5.0
2	端电阻	Terminal resistance	$\Omega$	3.9	4.1
3	空载转速	No-load speed	rpm	8550	9500
4	空载电流	No-load current	mA	35	35
5	堵转转矩	Stall torque	mNm	6.8	5.78
6	堵转电流	Stall current	mA	1280	1220
7	负载转矩	Load torque	mNm	1.0	1.0
8	负载转速	Load speed	rpm	7290	7860
9	负载电流	Load current	mA	220	240
10	最大输出功率	Max. output power	W	1.5	1.4
11	最大效率	Max. efficiency	%	70	69
12	反电势常数	Back-EMF constant	mV/rpm	0.6	0.5
13	转矩常数	Torque constant	mNm/A	5.4	4.9
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1260	1640
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.45	0.45
16	重量	Weight	g	15.8	15.8
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+85	-20~+85

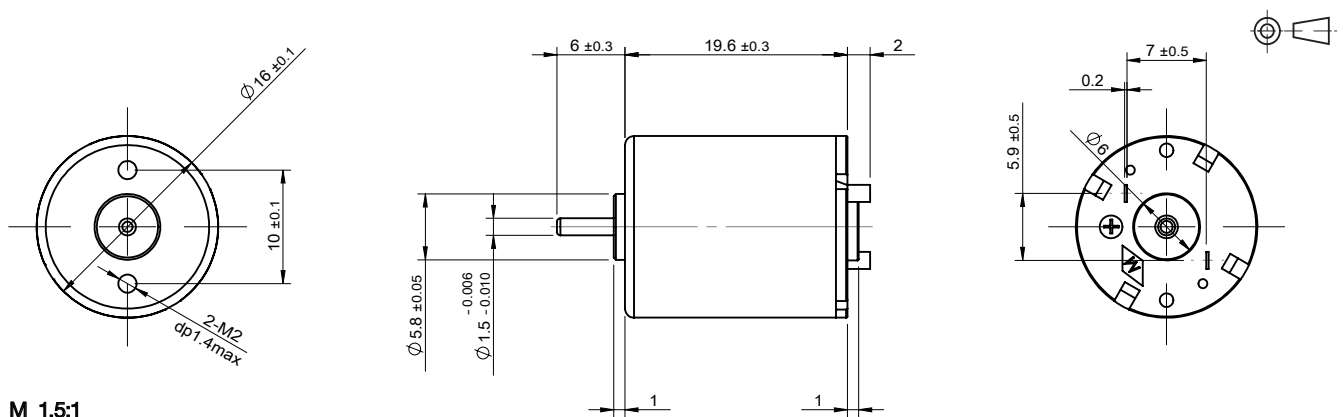
### 特性曲线 | Characteristics Curve



### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



M 1.5:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

### L1625N5M | 贵金属电刷 Precious Metal Commutation

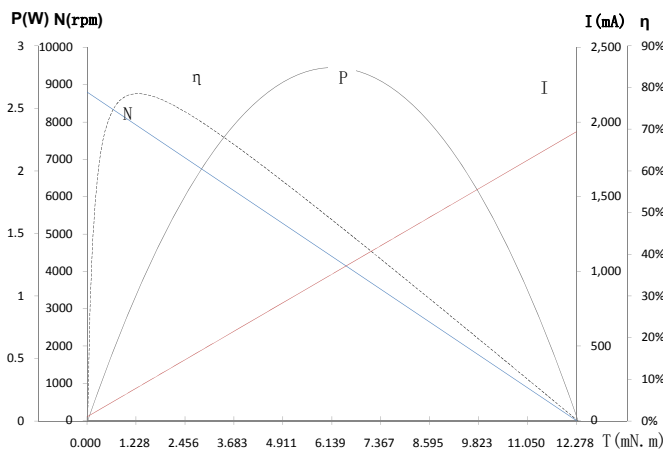
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

#### 主要技术指标 | Characteristics

			25-88-6.0	35-60-5.0	54-170-12.0
1	电压	Voltage	V	6.0	12.0
2	端电阻	Terminal resistance	$\Omega$	3.1	3.2
3	空载转速	No-load speed	rpm	8800	18700
4	空载电流	No-load current	mA	25	60
5	堵转转矩	Stall torque	mNm	12.3	22.3
6	堵转电流	Stall current	mA	1935	3750
7	负载转矩	Load torque	mNm	3.5	3.8
8	负载转速	Load speed	rpm	6290	15470
9	负载电流	Load current	mA	570	697
10	最大输出功率	Max. output power	W	2.8	10.9
11	最大效率	Max. efficiency	%	79	76
12	反电势常数	Back-EMF constant	mV/rpm	0.67	0.63
13	转矩常数	Torque constant	mNm/A	6.43	6.03
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	720	840
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.7	0.7
16	重量	Weight	g	20.5	20.5
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+85	-20~+85

#### 特性曲线 | Characteristics Curve

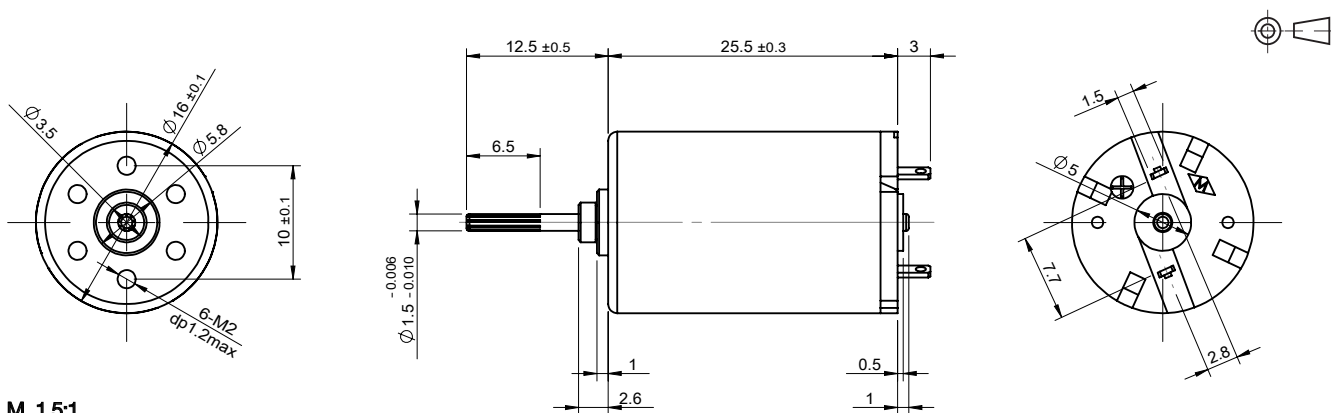


型号 / Model L1625N5M25-88-6.0

#### 可选参数 | Options

导线长度      Lead wires length  
 轴长            Shaft length  
 性能            Special coils  
 齿轮箱         Gearheads

#### 外观图 | Outline Drawing



M 1.5:1

规格如有变更，恕不另行通知  
 Specification subject to change without notice

© 2022 CONSTAR  
 www.constarmotor.com

## L1630N5M | 贵金属电刷 Precious Metal Commutation

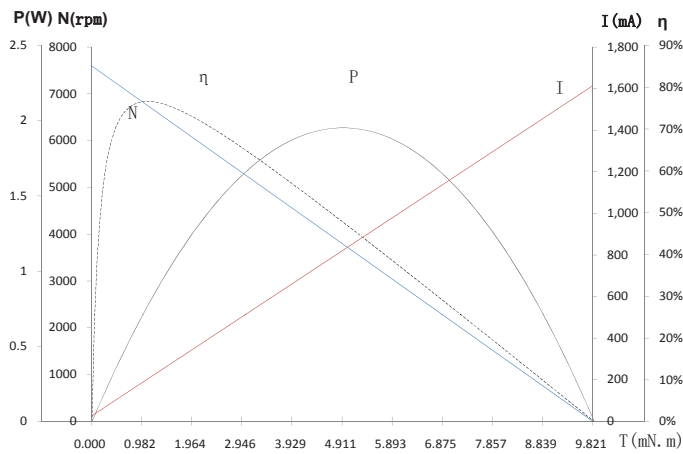
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			11-76-5.0	35-25-3.0	22-120-6.0
1	电压	Voltage	V	5.0	6.0
2	端电阻	Terminal resistance	$\Omega$	3.1	1.4
3	空载转速	No-load speed	rpm	7700	12000
4	空载电流	No-load current	mA	25	30
5	堵转转矩	Stall torque	mNm	9.8	20.2
6	堵转电流	Stall current	mA	1610	4290
7	负载转矩	Load torque	mNm	0.5	2.0
8	负载转速	Load speed	rpm	7310	10810
9	负载电流	Load current	mA	110	450
10	最大输出功率	Max. output power	W	2.0	6.4
11	最大效率	Max. efficiency	%	78	84
12	反电势常数	Back-EMF constant	mV/rpm	0.6	1.2
13	转矩常数	Torque constant	mNm/A	6.1	4.7
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	780	590
15	转子惯量	Rotor inertia	$\text{gcm}^2$	0.7	0.7
16	重量	Weight	g	25.2	25.2
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+85	-20~+85

### 特性曲线 | Characteristics Curve

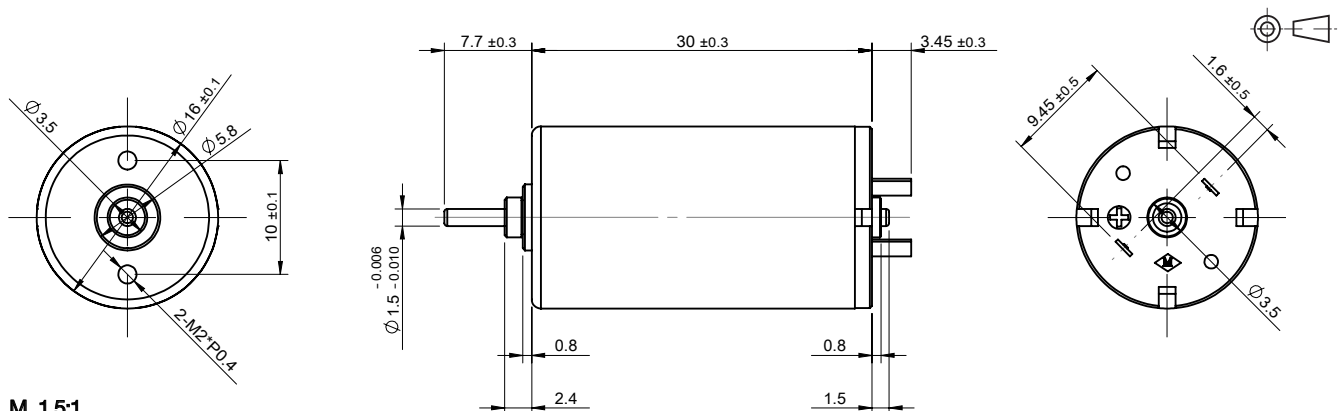


型号 / Mode L1630N5M11-76-5.0

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



M 1.5:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

# 直流空心杯电机

## DC CORELESS MOTOR

### L1718N5M | 贵金属电刷 Precious Metal Commutation

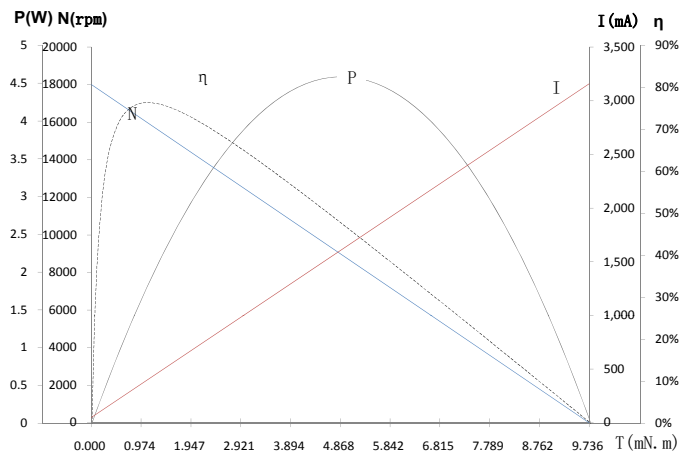
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

#### 主要技术指标 | Characteristics

			06-180-6.0	67-185-6.5	46-245-7.4	57-260-7.4	
1	电压	Voltage	V	6.0	6.5	7.4	7.4
2	端电阻	Terminal resistance	$\Omega$	1.9	1.7	1.2	1.3
3	空载转速	No-load speed	rpm	18000	18500	24500	26000
4	空载电流	No-load current	mA	50	50	40	60
5	堵转转矩	Stall torque	mNm	9.7	12.5	17.6	15.1
6	堵转电流	Stall current	mA	3160	3820	6170	5690
7	负载转矩	Load torque	mNm	1.0	1.0	1.0	2.0
8	负载转速	Load speed	rpm	16150	17020	23110	22570
9	负载电流	Load current	mA	370	350	390	800
10	最大输出功率	Max. output power	W	4.6	6.1	11.3	10.3
11	最大效率	Max. efficiency	%	77	79	85	81
12	反电势常数	Back-EMF constant	mV/rpm	0.3	0.3	0.3	0.3
13	转矩常数	Torque constant	mNm/A	3.1	3.3	2.9	2.7
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1850	1480	1390	1720
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.8	0.8	0.8	0.8
16	重量	Weight	g	18.3	18.3	18.5	20.5
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+85	-20~+85	-20~+85	-20~+85

#### 特性曲线 | Characteristics Curve

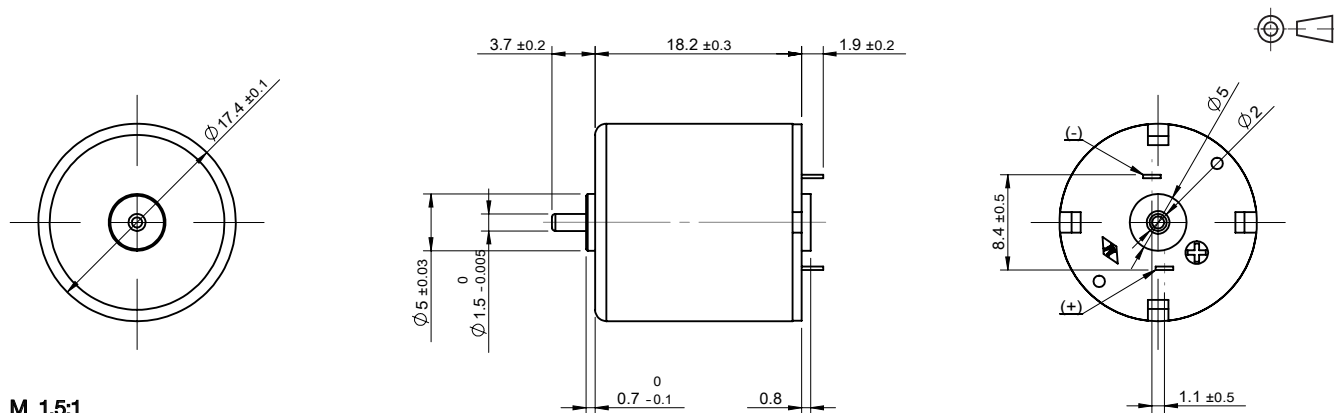


型号 / Model L1718N5M06-180-6.0

#### 可选参数 | Options

- 导线长度      Lead wires length
- 轴长            Shaft length
- 性能            Special coils
- 齿轮箱         Gearheads

#### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com



## L1722N5M | 贵金属电刷 Precious Metal Commutation

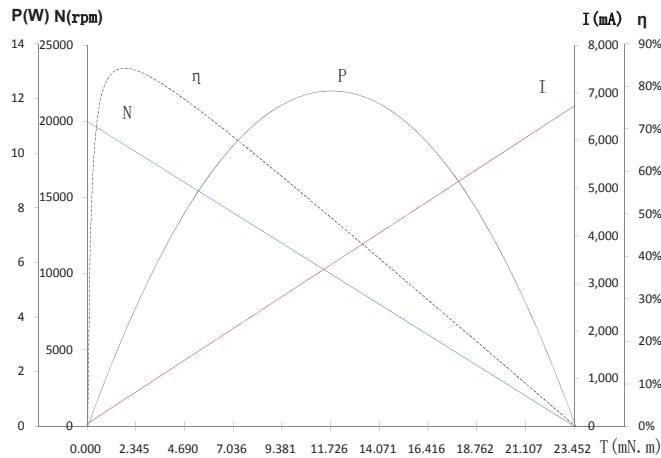
应用领域：微型无人机、智能电玩、小家电产品等领域。

Applications: mini UAV's, remote control hobby products, small household appliances, etc.

### 主要技术指标 | Characteristics

			16-200-7.4	08-218-7.4	11-270-12.0
1	电压	Voltage	V	7.4	12.0
2	端电阻	Terminal resistance	$\Omega$	1.1	1.8
3	空载转速	No-load speed	rpm	20000	27000
4	空载电流	No-load current	mA	45	50
5	堵转转矩	Stall torque	mNm	23.5	27.9
6	堵转电流	Stall current	mA	6730	6670
7	负载转矩	Load torque	mNm	1.0	2.0
8	负载转速	Load speed	rpm	19150	25060
9	负载电流	Load current	mA	330	520
10	最大输出功率	Max. output power	W	12.3	19.7
11	最大效率	Max. efficiency	%	84	84
12	反电势常数	Back-EMF constant	mV/rpm	0.4	0.4
13	转矩常数	Torque constant	mNm/A	3.5	4.2
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	850	970
15	转子惯量	Rotor inertia	$\text{gcm}^2$	0.8	0.8
16	重量	Weight	g	24.5	24.5
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+85	-20~+85

### 特性曲线 | Characteristics Curve

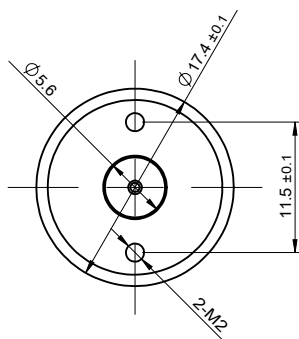


型号 / Mode L1722N5M16-200-7.4

### 可选参数 | Options

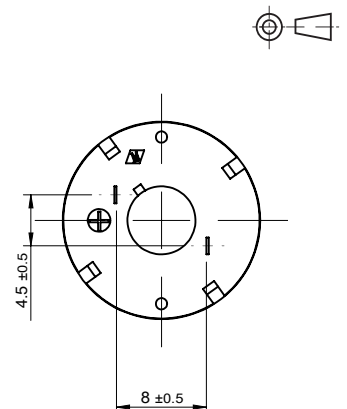
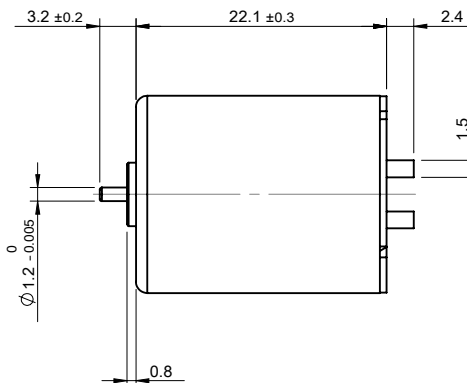
导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



M 1.5:1

规格如有变更，恕不另行通知  
Specification subject to change without notice



© 2022 CONSTAR  
www.constarmotor.com

## VL0408N3M | 贵金属电刷 Precious Metal Commutation

应用领域：穿戴设备、手机、平板电脑、保健器材等领域。

Applications: wearable products, mobile phones, tablet PC's, health care products, etc.

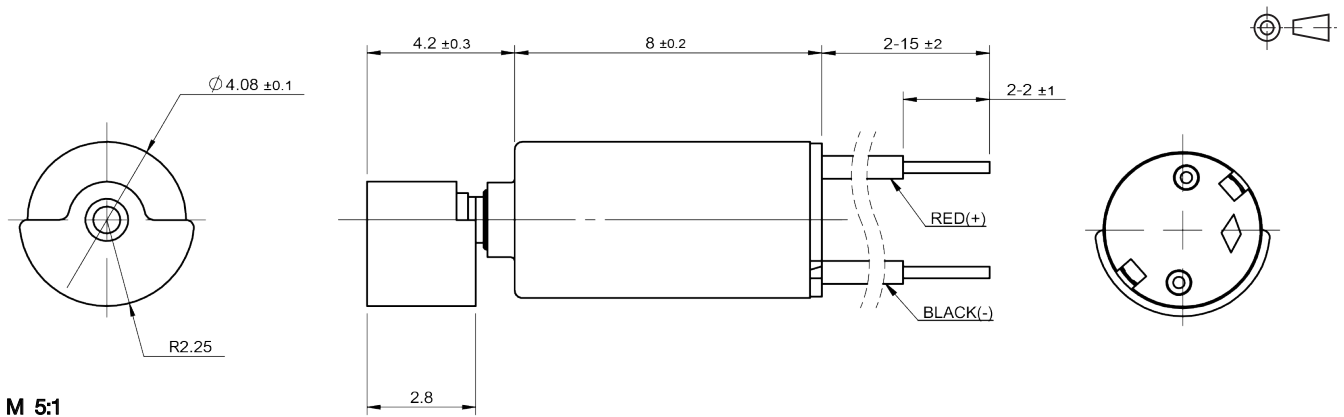
### 主要技术指标 | Characteristics

			10-120-3.0	10-85-2.7	70-220-3.0
1	电压	Voltage	V	3.0	3.0
2	端电阻	Terminal resistance	$\Omega$	32	12.8
3	转速	Speed	rpm	12000	20000
4	电流	Current	mA	75	185
5	启动电压	Starting voltage	V	1.4	1.5
6	堵转电流	Stall current	mA	95	230
7	重量	Weight	g	0.8	0.85
8	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+65	-10~+65

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
偏心锤	Eccentric weight
胶套	Silicone sets

### 外观图 | Outline Drawing



## VL0510N3M | 贵金属电刷 Precious Metal Commutation

应用领域：穿戴设备、手机、平板电脑、保健器材等领域。

Applications: wearable products, mobile phones, tablet PC's, health care products, etc.

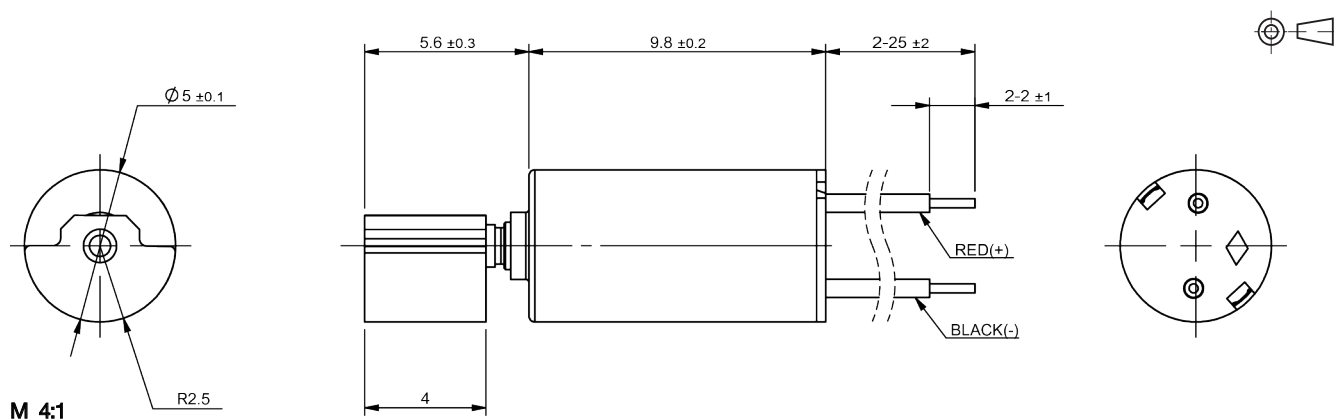
### 主要技术指标 | Characteristics

			05-120-3.0	10-200-3.0	04-150-3.0
1	电压	Voltage	V	3.0	3.0
2	端电阻	Terminal resistance	$\Omega$	17	10.7
3	转速	Speed	rpm	12000	15000
4	电流	Current	mA	130	180
5	启动电压	Starting voltage	V	0.8	0.8
6	堵转电流	Stall current	mA	190	420
7	重量	Weight	g	1.5	1.5
8	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+65	-10~+65

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
偏心锤	Eccentric weight
胶套	Silicone sets

### 外观图 | Outline Drawing



# 直流空心杯电机 DC CORELESS MOTOR

## VL0610N5M | 贵金属电刷 Precious Metal Commutation

应用领域：穿戴设备、手机、平板电脑、保健器材等领域。

Applications: wearable products, mobile phones, tablet PC's, health care products, etc.

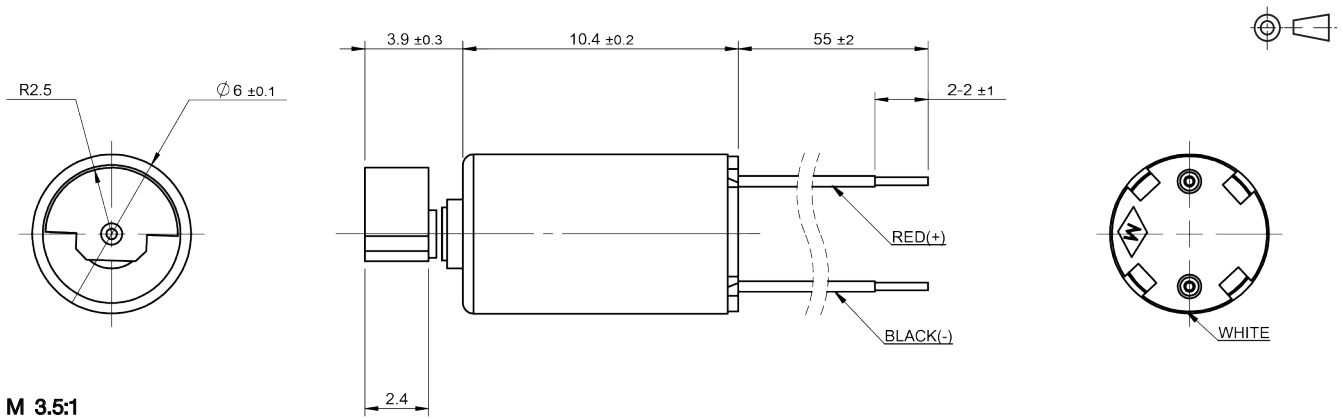
### 主要技术指标 | Characteristics

			36-90-1.5	80-87-1.3	40-110-3.0
1	电压	Voltage	V	1.5	3.0
2	端电阻	Terminal resistance	$\Omega$	22	55
3	转速	Speed	rpm	9000	11000
4	电流	Current	mA	16	20
5	启动电压	Starting voltage	V	0.8	0.8
6	堵转电流	Stall current	mA	80	120
7	重量	Weight	g	1.6	1.8
8	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+65	-10~+65

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
偏心锤	Eccentric weight
胶套	Silicone sets

### 外观图 | Outline Drawing



## VL0612N3M | 贵金属电刷 Precious Metal Commutation

应用领域：穿戴设备、手机、平板电脑、保健器材等领域。

Applications: wearable products, mobile phones, tablet PC's, health care products, etc.

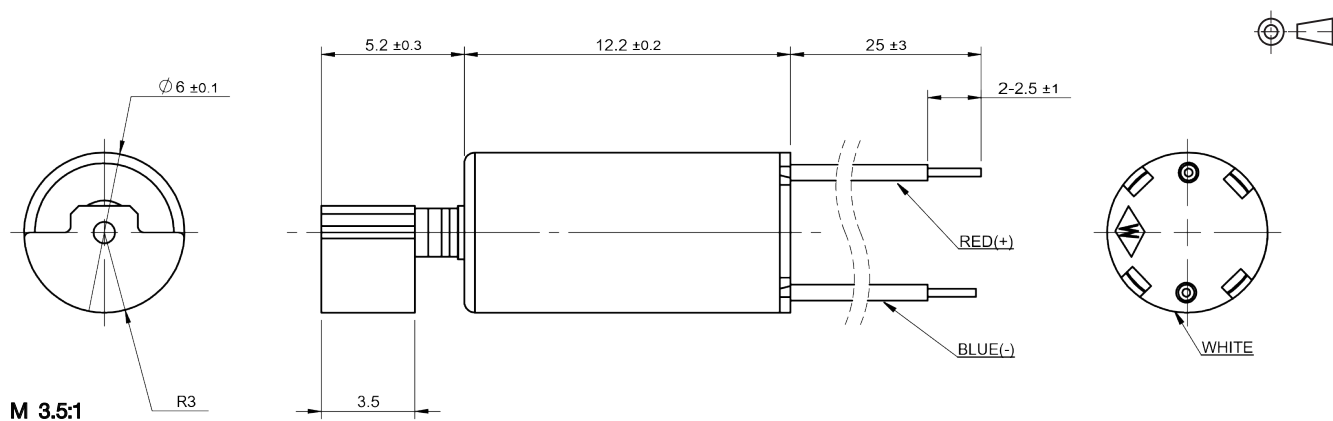
### 主要技术指标 | Characteristics

			42-95-1.3	24-125-3.7	52-130-1.5
1	电压	Voltage	V	1.3	1.5
2	端电阻	Terminal resistance	$\Omega$	7.8	6.4
3	转速	Speed	rpm	9500	13000
4	电流	Current	mA	70	90
5	启动电压	Starting voltage	V	0.8	0.8
6	堵转电流	Stall current	mA	200	200
7	重量	Weight	g	2.3	2.1
8	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+65	-10~+65

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
偏心锤	Eccentric weight
胶套	Silicone sets

### 外观图 | Outline Drawing



# 直流空心杯电机

## DC CORELESS MOTOR

### VL0614N5M | 贵金属电刷 Precious Metal Commutation

应用领域：穿戴设备、手机、平板电脑、保健器材等领域。

Applications: wearable products, mobile phones, tablet PC's, health care products, etc.

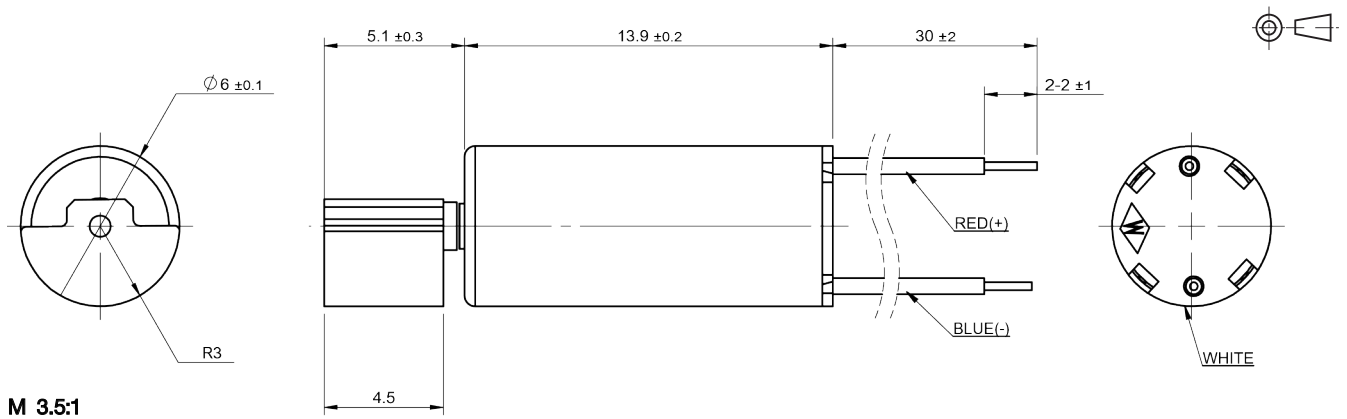
#### 主要技术指标 | Characteristics

			51-102-3.0	17-150-1.5	41-71-1.3
1	电压	Voltage	V	3.0	1.5
2	端电阻	Terminal resistance	$\Omega$	18	3.3
3	转速	Speed	rpm	10200	15000
4	电流	Current	mA	50	100
5	启动电压	Starting voltage	V	0.6	0.6
6	堵转电流	Stall current	mA	180	170
7	重量	Weight	g	2.9	2.25
8	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+65	-10~+65

#### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
偏心锤	Eccentric weight
胶套	Silicone sets

#### 外观图 | Outline Drawing



## VL0615N5M | 贵金属电刷 Precious Metal Commutation

应用领域：穿戴设备、手机、平板电脑、保健器材等领域。

Applications: wearable products, mobile phones, tablet PC's, health care products, etc.

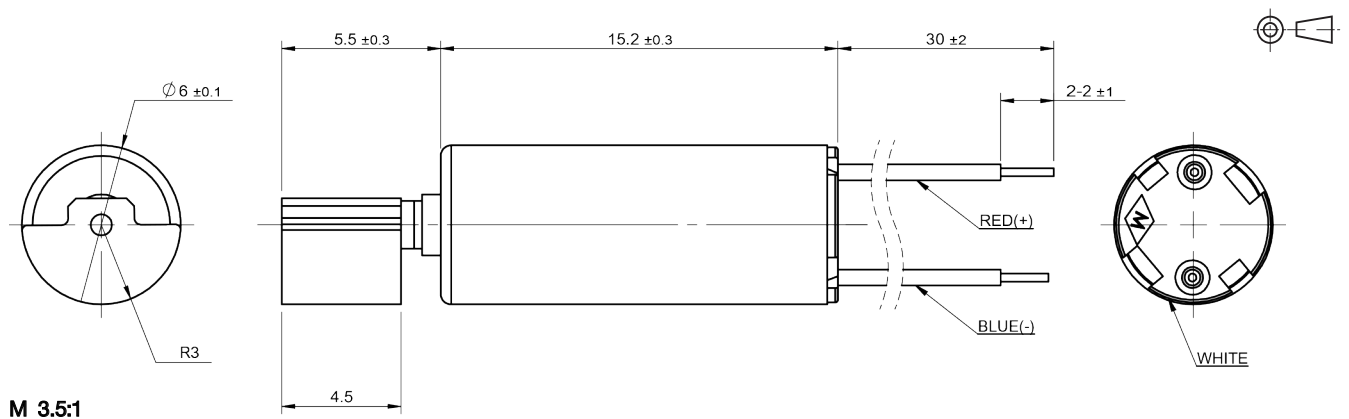
### 主要技术指标 | Characteristics

			47-100-3.0	02-92-1.5	21-250-3.0
1	电压	Voltage	V	3.0	3.0
2	端电阻	Terminal resistance	$\Omega$	20	2.8
3	转速	Speed	rpm	10000	25000
4	电流	Current	mA	45	280
5	启动电压	Starting voltage	V	0.6	0.8
6	堵转电流	Stall current	mA	150	1000
7	重量	Weight	g	3.4	2.6
8	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+65	-10~+65

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
偏心锤	Eccentric weight
胶套	Silicone sets

### 外观图 | Outline Drawing



# 直流空心杯电机 DC CORELESS MOTOR

## VL0716N5M | 贵金属电刷 Precious Metal Commutation

应用领域：穿戴设备、手机、平板电脑、保健器材等领域。

Applications: wearable products, mobile phones, tablet PC's, health care products, etc.

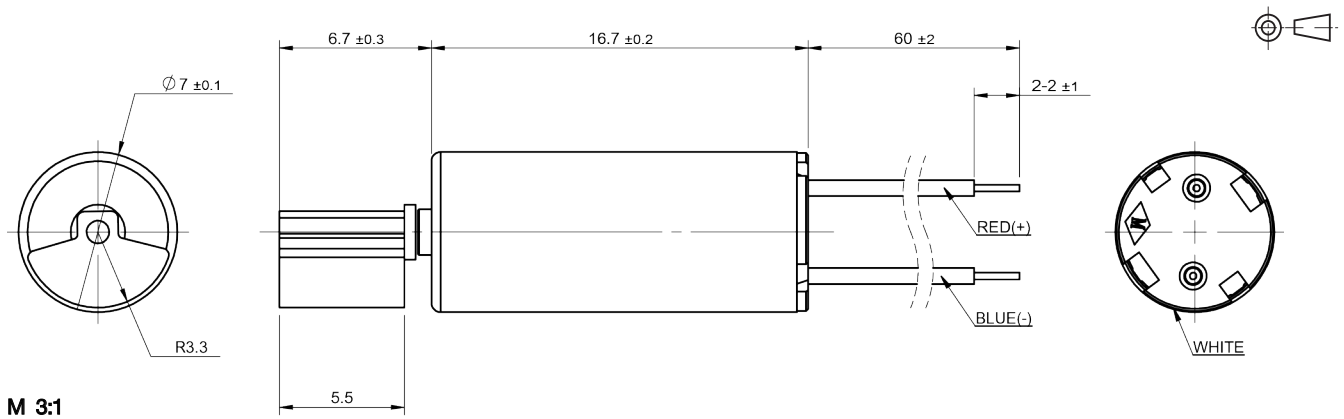
### 主要技术指标 | Characteristics

			12-105-3.0	61-130-3.0	91-140-3.7	
1	电压	Voltage	V	3.0	3.0	3.7
2	端电阻	Terminal resistance	$\Omega$	9.7	5.6	5.4
3	转速	Speed	rpm	10500	13000	14000
4	电流	Current	mA	110	180	260
5	启动电压	Starting voltage	V	0.8	0.8	0.8
6	堵转电流	Stall current	mA	300	500	600
7	重量	Weight	g	4	4	4
8	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+80	-20~+80	-20~+80

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
偏心锤	Eccentric weight
胶套	Silicone sets

### 外观图 | Outline Drawing





## VL8.520N5M | 贵金属电刷 Precious Metal Commutation

应用领域：穿戴设备、手机、平板电脑、保健器材等领域。

Applications: wearable products, mobile phones, tablet PC's, health care products, etc.

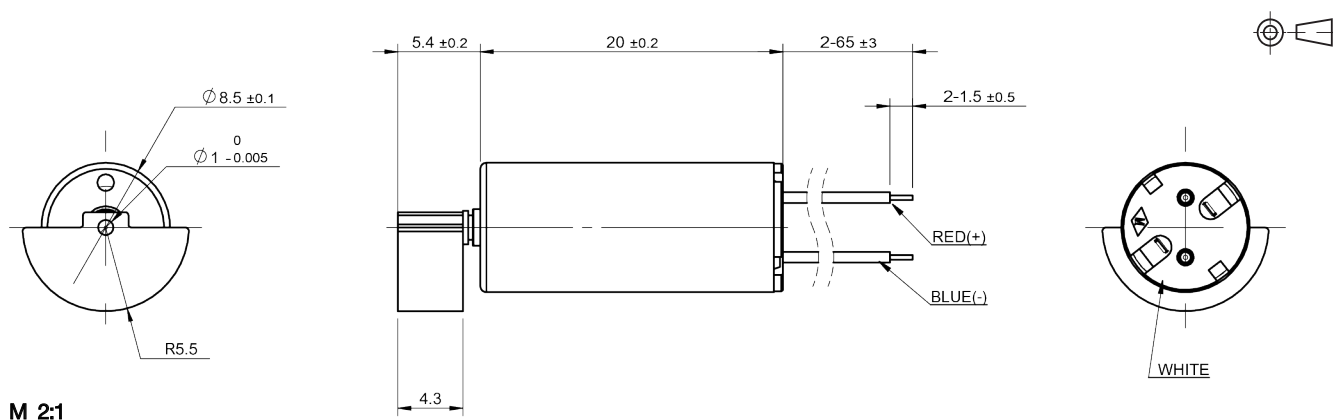
### 主要技术指标 | Characteristics

			62-96-3.0	82-93-3.0	74-96-3.0
1	电压	Voltage	V	3.0	3.0
2	端电阻	Terminal resistance	$\Omega$	8.35	3.75
3	转速	Speed	rpm	6500	10400
4	电流	Current	mA	60	85
5	启动电压	Starting voltage	V	0.8	0.8
6	堵转电流	Stall current	mA	360	800
7	重量	Weight	g	8.7	6.6
8	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+65	-20~+65

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
偏心锤	Eccentric weight

### 外观图 | Outline Drawing



# 直流空心杯电机

## DC CORELESS MOTOR

### VL1013N5M | 贵金属电刷 Precious Metal Commutation

应用领域：穿戴设备、手机、平板电脑、保健器材等领域。

Applications: wearable products, mobile phones, tablet PC's, health care products, etc.

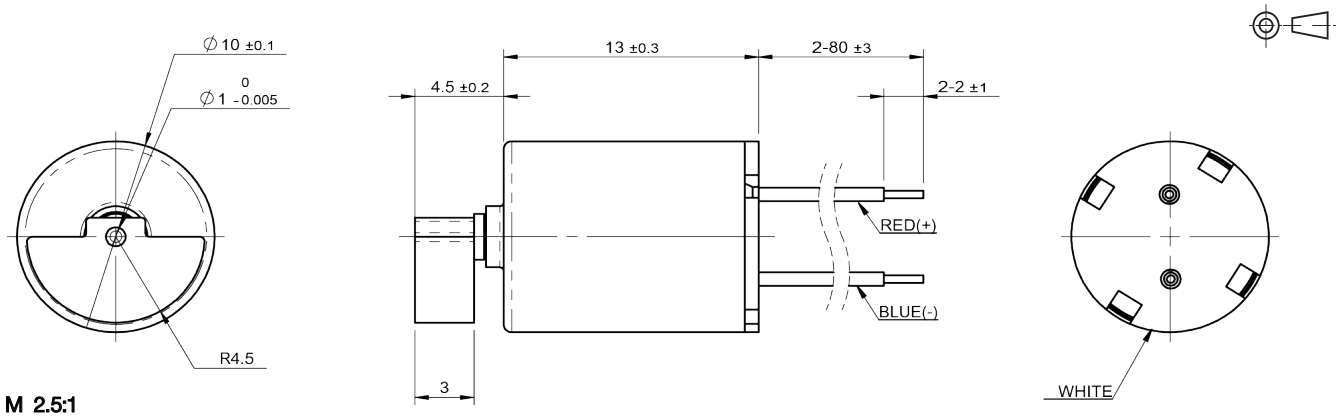
#### 主要技术指标 | Characteristics

			09-89-3.0	10-73-3.7	25-41-1.3
1	电压	Voltage	V	3.0	1.3
2	端电阻	Terminal resistance	$\Omega$	7.7	7.1
3	转速	Speed	rpm	8900	4100
4	电流	Current	mA	119	130
5	启动电压	Starting voltage	V	0.8	0.8
6	堵转电流	Stall current	mA	380	200
7	重量	Weight	g	6.1	6.7
8	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+65	-20~+65

#### 可选参数 | Options

导线长度      Lead wires length  
 轴长            Shaft length  
 偏心锤        Eccentric weight

#### 外观图 | Outline Drawing



## VL1015N5M | 贵金属电刷 Precious Metal Commutation

应用领域：穿戴设备、手机、平板电脑、保健器材等领域。

Applications: wearable products, mobile phones, tablet PC's, health care products, etc.

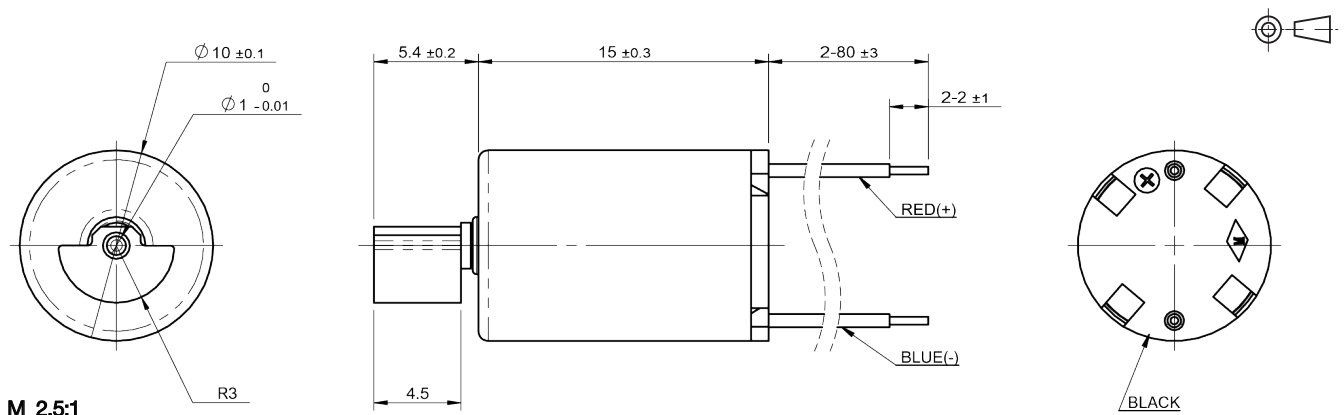
### 主要技术指标 | Characteristics

			96-129-5.0	99-66-3.0	65-70-1.3
1	电压	Voltage	V	5.0	3.0
2	端电阻	Terminal resistance	$\Omega$	10.5	8.35
3	转速	Speed	rpm	12900	6670
4	电流	Current	mA	80	137
5	启动电压	Starting voltage	V	0.8	0.8
6	堵转电流	Stall current	mA	470	332
7	重量	Weight	g	5.8	7.85
8	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+65	-20~+65

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
偏心锤	Eccentric weight

### 外观图 | Outline Drawing

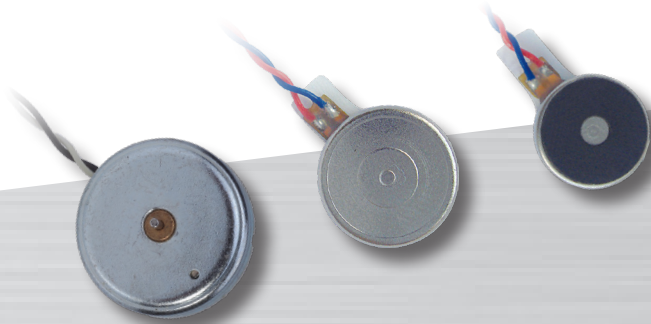




## FLAT DC MOTOR 圆扁式直流电机

Constar 圆扁式直流电机，设计结构新颖、实用高效，曾获深圳市科技进步二等奖，并获国家专利授权。作为驱动功能，应用于薄型化安装要求的小型电子产品、玩具等领域；作为振动功能，因内置振子结构可靠、扁平外形安装简易、体积小而大量应用于穿戴设备、保健器材、手机、平板电脑等。

The flat DC motor features a unique and practical design structure. The motor was awarded second prize for technological progress in a contest held in Shenzhen, and was also granted a national patent. The motor is well suited for electronic products with limited space. Due to its small size and available built-in vibrator, the product is widely used in wearable products, health care products, mobile phones, and tablet PC's.



# CONTENT 目录

## 圆扁式直流电机 FLAT DC MOTOR

### 驱动系列

DRIVING SERIES

	电机型号 Motor No.	尺寸 Dimension	换向结构 Commutation Structure	页码 Page
1	2007RFN	φ20×7.2 mm	贵金属电刷/Precious Metal Commutation	214

### 振动系列

VIBRATING SERIES

	电机型号 Motor No.	尺寸 Dimension	换向结构 Commutation Structure	页码 Page
1	0720RFN	φ7×2.1 mm	贵金属电刷/Precious Metal Commutation	215
2	0820RFN	φ8×2.0 mm	贵金属电刷/Precious Metal Commutation	216
3	0827RFN	φ8×2.7 mm	贵金属电刷/Precious Metal Commutation	216
4	0834RFN	φ8×3.4 mm	贵金属电刷/Precious Metal Commutation	216
5	1020RFN	φ10×2.0 mm	贵金属电刷/Precious Metal Commutation	217
6	1027RFN	φ10×2.7 mm	贵金属电刷/Precious Metal Commutation	217
7	1030RFN	φ10×3.0 mm	贵金属电刷/Precious Metal Commutation	217
8	1034RFN	φ10×3.4 mm	贵金属电刷/Precious Metal Commutation	217
9	1234RFN	φ12×3.4 mm	贵金属电刷/Precious Metal Commutation	218



# 圆扁式直流电机

## FLAT DC MOTOR

### 2007RFN | 贵金属电刷 Precious Metal Commutation

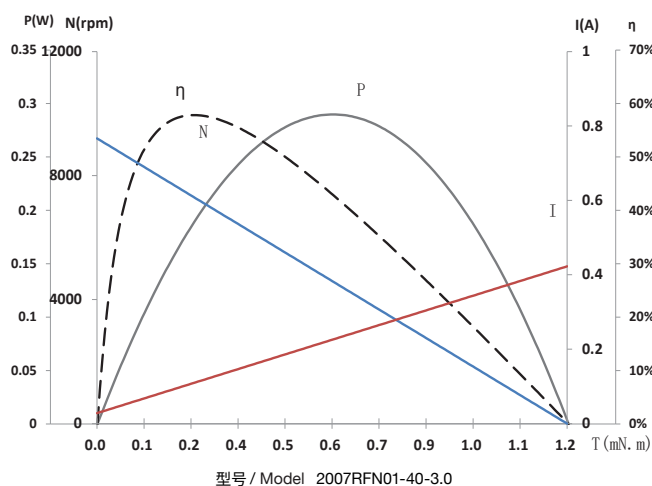
应用领域：小型电子产品、玩具等领域。

Applications: mini electronic products, toys, etc.

#### 主要技术指标 | Characteristics

			01-40-3.0	52-40-3.0	52a-40-3.0
1	电压	Voltage	V	3.0	3.0
2	端电阻	Terminal resistance	$\Omega$	7.1	1.6
3	空载转速	No-load speed	rpm	9200	19000
4	空载电流	No-load current	mA	28	80
5	堵转转矩	Stall torque	mNm	1.2	3.2
6	堵转电流	Stall current	mA	420	1800
7	负载转矩	Load torque	mNm	0.3	0.3
8	负载转速	Load speed	rpm	6850	17000
9	负载电流	Load current	mA	130	300
10	最大输出功率	Max. output power	W	0.29	1.6
11	最大效率	Max. efficiency	%	58	81.4
12	反电势常数	Back-EMF constant	mV/rpm	0.30	0.15
13	转矩常数	Torque constant	mNm/A	3.00	1.90
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	7667	5938
15	转子惯量	Rotor inertia	gcm <sup>2</sup>	0.40	0.40
16	重量	Weight	g	8.7	8.7
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+80	-20~+80

#### 特性曲线 | Characteristics Curve

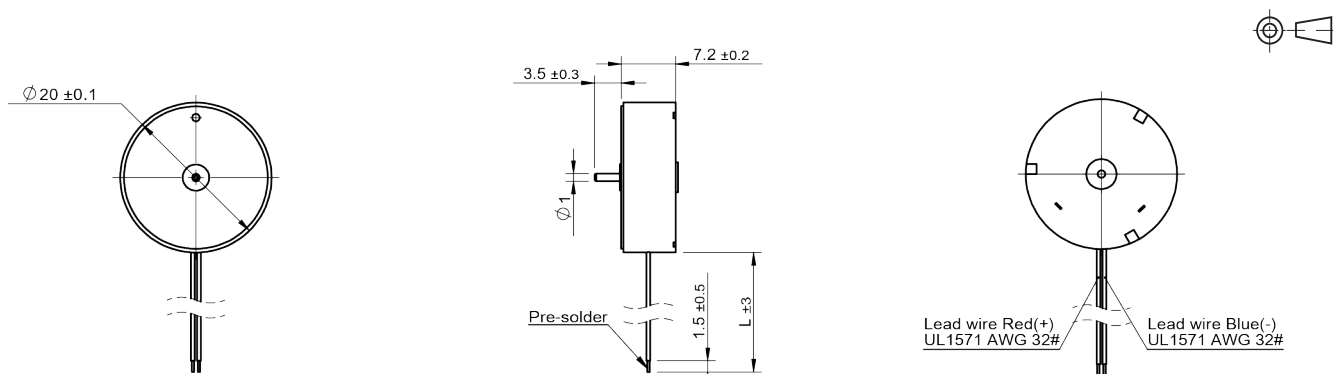


#### 可选参数 | Options

导线长度  
性能

Lead wires length  
Special coils

#### 外观图 | Outline Drawing



M 1.5:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com



## 0720RFN | 贵金属电刷 Precious Metal Commutation

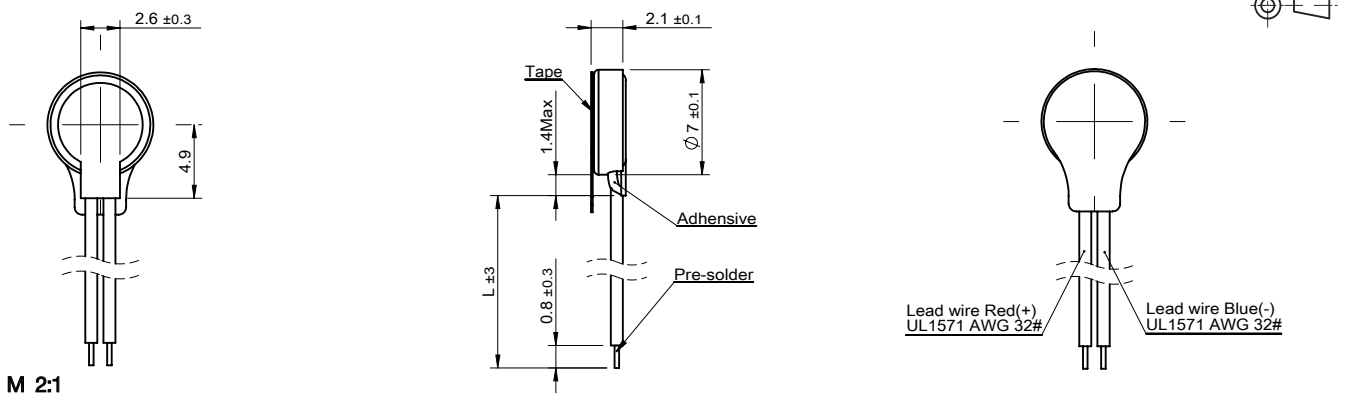
应用领域：穿戴设备、保健器材等领域。

Applications: wearable products, health care products, etc.

### 主要技术指标 | Characteristics

			31-12dp31-3.0		
1	电压	Voltage	V	3.0	-
2	端电阻	Terminal resistance	$\Omega$	54/100	-
3	转速	Speed	rpm	10000	-
4	电流	Current	mA	70	-
5	启动电压	Starting voltage	V	1.5	-
6	堵转电流	Stall current	mA	90	-
7	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+70	-

### 外观图 | Outline Drawing



### 可选参数 | Options

导线            Lead wires  
 胶垫            Rubber pad

# 圆扁式直流电机

## FLAT DC MOTOR

### 0820RFN/0827RFN/0834RFN | 贵金属电刷 Precious Metal Commutation

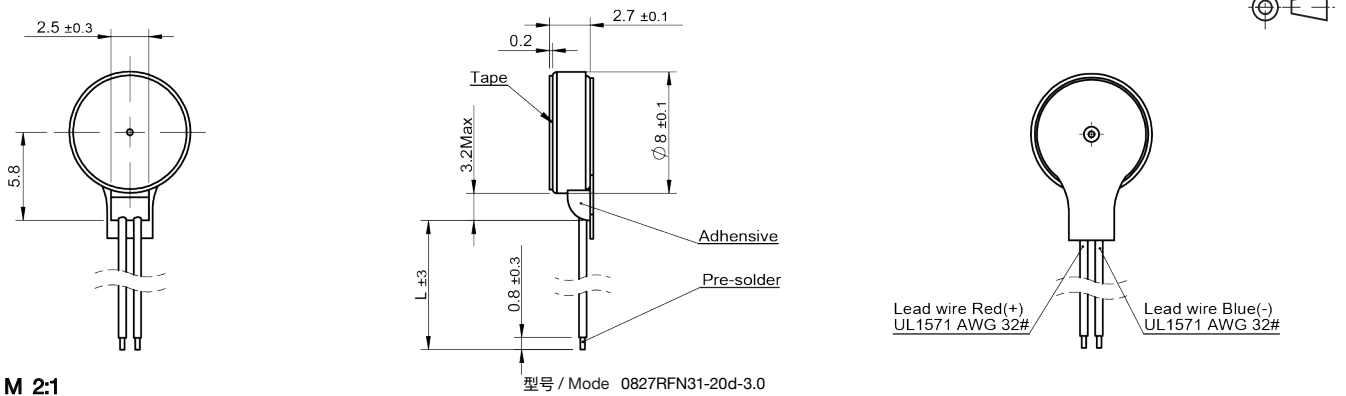
应用领域：穿戴设备、保健器材等领域。

Applications: wearable products, health care products, etc.

#### 主要技术指标 | Characteristics

		0820RFN31-8d-3.0 0827RFN31-20d-3.0 0827RFN32-20d-3.0 0834RFN31-8d-3.0					
1	电压	Voltage	V	3.0	3.0	3.0	3.0
2	端电阻	Terminal resistance	$\Omega$	30/60	31/62	55/110	28/54
3	转速	Speed	rpm	11000	11000	9000	11000
4	电流	Current	mA	70	70	40	70
5	启动电压	Starting voltage	V	1.5	1.7	1.7	1.7
6	堵转电流	Stall current	mA	90	80	50	90
7	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+70	-20~+70	-20~+70	-20~+70

#### 外观图 | Outline Drawing



#### 可选参数 | Options

导线            Lead wires  
胶垫            Rubber pad

## 1020RFN/1027RFN/1030RFN/1034RFN | 贵金属电刷 Precious Metal Commutation

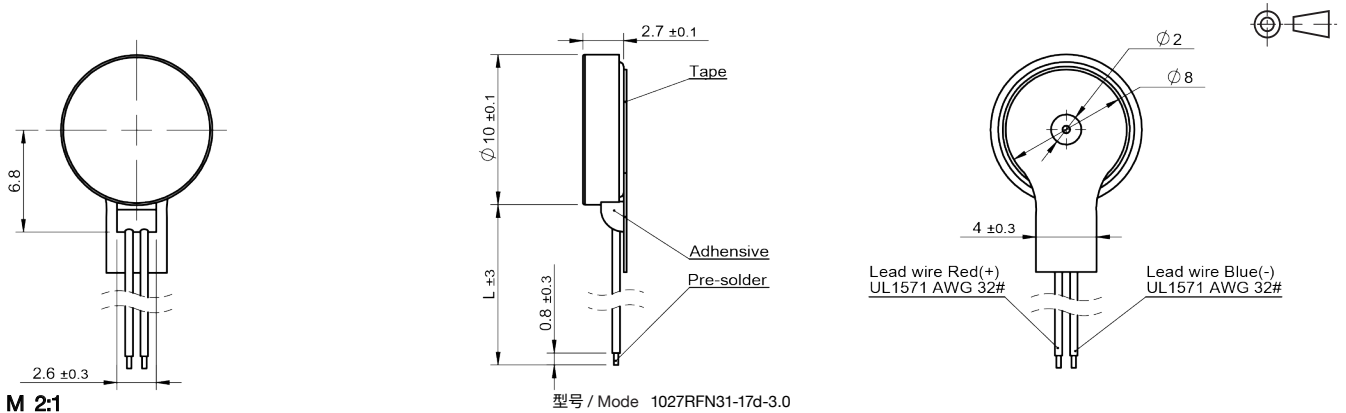
应用领域：穿戴设备、手机、平板电脑、保健器材等领域。

Applications: wearable products, mobile phones, tablet PC's, health care products, etc.

### 主要技术指标 | Characteristics

		1020RFN31-17d-3.0 1027RFN31-17d-3.0 1030RFN31-17d-3.0 1034RFN31-17d-3.0					
1	电压	Voltage	V	3.0	3.0	3.0	3.0
2	端电阻	Terminal resistance	$\Omega$	30/58	35/66	38/71	32/63
3	转速	Speed	rpm	13500	13500	13500	13500
4	电流	Current	mA	60	55	55	70
5	启动电压	Starting voltage	V	2.3	2.3	2.3	2.3
6	堵转电流	Stall current	mA	95	90	80	95
7	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+70	-20~+70	-20~+70	-20~+70

### 外观图 | Outline Drawing



### 可选参数 | Options

导线长度      Lead wires  
 胶垫          Rubber pad

# 圆扁式直流电机

## FLAT DC MOTOR

### 1234RFN | 贵金属电刷 Precious Metal Commutation

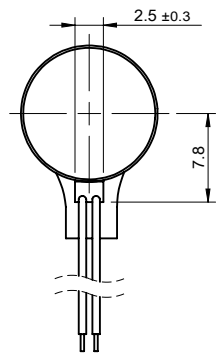
应用领域：对讲机、游戏手柄、穿戴设备、平板电脑、保健器材等。

Applications: interphone, gamepad, wearable products, tablet PC's, health care products, etc.

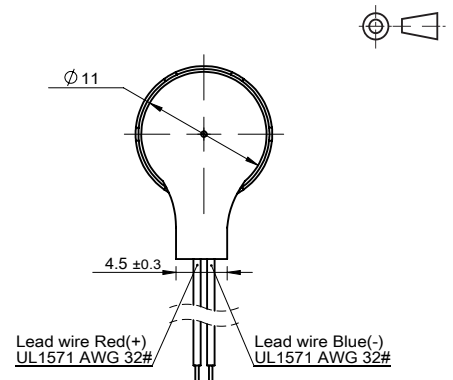
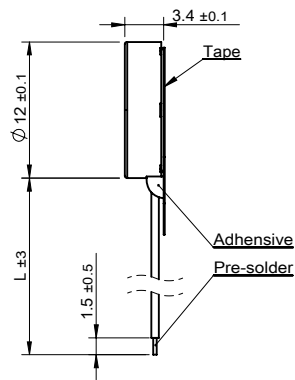
#### 主要技术指标 | Characteristics

		31-110d-3.0			
1	电压	Voltage	V	3.0	-
2	端电阻	Terminal resistance	$\Omega$	32/59	-
3	转速	Speed	rpm	11000	-
4	电流	Current	mA	60	-
5	启动电压	Starting voltage	V	1.7	-
6	堵转电流	Stall current	mA	90	-
7	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+70	-

#### 外观图 | Outline Drawing



M 1.5:1



#### 可选参数 | Options

导线                      Lead wires  
 胶垫                      Rubber pad

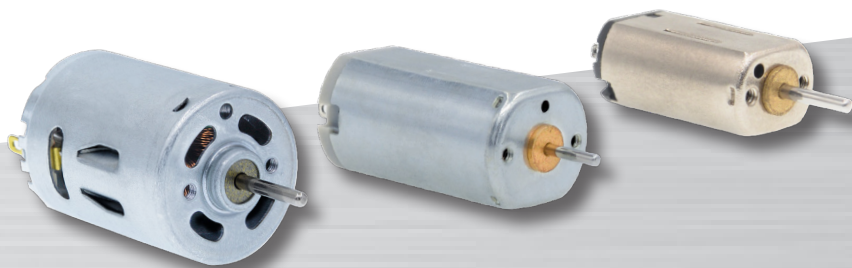




## DC CORE MOTOR 直流铁芯电机

直流铁芯电机线圈绕制于铁芯上，产品性能稳定可靠；对于大负荷、长寿命要求的场合，我们推荐使用碳刷结构。其驱动系列广泛应用于安防、小型电子产品、飞机类遥控玩具、个人护理产品、便携工具等领域；其振动系列大量应用于通讯设备、保健器材等领域。

As the name implies, this motor contains an iron core over which the winding is made. The product features stable and reliable performance. For heavy load applications requiring long operational life, a carbon brush structure is available. The drive motor series are widely used in applications of security equipment, small electronic products, remote control model aircraft, personal care products, and portable electric tools. The motor is also available in a vibration series which are widely used in communication devices and health care equipment.



# CONTENT 目录

## 直流铁芯电机 DC CORE MOTOR

	电机型号 Motor No.	尺寸 Dimension	换向结构 Commutation Structure	页码 Page
1	C1012F	φ10×12.6 mm	贵金属电刷/Precious Metal Commutation	224
2	C1015F	φ10×15 mm	贵金属电刷/Precious Metal Commutation	225
3	C1212F	φ12×12.2 mm	贵金属电刷/Precious Metal Commutation	226
4	C1215F	φ12×15.6 mm	贵金属电刷/Precious Metal Commutation	227
5	C1220F	φ12×20.6 mm	贵金属电刷/Precious Metal Commutation	228
6	C1627F	φ15.5×26.9 mm	贵金属电刷/Precious Metal Commutation	229
7	C1628R	φ16×27.6mm	碳刷/Graphite Brush	230
8	C1718R	φ17×17.8 mm	贵金属电刷/Precious Metal Commutation	231
9	C1718R	φ17×17.8 mm	碳刷/Graphite Brush	232
10	C1723R	φ17×22.8 mm	贵金属电刷/Precious Metal Commutation	233
11	C1723R	φ17×22.8 mm	碳刷/Graphite Brush	234
12	C2032F	φ20.3×32 mm	碳刷/Graphite Brush	235
13	C2430R	φ24.4×30.8 mm	贵金属电刷/Precious Metal Commutation	236
14	C2838R	φ27.7×37.65 mm	碳刷/Graphite Brush	237
15	C2838R415	φ27.6×38 mm	碳刷/Graphite Brush	238





## C1012F | 贵金属电刷 Precious Metal Commutation

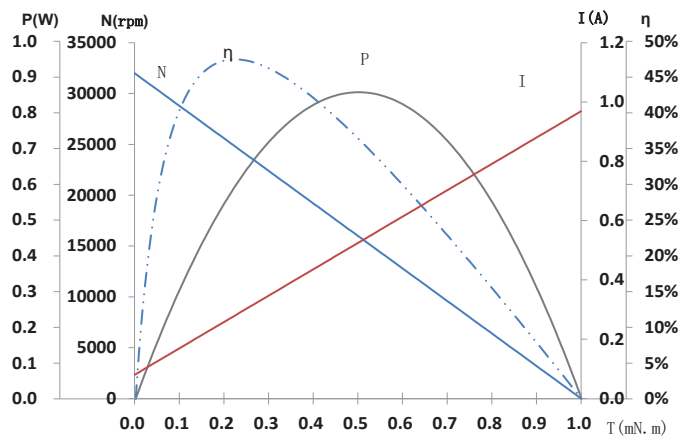
应用领域：安防、小型电子产品、飞机类遥控玩具、个人护理产品、便携工具等领域。

Applications: security equipment, small electronic products, remote control model aircraft, personal care products, portable electric tools, etc.

### 主要技术指标 | Characteristics

			43-0045	43-0108	43-0113	
1	电压	Voltage	V	4.5	2.0	3.0
2	端电阻	Terminal resistance	$\Omega$	3.7	16.5	11.1
3	空载转速	No-load speed	rpm	32000	7000	12900
4	空载电流	No-load current	mA	80	20	30
5	堵转转矩	Stall torque	mNm	1.00	0.30	0.50
6	堵转电流	Stall current	mA	969	120	288
7	负载转矩	Load torque	mNm	0.29	0.09	0.17
8	负载转速	Load speed	rpm	23000	4900	8400
9	负载电流	Load current	mA	330	50	120
10	最大输出功率	Max. output power	W	0.84	0.06	0.17
11	最大效率	Max. efficiency	%	46.4	46.3	44.7
12	反电势常数	Back-EMF constant	mV/rpm	0.13	0.24	0.21
13	转矩常数	Torque constant	mNm/A	1.13	3.00	1.94
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	32000	23333	25800
15	压敏电阻	Varistor	Yes/No	Yes	Yes	Yes
16	重量	Weight	g	3.15	3	3
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+80	-20~+80	-20~+80

### 特性曲线 | Characteristics Curve

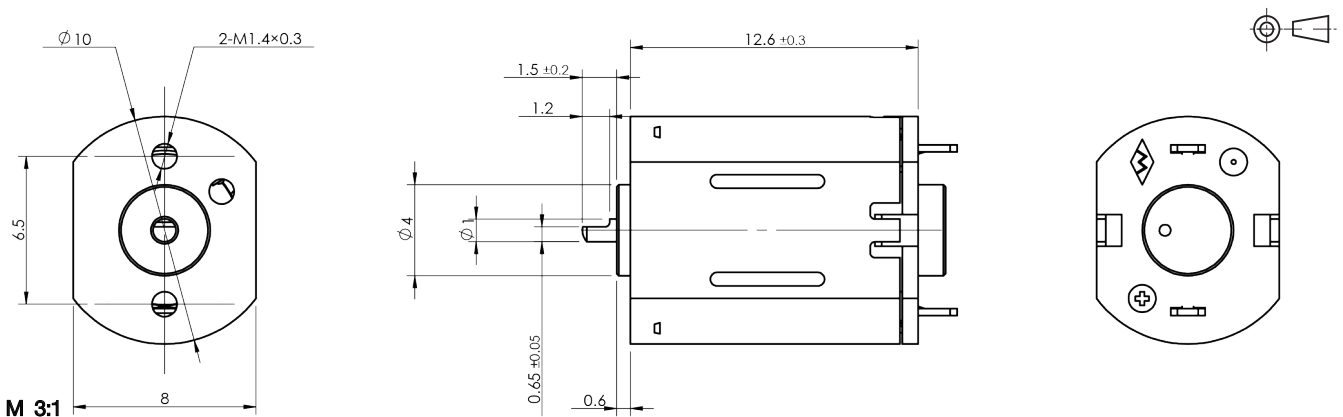


型号 / Model C1012F43-0045

### 可选参数 | Options

导线长度      Lead wires length  
轴长              Shaft length  
性能              Special coils  
齿轮箱            Gearheads

### 外观图 | Outline Drawing



## C1015F | 贵金属电刷 Precious Metal Commutation

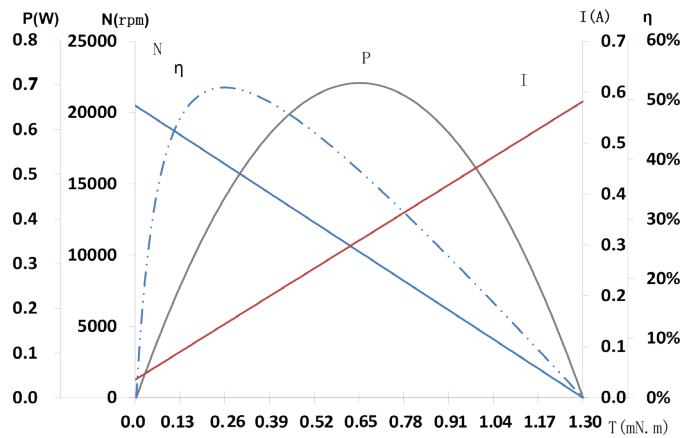
应用领域：安防、小型电子产品、飞机类遥控玩具、个人护理产品、便携工具等领域。

Applications: security equipment, small electronic products, remote control model aircraft, personal care products, portable electric tools, etc.

### 主要技术指标 | Characteristics

			33-0169	33-0107	33-0051	
1	电压	Voltage	V	3.0	6.0	3.0
2	端电阻	Terminal resistance	$\Omega$	4.5	10	35
3	空载转速	No-load speed	rpm	14700	20500	5500
4	空载电流	No-load current	mA	50	35	15
5	堵转转矩	Stall torque	mNm	1.0	1.30	0.40
6	堵转电流	Stall current	mA	680	582	91
7	负载转矩	Load torque	mNm	0.098	0.098	0.098
8	负载转速	Load speed	rpm	13300	19000	4200
9	负载电流	Load current	mA	110	75	33
10	最大输出功率	Max. output power	W	0.38	0.70	0.06
11	最大效率	Max. efficiency	%	45.8	51.6	42.7
12	反电势常数	Back-EMF constant	mV/rpm	0.19	0.28	0.45
13	转矩常数	Torque constant	mNm/A	1.56	2.38	5.25
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	15000	15769	13750
15	压敏电阻	Varistor	Yes/No	Yes	Yes	Yes
16	重量	Weight	g	4.0	4.1	3.9
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+80	-20~+80	-20~+80

### 特性曲线 | Characteristics Curve

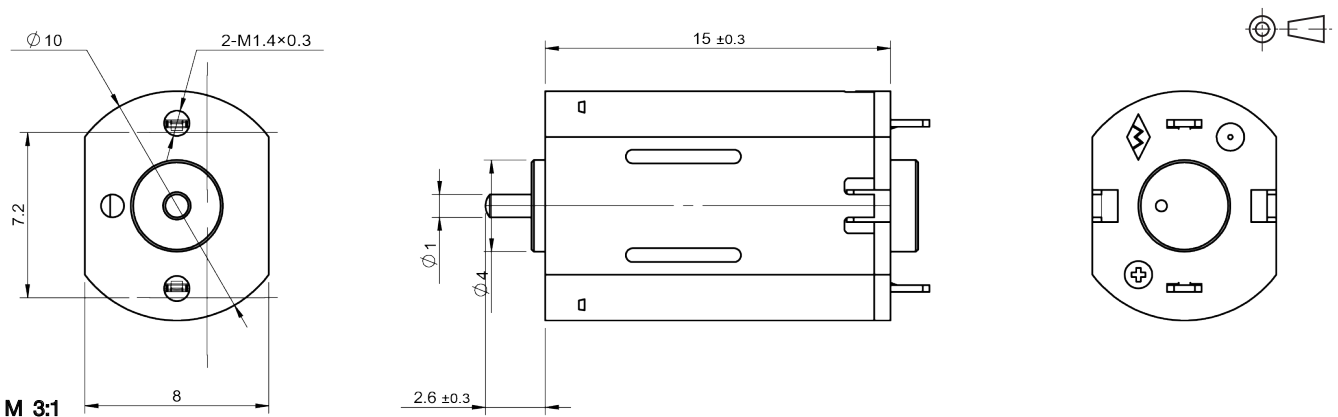


型号 / Model C1015F33-0107

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## C1212F | 贵金属电刷 Precious Metal Commutation

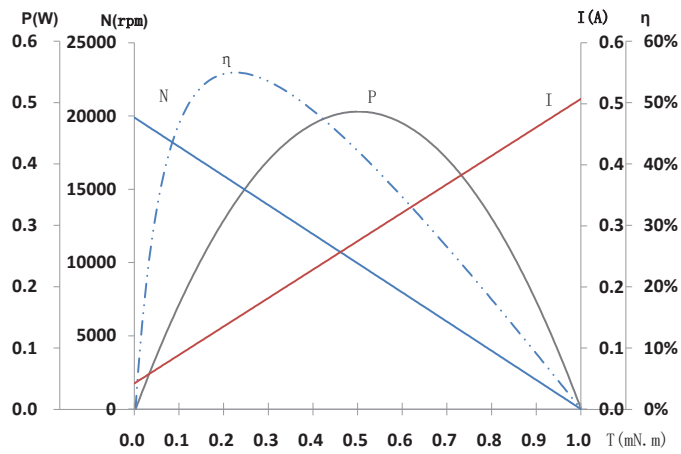
应用领域：安防、小型电子产品、飞机类遥控玩具、个人护理产品、便携工具等领域。

Applications: security equipment, small electronic products, remote control model aircraft, personal care products, portable electric tools, etc.

### 主要技术指标 | Characteristics

			13-0159	F33-0527	F33-0519	
1	电压	Voltage	V	4.2	3.0	3.0
2	端电阻	Terminal resistance	$\Omega$	7.8	3.1	9.9
3	空载转速	No-load speed	rpm	19900	22000	13400
4	空载电流	No-load current	mA	42	75	40
5	堵转转矩	Stall torque	mNm	1.00	0.75	0.48
6	堵转电流	Stall current	mA	511	808	290
7	负载转矩	Load torque	mNm	0.098	0.102	0.156
8	负载转速	Load speed	rpm	17950	19000	9000
9	负载电流	Load current	mA	88	175	122
10	最大输出功率	Max. output power	W	0.52	0.43	0.17
11	最大效率	Max. efficiency	%	58.7	41.8	40.8
12	反电势常数	Back-EMF constant	mV/rpm	0.19	0.13	0.19
13	转矩常数	Torque constant	mNm/A	2.13	1.02	1.90
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	19898	29412	28205
15	压敏电阻	Varistor	Yes/No	Yes	Yes	Yes
16	重量	Weight	g	5.4	5.4	5.4
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+80	-20~+80	-20~+80

### 特性曲线 | Characteristics Curve

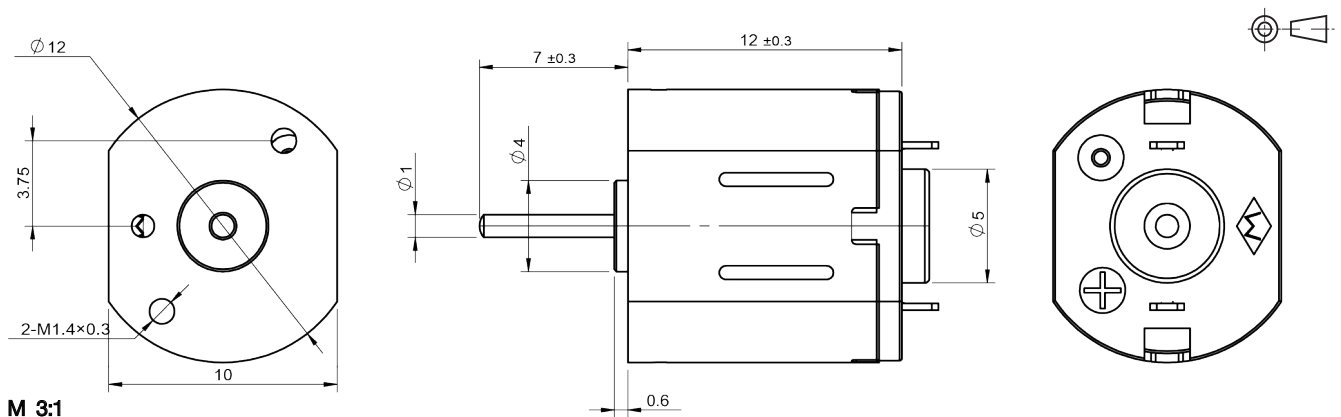


型号 / Model C1212F13-0159

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



M 3:1

## C1215F | 贵金属电刷 Precious Metal Commutation

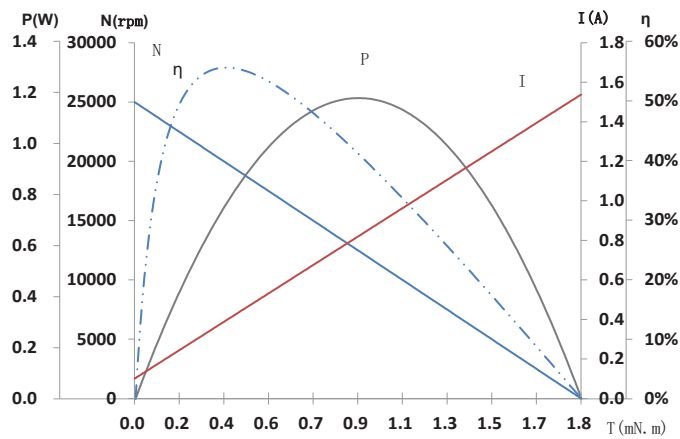
应用领域：安防、小型电子产品、飞机类遥控玩具、个人护理产品、便携工具等领域。

Applications: security equipment, small electronic products, remote control model aircraft, personal care products, portable electric tools, etc.

### 主要技术指标 | Characteristics

			13-0086	13-0141	13-0260	
1	电压	Voltage	V	3.5	1.5	3.0
2	端电阻	Terminal resistance	$\Omega$	1.7	1.2	10.8
3	空载转速	No-load speed	rpm	25000	11500	9600
4	空载电流	No-load current	mA	100	110	40
5	堵转转矩	Stall torque	mNm	1.80	1.10	0.70
6	堵转电流	Stall current	mA	1506	1030	274
7	负载转矩	Load torque	mNm	0.294	0.294	0.294
8	负载转速	Load speed	rpm	20910	8500	5500
9	负载电流	Load current	mA	330	350	140
10	最大输出功率	Max. output power	W	1.18	0.33	0.18
11	最大效率	Max. efficiency	%	56.5	48.8	44.8
12	反电势常数	Back-EMF constant	mV/rpm	0.13	0.12	0.27
13	转矩常数	Torque constant	mNm/A	1.28	1.20	2.99
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	13912	10455	13714
15	压敏电阻	Varistor	Yes/No	Yes	Yes	Yes
16	重量	Weight	g	5.4	5.4	5.1
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+80	-20~+80	-20~+80

### 特性曲线 | Characteristics Curve

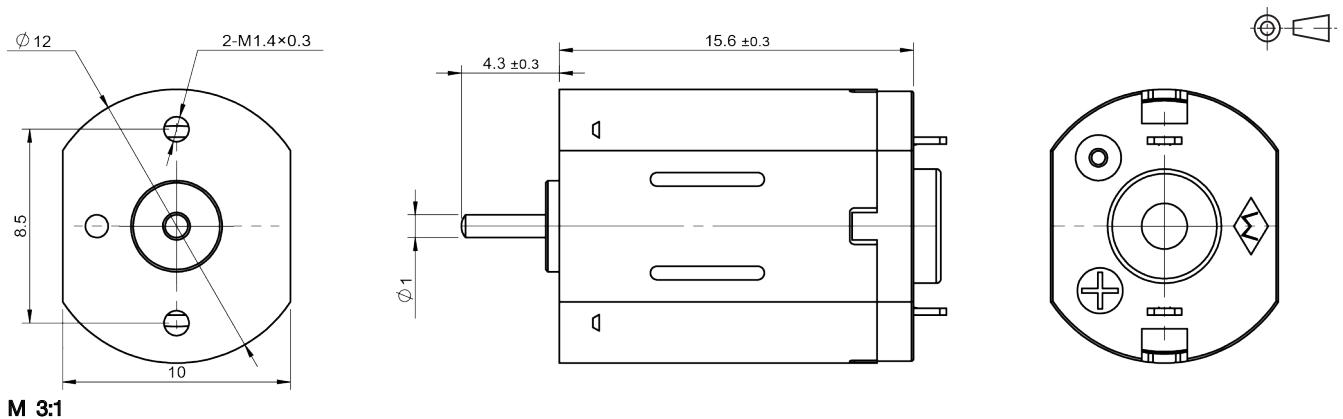


型号 / Model C1215F13-0086

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## C1220F | 贵金属电刷 Precious Metal Commutation

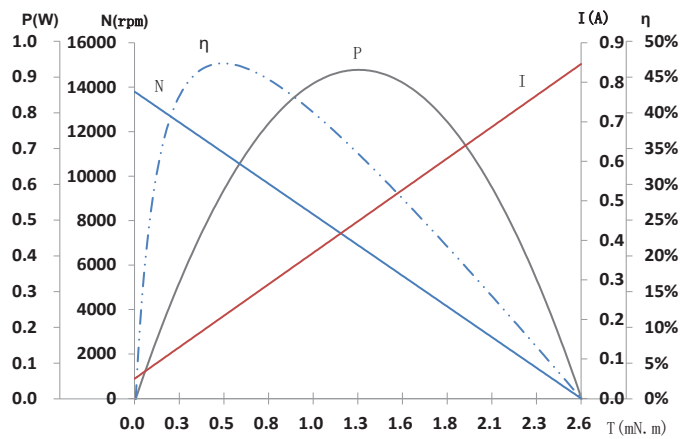
应用领域：安防、小型电子产品、飞机类遥控玩具、个人护理产品、便携工具等领域。

Applications: security equipment, small electronic products, remote control model aircraft, personal care products, portable electric tools, etc.

### 主要技术指标 | Characteristics

			35-0083	35-0103	35-0158	
1	电压	Voltage	V	6.0	5.0	4.5
2	端电阻	Terminal resistance	$\Omega$	7.4	2.5	10
3	空载转速	No-load speed	rpm	13800	18500	9500
4	空载电流	No-load current	mA	50	70	45
5	堵转转矩	Stall torque	mNm	2.60	3.60	1.70
6	堵转电流	Stall current	mA	846	2043	693
7	负载转矩	Load torque	mNm	0.294	0.294	0.196
8	负载转速	Load speed	rpm	12240	17000	8400
9	负载电流	Load current	mA	140	230	120
10	最大输出功率	Max. output power	W	0.94	1.75	0.42
11	最大效率	Max. efficiency	%	48.0	48.7	34.5
12	反电势常数	Back-EMF constant	mV/rpm	0.41	0.26	0.43
13	转矩常数	Torque constant	mNm/A	3.27	1.82	2.62
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	5306	5139	5588
15	压敏电阻	Varistor	Yes/No	Yes	Yes	Yes
16	重量	Weight	g	7.9	7.8	7.8
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+80	-20~+80	-20~+80

### 特性曲线 | Characteristics Curve

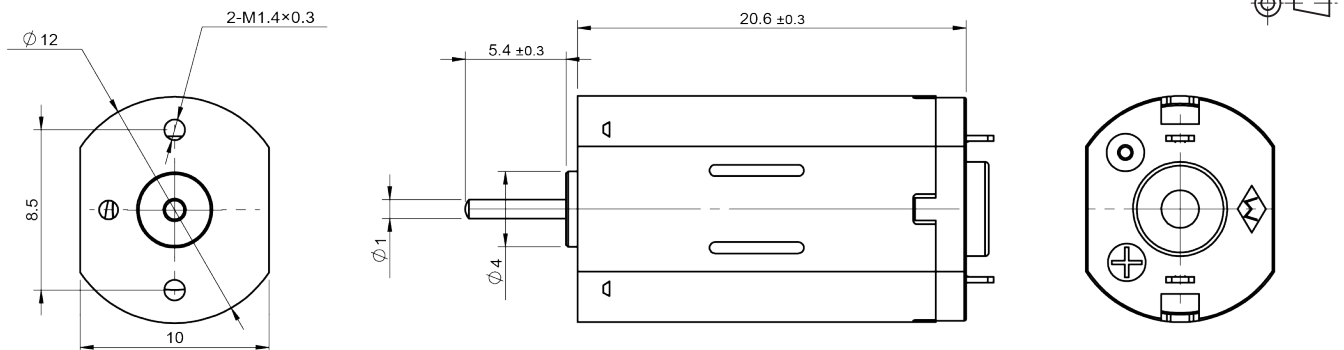


型号 / Model C1220F35-0083

### 可选参数 | Options

导线长度      Lead wires length  
轴长              Shaft length  
性能              Special coils  
齿轮箱            Gearheads

### 外观图 | Outline Drawing



M 2.5:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## C1627F | 贵金属电刷 Precious Metal Commutation

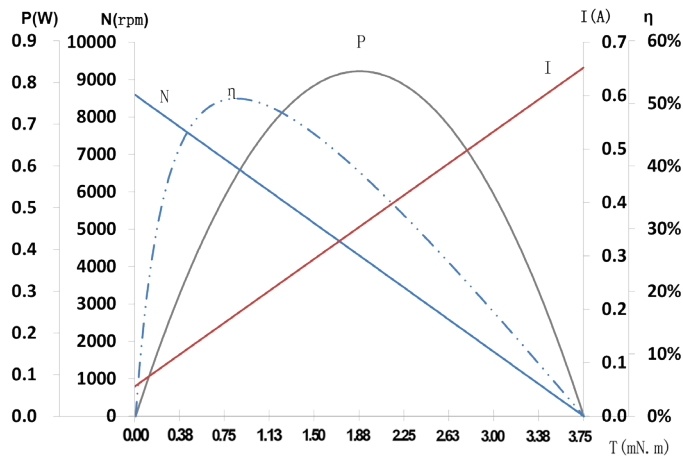
应用领域：安防、小型电子产品、飞机类遥控玩具、个人护理产品、便携工具等领域。

Applications: security equipment, small electronic products, remote control model aircraft, personal care products, portable electric tools, etc.

### 主要技术指标 | Characteristics

			34AH-0055	34AH-0063	34AH-0064	
1	电压	Voltage	V	6.0	12.0	6.0
2	端电阻	Terminal resistance	$\Omega$	8.8	49	2.4
3	空载转速	No-load speed	rpm	8600	8000	20200
4	空载电流	No-load current	mA	55	20	100
5	堵转转矩	Stall torque	mNm	3.75	3.43	5.40
6	堵转电流	Stall current	mA	652	233	2304
7	负载转矩	Load torque	mNm	0.79	0.59	0.39
8	负载转速	Load speed	rpm	6800	6500	19100
9	负载电流	Load current	mA	180	60	220
10	最大输出功率	Max. output power	W	0.85	0.72	2.86
11	最大效率	Max. efficiency	%	51.9	61.5	56.7
12	反电势常数	Back-EMF constant	mV/rpm	0.64	1.38	0.29
13	转矩常数	Torque constant	mNm/A	6.28	16.08	2.45
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	2293	2332	3741
15	压敏电阻	Varistor	Yes/No	Yes	Yes	Yes
16	重量	Weight	g	16.7	16.7	16.7
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+80	-20~+80	-20~+80

### 特性曲线 | Characteristics Curve

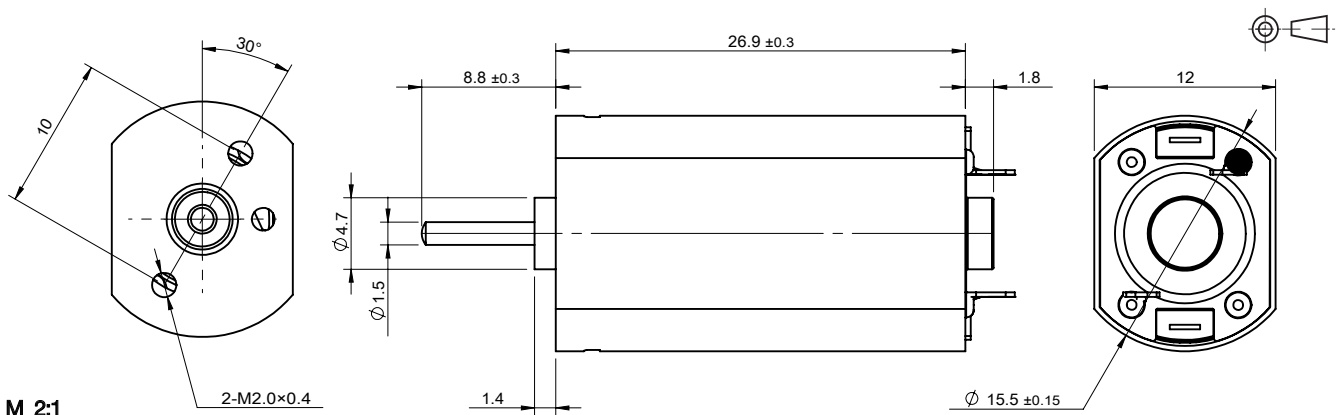


型号 / Model C1627F34AH-0055

### 可选参数 | Options

- 导线长度 | Lead wires length
- 轴长 | Shaft length
- 性能 | Special coils
- 齿轮箱 | Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## C1628R | 碳刷 Graphite Brush

应用领域：小型电子产品、智能家居等领域。

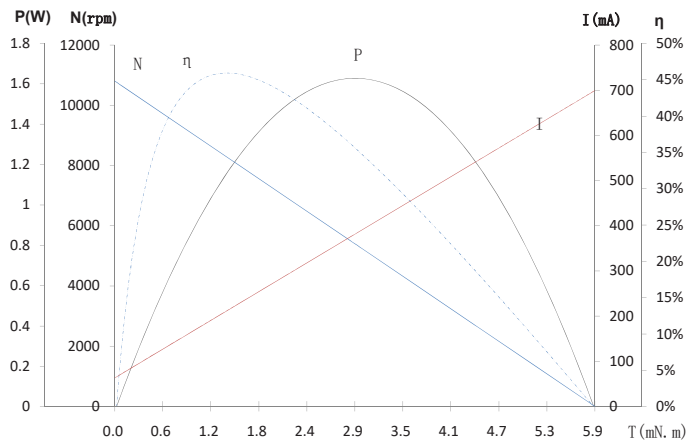
Applications: small electronic products, smart home, etc.

### 主要技术指标 | Characteristics

31-0108

1	电压	Voltage	V	12
2	空载转速	No-load speed	rpm	10800
3	空载电流	No-load current	mA	63
4	堵转转矩	Stall torque	mNm	5.9
5	堵转电流	Stall current	mA	700
6	负载转矩	Load torque	mNm	1.96
7	负载转速	Load speed	rpm	7200
8	负载电流	Load current	mA	275
9	最大输出功率	Max. output power	W	1.67
10	最大效率	Max. efficiency	%	47.1
11	转矩常数	Torque constant	mNm/A	9.26
12	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	1831
13	压敏电阻	Varistor	Yes/No	Yes
14	重量	Weight	g	20.8
15	工作温度范围	Operating temperature range	°C	-20~+60

### 特性曲线 | Characteristics Curve



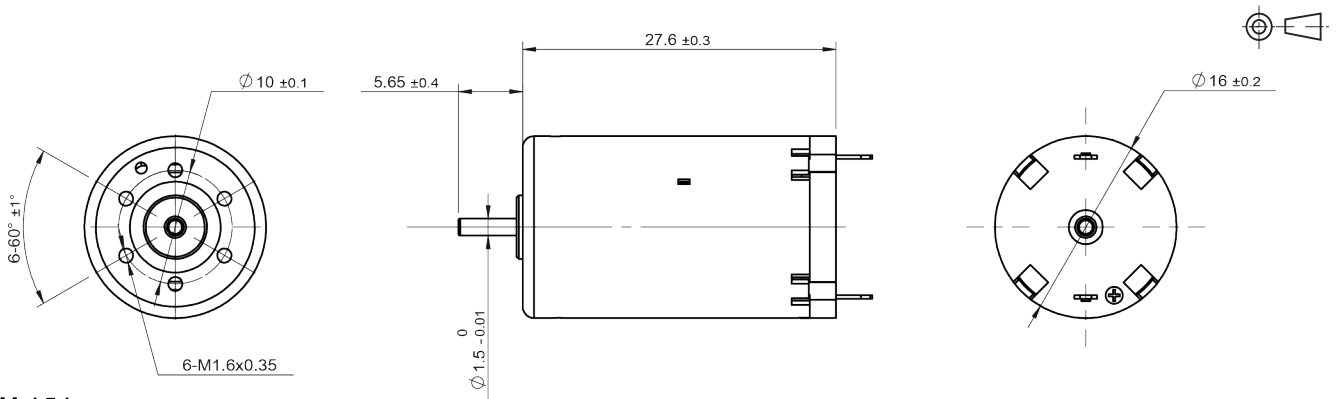
型号 / Model C1628R31-0108

### 可选参数 | Options

轴长  
性能

Shaft length  
Special coils

### 外观图 | Outline Drawing



M 1.5:1



## C1718R | 贵金属电刷 Precious Metal Commutation

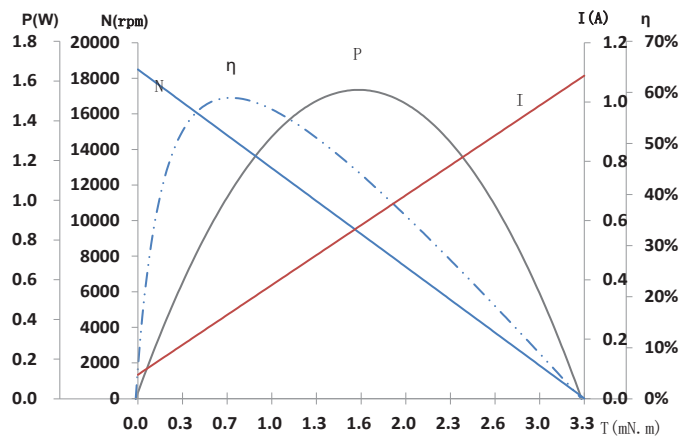
应用领域：安防、小型电子产品、飞机类遥控玩具、个人护理产品、便携工具等领域。

Applications: security equipment, small electronic products, remote control model aircraft, personal care products, portable electric tools, etc.

### 主要技术指标 | Characteristics

			14-0025	34B-0059	14B-0091	
1	电压	Voltage	V	6.0	7.4	11
2	端电阻	Terminal resistance	$\Omega$	4.0	3.0	5.1
3	空载转速	No-load speed	rpm	18500	16000	25200
4	空载电流	No-load current	mA	80	70	80
5	堵转转矩	Stall torque	mNm	3.30	6.53	5.61
6	堵转电流	Stall current	mA	1089	1670	1569
7	负载转矩	Load torque	mNm	0.39	0.49	0.49
8	负载转速	Load speed	rpm	16300	14800	23000
9	负载电流	Load current	mA	200	190	210
10	最大输出功率	Max. output power	W	1.60	2.74	3.71
11	最大效率	Max. efficiency	%	60.6	61.1	57.2
12	反电势常数	Back-EMF constant	mV/rpm	0.31	0.45	0.42
13	转矩常数	Torque constant	mNm/A	3.27	4.08	3.77
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	5612	2449	4490
15	压敏电阻	Varistor	Yes/No	Yes	Yes	Yes
16	重量	Weight	g	12.6	14.5	12.8
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+80	-20~+80	-20~+80

### 特性曲线 | Characteristics Curve

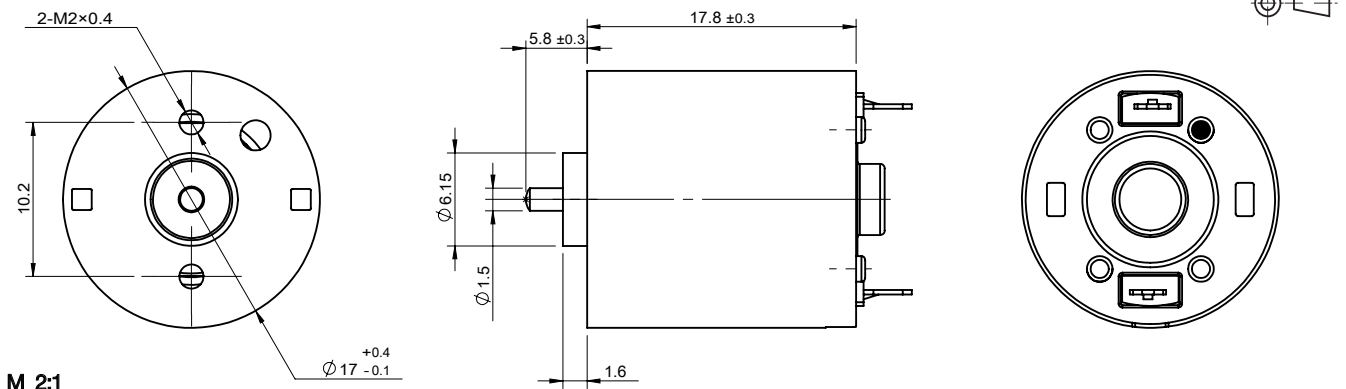


型号 / Model C1718R14-0025

### 可选参数 | Options

- 导线长度 | Lead wires length
- 轴长 | Shaft length
- 性能 | Special coils
- 齿轮箱 | Gearheads

### 外观图 | Outline Drawing



规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## C1718R | 碳刷 Graphite Brush

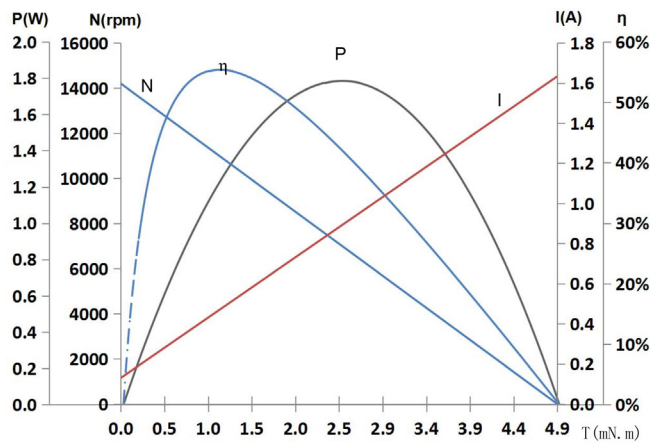
应用领域：小型电子产品、便携工具等领域。

Applications: small electronic products, portable electric tools, etc.

### 主要技术指标 | Characteristics

			31B-13120	31B-0110	31B-0129	
1	电压	Voltage	V	4.8	6.0	6.0
2	空载转速	No-load speed	rpm	14200	8300	12700
3	空载电流	No-load current	mA	130	50	120
4	堵转转矩	Stall torque	mNm	4.90	4.30	7.35
5	堵转电流	Stall current	mA	1600	700	1900
6	负载转矩	Load torque	mNm	0.88	0.39	0.49
7	负载转速	Load speed	rpm	11600	7580	11900
8	负载电流	Load current	mA	400	110	230
9	最大输出功率	Max. output power	W	1.82	0.94	2.45
10	最大效率	Max. efficiency	%	57.5	55.5	54.8
11	转矩常数	Torque constant	mNm/A	3.33	6.62	4.13
12	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	2898	1930	1728
13	压敏电阻	Varistor	Yes/No	Yes	Yes	Yes
14	重量	Weight	g	12.8	12.8	13
15	工作温度范围	Operating temperature range	°C	-20~+80	-20~+80	-20~+80

### 特性曲线 | Characteristics Curve

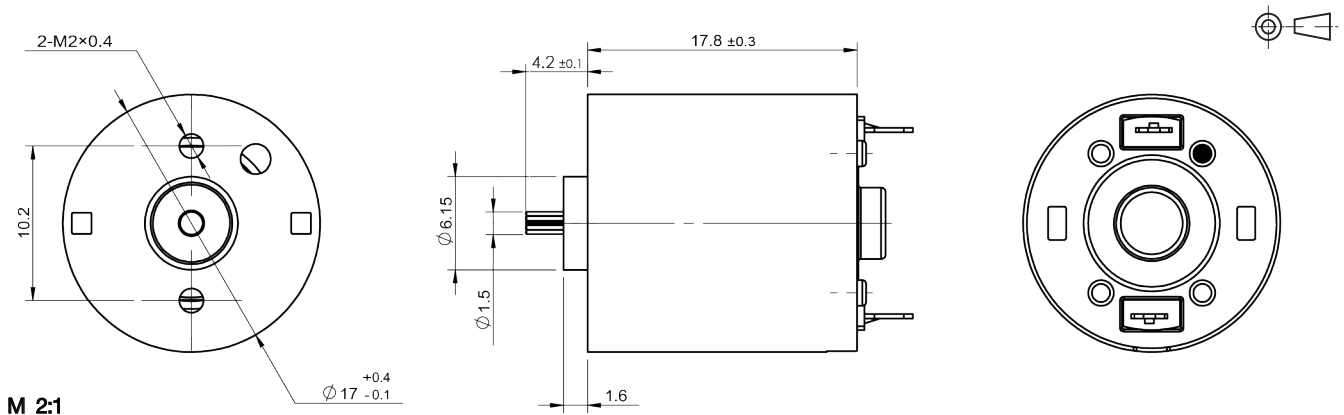


型号 / Model C1718R31B-13120

### 可选参数 | Options

- 导线长度 | Lead wires length
- 轴长 | Shaft length
- 性能 | Special coils
- 齿轮箱 | Gearheads

### 外观图 | Outline Drawing



## C1723R | 贵金属电刷 Precious Metal Commutation

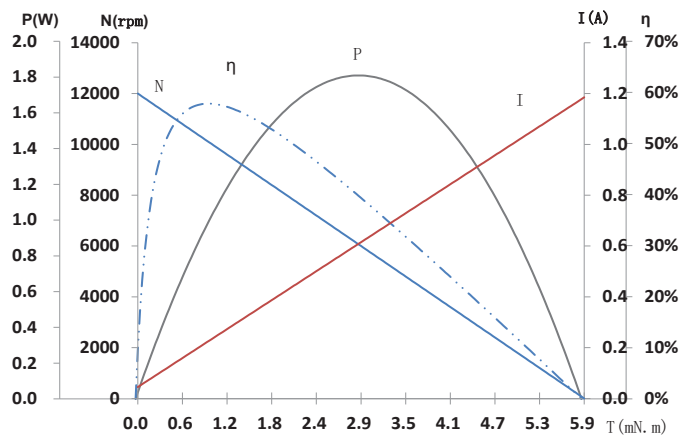
应用领域：安防、小型电子产品、飞机类遥控玩具、个人护理产品、便携工具等领域。

Applications: security equipment, small electronic products, remote control model aircraft, personal care products, portable electric tools, etc.

### 主要技术指标 | Characteristics

			14-0096	34-0095	34-0099	
1	电压	Voltage	V	7.4	6.0	6.0
2	端电阻	Terminal resistance	$\Omega$	5.0	1.55	4.6
3	空载转速	No-load speed	rpm	12000	19400	12400
4	空载电流	No-load current	mA	45	95	55
5	堵转转矩	Stall torque	mNm	5.88	7.57	4.40
6	堵转电流	Stall current	mA	1185	3102	1013
7	负载转矩	Load torque	mNm	0.49	0.39	0.39
8	负载转速	Load speed	rpm	11000	18400	11300
9	负载电流	Load current	mA	140	250	140
10	最大输出功率	Max. output power	W	1.85	3.85	1.43
11	最大效率	Max. efficiency	%	59.1	59.9	61.8
12	反电势常数	Back-EMF constant	mV/rpm	0.60	0.30	0.46
13	转矩常数	Torque constant	mNm/A	5.16	2.52	4.59
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	2041	2564	2821
15	压敏电阻	Varistor	Yes/No	Yes	Yes	Yes
16	重量	Weight	g	18.2	18.2	18.2
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+80	-20~+80	-20~+80

### 特性曲线 | Characteristics Curve

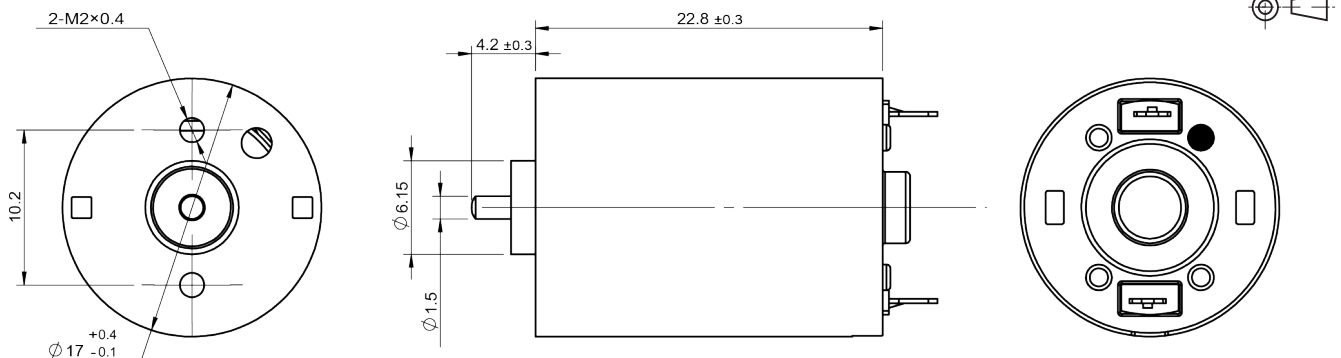


型号 / Model C1723R14-0096

### 可选参数 | Options

导线长度	Lead wires length
轴长	Shaft length
性能	Special coils
齿轮箱	Gearheads

### 外观图 | Outline Drawing



M 2:1

规格如有变更，恕不另行通知  
Specification subject to change without notice

© 2022 CONSTAR  
www.constarmotor.com

## C1723R | 碳刷 Graphite Brush

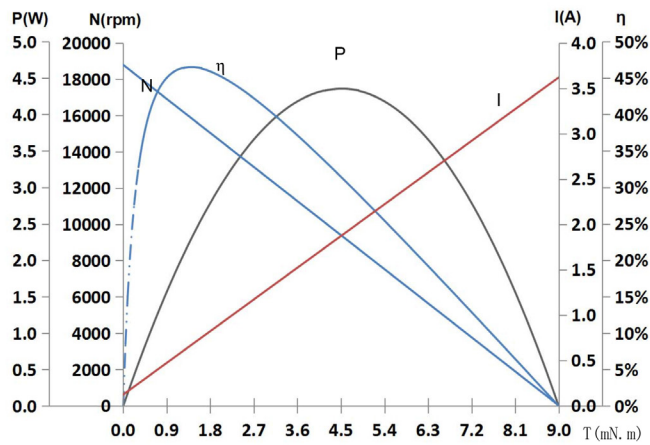
应用领域：小型电子产品、便携工具等领域。

Applications: small electronic products, portable electric tools, etc.

### 主要技术指标 | Characteristics

			31B-0114	31B-0159	31B-0165	
1	电压	Voltage	V	7.4	12.0	12.0
2	空载转速	No-load speed	rpm	18800	18400	17200
3	空载电流	No-load current	mA	120	80	80
4	堵转转矩	Stall torque	mNm	9.0	9.80	11.77
5	堵转电流	Stall current	mA	3700	1900	2700
6	负载转矩	Load torque	mNm	0.49	0.88	0.49
7	负载转速	Load speed	rpm	17780	16700	16500
8	负载电流	Load current	mA	310	240	180
9	最大输出功率	Max. output power	W	4.43	4.73	5.31
10	最大效率	Max. efficiency	%	46.5	57.1	47.7
11	转矩常数	Torque constant	mNm/A	2.51	5.38	4.49
12	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	2089	1878	1461
13	压敏电阻	Varistor	Yes/No	Yes	Yes	Yes
14	重量	Weight	g	18.2	18.2	18.2
15	工作温度范围	Operating temperature range	°C	-20~+80	-20~+80	-20~+80

### 特性曲线 | Characteristics Curve

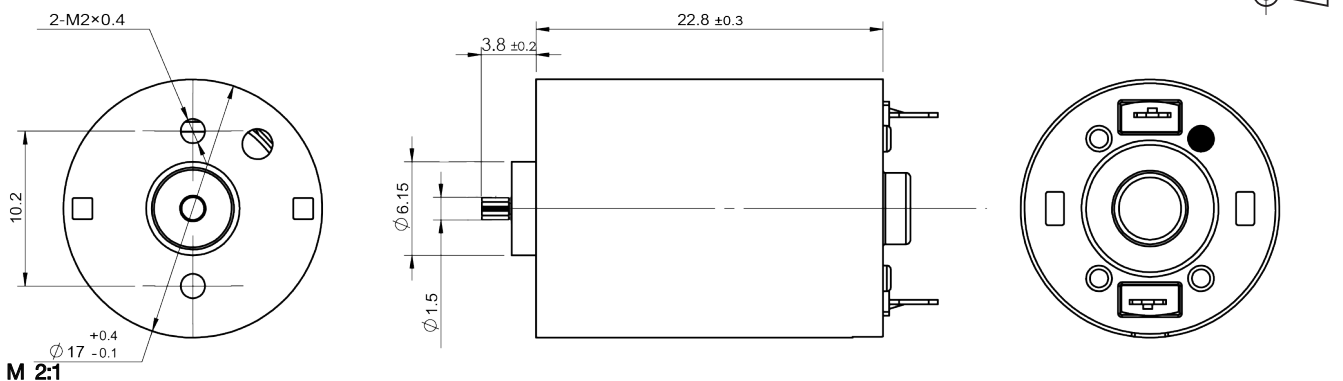


型号 / Model C1723R31B-0114

### 可选参数 | Options

- 导线长度 | Lead wires length
- 轴长 | Shaft length
- 性能 | Special coils
- 齿轮箱 | Gearheads

### 外观图 | Outline Drawing



## C2032F | 碳刷 Graphite Brush

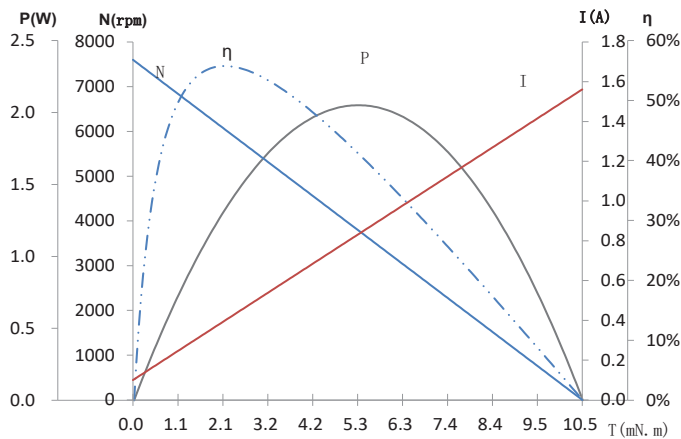
应用领域：小型电子产品、便携工具等。

Applications: small electronic products, portable electric tools, etc.

### 主要技术指标 | Characteristics

			41-0141	41-0142	41-0159	
1	电压	Voltage	V	6.0	9.0	12.0
2	空载转速	No-load speed	rpm	7400	8200	8700
3	空载电流	No-load current	mA	89	65	57
4	堵转转矩	Stall torque	mNm	12.1	12.8	12.4
5	堵转电流	Stall current	mA	1576	1264	1101
6	负载转矩	Load torque	mNm	1.80	2.27	1.57
7	负载转速	Load speed	rpm	6300	6750	7600
8	负载电流	Load current	mA	310	277	189
9	最大输出功率	Max. output power	W	2.35	2.76	2.83
10	最大效率	Max. efficiency	%	64.9	64.5	56.9
11	转矩常数	Torque constant	mNm/A	8.14	10.71	11.89
12	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	611	639	701
13	压敏电阻	Varistor	Yes/No	Yes	Yes	Yes
14	重量	Weight	g	33	33	33
15	工作温度范围	Operating temperature range	°C	0~+60	0~+60	0~+60

### 特性曲线 | Characteristics Curve



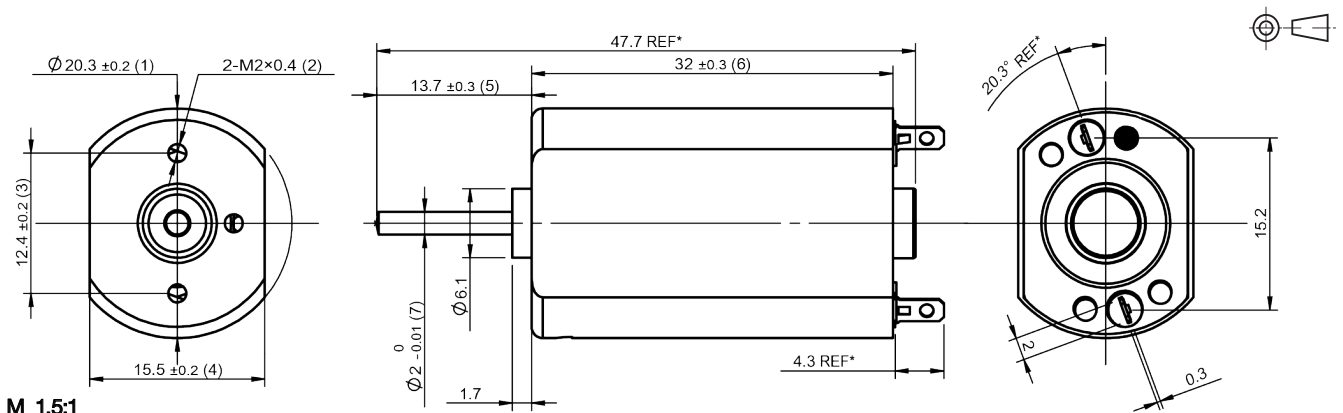
型号 / Model C2032F41-0141

### 可选参数 | Options

轴长  
性能

Shaft length  
Special coils

### 外观图 | Outline Drawing



M 1.5:1

## C2430R | 贵金属电刷 Precious Metal Commutation

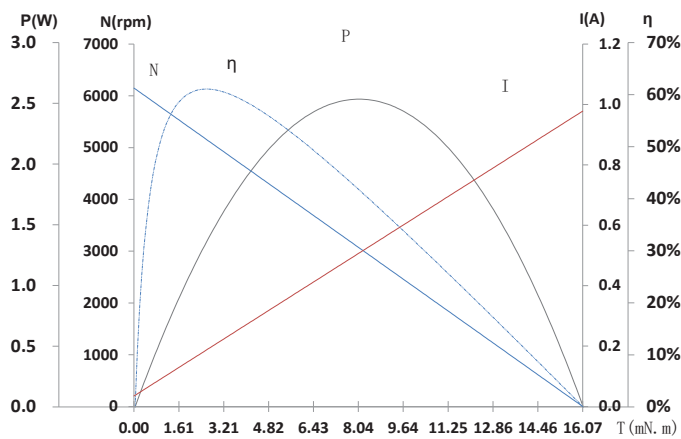
应用领域：安防、小型电子产品、飞机类遥控玩具、个人护理产品、便携工具等领域。

Applications: security equipment, small electronic products, remote control model aircraft, personal care products, portable electric tools, etc.

### 主要技术指标 | Characteristics

				23-0021	43-0010	44-0039
1	电压	Voltage	V	24.0	12.0	3.7
2	端电阻	Terminal resistance	$\Omega$	260.0	11.0	0.8
3	空载转速	No-load speed	rpm	2500	6150	6350
4	空载电流	No-load current	mA	4	35	130
5	堵转转矩	Stall torque	mNm	6.53	16.10	23.50
6	堵转电流	Stall current	mA	107	978	4683
7	负载转矩	Load torque	mNm	1.96	1.96	1.96
8	负载转速	Load speed	rpm	1750	5400	5820
9	负载电流	Load current	mA	35	150	510
10	最大输出功率	Max. output power	W	0.43	2.59	3.91
11	最大效率	Max. efficiency	%	46.7	62.5	66.3
12	反电势常数	Back-EMF constant	mV/rpm	9.18	1.89	0.57
13	转矩常数	Torque constant	mNm/A	63.19	17.07	5.16
14	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	383	382	270
15	压敏电阻	Varistor	Yes/No	Yes	Yes	Yes
16	重量	Weight	g	48.5	48.5	50.5
17	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-20~+80	-20~+80	-20~+80

### 特性曲线 | Characteristics Curve

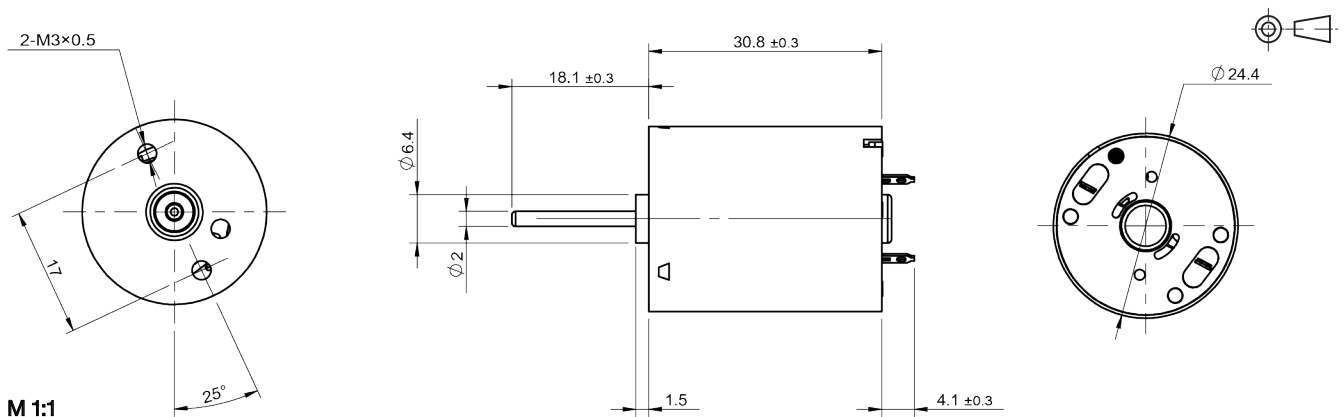


型号 / Model C2430R43-0010

### 可选参数 | Options

导线长度      Lead wires length  
轴长              Shaft length  
性能              Special coils  
齿轮箱            Gearheads

### 外观图 | Outline Drawing



## C2838R | 碳刷 Graphite Brush

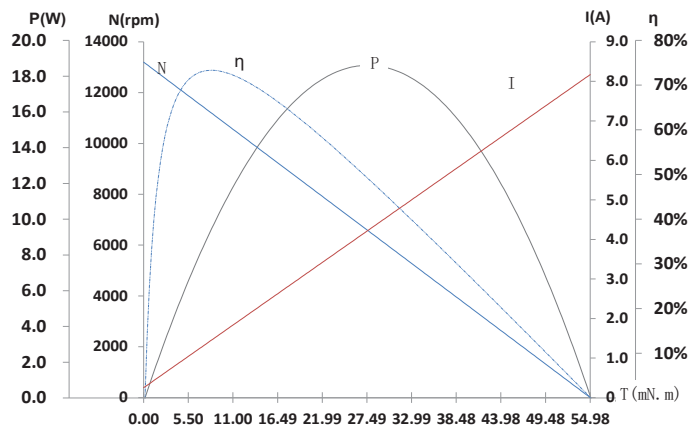
应用领域：汽车产品、吸奶器、电动工具等。

Applications: automotive products, breast pumps, electric tools, etc.

### 主要技术指标 | Characteristics

			41-0007	41-0010	41-0019
1	电压	Voltage	V	9.0	24.0
2	空载转速	No-load speed	rpm	13200	8800
3	空载电流	No-load current	mA	250	70
4	堵转转矩	Stall torque	mNm	55	60.0
5	堵转电流	Stall current	mA	8170	1903
6	负载转矩	Load torque	mNm	8.33	8.82
7	负载转速	Load speed	rpm	11200	7480
8	负载电流	Load current	mA	1450	345
9	最大输出功率	Max. output power	W	19.03	13.84
10	最大效率	Max. efficiency	%	75.0	85.3
11	转矩常数	Torque constant	mNm/A	6.94	32.73
12	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	240	147
13	压敏电阻	Varistor	Yes/No	Yes	No
14	重量	Weight	g	70	70
15	工作温度范围	Operating temperature range	°C	0~+60	0~+60

### 特性曲线 | Characteristics Curve

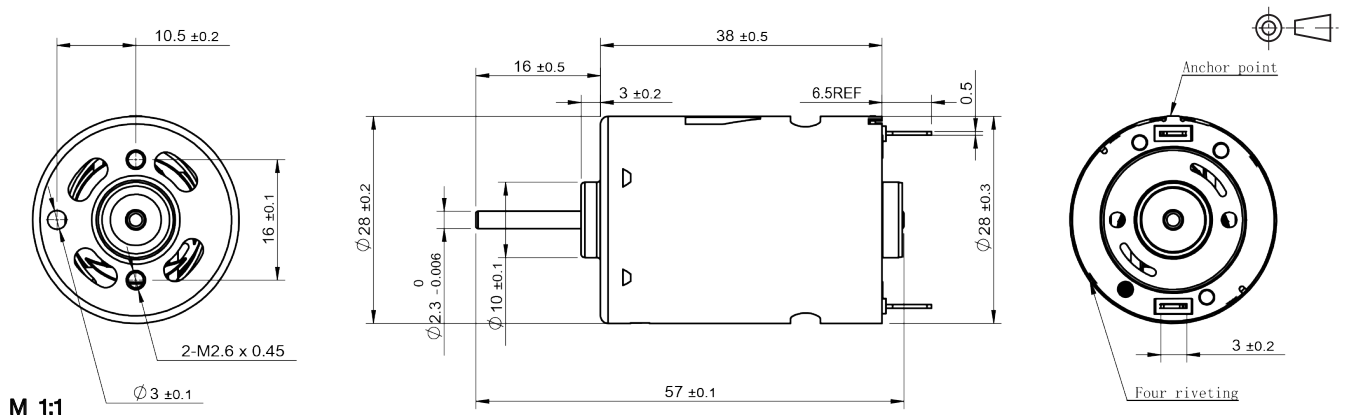


型号 / Model C2838R41-0007

### 可选参数 | Options

导线长度      Lead wires length  
 轴长            Shaft length  
 性能            Special coils  
 齿轮箱         Gearheads

### 外观图 | Outline Drawing



## C2838R415 | 碳刷 Graphite Brush

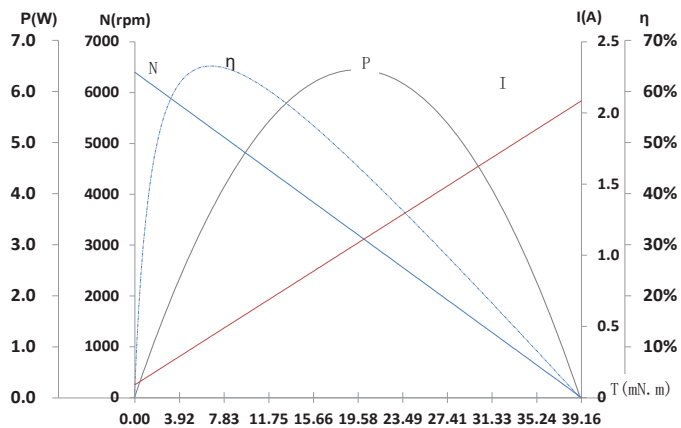
应用领域：汽车产品、吸奶器、电动工具等。

Applications: automotive products, breast pumps, electric tools, etc.

### 主要技术指标 | Characteristics

			415-0016	415-0055	415-0076	
1	电压	Voltage	V	13.0	24.0	24.0
2	空载转速	No-load speed	rpm	6400	12270	17800
3	空载电流	No-load current	mA	90	90	130
4	堵转转矩	Stall torque	mNm	39.2	54.9	51.0
5	堵转电流	Stall current	mA	2086	3200	4600
6	负载转矩	Load torque	mNm	5.69	8.33	7.84
7	负载转速	Load speed	rpm	5470	10400	15100
8	负载电流	Load current	mA	380	550	810
9	最大输出功率	Max. output power	W	6.57	17.65	23.79
10	最大效率	Max. efficiency	%	66.5	67.4	63.2
11	转矩常数	Torque constant	mNm/A	19.64	17.65	11.41
12	转速 / 转矩斜率	Speed/torque gradient	rpm/mNm	163	223	349
13	压敏电阻	Varistor	Yes/No	No	No	No
14	重量	Weight	g	70	70	68
15	工作温度范围	Operating temperature range	°C	0~+60	0~+60	0~+60

### 特性曲线 | Characteristics Curve

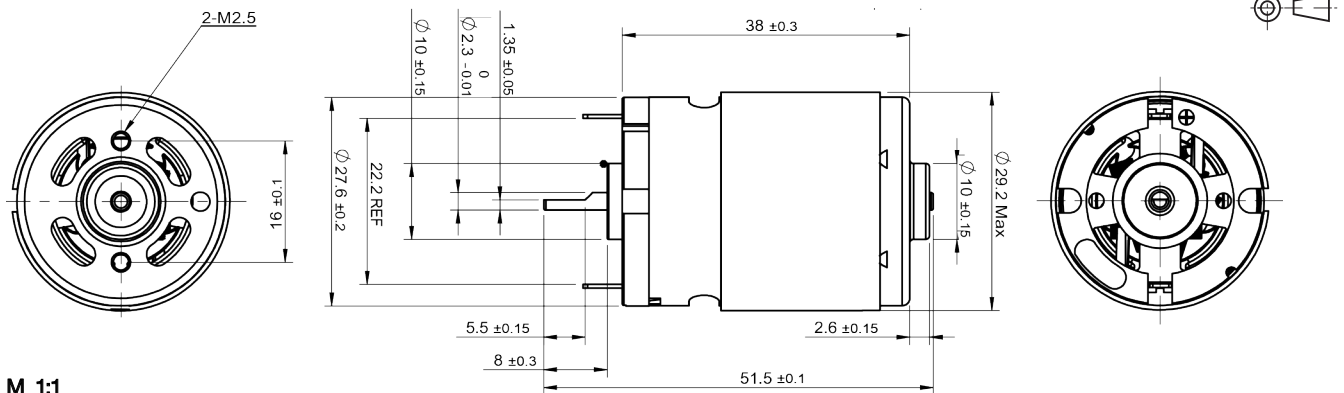


型号 / Model C2838R415-0016

### 可选参数 | Options

- 导线长度 | Lead wires length
- 轴长 | Shaft length
- 性能 | Special coils
- 齿轮箱 | Gearheads

### 外观图 | Outline Drawing





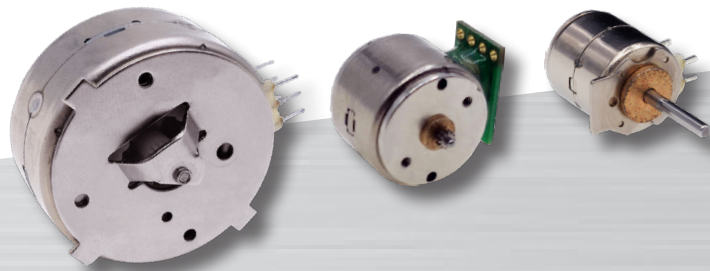




## MINI STEP MOTOR 微型步进电机

Constar 微型步进电机采用永磁体结构, 设计合理、性能可靠, 在开环系统里具有较好的位置精度和运动重复性; 配以不同的驱动方式实现相应的步距要求, 应用于安防系统、办公自动化系统、医疗器械、小家电及玩具领域等。

The mini step motor features a rational permanent magnet (PM) design. In an open loop system the motor performs very reliably with good positioning precision and repeatability. When properly matched with driving electronics, various incremental steps can be achieved. It is applied in the fields of security systems, office automation systems, medical equipment, mini household appliances and toys, etc.



# CONTENT 目录

## 微型步进电机 MINI STEP MOTOR

	电机型号 Motor No.	尺寸 Dimension	结构 Structure	页码 Page
1	1011P0209	φ10×10.3 mm	PM永磁/Permanent Magnet	244
2	1511P0209	φ15×11.6 mm	PM永磁/Permanent Magnet	245



1011P0209 | 1011BYB | PM永磁 Permanent Magnet

应用领域：安防系统、办公自动化系统、医疗器械、小家电及玩具等领域。

Applications: security systems, office automation systems, medical equipment, mini household appliances, toys, etc.

主要技术指标 | Characteristics

			1011P0209-015-5.0-0023	1011BYB-07-5.0
1	相数	No. of phase	2	2
2	运行方式	Excitation Mode	2-2	2-2
3	电压	Voltage	5.0	3.0
4	直流电阻	Resistance	15	15
5	步距角	Step Angle	18°	18°
6	电流	Current	0.33	0.19
7	空载牵入频率	No-load Pull-in Frequency	≥1200	≥1200
8	空载牵出频率	No-load Pull-out Frequency	≥1300	≥1300
9	自定位转矩	Detent Torque	0.1	0.1
10	牵入转矩	Pull-in Torque	0.4	0.4
11	负载牵入频率	Load pull-in Frequency	≥500	≥350
12	重量	Weight	4.5	4.5
13	工作温度范围	Operating temperature range	-20~+80	-20~+80

步序图 | Sequence Diagram

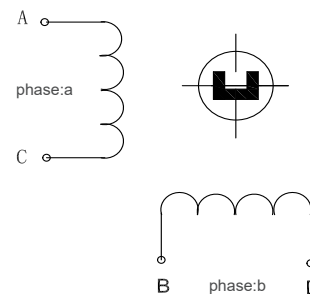
运行方式 Excitation Mode 2-2

CCW →

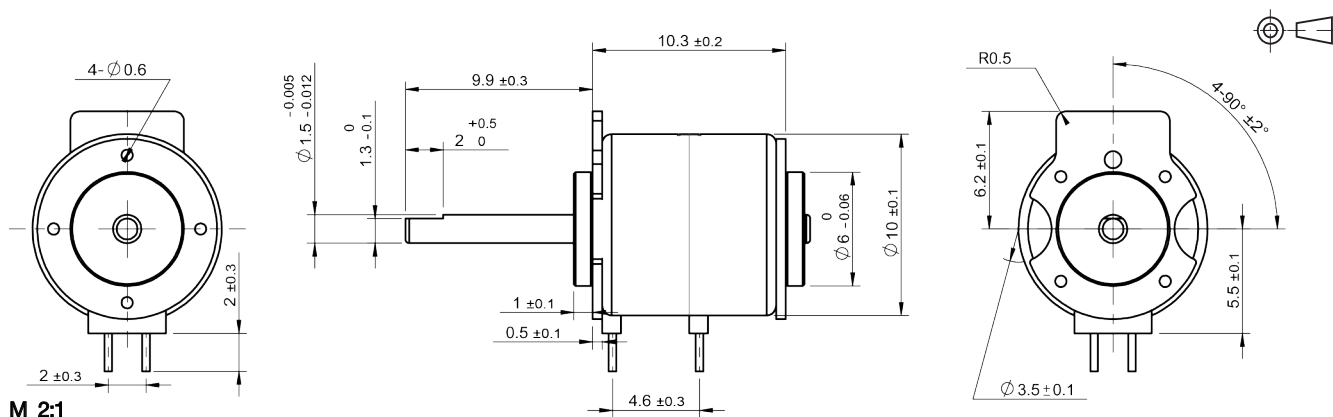
PIN	Step 1	Step 2	Step 3	Step 4
A	+	-	-	+
C	-	+	+	-
B	+	+	-	-
D	-	-	+	+
Phase	a,b	-a,b	-a,-b	a,-b

← CW

接线图 | Wiring Diagram



外观图 | Outline Drawing



# 1511P0209 | PM永磁 Permanent Magnet

应用领域：安防系统、办公自动化系统、医疗器械、小家电及玩具等领域。

Applications: security systems, office automation systems, medical equipment, mini household appliances, toys, etc.

## 主要技术指标 | Characteristics

			-013-5.0-002	-013-6.5-0019
1	相数	No. of phase	2	2
2	运行方式	Excitation Mode	2-2	2-2
3	电压	Voltage	5.0	6.5
4	直流电阻	Resistance	12.6	12.6
5	步距角	Step Angle	18°	18°
6	电流	Current	0.4	0.5
7	空载牵入频率	No-load Pull-in Frequency	≥1200	≥1200
8	空载牵出频率	No-load Pull-out Frequency	≥1300	≥1300
9	自定位转矩	Detent Torque	0.40	0.40
10	牵入转矩	Pull-in Torque	1	1
11	负载牵入频率	Load pull-in Frequency	≥800	≥500
12	重量	Weight	9.0	8.8
13	工作温度范围	Operating temperature range	-20~+80	-20~+80

## 步序图 | Sequence Diagram

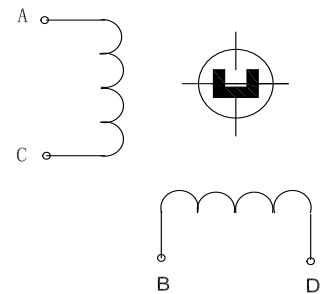
运行方式 Excitation Mode 2-2

CCW →

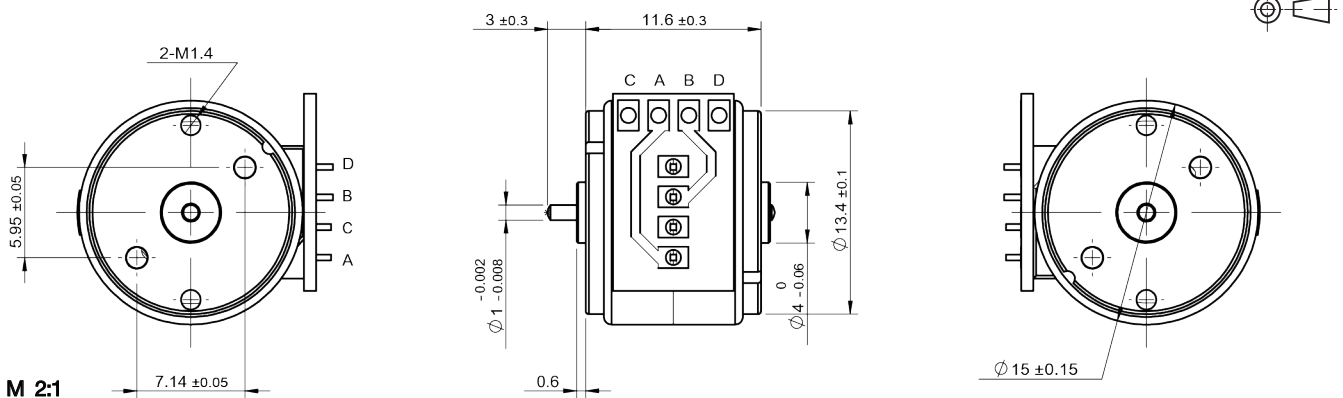
PIN	Step 1	Step 2	Step 3	Step 4
A	+	-	-	+
C	-	+	+	-
B	+	+	-	-
D	-	-	+	+
Phase	a,b	-a,b	-a,-b	a,-b

← CW

## 接线图 | Wiring Diagram



## 外观图 | Outline Drawing



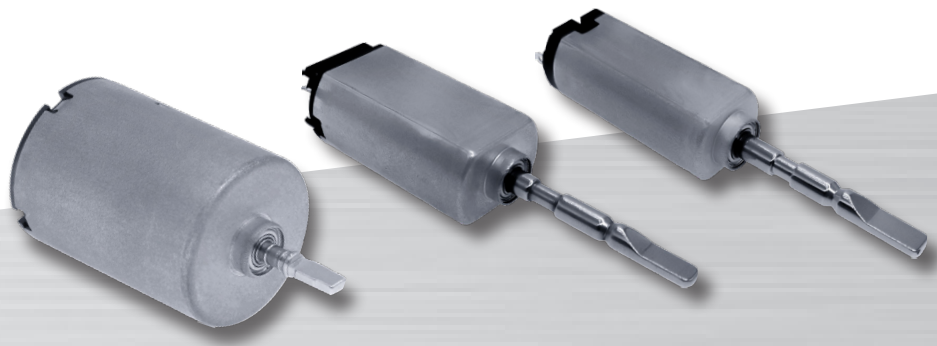


## SONIC MOTOR 声波振动电机

Constar 声波振动电机设计新颖、结构精巧,已获国家专利授权。产品噪音低、频率高、力矩大、寿命长,适用于电动牙刷、洁面仪、保健器材等。

Constar Sonic Motor, featuring novel design and ingenious structure, was granted national patents. It is characterized by low noise, high frequency, high torque, long lifetime, and mainly used in electric toothbrushes, facial brushes, health care products, etc.





# CONTENT 目录

## 声波振动电机 SONIC MOTOR

	电机型号 Motor No.	尺寸 Dimension	启动转矩 Starting Torque	页码 Page
1	1339ZDF	φ13.5×39 mm	11mNm / 8mNm / 15mNm	250
2	1434ZDF	φ14.5×34 mm	12mNm / 12mNm / 8.5mNm	251
3	1538ZDF	φ14.9×38 mm	13mNm / 13mNm / 9mNm	252
4	1640ZDF	φ16×39.8 mm	15mNm / 15mNm / 14mNm	253
5	1839ZDF	φ18.3×40.05 mm	18mNm / 22mNm / 18mNm	254
6	1941ZDF	φ18.6*41mm	22mNm / 22mNm / 21mNm	255
7	2038ZDF	φ20.3×38.3 mm	22mNm	256
8	2040ZDF	φ20.3×40 mm	23mNm	256
9	2724ZDR	φ27×23.5 mm	40mNm / 27mNm / 54mNm	257
10	2734ZDR	φ27×33.5 mm	56mNm / 56mNm / 75mNm	258



1339ZDF | 声波振动电机 Sonic Motor

应用领域：电动牙刷、保健器材、清洁用具等。

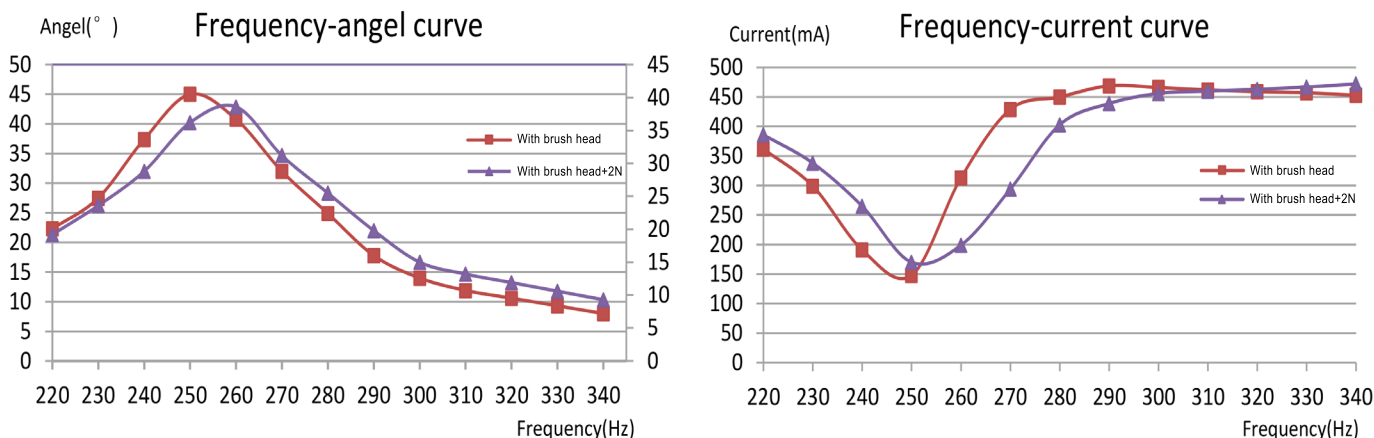
Applications: electric toothbrushes, health care products, cleaning equipment, etc.

主要技术指标 | Characteristics

			-1-L2-3.7	-1-L3-2.5	-1-L4-5.0	
1	电压	Voltage	V	3.7	2.5	5.0
2	直流电阻	Resistance	$\Omega$	4	4	4
3	工作频率范围	Operating frequency range	Hz	220~360	220~360	220~360
4	空载振动频次	No-load vibration frequency	Times / minute	39600	39600	39600
5	空载振动电流	No-load current	mA	90	75	110
6	启动转矩	Starting torque	mNm	11	8	15
7	启动电流	Starting current	A	0.9	0.7	1.2
8	负载(刷头)	Rated load (Brush head)	g	3.8	3.8	3.8
9	负载振动频次	Load vibration frequency	Times / minute	31200	31200	31200
10	负载电流	Load current	mA	400	330	480
11	转子惯量	Rotor inertia	$gcm^2$	0.75	0.75	0.75
12	重量	Weight	g	19	19	19
13	工作温度范围	Operating temperature range	$^{\circ}C$	-10~+60	-10~+60	-10~+60

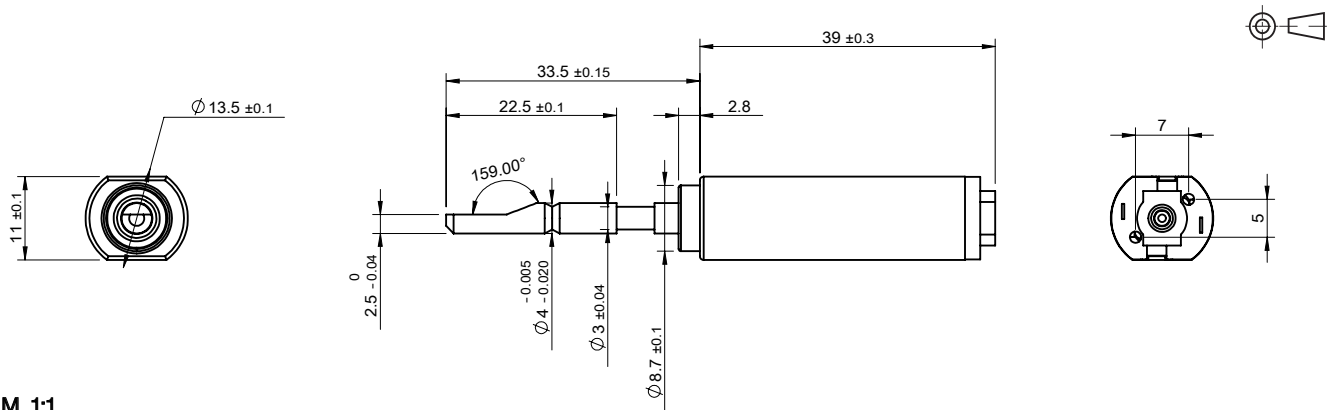
★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

特性曲线 | Characteristics Curve



型号 / Model 1339ZDF-1-L2-3.7

外观图 | Outline Drawing



M 1:1

## 1434ZDF | 声波振动电机 Sonic Motor

应用领域：电动牙刷、保健器材、清洁用具等。

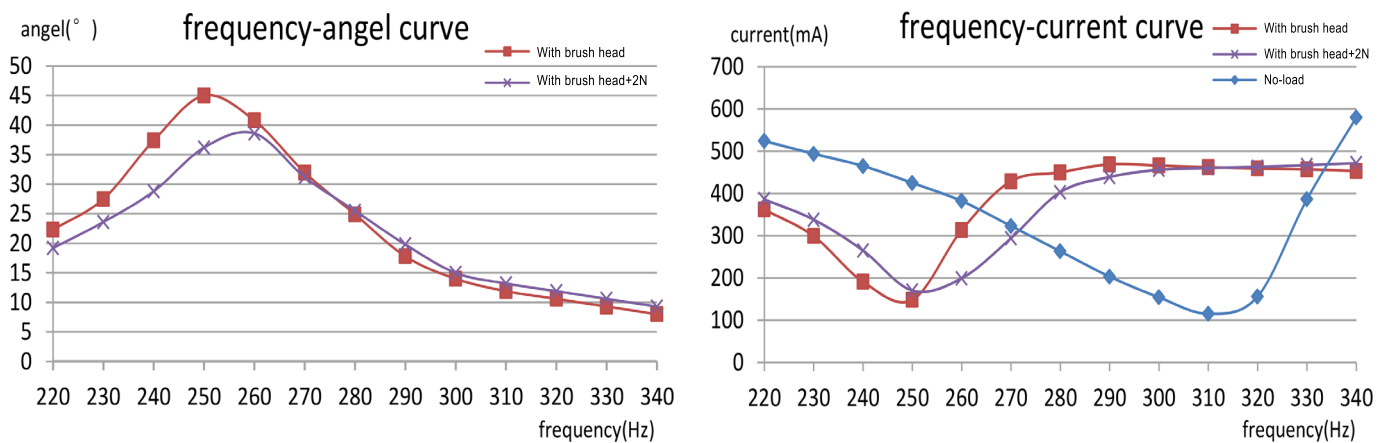
Applications: electric toothbrushes, health care products, cleaning equipment, etc.

### 主要技术指标 | Characteristics

			-1-L1-3.7	-ET-L15-3.7	-1-L2-2.5
1	电压	Voltage	V	3.7	2.5
2	直流电阻	Resistance	$\Omega$	3.8	3.8
3	工作频率范围	Operating frequency range	Hz	220~360	220~360
4	空载振动频次	No-load vibration frequency	Times / minute	39600	39600
5	空载振动电流	No-load current	mA	90	80
6	启动转矩	Starting torque	mNm	12	8.5
7	启动电流	Starting current	A	0.9	0.7
8	负载 (刷头)	Rated load (Brush head)	g	3.8	3.8
9	负载振动频次	Load vibration frequency	Times / minute	31200	31200
10	负载电流	Load current	mA	400	340
11	转子惯量	Rotor inertia	$\text{gcm}^2$	1.0	1.0
12	重量	Weight	g	19	19
13	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+60	-10~+60

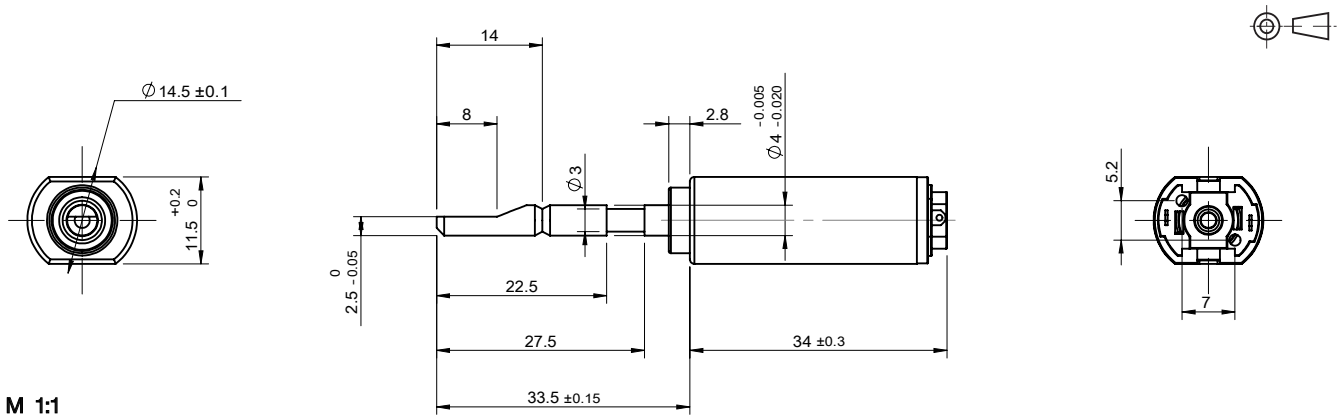
★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

### 特性曲线 | Characteristics Curve



型号 / Model 1434ZDF-1-L1-3.7

### 外观图 | Outline Drawing



## 1538ZDF | 声波振动电机 Sonic Motor

应用领域：电动牙刷、保健器材、清洁用具等。

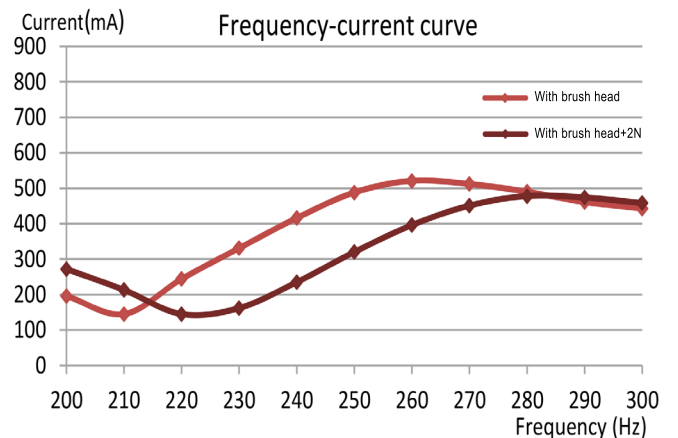
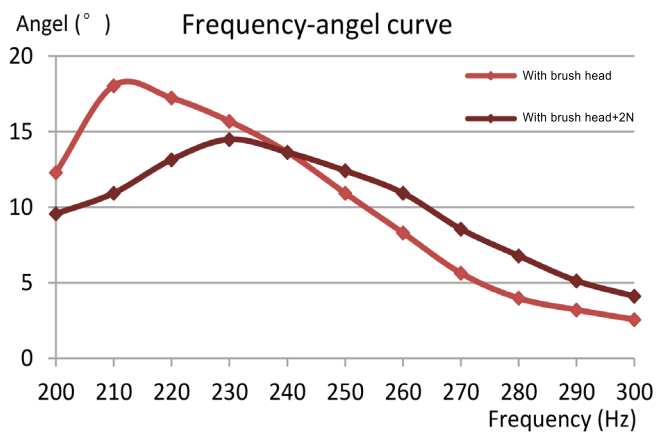
Applications: electric toothbrushes, health care products, cleaning equipment, etc.

### 主要技术指标 | Characteristics

			-1-L4-3.7	-ET-L9-3.7	-1-L1-2.5	
1	电压	Voltage	V	3.7	3.7	2.5
2	直流电阻	Resistance	$\Omega$	3.8	3.8	3.8
3	工作频率范围	Operating frequency range	Hz	200~360	200~360	200~360
4	空载振动频次	No-load vibration frequency	Times / minute	40800	40800	40800
5	空载振动电流	No-load current	mA	90	95	90
6	启动转矩	Starting torque	mNm	13	13	9
7	启动电流	Starting current	A	0.9	0.9	0.7
8	负载 (刷头)	Rated load (Brush head)	g	3.9	3.9	3.9
9	负载振动频次	Load vibration frequency	Times / minute	31200	31200	31200
10	负载电流	Load current	mA	350	380	320
11	转子惯量	Rotor inertia	$\text{gcm}^2$	1.1	1.1	1.1
12	重量	Weight	g	20	20	20
13	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+60	-10~+60	-10~+60

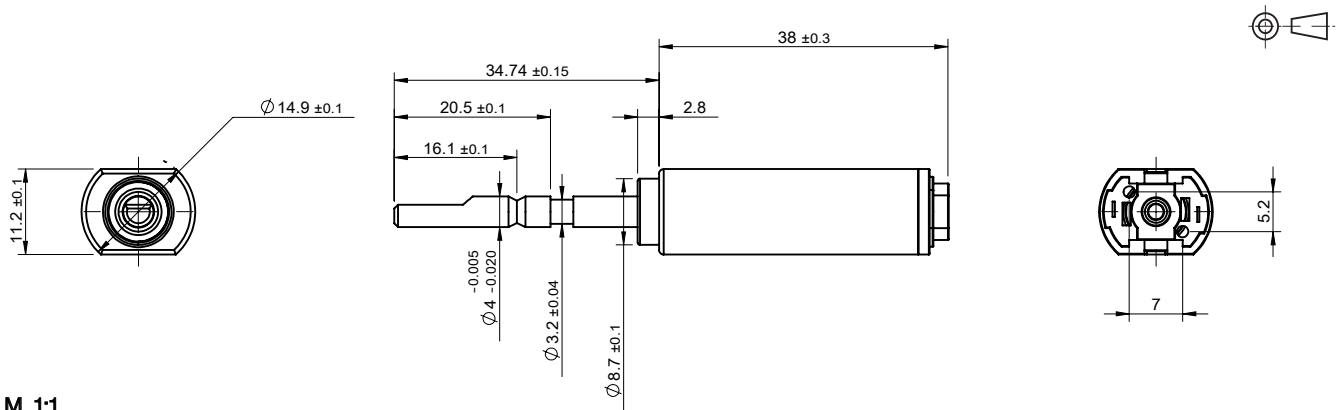
★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

### 特性曲线 | Characteristics Curve



型号 / Model 1538ZDF-1-L4-3.7

### 外观图 | Outline Drawing



## 1640ZDF | 声波振动电机 Sonic Motor

应用领域：电动牙刷、保健器材、清洁用具等。

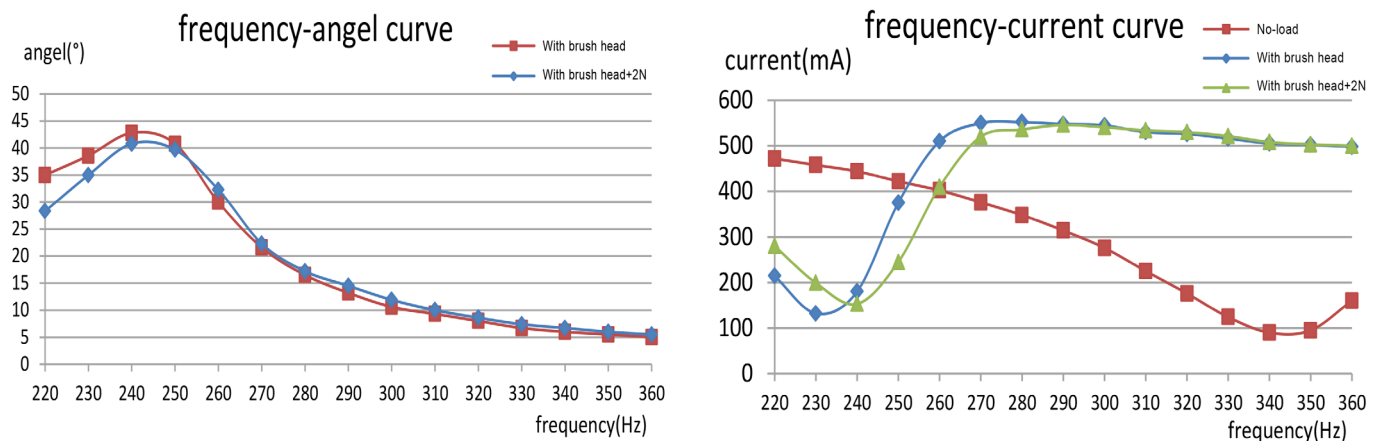
Applications: electric toothbrushes, health care products, cleaning equipment, etc.

### 主要技术指标 | Characteristics

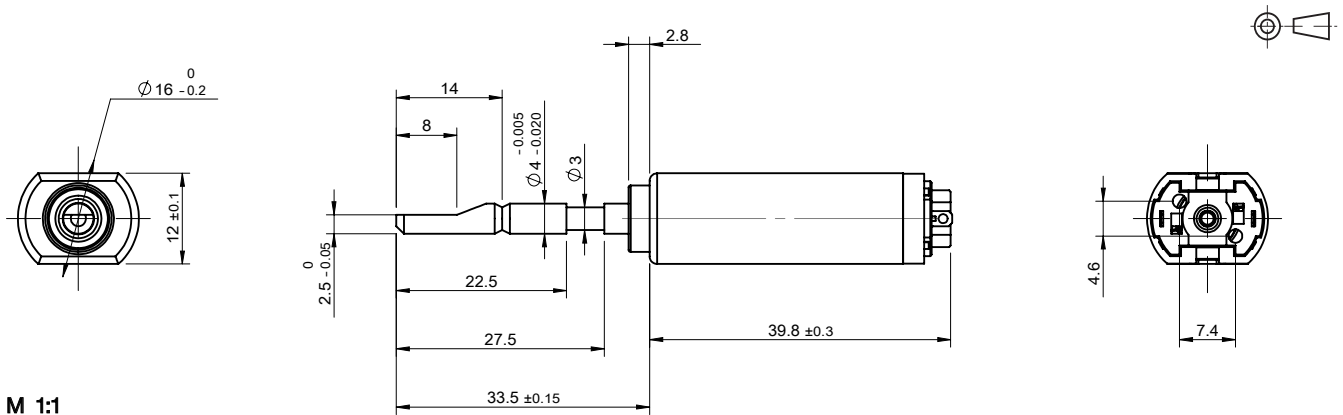
			-1-L2-3.7	-T-1A-L36-3.7	-ET-L4-3.7
1	电压	Voltage	V	3.7	3.7
2	直流电阻	Resistance	$\Omega$	3.7	4
3	工作频率范围	Operating frequency range	Hz	220~360	220~360
4	空载振动频次	No-load vibration frequency	Times / minute	40800	42000
5	空载振动电流	No-load current	mA	90	90
6	启动转矩	Starting torque	mNm	15	15
7	启动电流	Starting current	A	1.0	1.0
8	负载 (刷头)	Rated load (Brush head)	g	3.6	3.9
9	负载振动频次	Load vibration frequency	Times / minute	36000	36000
10	负载电流	Load current	mA	350	370
11	转子惯量	Rotor inertia	$\text{gcm}^2$	1.2	1.2
12	重量	Weight	g	25	25
13	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+60	-10~+60

★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

### 特性曲线 | Characteristics Curve



### 外观图 | Outline Drawing



### 1839ZDF | 声波振动电机 Sonic Motor

应用领域：电动牙刷、保健器材、清洁用具等。

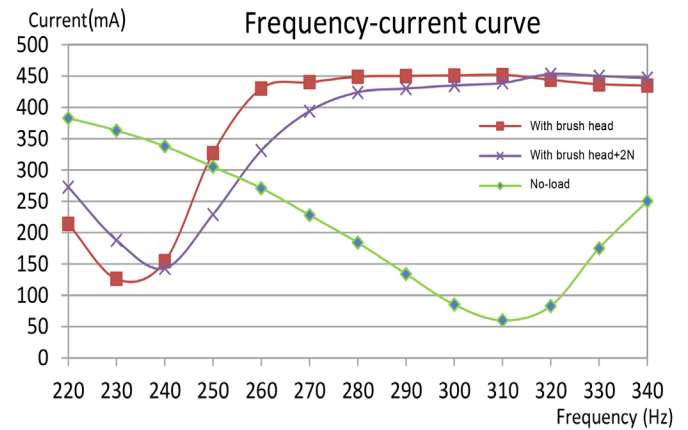
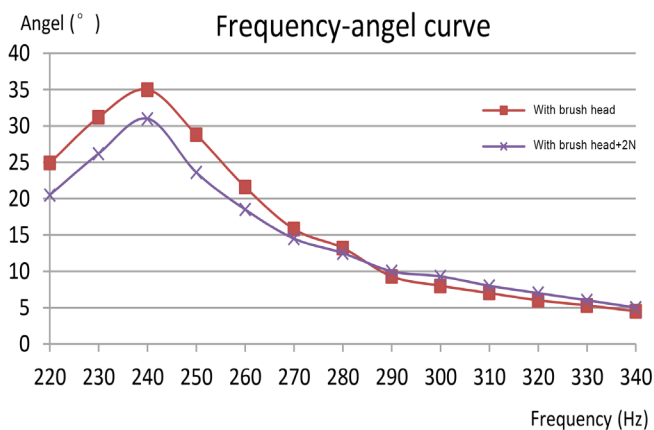
Applications: electric toothbrushes, health care products, cleaning equipment, etc.

#### 主要技术指标 | Characteristics

			-1-L5-3.7	-1AD-L23-40-3.7	-ET-L2-3.7
1	电压	Voltage	V	3.7	3.7
2	直流电阻	Resistance	$\Omega$	3.3	3.7
3	工作频率范围	Operating frequency range	Hz	240~350	220~340
4	空载振动频次	No-load vibration frequency	Times / minute	40000	34800
5	空载振动电流	No-load current	mA	90	75
6	启动转矩	Starting torque	mNm	18	22
7	启动电流	Starting current	A	1.1	1.0
8	负载 (刷头)	Rated load (Brush head)	g	3.8	3.9
9	负载振动频次	Load vibration frequency	Times / minute	33600	31200
10	负载电流	Load current	mA	400	460
11	转子惯量	Rotor inertia	$\text{gcm}^2$	1.7	1.8
12	重量	Weight	g	29	30
13	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+60	-10~+60

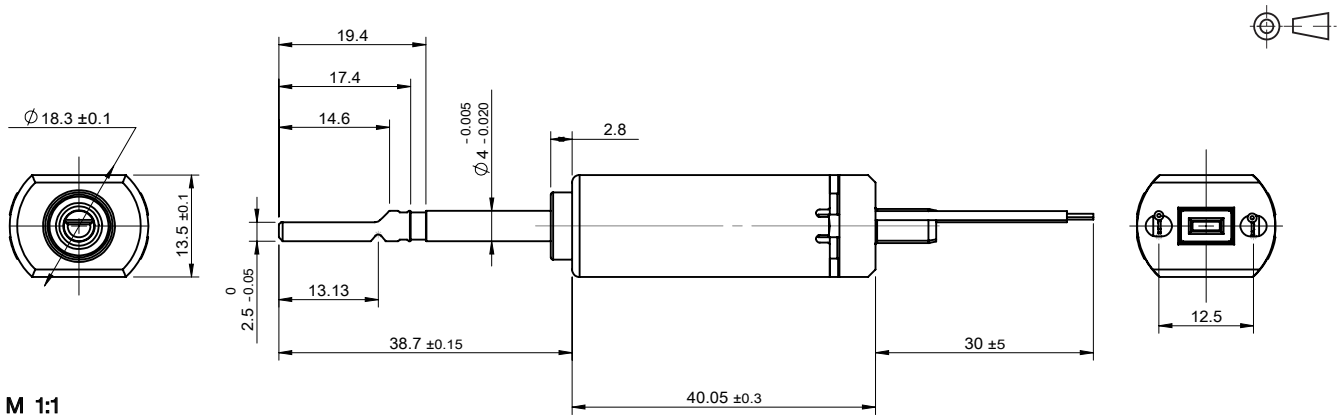
★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

#### 特性曲线 | Characteristics Curve



型号 / Model 1839ZDF-1-L5-3.7

#### 外观图 | Outline Drawing





## 1941ZDF | 声波振动电机 Sonic Motor

应用领域：电动牙刷、保健器材、清洁用具等。

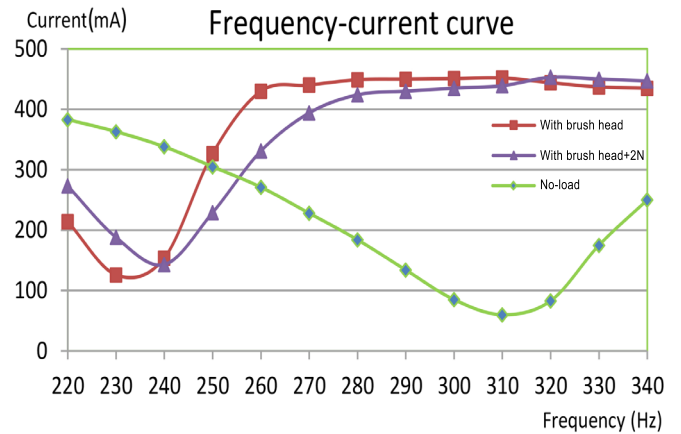
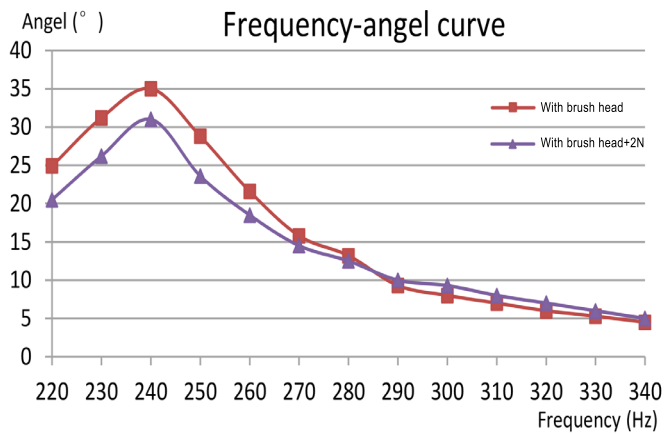
Applications: electric toothbrushes, health care products, cleaning equipment, etc.

### 主要技术指标 | Characteristics

			-1-L3-2.5	-1-L2-30-3.7	-1K-L4-30-3.7
1	电压	Voltage	V	3.7	3.7
2	直流电阻	Resistance	$\Omega$	3.5	3.7
3	工作频率范围	Operating frequency range	Hz	200~360	200~360
4	空载振动频次	No-load vibration frequency	Times / minute	38400	38400
5	空载振动电流	No-load current	mA	80	90
6	启动转矩	Starting torque	mNm	22	22
7	启动电流	Starting current	A	1.1	1.1
8	负载 (刷头)	Rated load (Brush head)	g	3.8	3.8
9	负载振动频次	Load vibration frequency	Times / minute	36000	36000
10	负载电流	Load current	mA	360	400
11	转子惯量	Rotor inertia	gcm <sup>2</sup>	1.8	1.8
12	重量	Weight	g	31	31
13	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+60	-10~+60

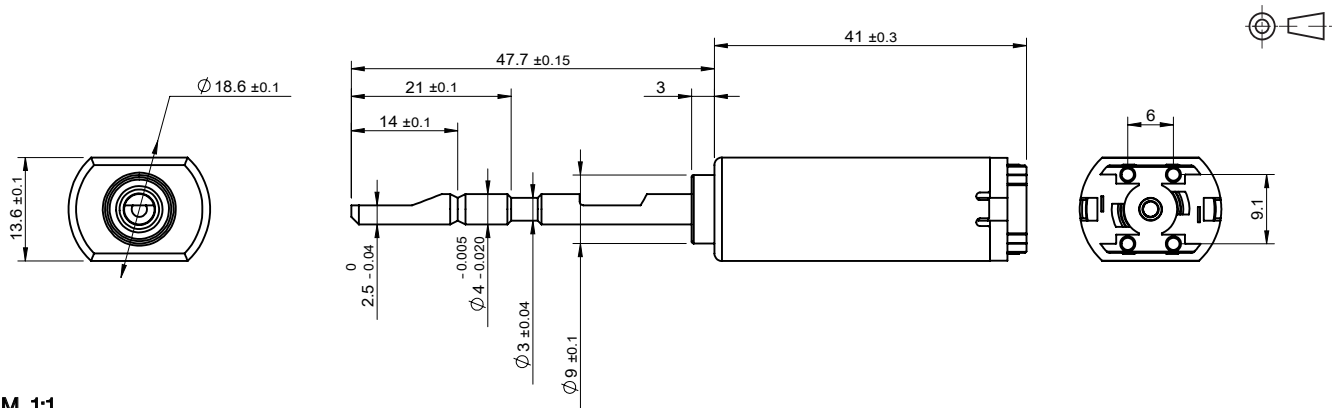
★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

### 特性曲线 | Characteristics Curve



型号 / Model 1941ZDF-1-L3-3.7

### 外观图 | Outline Drawing



2038ZDF | 2040ZDF | 声波振动电机 Sonic Motor

应用领域：电动牙刷、保健器材、清洁用具等。

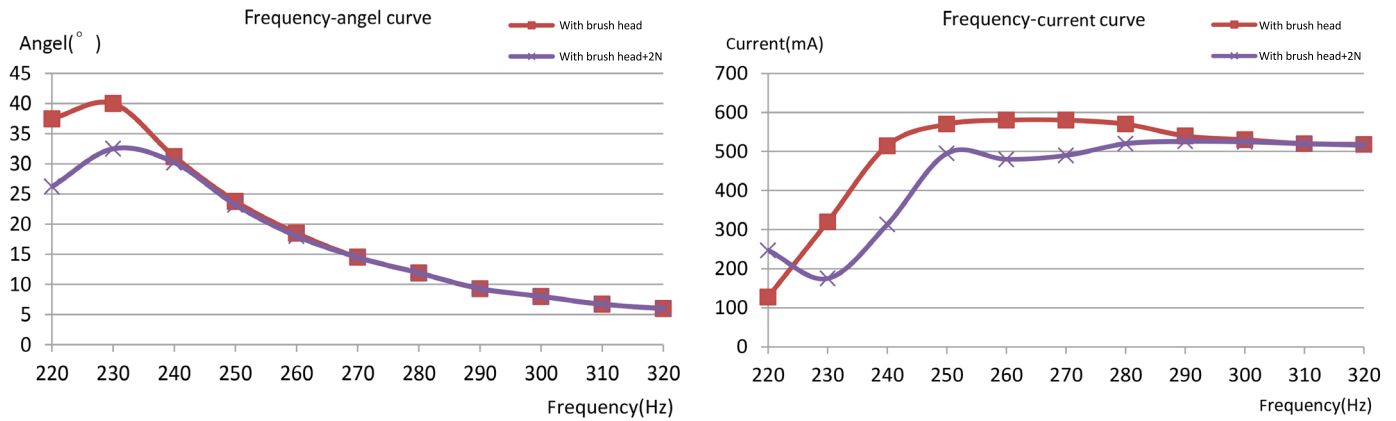
Applications: electric toothbrushes, health care products, cleaning equipment, etc.

主要技术指标 | Characteristics

		2038ZDF-BW-3-L4-3.7 2038ZDF-ET-L4-3.7 2040ZDF-3-L1-3.7				
1	电压	Voltage	V	3.7	3.7	3.7
2	直流电阻	Resistance	$\Omega$	3.2	3.2	3.2
3	工作频率范围	Operating frequency range	Hz	230~330	220~320	220~320
4	空载振动频次	No-load vibration frequency	Times / minute	34800	34800	34800
5	空载振动电流	No-load current	mA	90	95	90
6	启动转矩	Starting torque	mNm	22	22	23
7	启动电流	Starting current	A	1.15	1.15	1.15
8	负载(刷头)	Rated load (Brush head)	g	4.4	4.4	4.4
9	负载振动频次	Load vibration frequency	Times / minute	31000	31000	31000
10	负载电流	Load current	mA	400	450	500
11	转子惯量	Rotor inertia	$\text{gcm}^2$	2.4	2.4	2.4
12	重量	Weight	g	31	31	31
13	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+60	-10~+60	-10~+60

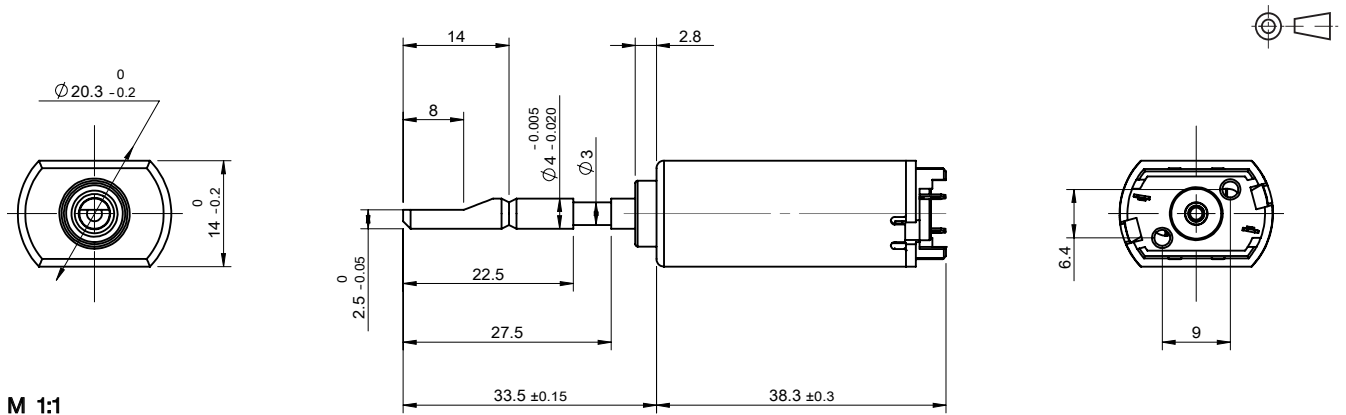
★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

特性曲线 | Characteristics Curve



型号 / Mode 2040ZDF-3-L1-3.7

外观图 | Outline Drawing



## 2724ZDR | 声波振动电机 Sonic Motor

应用领域：洗脸刷、脸部按摩仪、保健器材、清洁用具等。

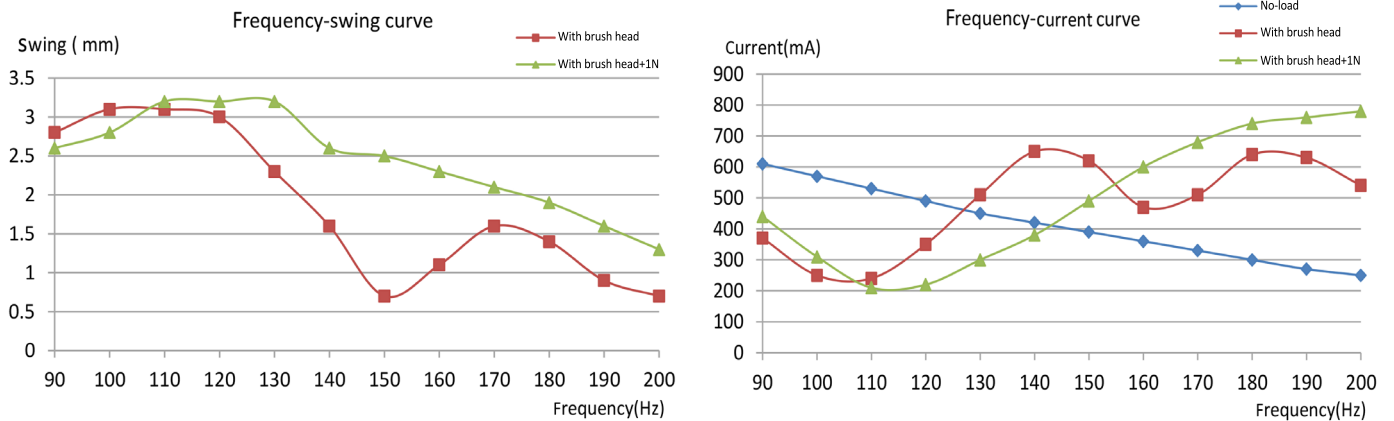
Applications: facial brushes, facial massagers, health care products, cleaning equipment, etc.

### 主要技术指标 | Characteristics

			-1-L7-30-3.7	-1-L14-50-2.5	-1-L19-35-5.0	
1	电压	Voltage	V	3.7	2.5	5.0
2	直流电阻	Resistance	$\Omega$	2.2	2.2	2.2
3	工作频率范围	Operating frequency range	Hz	100~220	100~220	100~220
4	空载振动频次	No-load vibration frequency	Times / minute	26400	26400	26400
5	空载振动电流	No-load current	mA	150	135	180
6	启动转矩	Starting torque	mNm	40	27	54
7	启动电流	Starting current	A	1.7	1.15	2.3
8	负载 (刷头)	Rated load (Brush head)	g   mm	10   31	10   31	10   31
9	负载振动频次	Load vibration frequency	Times / minute	20400	20400	20400
10	负载电流	Load current	mA	450	410	500
11	转子惯量	Rotor inertia	gcm <sup>2</sup>	1.35	1.35	1.35
12	重量	Weight	g	49	49	49
13	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+60	-10~+60	-10~+60

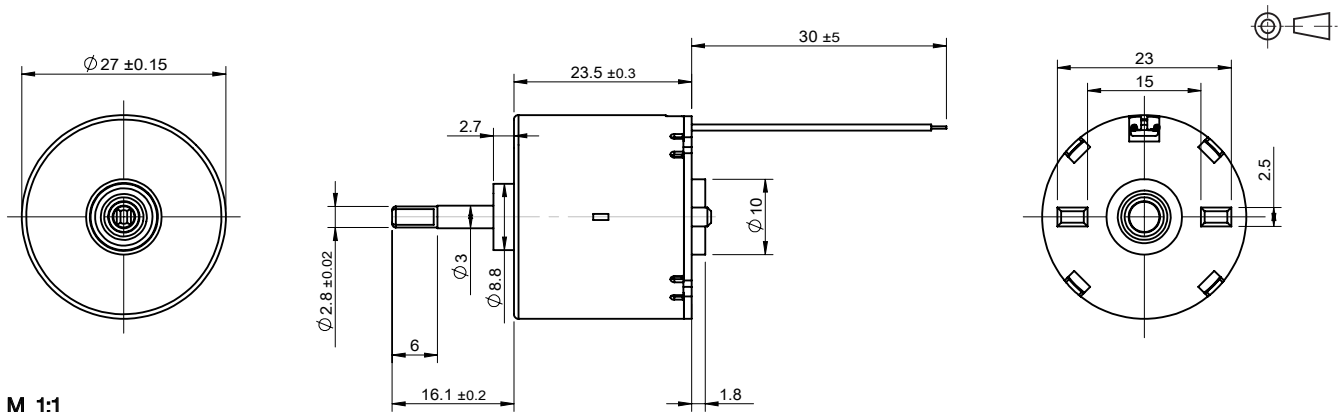
★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

### 特性曲线 | Characteristics Curve



型号 / Model 2724ZDR-1-L7-30-3.7

### 外观图 | Outline Drawing



M 1:1

## 2734ZDR | 声波振动电机 Sonic Motor

应用领域：洗脸刷、脸部按摩仪、保健器材、清洁用具等。

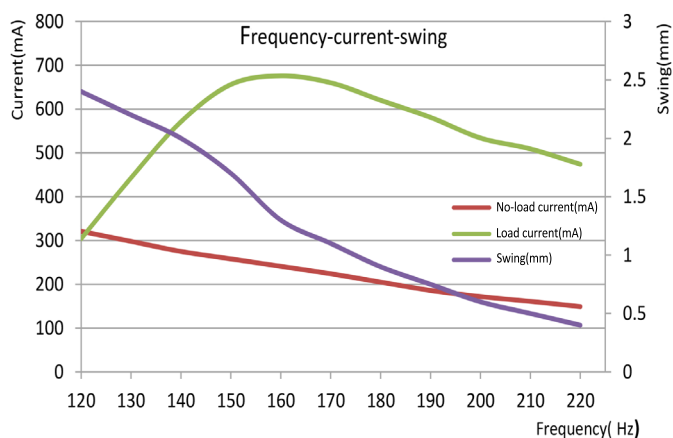
Applications: facial brushes, facial massagers, health care products, cleaning equipment, etc.

### 主要技术指标 | Characteristics

			-1-L2-30-3.7	-2-L13-30-3.7	-1-L3-25-5.0
1	电压	Voltage	V	3.7	5.0
2	直流电阻	Resistance	$\Omega$	3.0	3.0
3	工作频率范围	Operating frequency range	Hz	100~240	100~240
4	空载振动频次	No-load vibration frequency	Times / minute	30000	30000
5	空载振动电流	No-load current	mA	150	220
6	启动转矩	Starting torque	mNm	56	75
7	启动电流	Starting current	A	1.23	1.67
8	负载 (刷头)	Rated load (Brush head)	g   mm	13.8   41	13.8   41
9	负载振动频次	Load vibration frequency	Times / minute	20400	20400
10	负载电流	Load current	mA	580	670
11	转子惯量	Rotor inertia	$\text{gcm}^2$	2.4	2.4
12	重量	Weight	g	76	76
13	工作温度范围	Operating temperature range	$^{\circ}\text{C}$	-10~+60	-10~+60

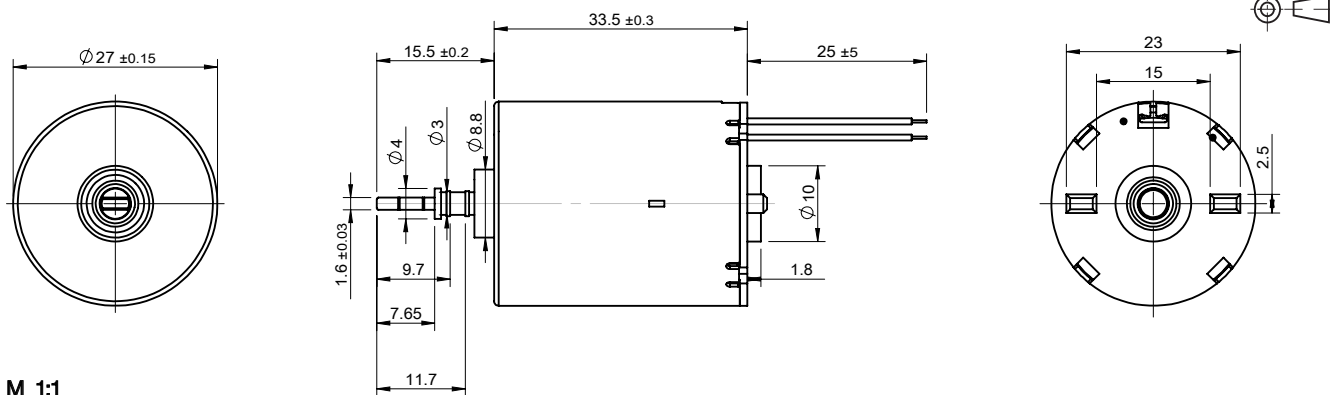
★可选参数 Options: 导线长度 Lead wires length 轴长 Shaft length 性能 Special coils

### 特性曲线 | Characteristics Curve



型号 / Mode 2734ZDR-1-L2-30-3.7

### 外观图 | Outline Drawing



M 1:1



# CONTACT 联系方式

## 亚洲 /Asia

### 深圳市德达兴驱动科技有限公司

地址：深圳市光明区马田街道马山头社区钟表基地瑞辉大厦 603  
邮编：518106  
电话：+86-755-27351975  
传真：+86-755-82049529  
邮箱：szcxd@constarmotor.com

### CONSTAR MOTION CO.,LTD

Add: Suite 603, Ruihui Building, Mashantou Community  
Clock&Watch Base, Matian Subdistrict, Guangming District,  
Shenzhen, China  
P.C: 518106  
Tel: +86-755-27351975  
Fax: +86-755-82049529  
E-mail: szcxd@constarmotor.com

### 深圳市仓兴达科技有限公司

地址：深圳市福田区车公庙天安科技创业园大厦 A701 房  
邮编：518040  
电话：+86-755-27351975  
传真：+86-755-82049529  
邮箱：szcxd@constarmotor.com

### CONSTAR MICROMOTOR CO., LTD

Add: Room 701, Tower A, Futian Tian'an Hi-Tech Venture Park,  
Futian District, Shenzhen, China  
P.C: 518040  
Tel: +86-755-27351975  
Fax: +86-755-82049529  
E-mail: szcxd@constarmotor.com

### 深圳市仓兴达科技有限公司精密电机厂

地址：深圳市光明区马田街道马山头社区钟表基地瑞辉大厦  
501-601

### CONSTAR MICROMOTOR CO.,LTD PRECISION MICROMOTOR FACTORY

Add: Room 501-601, Ruihui Building, Mashantou Community  
Clock&Watch Base, Matian Subdistrict, Guangming District,  
Shenzhen, China

### 重庆市仓兴达科技有限公司

地址：重庆市涪陵区新城区聚龙大道 133 号  
**CONSTAR MICROMOTOR (CHONGQING) CO.,LTD**  
Add: No.133, Julong Road, New Town, Fuling District, Chongqing,  
China

### 同美企业股份有限公司 (台湾总公司)

地址：24355 新北市泰山區新北大道六段 399 號 2 樓  
电话：+886-2-29021522  
传真：+886-2-29071076  
邮箱：service@tongmei.com.tw

### TOUNG MEI CORPORATION

Add: 2F., No.399, Sec.6, New Taipei Blvd., TaiShan Dist., New  
Taipei City 24355, Taiwan  
Tel: +886-2-29021522  
Fax: +886-2-29071076  
E-mail: service@tongmei.com.tw

### 同美 (香港) 有限公司

地址：香港九龍灣宏冠道 6 號鴻力工業中心 B 座 9 樓 921 室  
电话：+852-2755 9977  
传真：+852-8148 0441  
邮箱：tongmei@tongmei.com.hk

### TOUNG MEI (HK) CO. LTD.

Add: Unit 21, 9/F, Block B, Proficient Industrial Centre, 6 Wang  
Kwun Road, Kowloon Bay, Hong Kong  
Tel: +852-2755 9977  
Fax: +852-2305 2909  
E-mail: tongmei@tongmei.com.hk

### 同美仓兴 (深圳) 科技有限公司 (深圳分公司)

地址：深圳市光明鳳凰街道東坑社區樂府廣場 2 號 2508  
電話：+86-755-23919455  
傳真：+86-755-23487313  
郵箱：service@tongmei.com.tw

### TOUNG MEI CANG XING (SHENZHEN) TECHNOLOGY CORPORATION

Add: Room 2508, No.2, Yuefu Square, Dongkeng Community,  
Fenghuang Street, Guangming District, Shenzhen City,  
Guangdong, China 518107  
Tel: +86-755-23919455  
Fax: +86-755-23487313  
E-mail: service@tongmei.com.tw



## 欧洲 /Europe

### **KOCO MOTION GmbH**

Add: Niedereschacher Str.54 78083 Dauchingen Germany

Tel: +49 7720 995858-0

Fax: +49 7720 995858-99

E-mail: [info@kocomotion.de](mailto:info@kocomotion.de)

### **KOCO automotive GmbH**

Add: Niedereschacher Str. 52 78083 Dauchingen Germany

Tel: +49 7720 995164-2

Fax: +49 7720 995164-9

E-mail: [info@kocoautomotive.de](mailto:info@kocoautomotive.de)

### **F&C Solutions S.r.l.**

Add: Via 1 Maggio, 97 - 20863 - CONCOREZZO (MB) - Italy

Tel: +39 039-2110318

Fax: +39 039-2110318

E-mail: [info@fcsolutions.it](mailto:info@fcsolutions.it)

### **NetivTech Ltd**

Add: Kibbutz Netiv Halamed-Hey, Israel 9985500

Tel: +972-2-9900560

E-mail: [info@netivtech.com](mailto:info@netivtech.com)

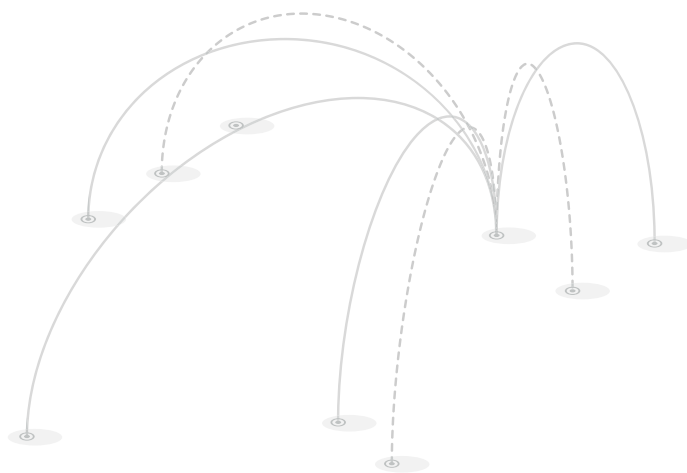
## 美洲 /America

### **KOCO DC-MOTION, Inc.**

Add: 20676 Carrey Road Walnut, CA 91789, U.S.A

Tel: (408) 722-5509

E-mail: [k.oda@kocodcmotion.com](mailto:k.oda@kocodcmotion.com)



---

**深圳市德达兴驱动科技有限公司**

**深圳市仓兴达科技有限公司**

CONSTAR MOTION CO., LTD

CONSTAR MICROMOTOR CO., LTD

**深圳市光明区马田街道马山头社区钟表基地瑞辉大厦 603**

Suite 603, Ruihui Building, Mashantou Community Clock&Watch Base,  
Matian Subdistrict, Guangming District, Shenzhen, China

Tel: +86-755-27351975

Fax: +86-755-82049529

E-mail: szcxd@constarmotor.com

P.C:518106

**Constar**

[www.constarmotor.com](http://www.constarmotor.com)