



富兴机电

# STEPPER MOTOR

---

## 步进电机



常州富兴机电有限公司  
Changzhou Fulling Motor Co.,Ltd

2024版

 **愿景 Vision**

成为世界级的控制电机制造商及系统集成方案提供者

Become a world-class manufacturer of control motors and a provider of system integration solutions.

 **使命 Mission**

为客户创造价值, 提供最优的行业解决方案

Create value for customers and provide the best industry solution.

 **价值观 Values**

责任, 诚信, 共赢

Responsibility, Integrity and Win-win.



# Company Profile - 公司简介

常州富兴机电有限公司是一家中、德、瑞合资企业，成立于2001年，位于中国常州。我们专业生产各类混合式步进电机，直流无刷电机，伺服电机及相关的驱动器，年生产各类电机550万台以上，另外我司有数家合资工厂，专业生产各类永磁步进电机，有刷直流电机，二相、三相交流电机，减速电机，年销售各类电机总量超650万台。产品广泛应用于自动化，AGV，机器人，纺织，印刷，包装，医疗器械，物流，通信，家电，汽车等行业，远销美国，德国，瑞士，意大利，法国等30多个国家和地区。

公司技术力量雄厚，生产工艺成熟，检验设备齐全。拥有优良的品质保证体系及服务体系，我们已获得德国TUV认证的ISO9001质量管理体系证书、IATF16949质量管理体系证书以及ISO14001环境管理体系证书，所有产品获得CE认证，并符合欧盟RoHS要求，部分获得UL认证。

公司秉承以质量至上，创新和社会责任为公司发展理念，持续为全球客户提供专业化的控制电机制造和研发服务。



Changzhou Fulling Motor Co., Ltd was established in year 2001 as a joint venture of Germany - Swiss - China. We are a professional motor manufacturer in Changzhou city, China. Our Company offers four major series of products: Hybrid stepper motors, DC brushless motors, Servo motors and the motor drivers. Production capacity exceeds more than 5.5 million motors per year. Changzhou Fulling Motor Co., Ltd also has several joint venture companies who specialized in the production of PM stepper motors, and DC gear motors.

We sell nearly 6.5 million different motors to customers worldwide every year. Our products are widely used on industrial automation, AGV, robots, textile, printing, medical equipments, logistics, communication, household appliances and automobile etc. We export our motors to more than 30 countries such as Italy, Germany and United States.

At the core of our development is a professional engineering team that comprises industry experts in the fields of design and application engineering. We provide these talented individuals with access to advanced technology and cutting-edge equipment, ensuring the yield of high-quality products. Our company has successfully passed the quality management system certification for the ISO9001, IATF16949 and ISO14001, which were authorized by the German TUV group. All products are RoHS compliant and CE certified; some are UL approved. Fulling declares no 3TG remain in our products. No 3TG intentionally added or used in the products or in the production process.

Fulling insists the quality first, innovation and social responsibility as company's concept of development and continues to provide global customers with specialized control motor manufacturing and R&D services.



# APPLICATIONS - 产品应用



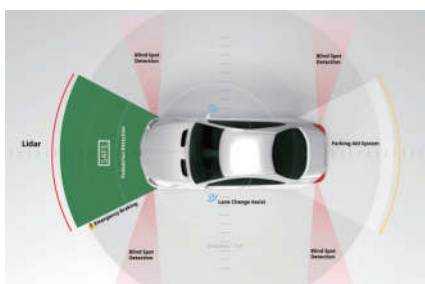
AGV



家电  
Home Appliance



闸机、自动门  
Barrier / Auto Door



激光雷达  
LIDAR



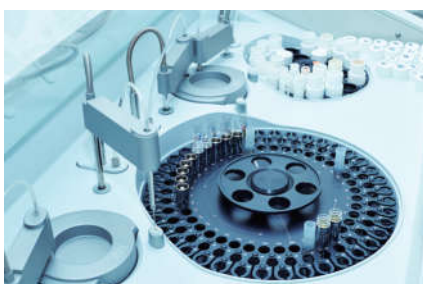
机器人  
Robotics



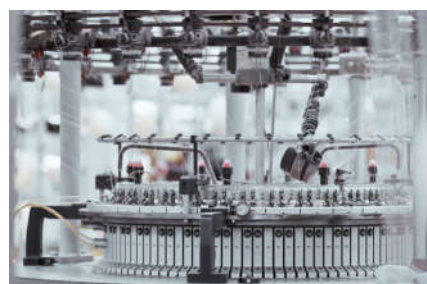
物流  
Logistics



新能源  
Green Energy



医疗行业  
Medical



纺织  
Textile



办公自动化  
Office Automation



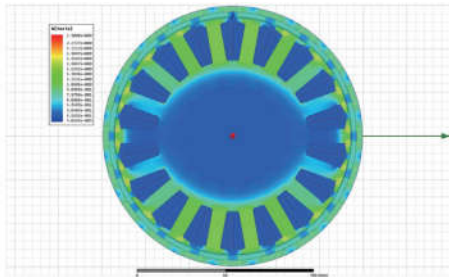
金融设备  
Financial Equipment




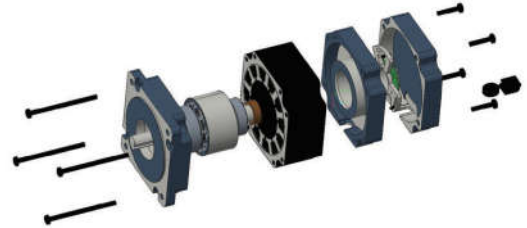
农业  
Agriculture

# Software system and Management system

## 电机研发及设计软件 Research and Development Software for motor



ANSYS 电机性能模拟设计软件  
ANSYS Simulation software

Creo 仿真机械设计软件  
3D drawing designed by Creo

## 管理体系证书 Certificates of Management



★ ISO 9001 ★



★ ISO 14001 ★



★ IATF 16949 ★

## 产品认证以及管理系统 Motor certification & Management System



\* 注:部分产品符合UL认证

Note: Part of products are UL certified



## A STD系列步进电机 STD series Stepper Motor

42STD	001
57STD	002
86STD	003

## B 经典步进电机 Classic Stepper Motor

### B-1 0.9°两相步进电机 0.9° 2 Phase Stepper Motor

35ST	004
36STH	005
39STH	006
42STH	007
57STH	009

### B-2 1.2°三相步进电机 1.2° 3 Phase Stepper Motor

423P	011
573P	013
603P	014
863P	015
1103P	016

### B-3 1.8°两相步进电机 1.8° 2 Phase Stepper Motor

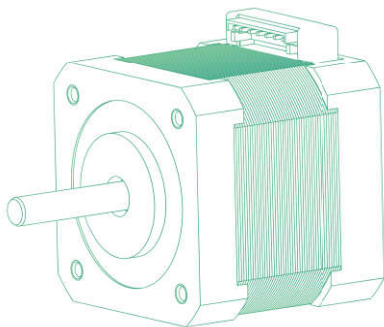
14STH	017
20STH	018
25STH	019
28ST10	020
28STH	021
35ST	023
39ST	024
39STH	025
42STH	026
46ST	028
57ST	029
57STH	031
60STH	033
63ST	035
86ST	036
86STH	037
86STH-C	039
110STH	040

### B-4 3.6°两相步进电机 3.6° 2 Phase Stepper Motor

42ST-D	041
--------	-----

## C 内置接插件型步进电机 Intergrated Connector Stepper motor

20STC	042
28STC	043
35STC	045
42STC	046
57STC	048
60STH-C	049



## D 力矩增强型步进电机 Enhanced Torque Stepper Motor

57STEN	051
60STEN	052

## E 防水型电机 Waterproof Stepper Motor

42STH IP65	053
57STH IP65	054
60STH IP65	055
86STH IP65	056

## F 空心轴步进电机 Stepper Motor with Hollow Shaft

20STC-H	057
28STC-H	058
35STC-H	059
42STC-H	060
57STC-H	061
86STH-H	062

## G 内置驱动型步进电机 Stepper Motor with Integrated Driver

42STH IE	063
IO57	065

## H 减速步进电机 Stepper Motor with Gearbox

### H-1 正齿轮箱

Spur Gearbox

42STH-42JB	067
57STH-60JB	068
86STH-90JB	069

### H-2 行星减速箱

Planetary Gearbox

22JM20K-20STH	070
28JMS40K-28STH	071
42JMGS100K-42STH	072
56JMES300K-57STH	073
60JMS300K-60STH	074

## 混合式直线电机 Linear Actuator

LA20	075
LGA20	077
LSA20	079
LA28	081
LGA28	085
LSA28	089
LA35	093
LGA35	095
LSA35	097
LA42	099
LGA42	103
LSA42	106
LA56	109
LGA56	111
LSA56	113

## J 永磁式步进电机 PM Stepper Motor

PM10/15/20/25	115
PM35/42/49/57	118
PMG15	121
PMG25/35	123
PMG42	125
15/20/25/35/42/57BYT	127
15/25BYZ	129
28/35/57BYZ	131



## ◆产品概述 (Product Overview)

步进电机是一种将电脉冲转化为角位移的执行机构,通过控制脉冲个数来控制角位移量,实现精确定位。在数字、模拟、通信等各种控制信号下,步进电机被广泛地运用在多种位置和速度控制的应用中。(Stepper motor is an actuator that converts electric pulse into angular displacement, and controls angular displacement by controlling the number of pulses, so as to achieve accurate positioning. Under various control signals such as digital and analog communication, stepper motor is widely used in various position and speed control applications)

## ◆命名规则 (Motor Numbering Information)

FL 57 ST A 41- 280 4 A

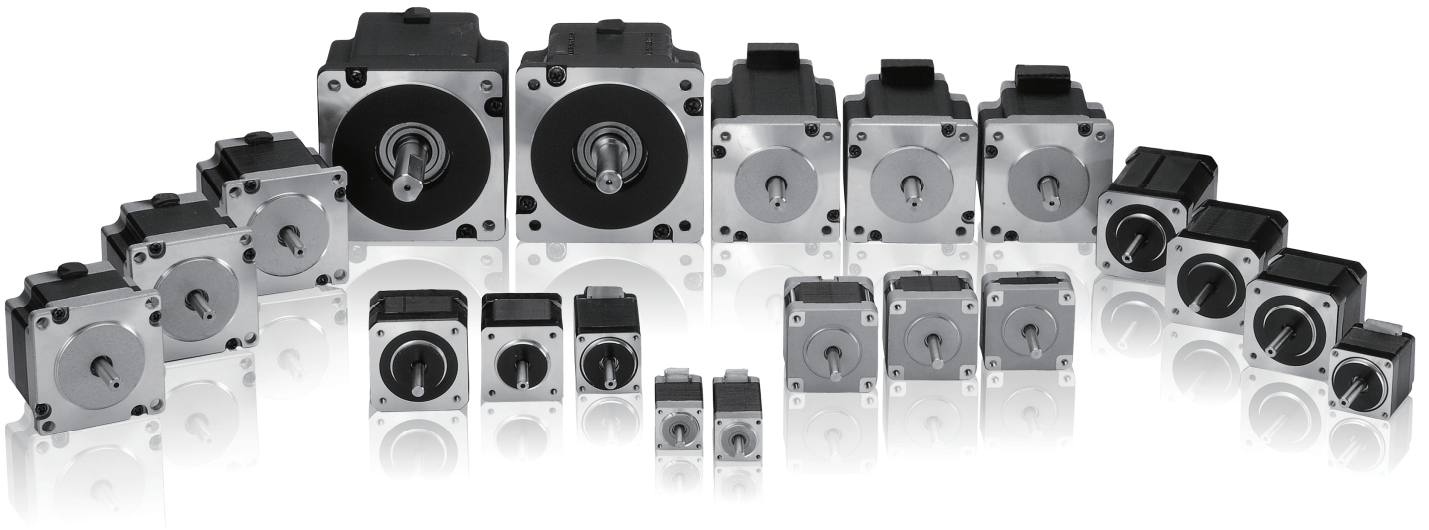
① ② ③ ④ ⑤ ⑥ ⑦

- ① 机座号 (Frame Size) : 20mm,28mm,35mm,39mm,42mm,57mm ,60mm,86mm,110mm
- ② 步进电动机代号 (Stepping motor code) : ST or special words
- ③ 规格系列号 (Specification series no.) : A,B,C.....Z or special words
- ④ 长度系列号 (Length series) : 41mm,51mm.....
- ⑤ 静态电流代号 (Static current code) : 280表示2.8A(280 means 2.8A),
- ⑥ 引出线数代号 (Number of leads) : 4表示4线 (4 means 4 leads)
- ⑦ A单轴 (Single shaft) , B双轴 (Double shaft) ; MA,MB表示0.9°单双轴 (means 0.9°single or double shaft)

## ◆基本分类 (Basic Classification)

- 步进电机有各种不同的类型,包含有 (There are various types of stepper motors, including) :
- 基本型:机械和性能参数比较标准,容易使用,满足大多数使用要求 (Basic type: mechanical and performance parameters comparison standard, easy to use, meet most operational requirements)
- IP65型:对防尘和防水有特殊设计,满足对IP65防护等级有要求的应用 (IP65 type: specially designed for dustproof and waterproof, which can meet the requirements of IP65 protection grade)
- 刹车型:装有失电有效式电磁刹车,满足垂直轴应用 (brake type: Equipped with disenergized effective electromagnetic brake, Meet the vertical axis application)
- 混合式线性执行器型:加装丝杆,将旋转运动转化为丝杆的直线运动 (HYBRID LINEAR ACTUATORS: Equipped with screw, it converts the rotary motion of the motor into linear motion for a screw)
- 编码器型:装有编码器,编码器反馈信号,可以实现闭环控制功能 (Coder type: equipped with encoder, encoder feedback signal, can achieve closed-loop control function)
- 减速机型:加装高精度行星减速机,满足大转矩的需求的应用 (Reducer: it is equipped with high precision planetary reducer to meet the requirement of high torque)
- 一体驱动器型:加装集成的驱动器,满足空间要求紧凑,系统布线简单的应用 (Integrated driver type, assemble Integrated driver, Compact space requirements, simple system wiring applications)
- 闭环伺服控制型:加装编码器,集成驱动器和控制器,满足控制智能,运行高效,结构紧凑,定位精确,响应快速的应用 (Closed loop servo control, assemble encoder, Integrated driver and controller, It meets the requirements of intelligent control, efficient operation, compact structure, accurate positioning and rapid response)





### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	10N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ, 500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件

齿轮箱

编码器

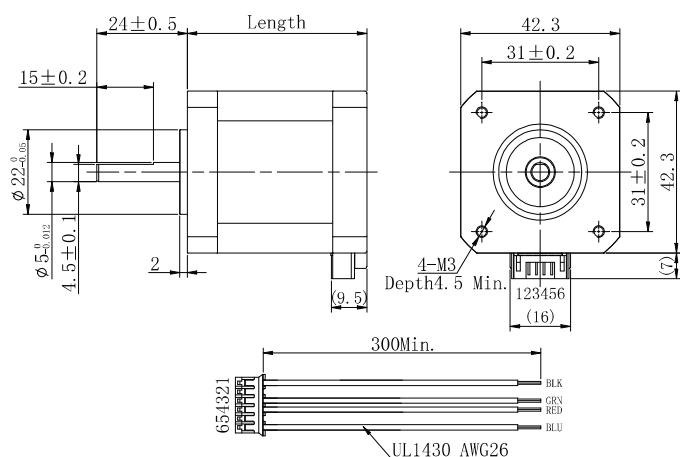
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL42STD33-1334AF	1.33	2.1	2.9	0.22	0.012	4	35	0.22	33.5
FL42STD38-1684AF	1.68	1.65	3.2	0.36	0.015	4	54	0.28	39.5
FL42STD47-1684AF	1.68	1.65	3.3	0.44	0.02	4	68	0.35	47.5

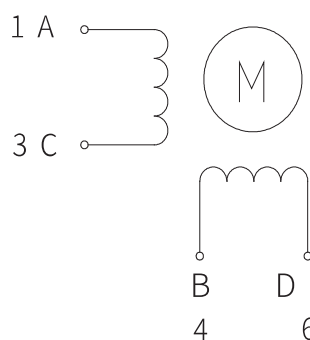
### ● 机械尺寸

(Dimension)



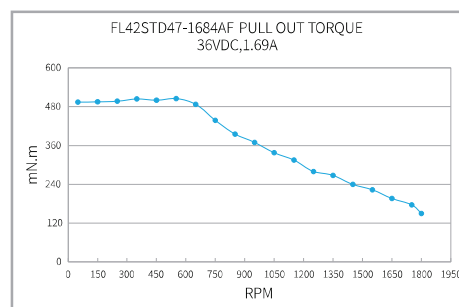
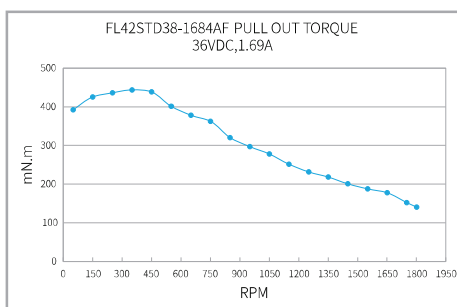
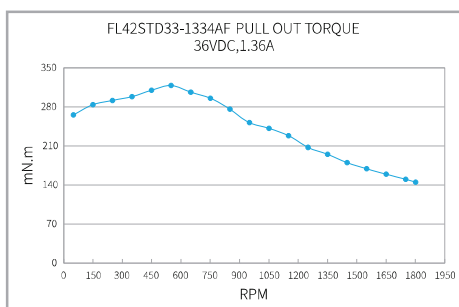
### ● 接线图

(Wiring Diagram)



### ● 矩频曲线

(Pull out torque curve)



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	75N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	15N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件



齿轮箱



编码器



刹车

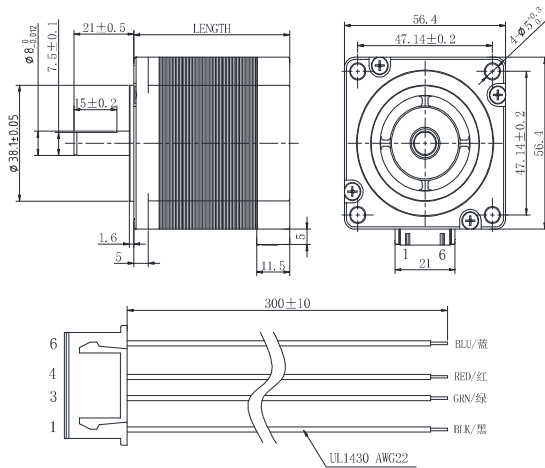
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL57STD56-2804ACF	2.8	1	3.4	1.4	0.045	4	300	0.7	54.5
FL57STD76-2804ACF	2.8	1.2	4.6	2.3	0.07	4	480	1	75

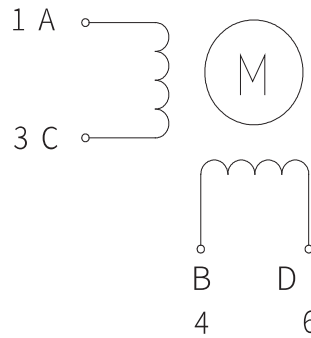
### ● 机械尺寸

(Dimension)



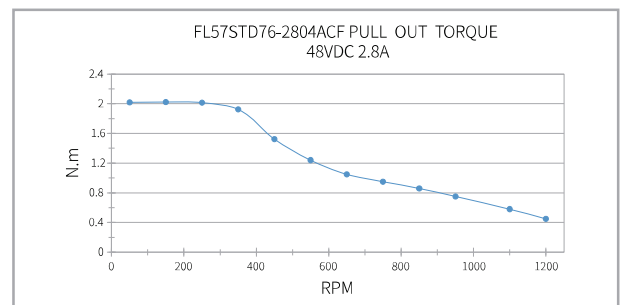
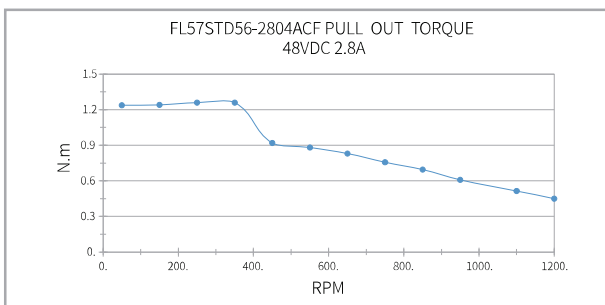
### ● 接线图

(Wiring Diagram)



### ● 矩频曲线

(Pull out torque curve)



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	130N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	36N
介电强度 (Dielectric Strength)	900VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件



齿轮箱



编码器



刹车

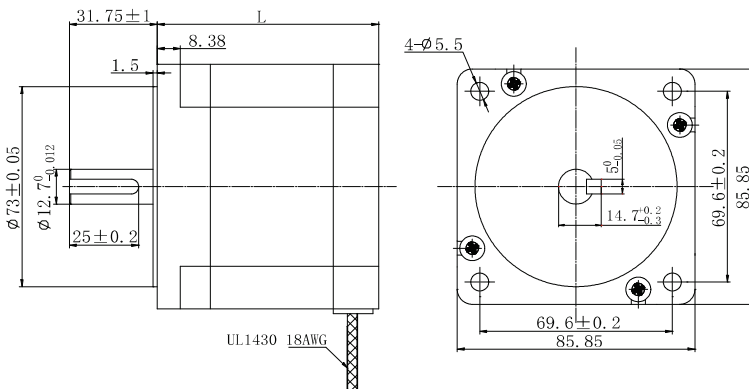
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL86STD80-6004AK	6	0.39	3	4.5	0.12	4	1400	2.3	75
FL86STD118-6004AK	6	0.55	6	8.5	0.24	4	2700	3.8	112

### ● 机械尺寸

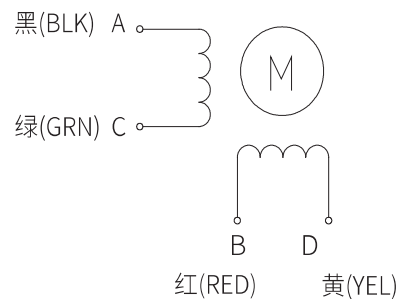
(Dimension)



### ● 接线图

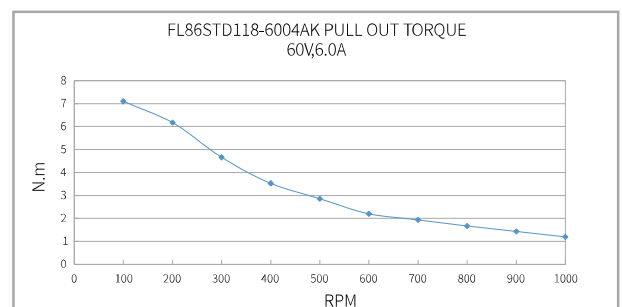
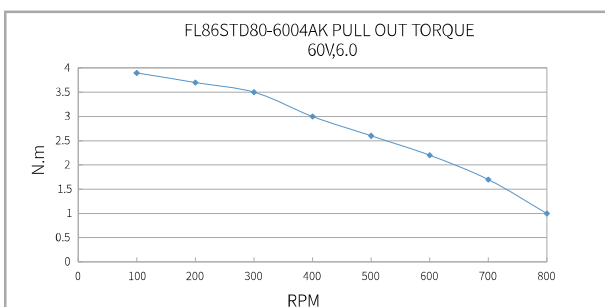
(Wiring Diagram)

4 线 (leads)



### ● 矩频曲线

(Pull out torque curve)



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	0.9°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@400 g
轴向间隙 (Axial Play)	0.08mm@400 g
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	10N
介电强度 (Dielectric Strength)	600VAC / 1S
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱

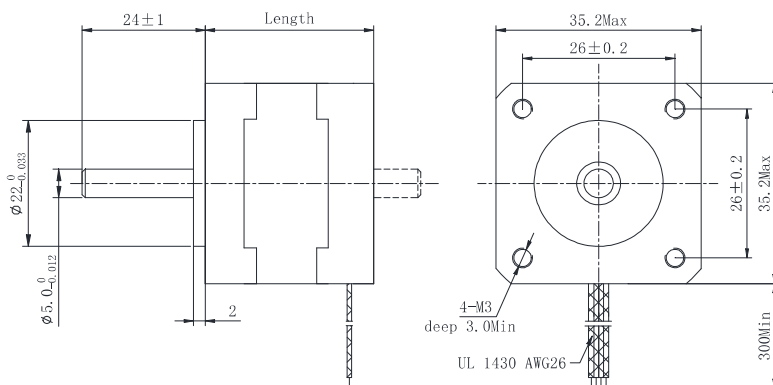
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL35ST20-1004MA	1	10	8.5	0.05	0.005	4	8	0.1	20
FL35ST26-0504MA	0.5	6.1	6.9	0.09	0.008	4	11	0.15	26

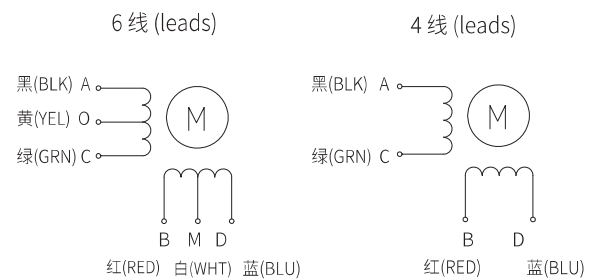
### ● 机械尺寸

(Dimension)



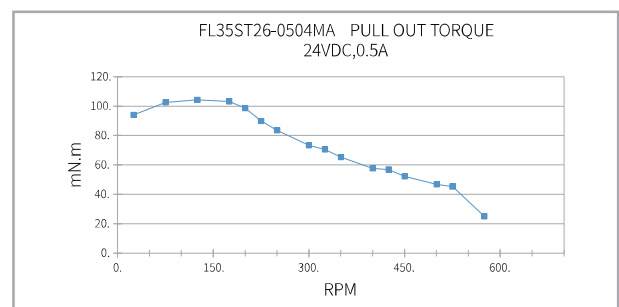
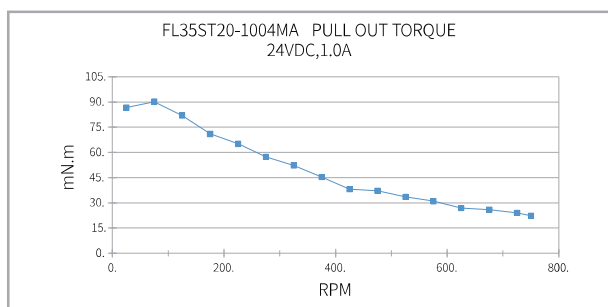
### ● 接线图

(Wiring Diagram)



### ● 矩频曲线

(Pull out torque curve)



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	0.9°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	5.5N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	2.5N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱

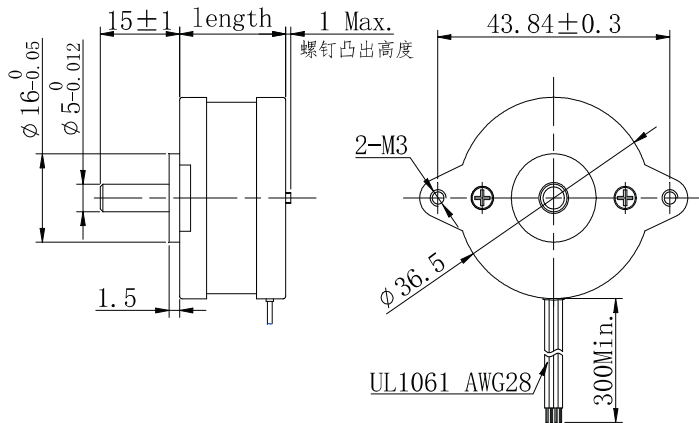
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g-cm <sup>2</sup>	kg	mm
FL36STH20-0804MAN -01	0.8	5.5	4.8	0.092	0.006	4	19.6	0.09	20.5

### ● 机械尺寸

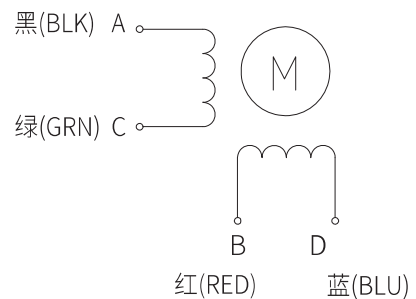
(Dimension)



### ● 接线图

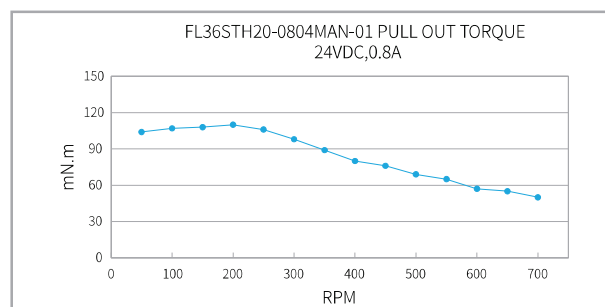
(Wiring Diagram)

4 线 (leads)



### ● 矩频曲线

(Pull out torque curve)



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	0.9°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	10N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱

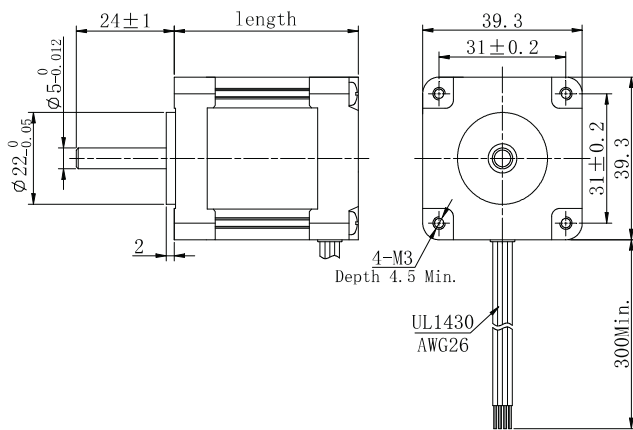
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL39STH45-0284MA	0.28	60	145	0.297	0.02	4	36	0.29	44.5

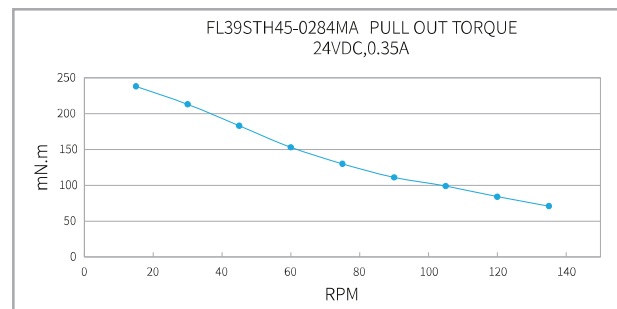
### ● 机械尺寸

(Dimension)



### ● 矩频曲线

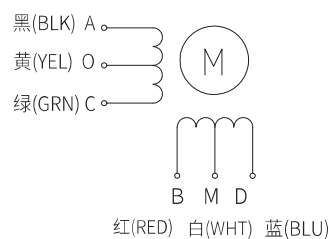
(Pull out torque curve)



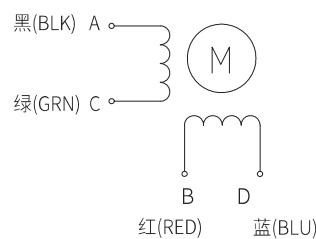
### ● 接线图

(Wiring Diagram)

6 线 (leads)



4 线 (leads)



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	0.9°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	10N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱

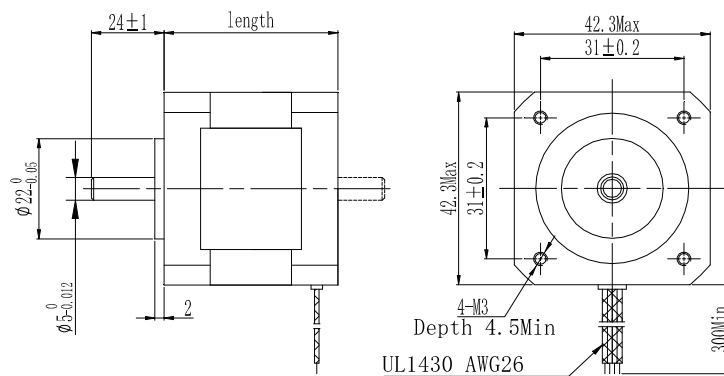
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL42STH33-0956MA	0.95	4.2	4	0.158	0.02	6	35	0.22	33.5
FL42STH33-1334MA	1.33	2.1	5.1	0.22		4			
FL42STH38-1206MA	1.2	3.5	4.1	0.259	0.022	6	54	0.28	39.5
FL42STH38-1684MA	1.68	1.8	4.1	0.33		4			
FL42STH47-1206MA	1.2	3.3	4.9	0.317	0.025	6	68	0.35	47.5
FL42STH47-1684MA	1.68	1.8	5.5	0.4		4			

### ● 机械尺寸

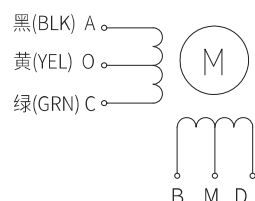
(Dimension)



### ● 接线图

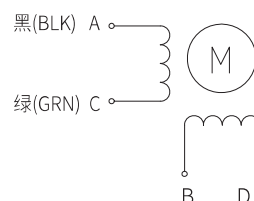
(Wiring Diagram)

6 线 (leads)



红 (RED) 白 (WHT) 蓝 (BLU)

4 线 (leads)



红 (RED) 蓝 (BLU)

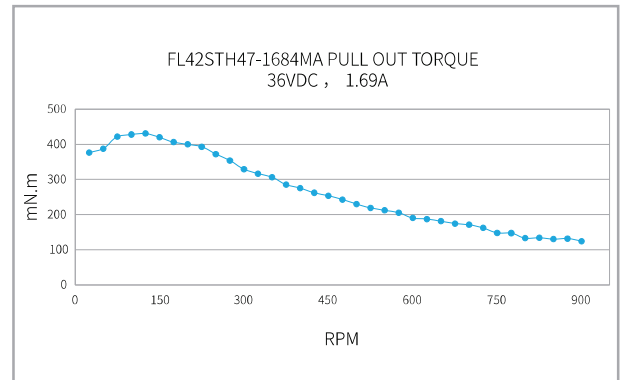
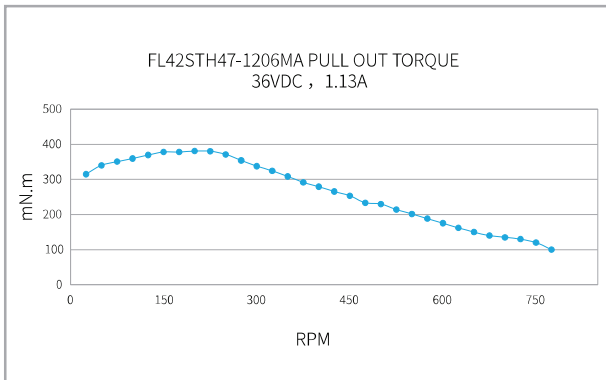
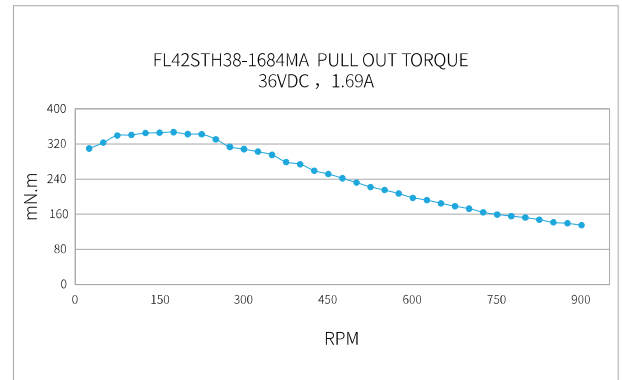
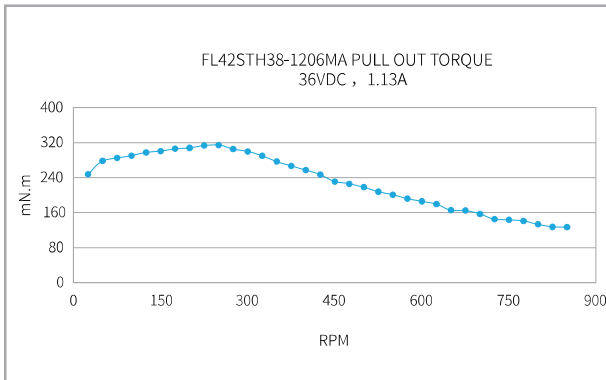
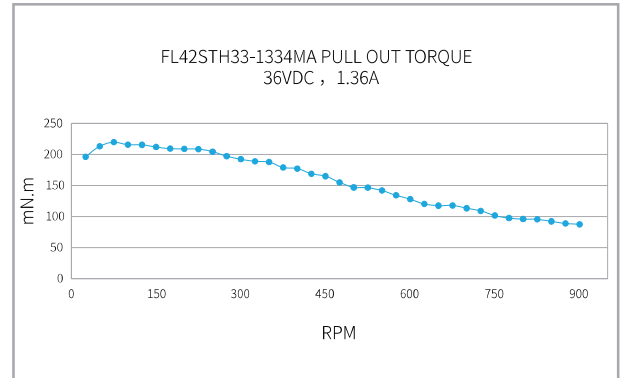
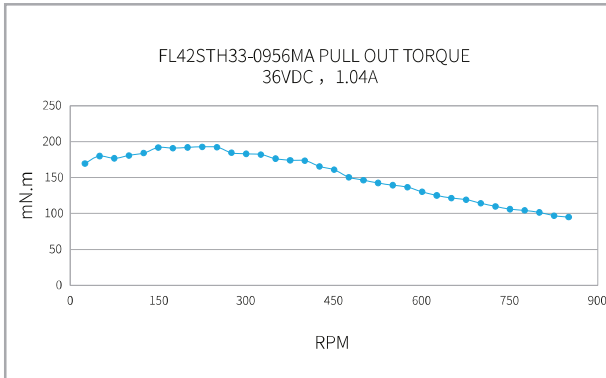




● 矩频曲线

(Pull out torque curve)

B1



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	0.9°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	75N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	15N
介电强度 (Dielectric Strength)	600VAC / 1S
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱

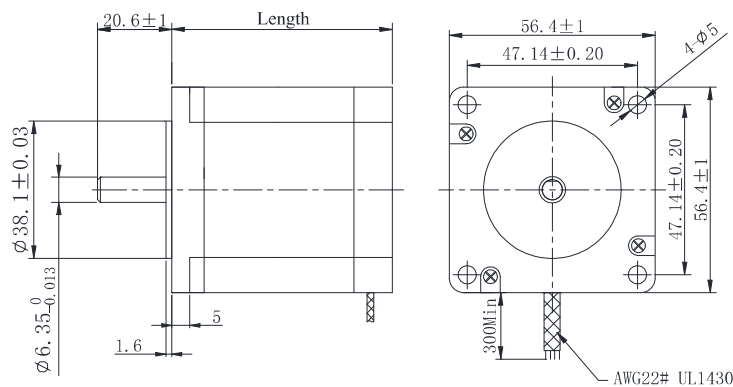
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g-cm <sup>2</sup>	kg	mm
FL57STH41-2006MA	2	1.4	2.2	0.39	0.021	6	120	0.45	41
FL57STH41-2804MA	2.8	0.7	2.2	0.55	0.021	4	120	0.45	41
FL57STH56-2006MA	2	1.8	4.5	0.9	0.04	6	300	0.7	56
FL57STH56-2804MA	2.8	0.9	4.5	1.2	0.04	4	300	0.7	56
FL57STH76-2006MA	2	2.25	5.6	1.35	0.068	6	480	1	76
FL57STH76-2804MA	2.8	1.13	5.6	1.8	0.068	4	480	1	76

### ● 机械尺寸

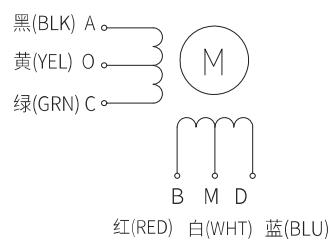
(Dimension)



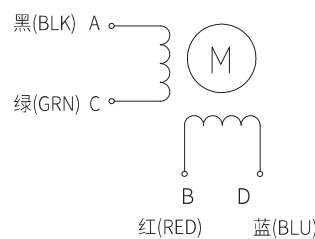
### ● 接线图

(Wiring Diagram)

6 线 (leads)



4 线 (leads)

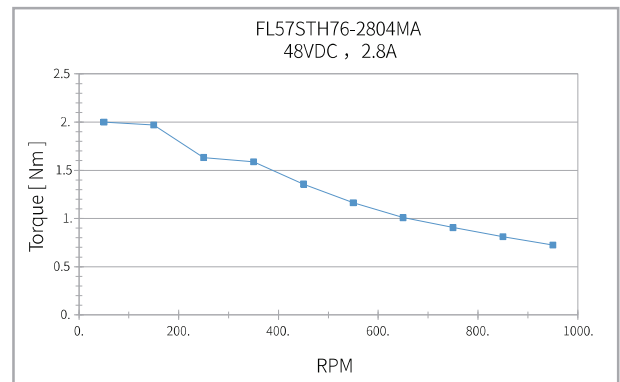
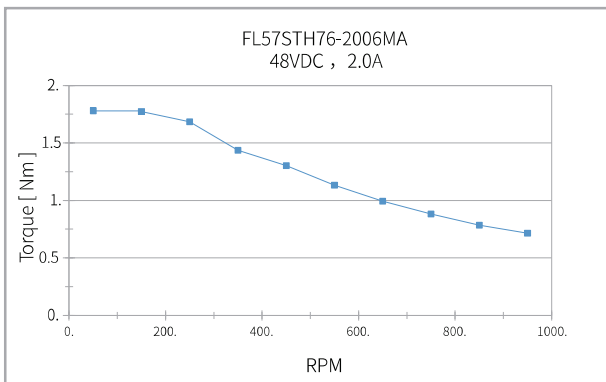
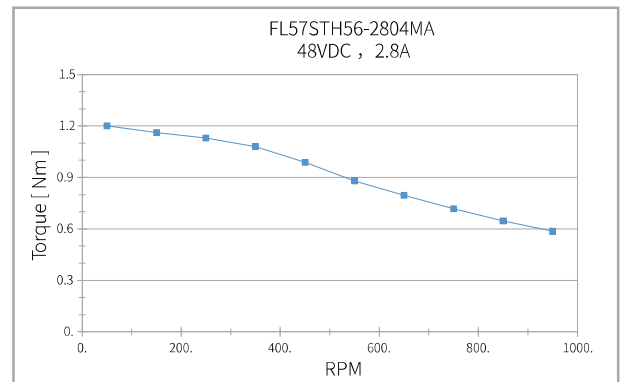
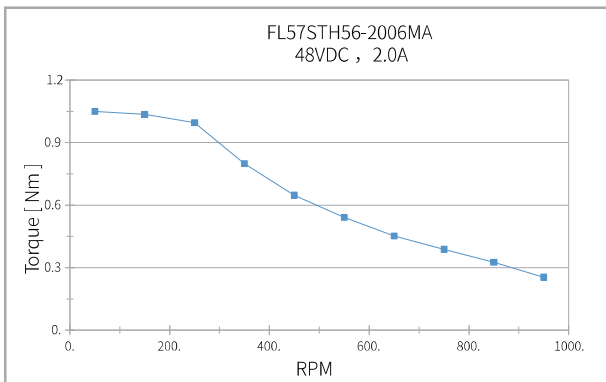
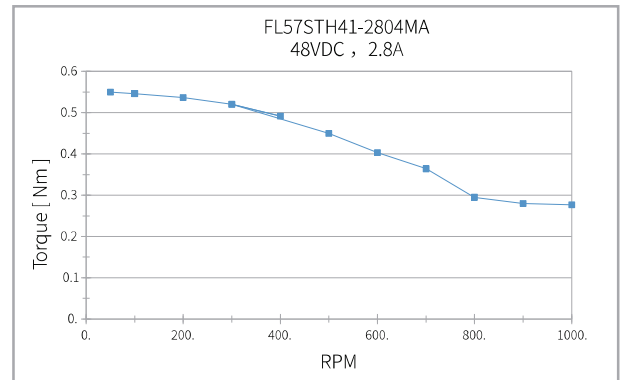
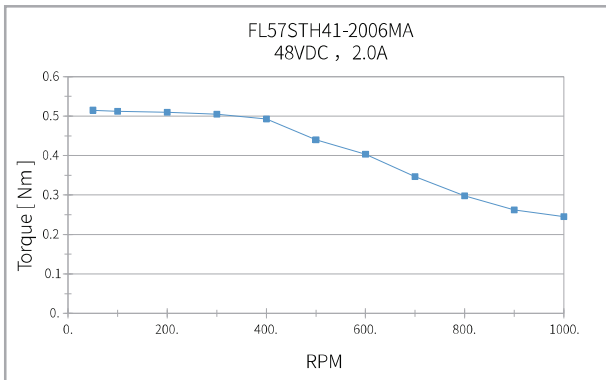




● 矩频曲线

(Pull out torque curve)

B1



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.2°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	10N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱

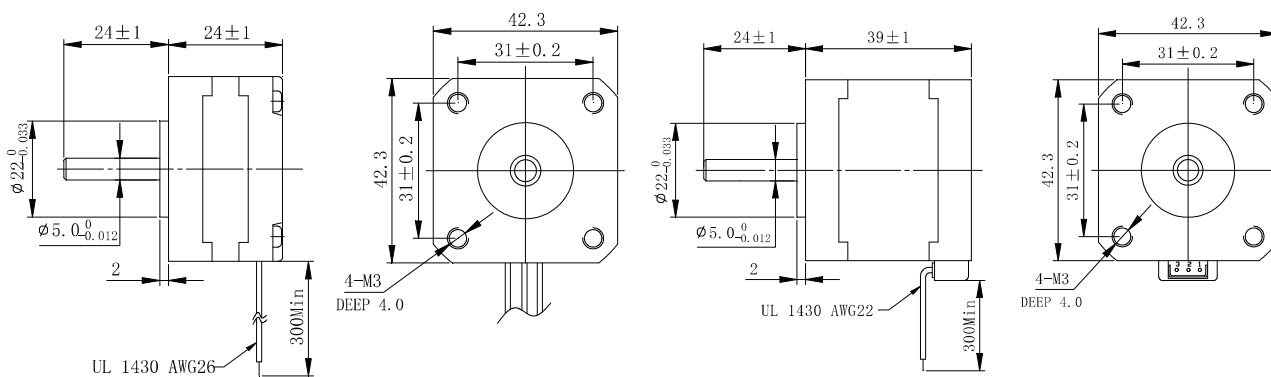
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL423P24 - 0903A	0.9	6.2	3.2	0.08	0.012	3	20	0.14	24
FL423P39 - 2403A	2.4	1.2	0.8	0.196	0.015	3	53	0.3	39

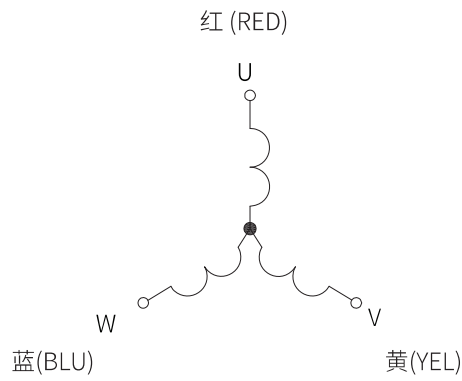
### ● 机械尺寸

(Dimension)



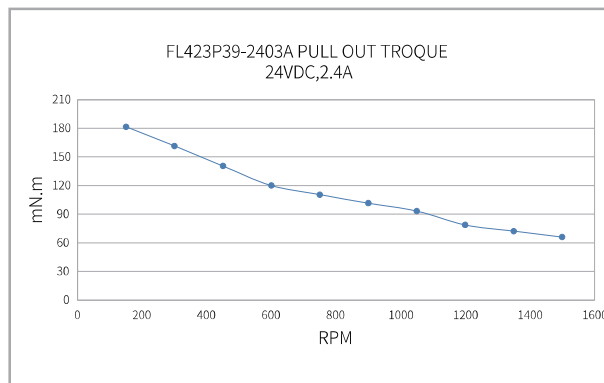
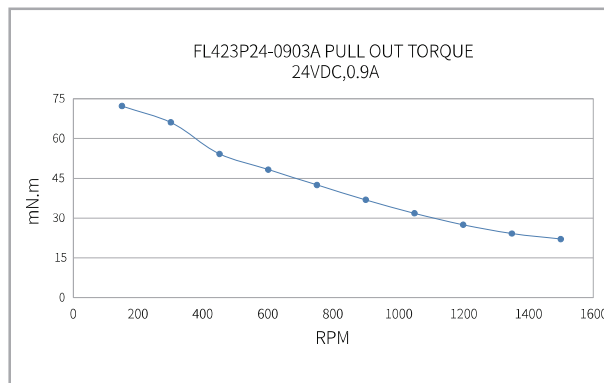
● 接线图

(Wiring Diagram)



● 矩频曲线

(Pull out torque curve)



# 1.2° 57mm 3P Series

三相步进电机  
3 Phase Stepper Motor



## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.2°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	10N
介电强度 (Dielectric Strength)	900VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



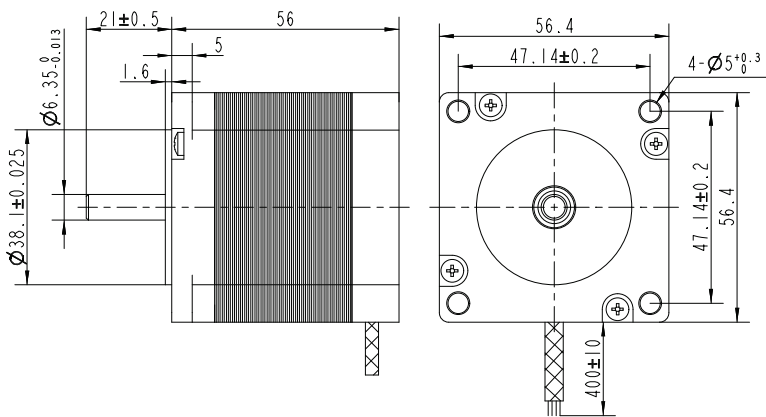
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL573P42-5206A	5.2	1.3	1.4	0.45	0.021	6	110	0.45	42
FL573P56-5606A	5.6	0.7	1.7	0.9	0.04	6	300	0.75	56
FL573P79-5806A	5.8	1.05	2.4	1.5	0.068	6	480	1.1	79

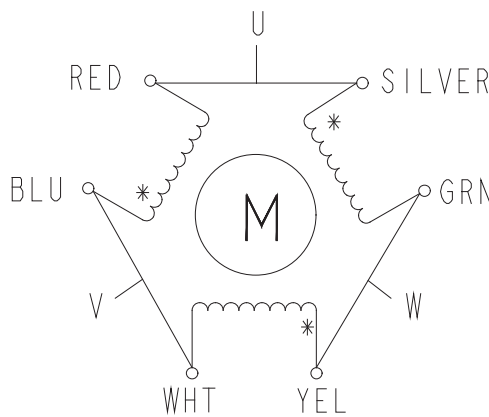
## ● 机械尺寸

(Dimension)



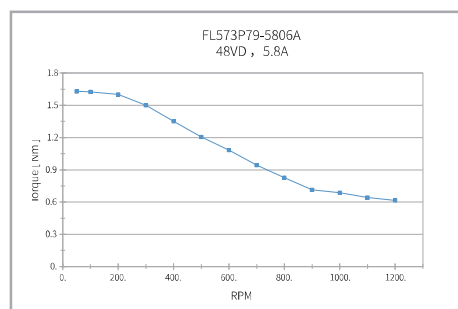
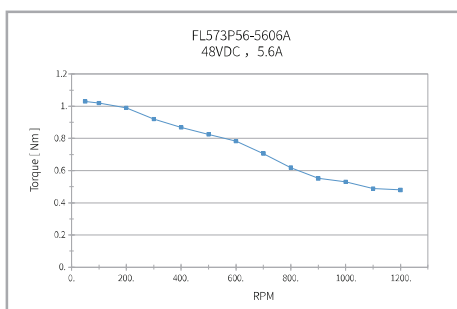
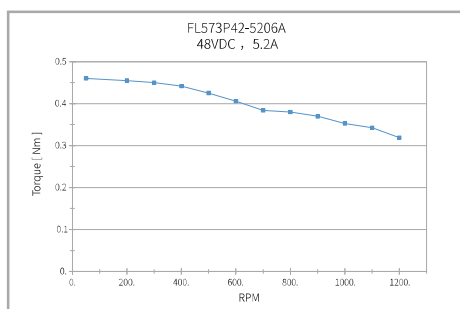
## ● 接线图

(Wiring Diagram)



## ● 矩频曲线

(Pull out torque curve)



# 1.2° 60mm 3P Series

三相步进电机  
3 Phase Stepper Motor



FULLING MOTOR

## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.2°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	75N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	15N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件



齿轮箱



编码器



刹车

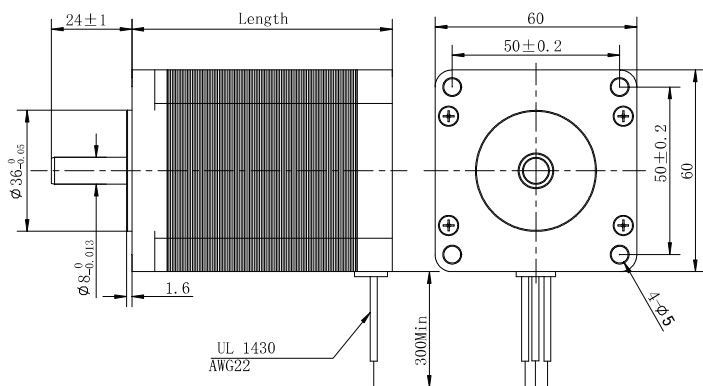
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL603P1253-1503A	1.5	4.1	9.5	0.8	0.07	3	260	0.8	53.5
FL603P1277-1503A	1.5	4.4	10	1.1	0.09	3	460	1.3	77.5

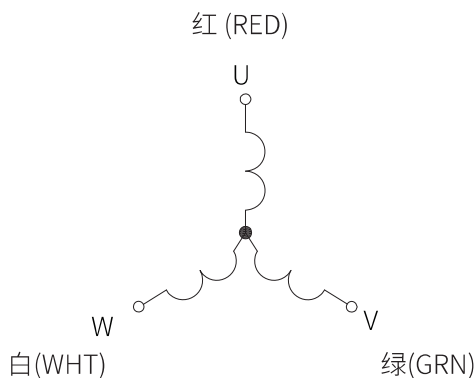
## ● 机械尺寸

(Dimension)



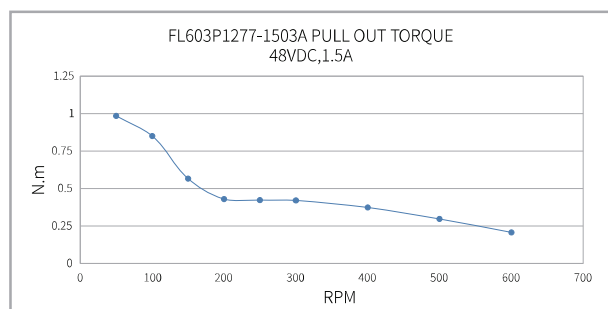
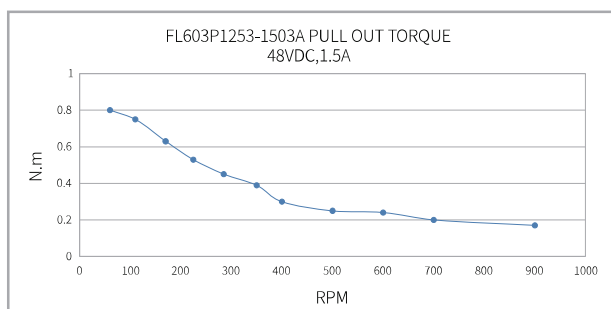
## ● 接线图

(Wiring Diagram)



## ● 矩频曲线

(Pull out torque curve)



# 1.2° 86mm 3P Series

三相步进电机  
3 Phase Stepper Motor



## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.2°
步距角精度 (Step Angle Accuracy)	±5% (整步, 空载)
径向间隙 (Radial Play)	0.025mm@500 g
轴向间隙 (Axial Play)	0.075mm@1000 g
最大径向负载 (Max. radial force)	220N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	60N
介电强度 (Dielectric Strength)	1200VAC /1S
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



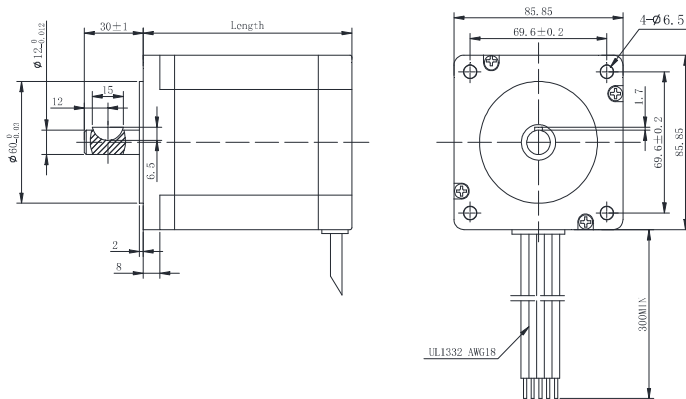
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL863P67-01AW	1.75	4.25	11	2	0.08	6	1120	1.65	67
FL863P97-01AW	2	5.8	23	4.52	0.15	6	2200	2.7	97
FL863P97-02AW	5.8	0.97	3.2	4.52	0.15	6			
FL863P127-01AW	2.25	9	41	6.78	0.26	6	3300	3.8	127
FL863P127-02AW	5.2	1.8	8	6.78	0.26	6			

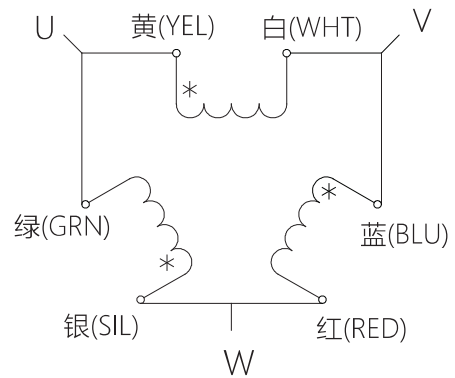
## ● 机械尺寸

(Dimension)



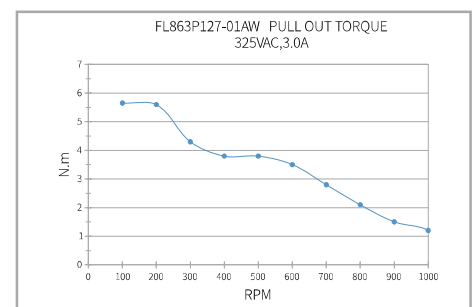
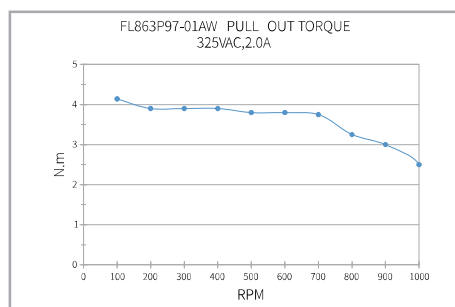
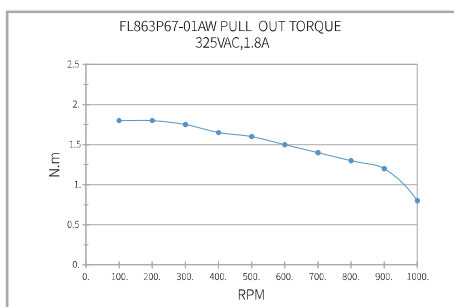
## ● 接线图

(Wiring Diagram)



## ● 矩频曲线

(Pull out torque curve)





# 1.2° 110mm 3P Series

三相步进电机  
3 Phase Stepper Motor

## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.2°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	330N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	100N
介电强度 (Dielectric Strength)	1800VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



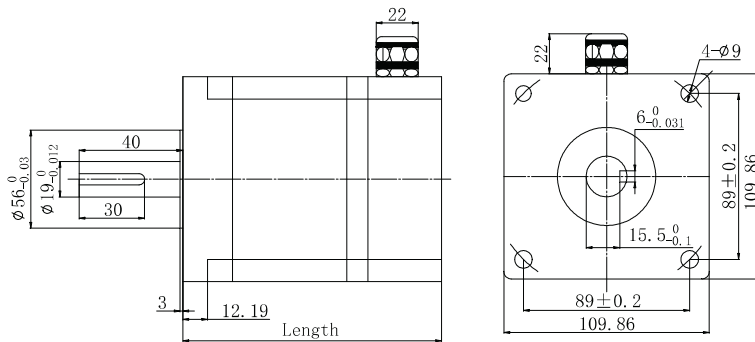
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL1103P170-01	4.1	1.96	18	13.92	1.01	6	10500	8	173

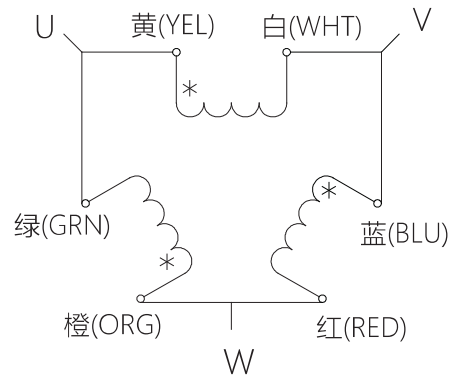
## ● 机械尺寸

(Dimension)



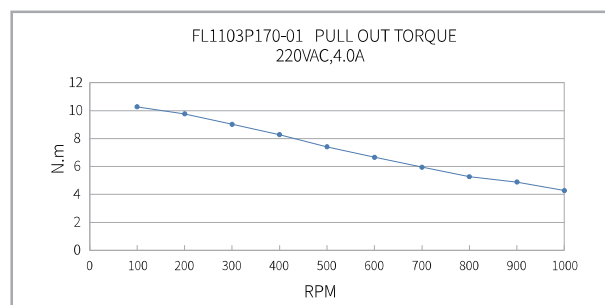
## ● 接线图

(Wiring Diagram)



## ● 矩频曲线

(Pull out torque curve)



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	3.9N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	1.0N
介电强度 (Dielectric Strength)	300VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件

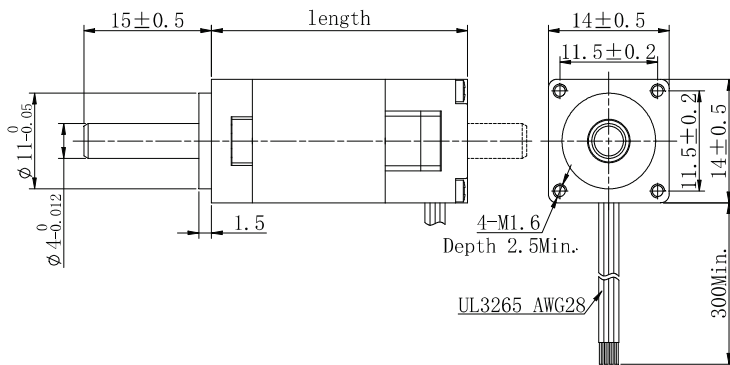
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL14STH30-0304A	0.3	21	4.2	0.0063	0.0007	4	0.64	0.03	30

### ● 机械尺寸

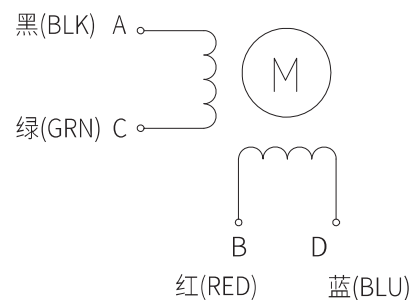
(Dimension)



### ● 接线图

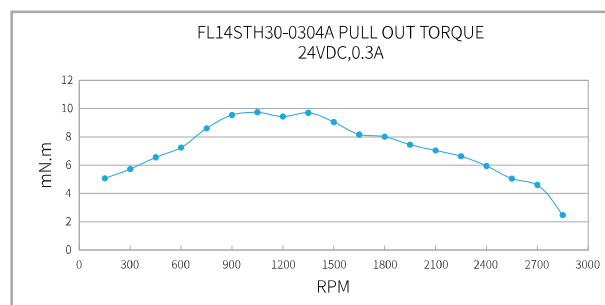
(Wiring Diagram)

4 线 (leads)



### ● 矩频曲线

(Pull out torque curve)



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	10N
最大轴向负载 (Max. axial force)	4N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱

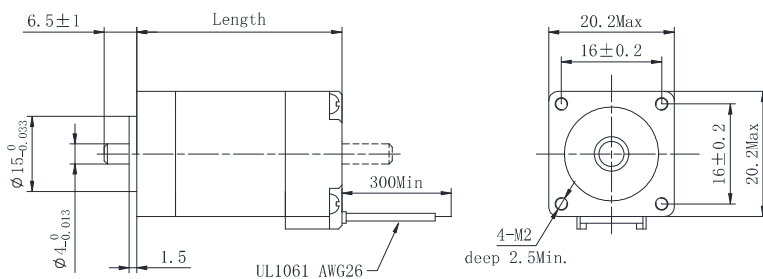
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL20STH30-0604A	0.6	6.5	1.7	0.018	0.002	4	2	0.06	30
FL20STH33-0604A	0.6	6.5	1.7	0.018	0.002	4	2	0.06	33
FL20STH42-0804A	0.8	5.4	1.5	0.03	0.002	4	3.6	0.08	42

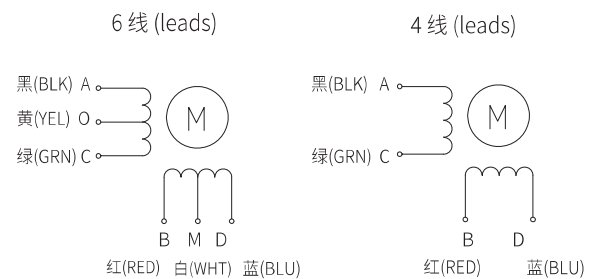
### ● 机械尺寸

(Dimension)



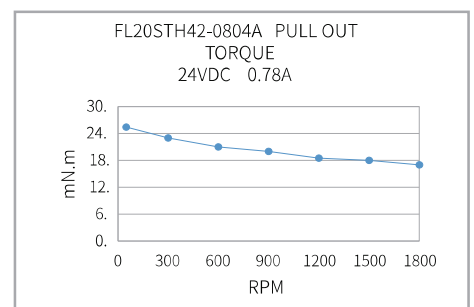
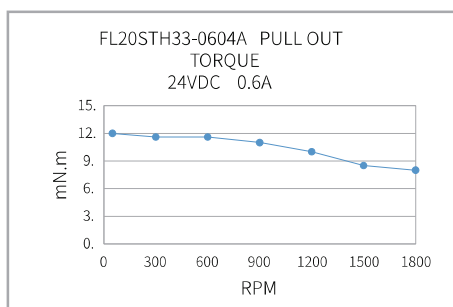
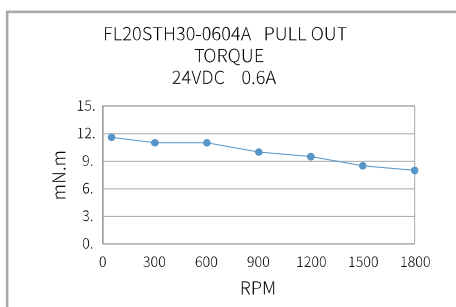
### ● 接线图

(Wiring Diagram)



### ● 矩频曲线

(Pull out torque curve)



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	7N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱

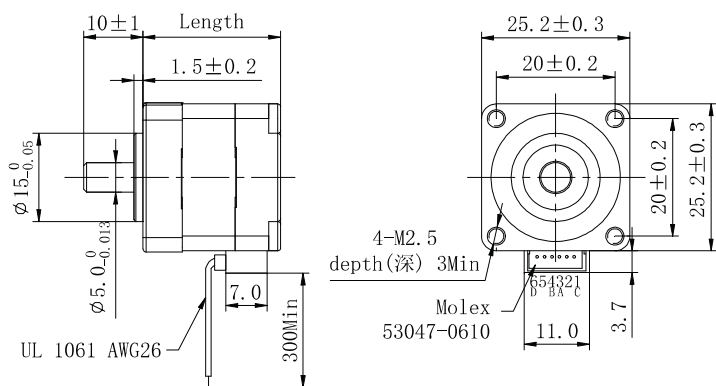
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL25STH23-0704A	0.7	4	2.4	0.033	0.003	4	2	0.055	24

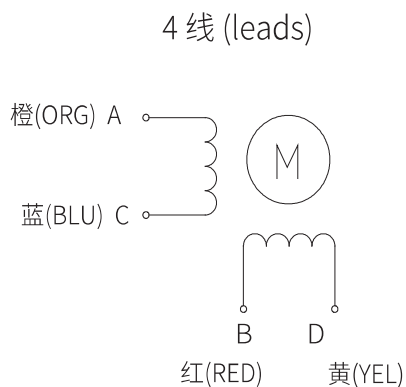
### ● 机械尺寸

(Dimension)



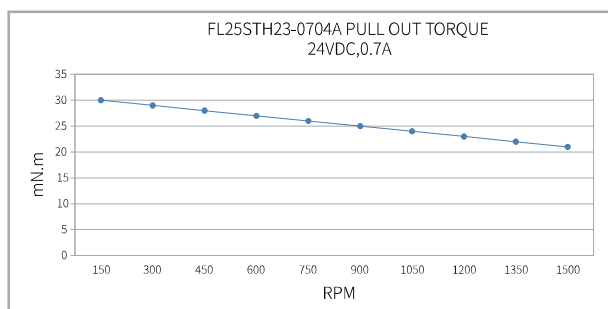
### ● 接线图

(Wiring Diagram)



### ● 矩频曲线

(Pull out torque curve)



# 1.8° 28mm ST Series

两相步进电机  
2 Phase Stepper Motor



FULLING MOTOR

## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@400 g
轴向间隙 (Axial Play)	0.08mm@400 g
最大径向负载 (Max. radial force)	10N 距法兰5mm (5mm from the flange)
最大轴向负载 (Max. axial force)	2N
介电强度 (Dielectric Strength)	600VAC / 1S
绝缘电阻 (Insulation Resistance)	100MΩ, 500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件

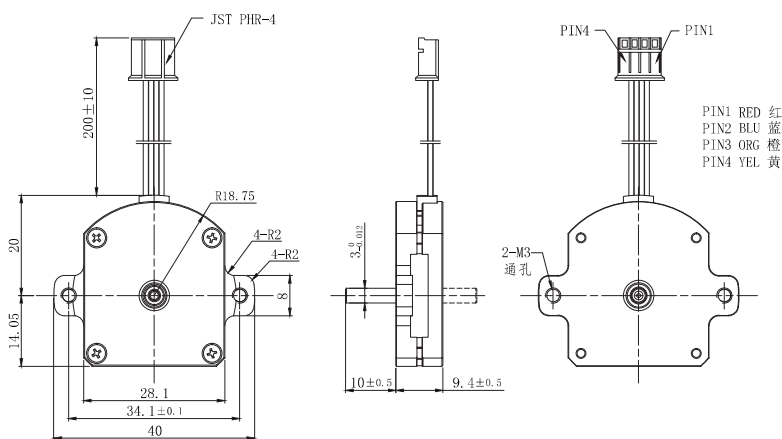
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL28ST10-0504A	0.5	3.7	0.88	0.01	0.001	4	1.7	0.028	9.4

## ● 机械尺寸

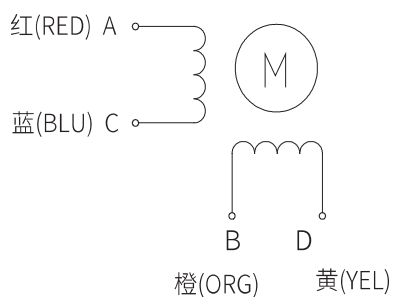
(Dimension)



## ● 接线图

(Wiring Diagram)

4 线 (leads)



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@400 g
轴向间隙 (Axial Play)	0.08mm@400 g
最大径向负载 (Max. radial force)	28N 距法兰5mm (5mm from the flange)
最大轴向负载 (Max. axial force)	7N
介电强度 (Dielectric Strength)	600VAC / 1S
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱

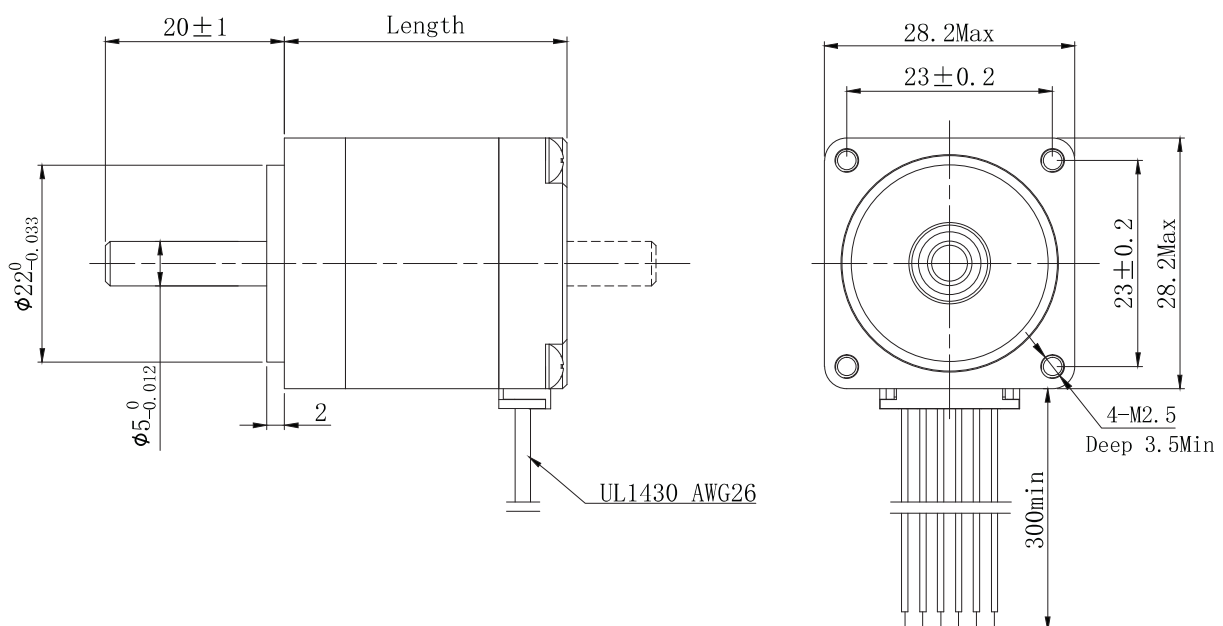
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL28STH32-0674A	0.67	5.6	3.4	0.06	0.005	4	9	0.11	32
FL28STH32-0956A	0.95	2.8	1	0.043	0.005	6	9	0.11	32
FL28STH45-0674A	0.67	6.8	4.9	0.095	0.006	4	12	0.14	45
FL28STH45-0956A	0.95	3.4	1.2	0.075	0.006	6	12	0.14	45
FL28STH51-0674A	0.67	9.2	7.2	0.12	0.008	4	18	0.2	51
FL28STH51-0956A	0.95	4.6	1.8	0.09	0.008	6	18	0.2	51

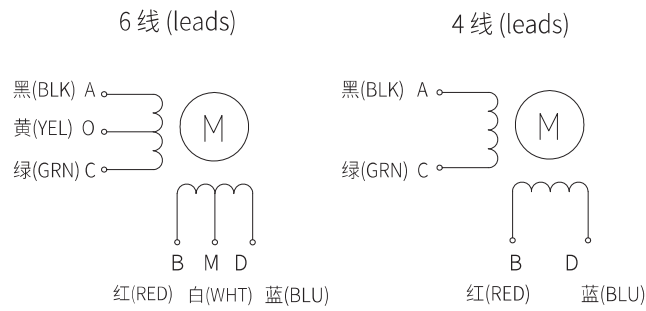
### ● 机械尺寸

(Dimension)



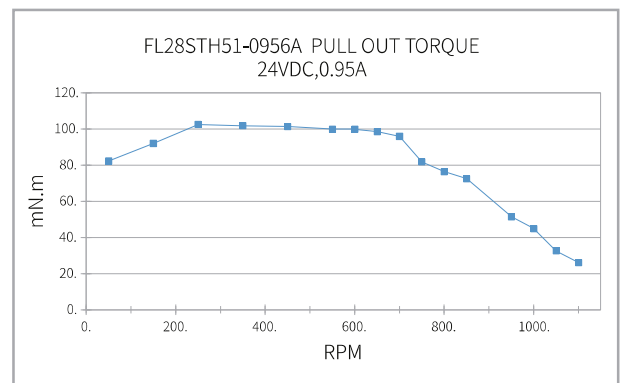
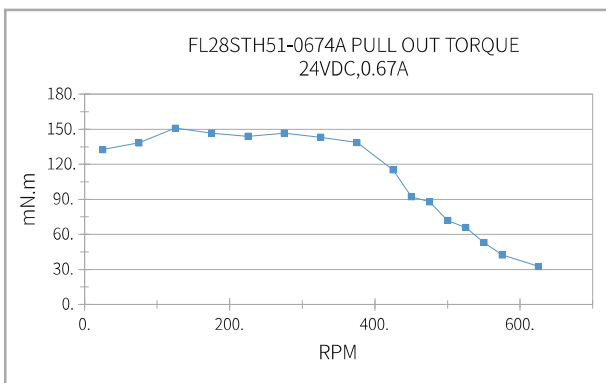
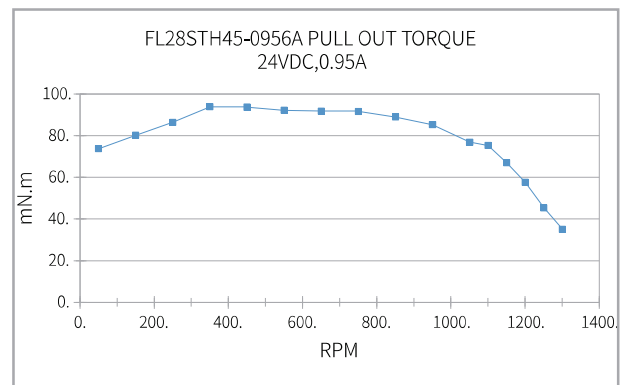
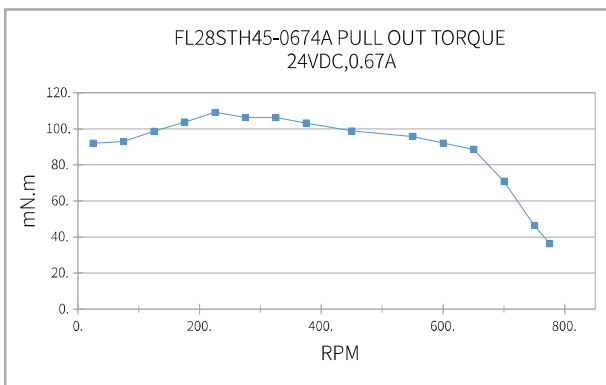
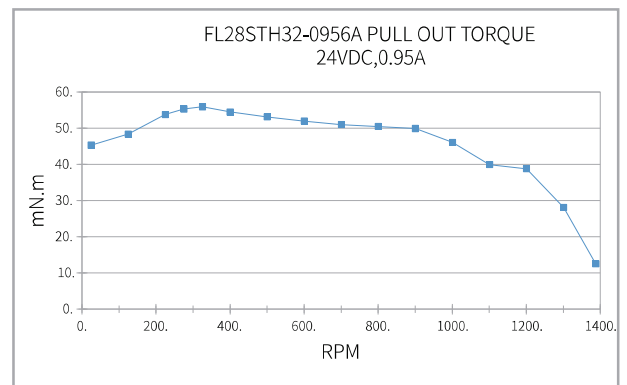
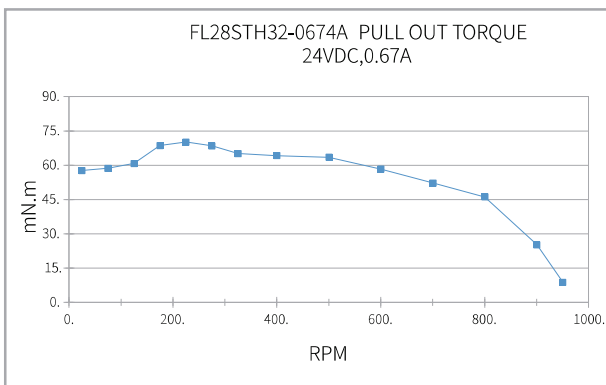
● 接线图

(Wiring Diagram)



● 矩频曲线

(Pull out torque curve)



# 1.8° 35mm ST Series

两相步进电机  
2 Phase Stepper Motor



## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	10N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ, 500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱

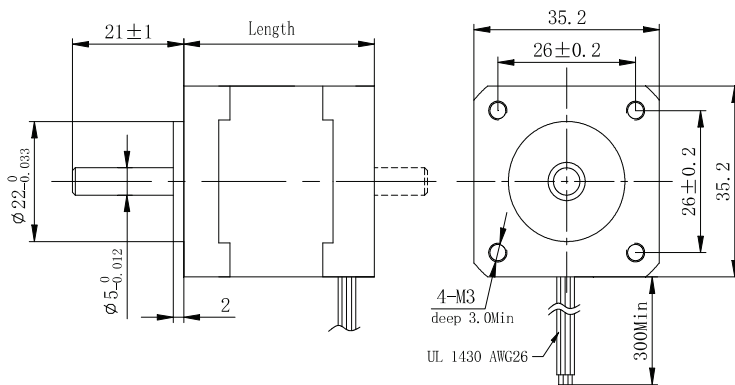
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL35ST26-0284A	0.28	26	27	0.07	0.006	4	10	0.13	26
FL35ST28-0504A	0.5	20	14	0.1	0.008	4	11	0.14	28
FL35ST36-1004A	1	2.7	4.3	0.14	0.01	4	14	0.18	36

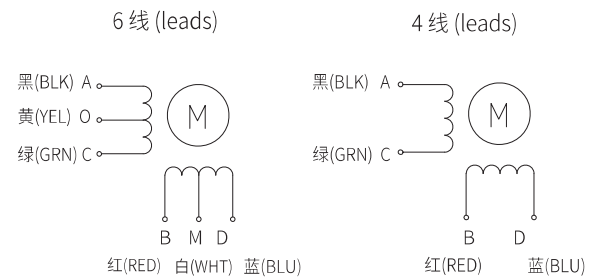
## ● 机械尺寸

(Dimension)



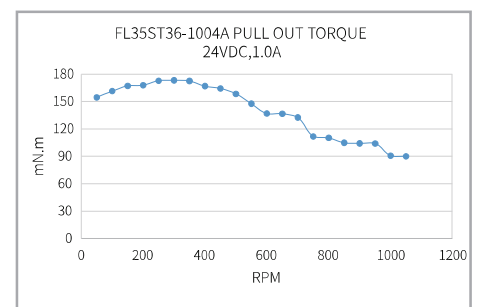
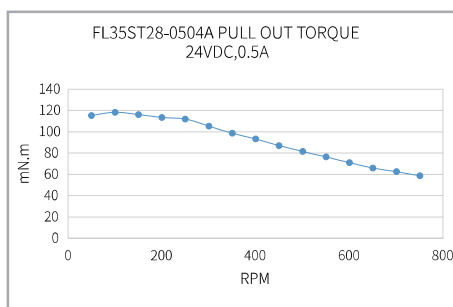
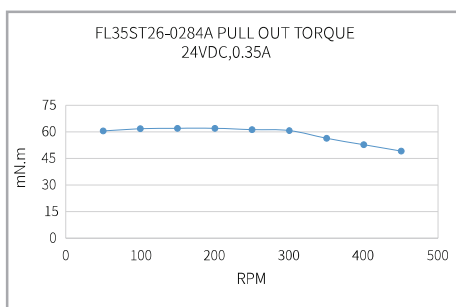
## ● 接线图

(Wiring Diagram)



## ● 矩频曲线

(Pull out torque curve)





# 1.8° 39mm ST Series

两相步进电机  
2 Phase Stepper Motor

## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	10N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱

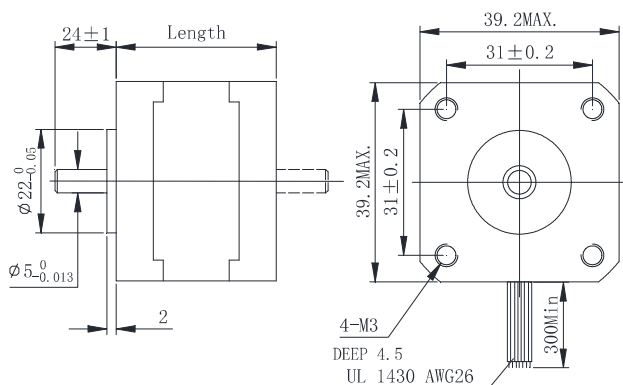
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL39ST20-0404A	0.4	6.6	6	0.065	0.005	4	11	0.12	20
FL39ST20-0506A	0.5	15	6	0.065		6			
FL39ST34-0404A	0.4	30	43	0.21	0.012	4	20	0.18	34
FL39ST34-0306A	0.3	34	20	0.13		6			
FL39ST38-0504A	0.5	22	40	0.29	0.018	4	24	0.2	38
FL39ST38-0806A	0.8	7.5	8	0.2		6			
FL39ST44-0304A	0.3	40	60	0.28	0.025	4	40	0.25	44

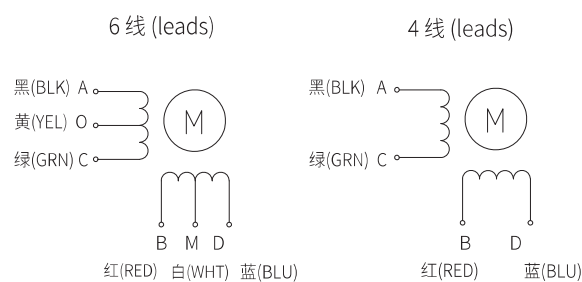
## ● 机械尺寸

(Dimension)



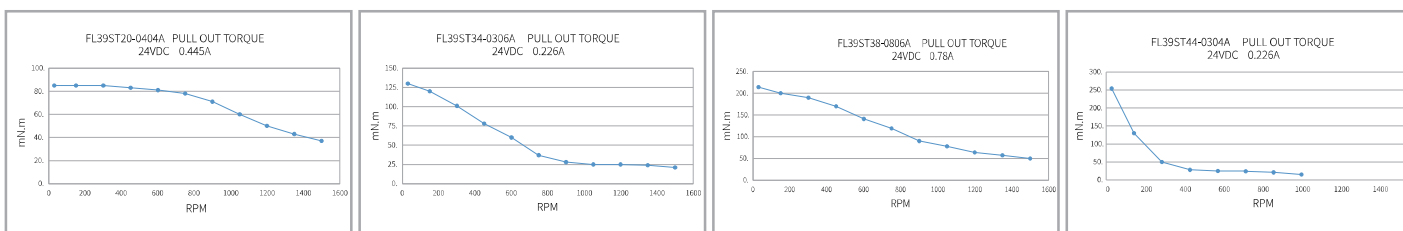
## ● 接线图

(Wiring Diagram)



## ● 矩频曲线

(Pull out torque curve)



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	10N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱

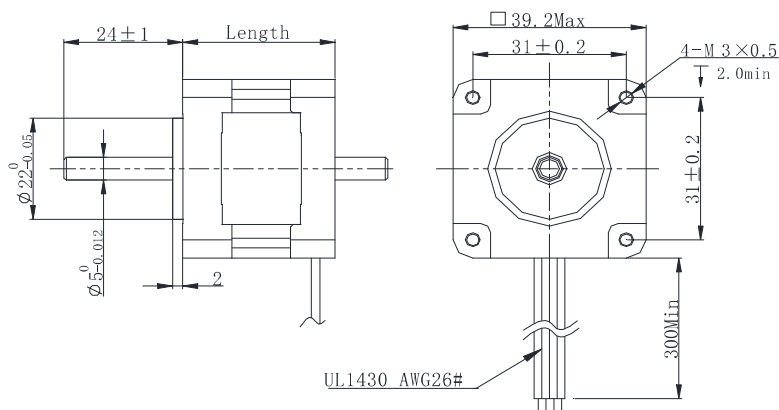
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL39STH20-0404A	0.4	6.6	7	0.085	0.008	4	50	0.12	20
FL39STH34-0306A	0.3	40	30	0.18	0.01	6	120	0.18	31
FL39STH38-0504A	0.5	24	50	0.36	0.012	4	180	0.2	38

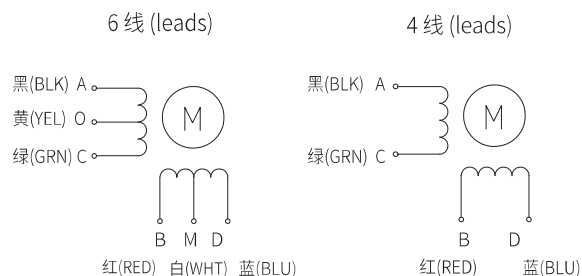
### ● 机械尺寸

(Dimension)



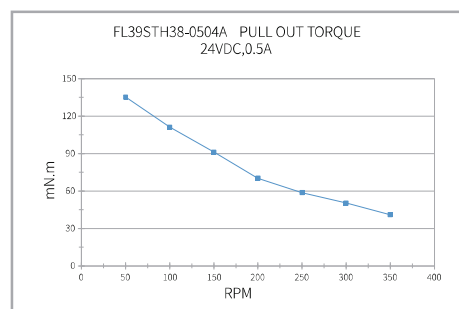
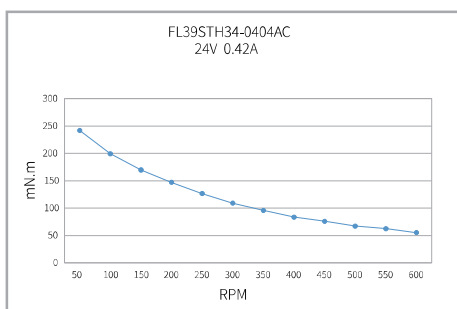
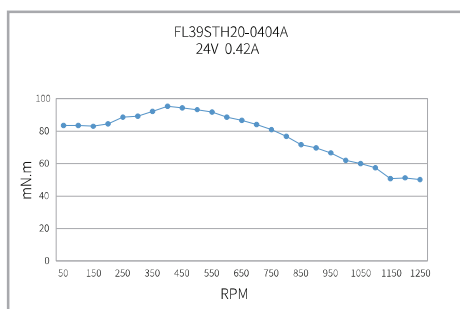
### ● 接线图

(Wiring Diagram)



### ● 矩频曲线

(Pull out torque curve)



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	10N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件



齿轮箱



编码器

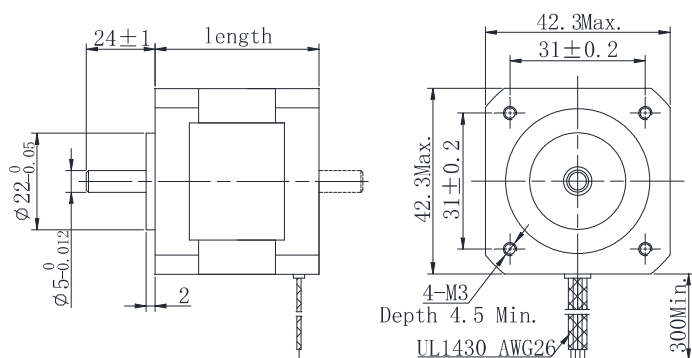
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL42STH25-0404A	0.4	24	30	0.17	0.0075	4	20	0.15	26
FL42STH33-0956A	0.95	4.2	2.5	0.16	0.012	6	35	0.22	33.5
FL42STH33-1334A	1.33	2.1	2.5	0.22		4			
FL42STH38-1206A	1.2	3.3	3.2	0.26	0.015	6	54	0.28	39.5
FL42STH38-1684A	1.68	1.65	3.2	0.36		4			
FL42STH47-1206A	1.2	3.3	2.8	0.317	0.02	6	68	0.35	47.5
FL42STH47-1684A	1.68	1.65	2.8	0.44		4			
FL42STH60-1206A	1.2	6	7	0.56	0.028	6	102	0.5	60

### ● 机械尺寸

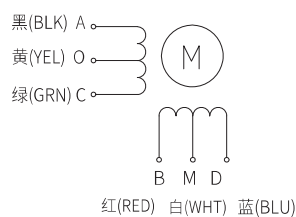
(Dimension)



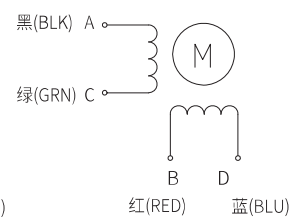
### ● 接线图

(Wiring Diagram)

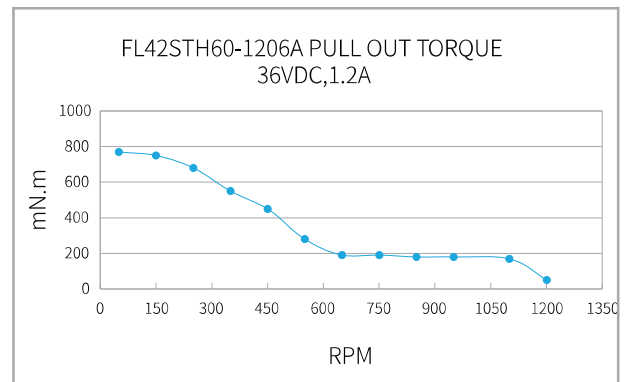
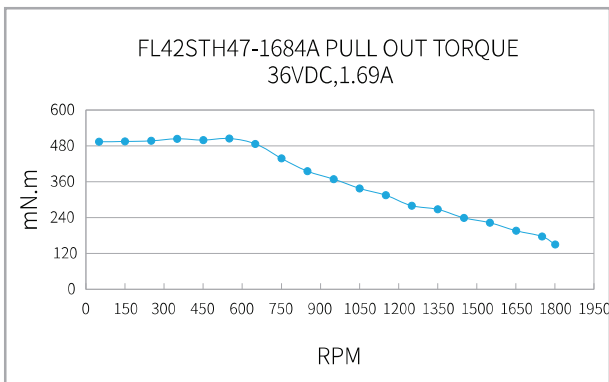
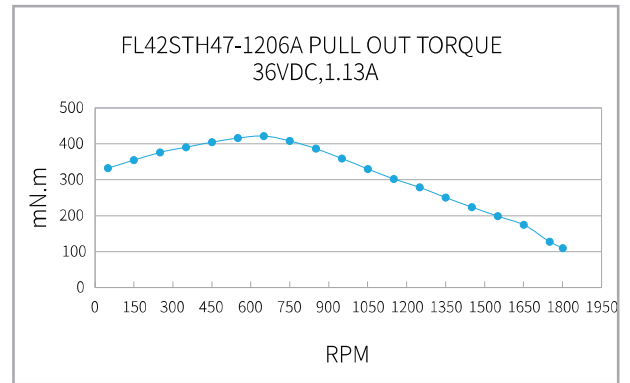
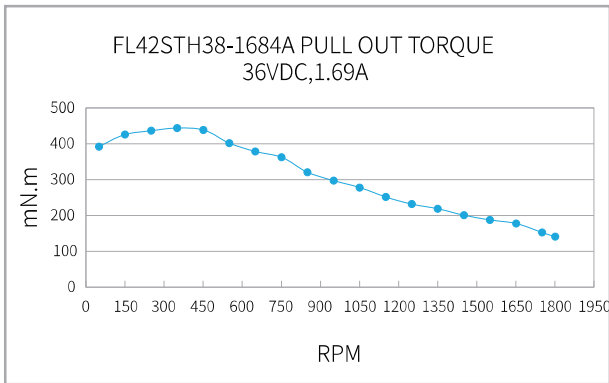
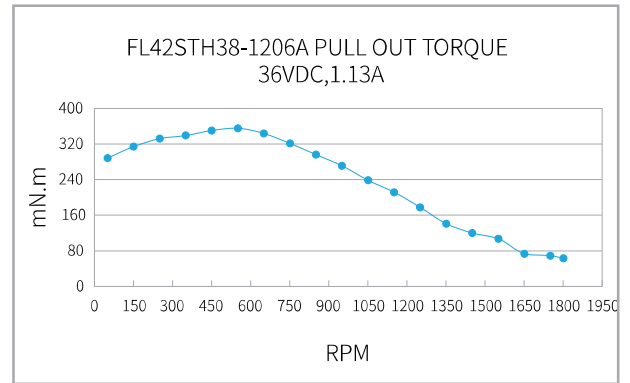
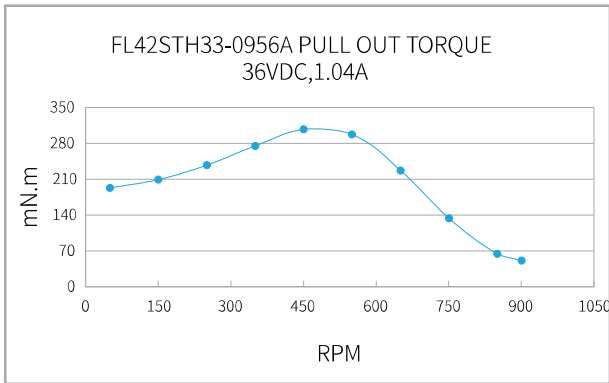
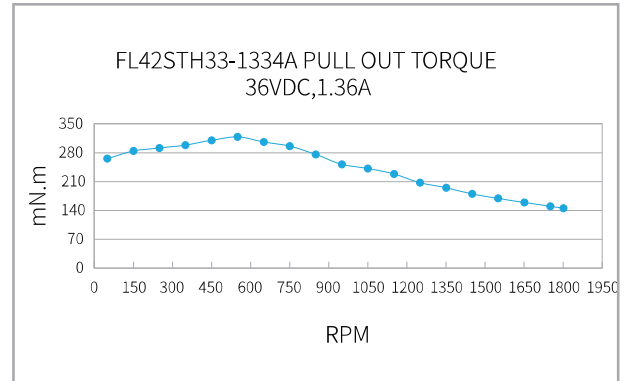
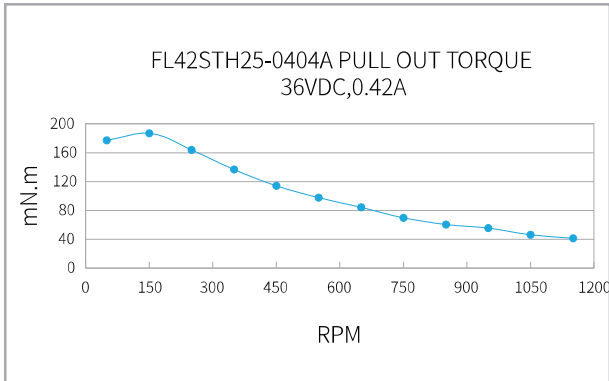
6线 (leads)



4线 (leads)



● 矩频曲线 (Pull out torque curve)



#### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	10N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	2N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件

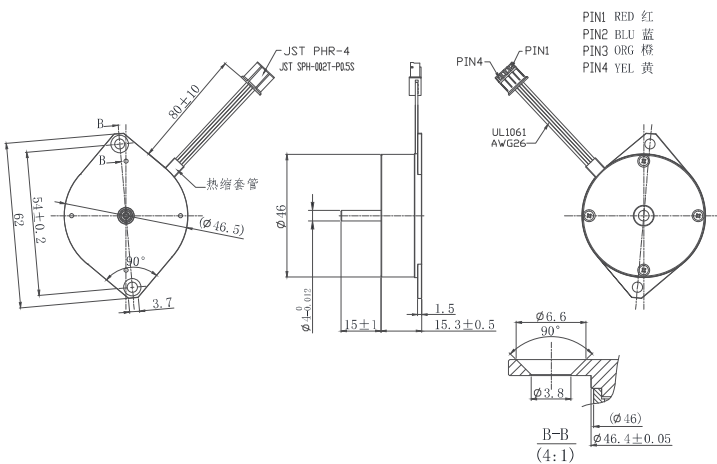
#### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL46ST16-1004A-01	1	3.2	2.5	0.08	0.006	4	11	0.1	15.3

#### ● 机械尺寸

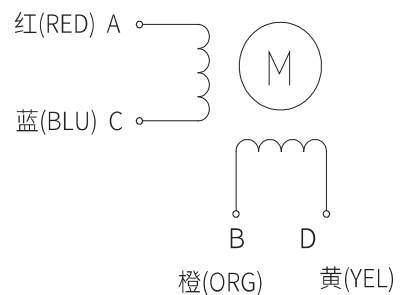
(Dimension)



#### ● 接线图

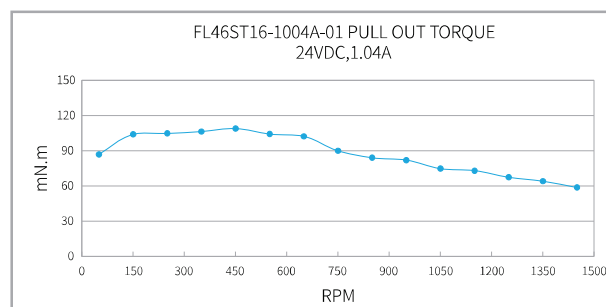
(Wiring Diagram)

4 线 (leads)



#### ● 矩频曲线

(Pull out torque curve)



# 1.8° 57mm ST Series

两相步进电机(圆形)  
2 Phase Stepper Motor (Round)



## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	75N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	15N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱 编码器

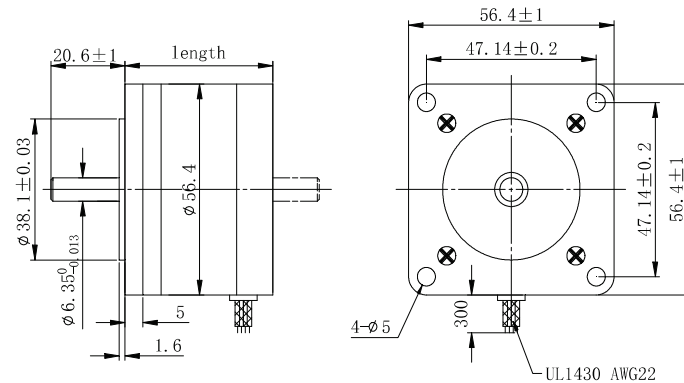
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL57ST41-1106A	1.1	3.6	4	0.28	0.018	6	57	0.54	41
FL57ST51-2804A	2.8	0.85	2.1	0.69	0.035	4	110	0.6	51
FL57ST56-2554A	2.55	1.1	3.6	0.84	0.042	4	135	0.65	56
FL57ST76-1506A	1.5	3.6	6	0.9	0.072	6	200	0.95	76

## ● 机械尺寸

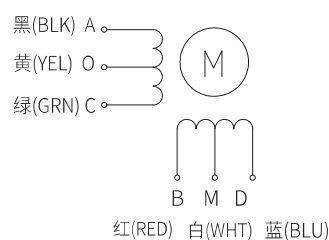
(Dimension)



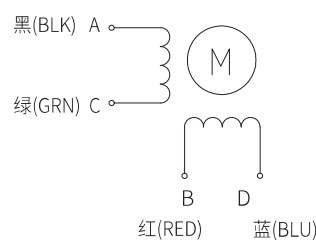
## ● 接线图

(Wiring Diagram)

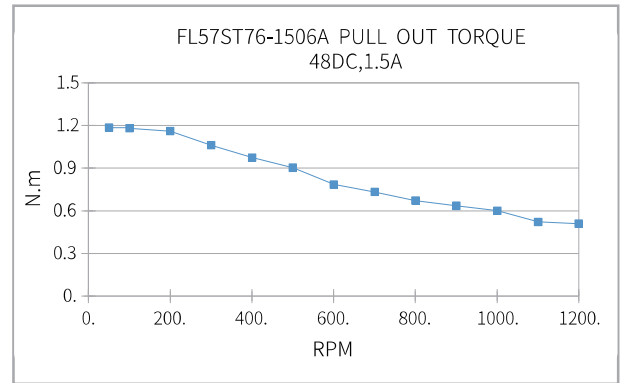
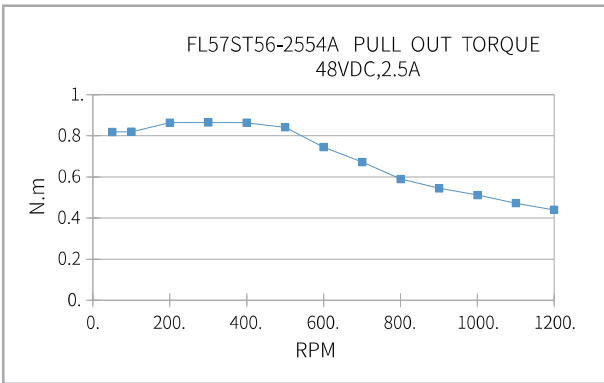
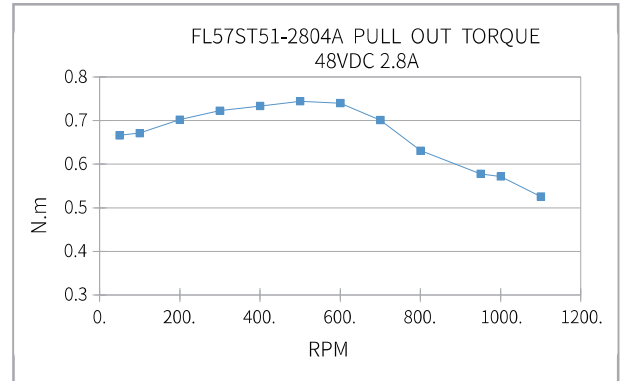
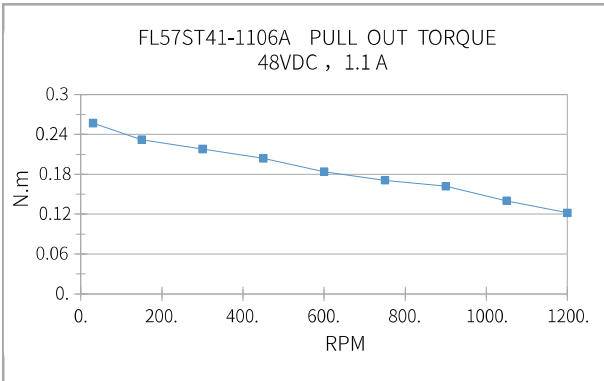
6 线 (leads)



4 线 (leads)



● 矩频曲线 (Pull out torque curve)



B3

# 1.8° 57mm STH Series

两相步进电机  
2 Phase Stepper Motor

## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步, 空载)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	75N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	15N
介电强度 (Dielectric Strength)	600VAC / 1S
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件



齿轮箱



编码器



刹车

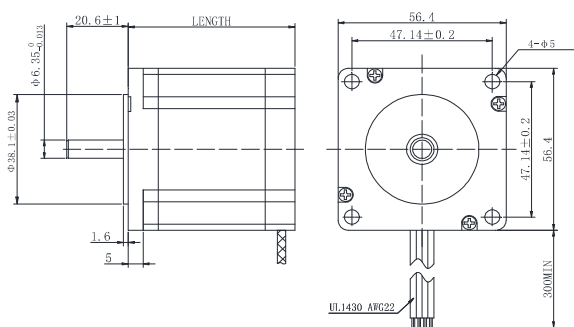
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL57STH41-2006A	2	1.4	1.4	0.39	0.02	6	120	0.45	40
FL57STH41-2804A	2.8	0.7	1.4	0.55	0.02	4	120	0.45	40
FL57STH51-2006A	2	1.65	2.2	0.72	0.035	6	275	0.65	50
FL57STH51-2804A	2.8	0.83	2.2	1	0.035	4	275	0.65	50
FL57STH56-2006A	2	1.8	2.5	0.9	0.04	6	300	0.7	54
FL57STH56-2804A	2.8	0.9	2.5	1.26	0.04	4	300	0.7	54
FL57STH76-2006A	2	2.25	3.6	1.35	0.068	6	480	1	75
FL57STH76-2804A	2.8	1.13	3.6	1.89	0.068	4	480	1	75
FL57STH115-2804A	2.8	2.1	10	3	0.1	4	650	1.8	115

## ● 机械尺寸

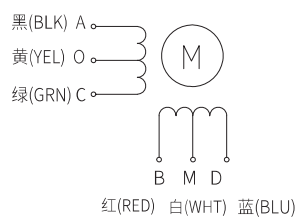
(Dimension)



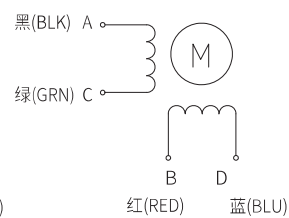
## ● 接线图

(Wiring Diagram)

6线 (leads)

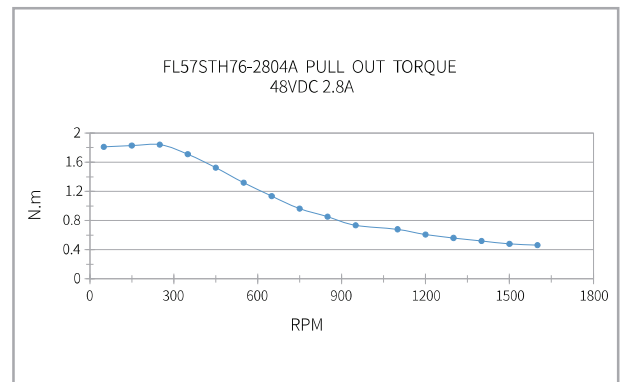
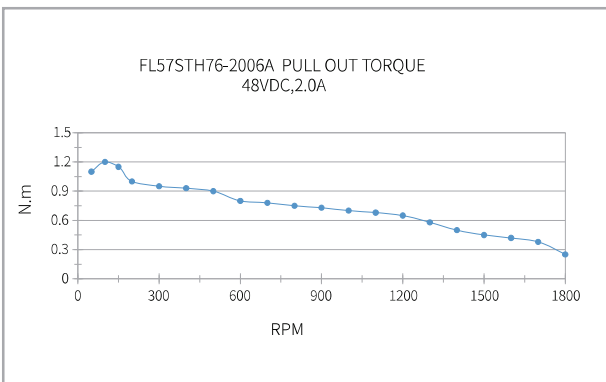
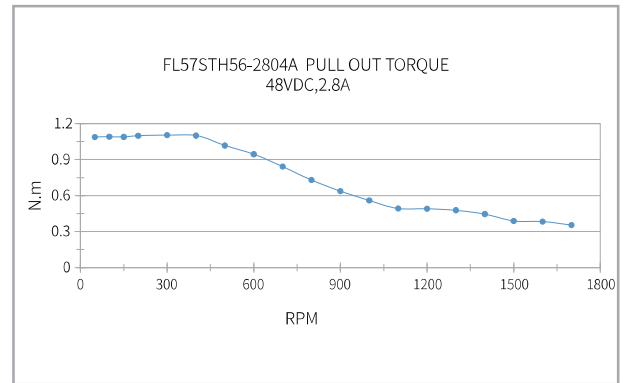
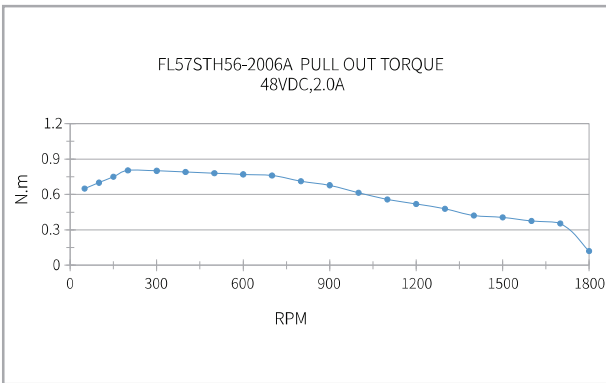
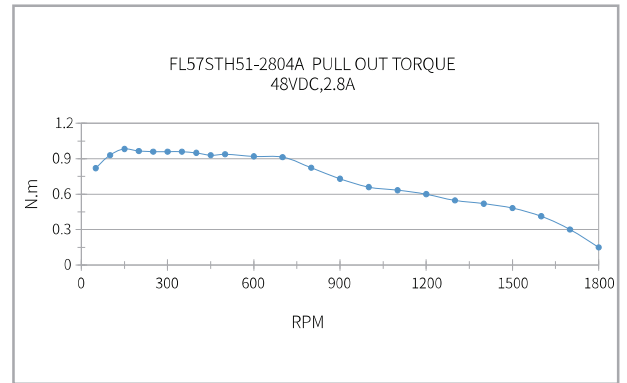
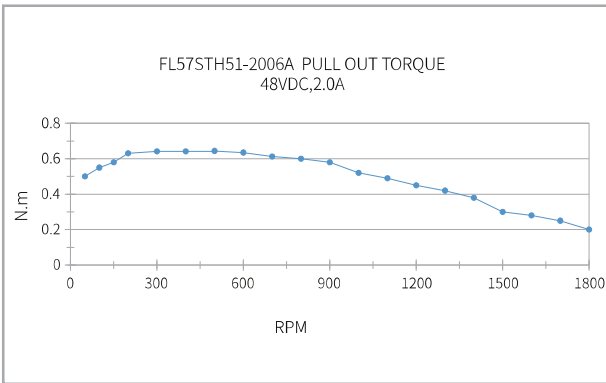
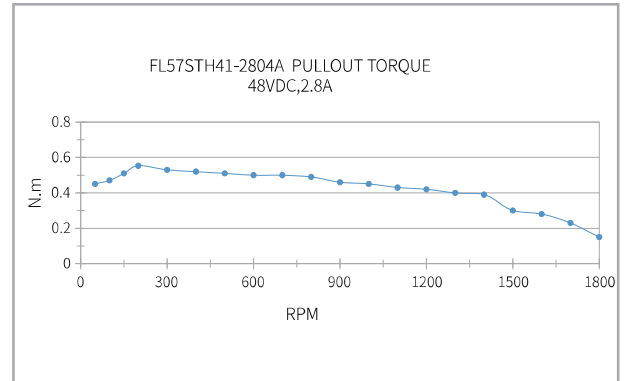
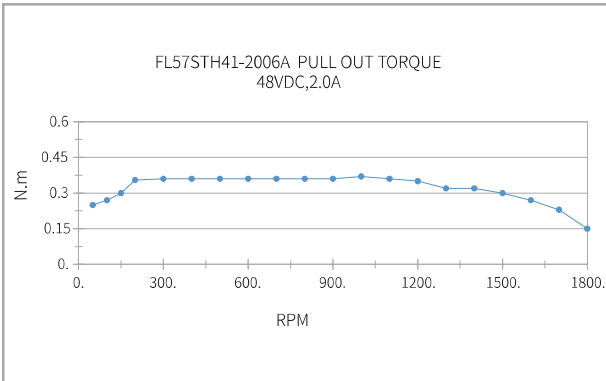


4线 (leads)





● 矩频曲线 (Pull out torque curve)



B3

### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	75N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	15N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



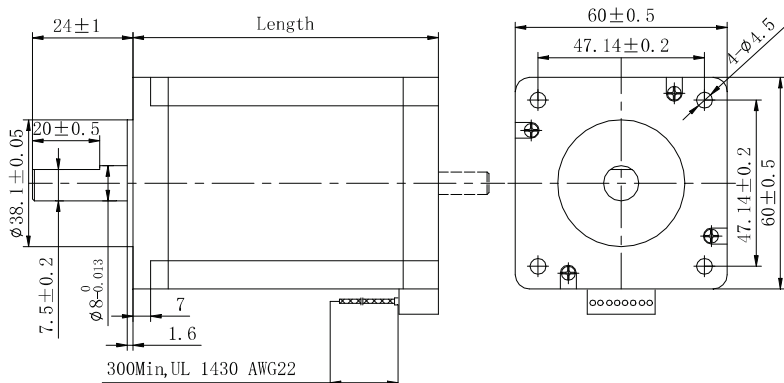
### ● 电性能

(Electrical specifications)

型号 (Model No.)		Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
单轴 (Single shaft)		A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL60STH45-2008AF	单极性 (unipolar)	2	1.5	2	0.78	0.05	8	275	0.6	47±1
	并联 (parallel)	2.8	0.75	2	1.1					
	串联 (series)	1.4	3	8	1.1					
FL60STH56-2008AF	单极性 (unipolar)	2	1.8	3.6	1.17	0.07	8	400	0.77	56±1
	并联 (parallel)	2.8	0.9	3.6	1.65					
	串联 (series)	1.4	3.6	14.4	1.65					
FL60STH65-2008AF	单极性 (unipolar)	2	2.4	4.6	1.5	0.09	8	570	1.2	67±1
	并联 (parallel)	2.8	1.2	4.6	2.1					
	串联 (series)	1.4	4.8	18.4	2.1					
FL60STH86-2008AF	单极性 (unipolar)	2	3	6.8	2.1	0.12	8	840	1.4	88±1
	并联 (parallel)	2.8	1.5	6.8	3					
	串联 (series)	1.4	6	27.2	3					

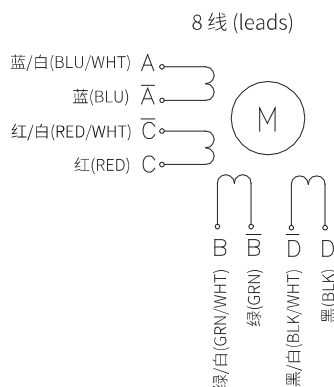
### ● 机械尺寸

(Dimension)



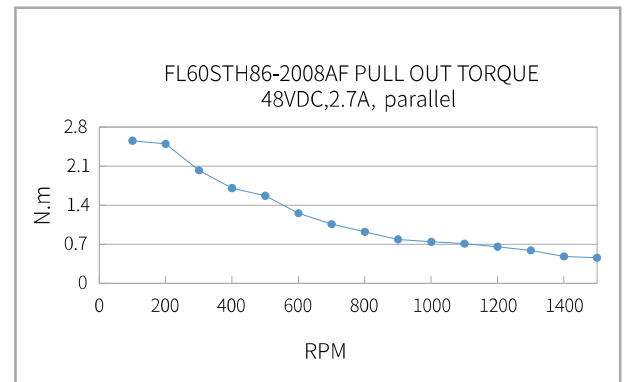
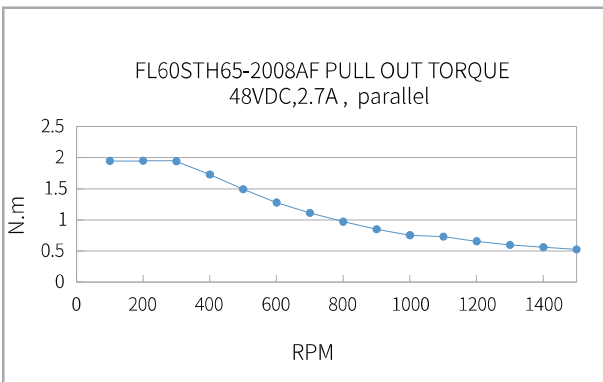
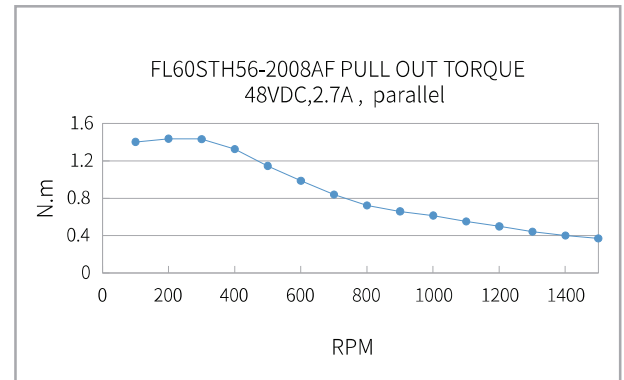
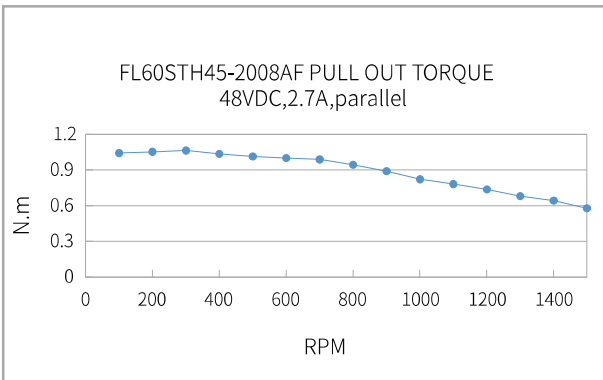
### ● 接线图

(Wiring Diagram)



**● 矩频曲线**

(Pull out torque curve)



B3

# 1.8° 63mm ST Series

两相步进电机  
2 Phase Stepper Motor



## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@400 g
轴向间隙 (Axial Play)	0.08mm@400 g
最大径向负载 (Max. radial force)	10N 距法兰5mm (5mm from the flange)
最大轴向负载 (Max. axial force)	2N
介电强度 (Dielectric Strength)	600VAC / 1S
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件

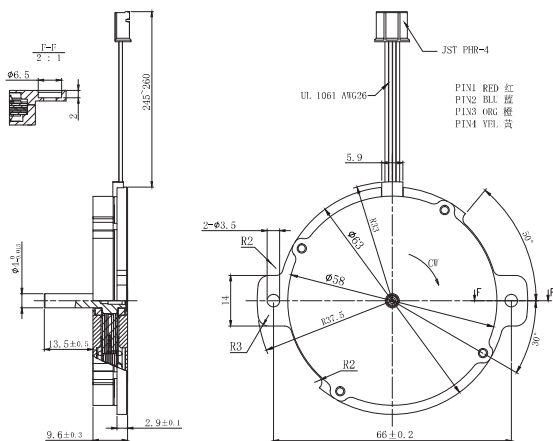
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL63ST10-1004A-01	1	3.8	2	0.06	0.005	4	16	0.095	9.6

## ● 机械尺寸

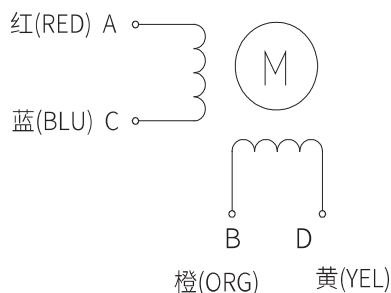
(Dimension)



## ● 接线图

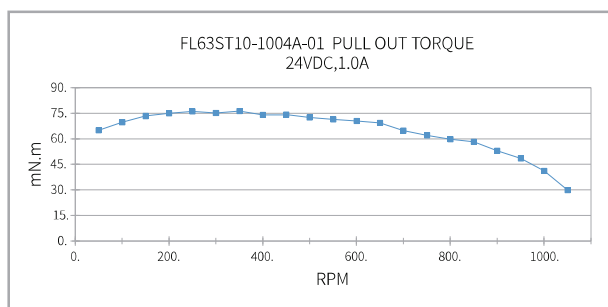
(Wiring Diagram)

4 线 (leads)



## ● 矩频曲线

(Pull out torque curve)



# 1.8° 86mm ST Series

## 两相步进电机(圆形) 2 Phase Stepper Motor (Round)



FULLING MOTOR

### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	220N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	60N
介电强度 (Dielectric Strength)	820VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ, 500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件



齿轮箱



刹车

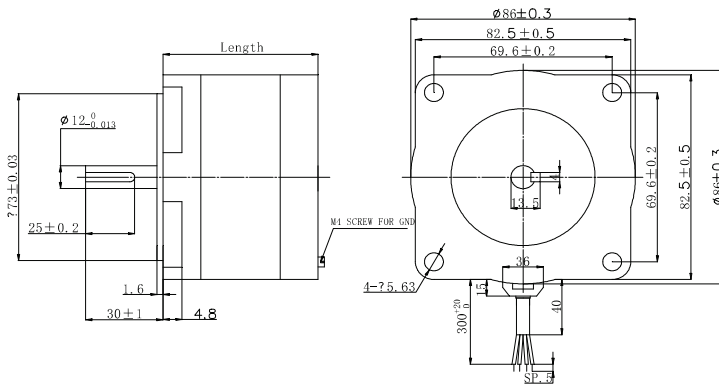
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL86ST67-2808AH	2.8	1.3	5.1	2.8	0.12	8	660	1.6	67
FL86ST94-2808AH	2.8	1.7	7.7	4.8	0.18	8	1200	2.4	94
FL86ST125-3508AH	3.5	1.42	7.9	7.6	0.23	8	1800	3.6	125

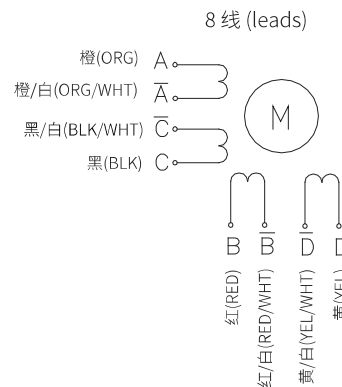
### ● 机械尺寸

(Dimension)



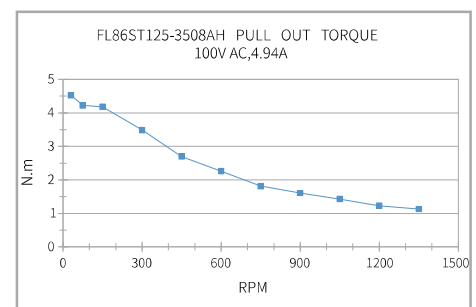
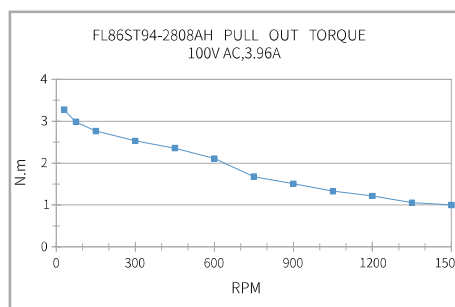
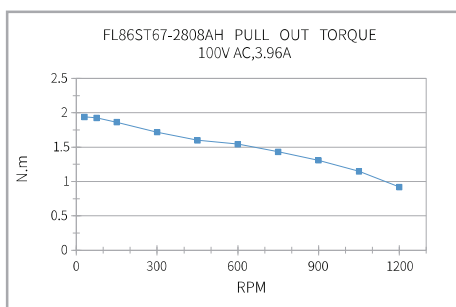
### ● 接线图

(Wiring Diagram)



### ● 矩频曲线

(Pull out torque curve)



# 1.8° 86mm STH Series

两相步进电机  
2 Phase Stepper Motor



## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	220N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	60N
介电强度 (Dielectric Strength)	1200VAC / 1S
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件



齿轮箱



编码器



刹车

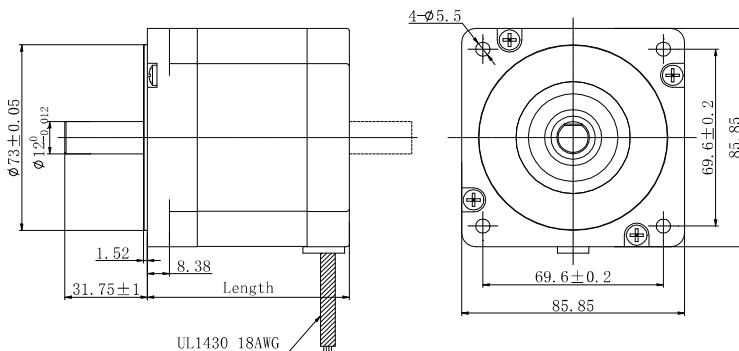
## ● 电性能

(Electrical specifications)

型号 (Model No.)		Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
单轴 (Single shaft)		A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL86STH65-2808A	单极性 unipolar	2.8	1.3	3.9	2.2	0.08	8	1000	1.7	65
	串联 series	2	2.6	15.6	3.5					
	并联 parallel	4	0.65	3.9	3.5					
FL86STH80-4208A	单极性 unipolar	4.2	0.65	3	3.2	0.12	8	1400	2.3	80
	串联 series									
	并联 parallel	3	1.3	12	4.5					
FL86STH118-4208A	单极性 unipolar	4.2	0.99	6	6	0.24	8	2700	3.8	118
	串联 series	3	1.98	24	8.5					
	并联 parallel	6	0.495	6	8.5					
FL86STH156-4208A	单极性 unipolar	4.2	1.25	8	8.4	0.36	8	4000	5.3	156
	串联 series	3	2.5	32	12					
	并联 parallel	6	0.63	8	12					

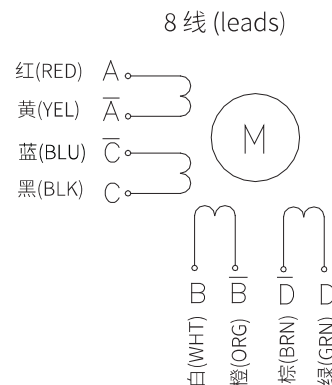
## ● 机械尺寸

(Dimension)



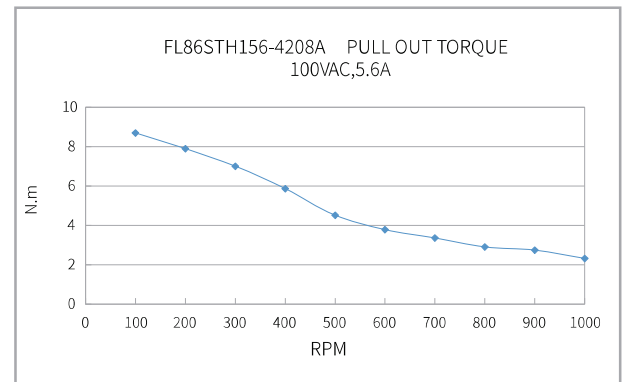
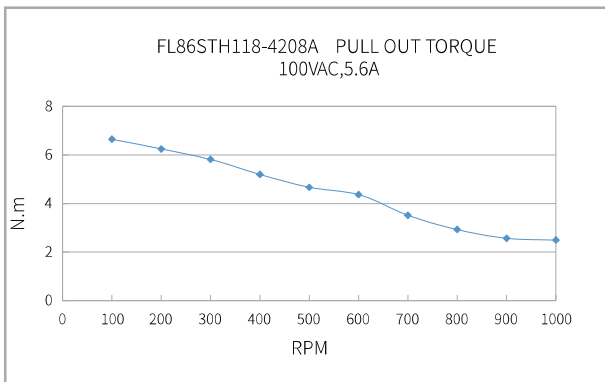
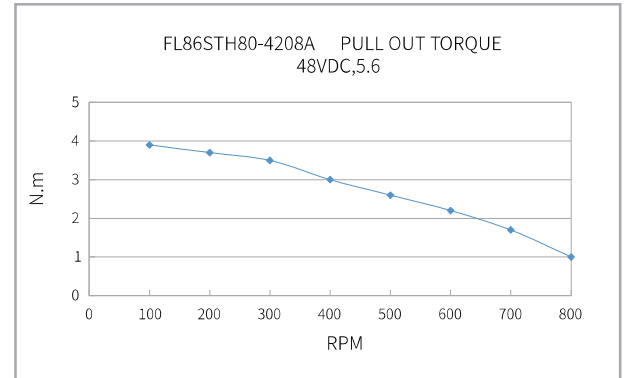
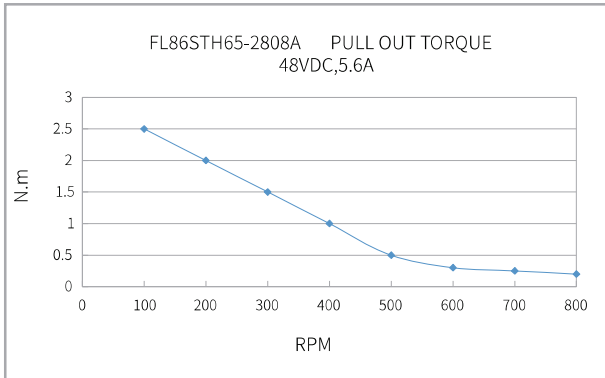
## ● 接线图

(Wiring Diagram)



● 矩频曲线

(Pull out torque curve)



B3

# 1.8° 86mm STH-C

两相步进电机(经济型)  
2 Phase Stepper Motor (Economic)



## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	130N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	36N
介电强度 (Dielectric Strength)	1200VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件



齿轮箱



编码器



刹车

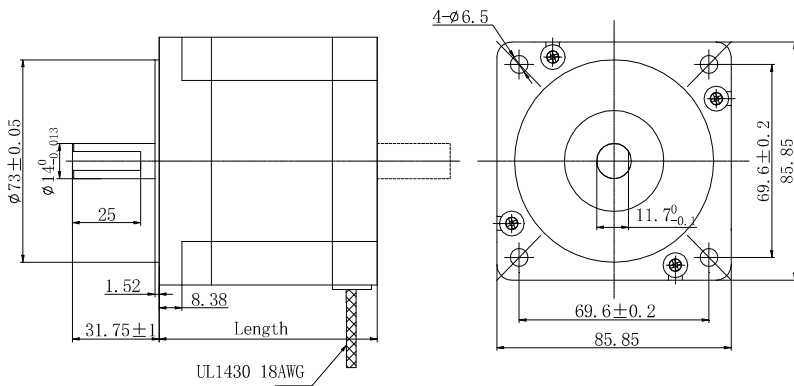
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL86STH65-6004AC	6	0.29	1.77	3.5	0.08	4	1000	1.7	63
FL86STH80-6004AC	6	0.39	3	4.5	0.12	4	1400	2.3	75
FL86STH118-6004AC	6	0.55	6	8.5	0.24	4	2700	3.8	112
FL86STH156-6004AC	6	0.73	8.68	12	0.36	4	4000	5.3	150

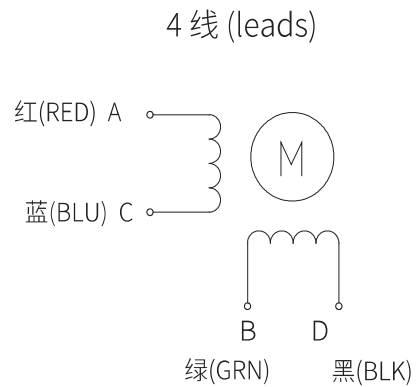
## ● 机械尺寸

(Dimension)



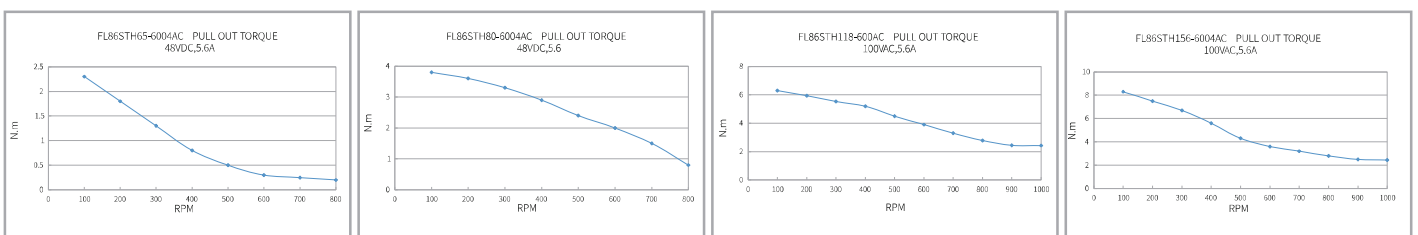
## ● 接线图

(Wiring Diagram)



## ● 矩频曲线

(Pull out torque curve)





### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	330N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	100N
介电强度 (Dielectric Strength)	1200VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



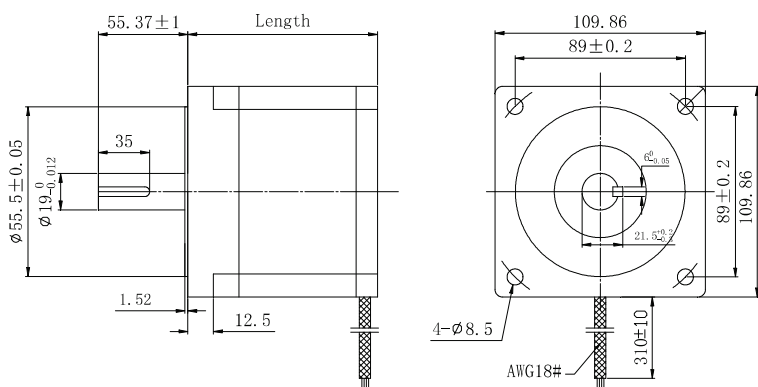
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL110STH99-5504A	5.5	0.7	9.8	11.2	0.55	4	5600	5	99
FL110STH150-6504A	6.5	0.72	11.5	21	1.09	4	13000	8.4	150
FL110STH201-8004A	8	0.67	12	28	1.62	4	173000	11.7	201

### ● 机械尺寸

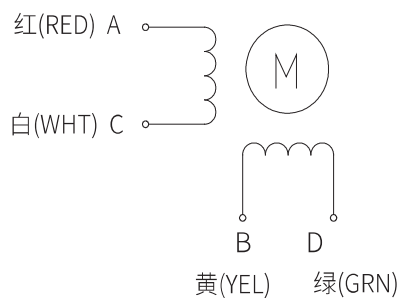
(Dimension)



### ● 接线图

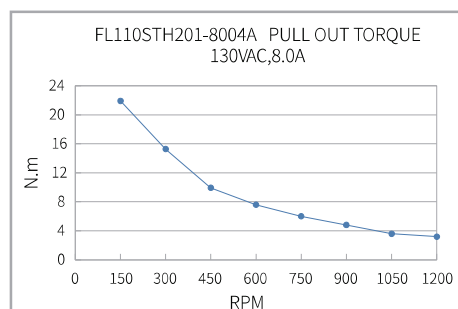
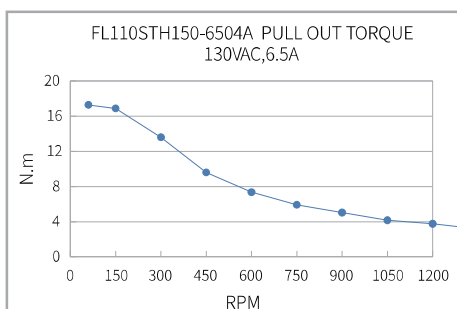
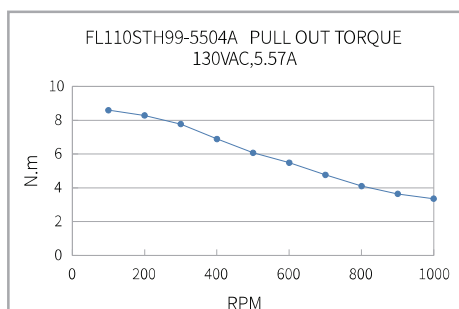
(Wiring Diagram)

4线 (leads)



### ● 矩频曲线

(Pull out torque curve)



# 3.6° 42mm ST-D Series

两相步进电机  
2 Phase Stepper Motor



## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	3.6°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	10N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件



齿轮箱



编码器

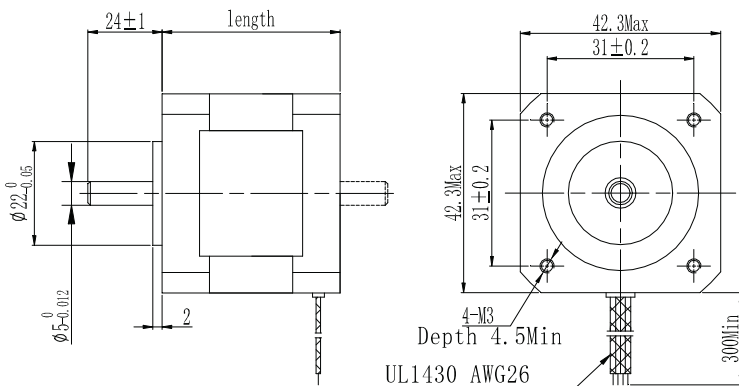
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL42ST33-0504DA	0.5	17	30	0.08	0.016	4	16	0.2	32

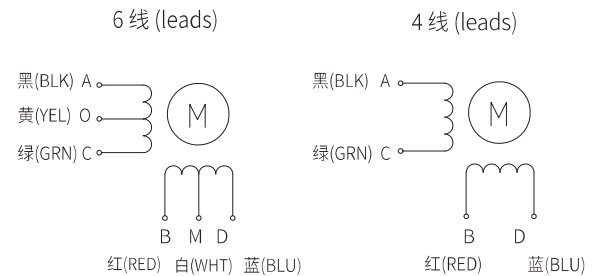
## ● 机械尺寸

(Dimension)



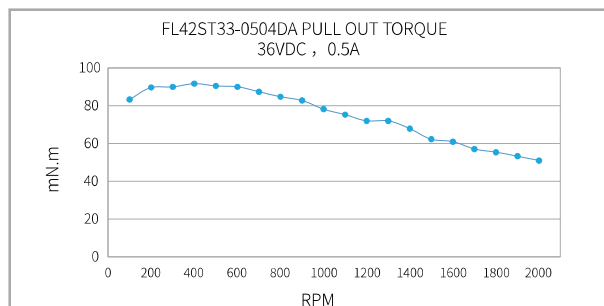
## ● 接线图

(Wiring Diagram)



## ● 矩频曲线

(Pull out torque curve)



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	10N
最大轴向负载 (Max. axial force)	4N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱

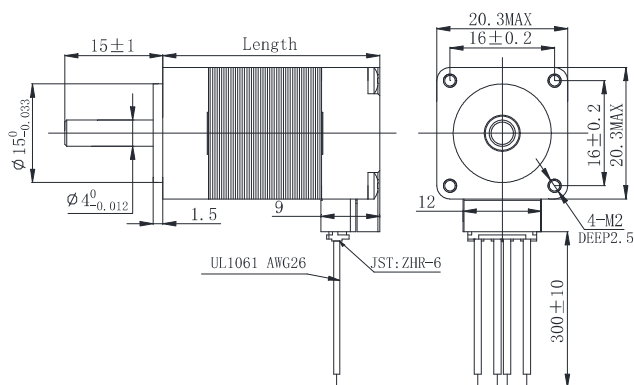
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL20STC33-0604A	0.6	6.4	2.6	0.022	0.002	4	2	0.06	33

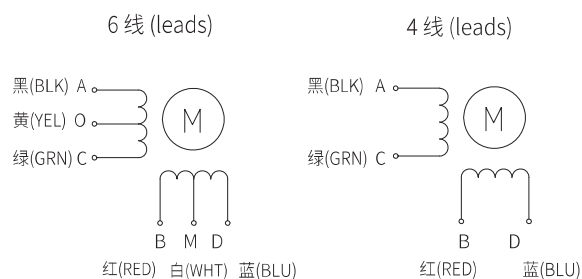
### ● 机械尺寸

(Dimension)



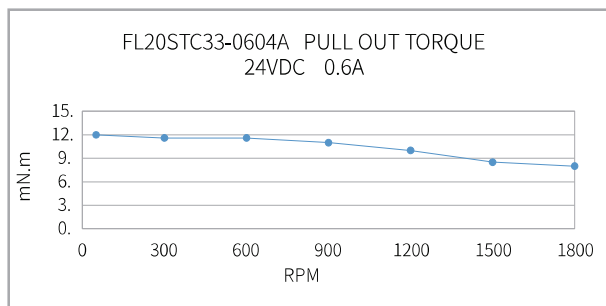
### ● 接线图

(Wiring Diagram)



### ● 矩频曲线

(Pull out torque curve)



# 1.8° 28mm STC

## 内置接插件型步进电机 Intergrated Connector Stepper Motor



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@400 g
轴向间隙 (Axial Play)	0.08mm@400 g
最大径向负载 (Max. radial force)	28N 距法兰5mm (5mm from the flange)
最大轴向负载 (Max. axial force)	7N
介电强度 (Dielectric Strength)	600VAC / 1S
绝缘电阻 (Insulation Resistance)	100MΩ, 500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱

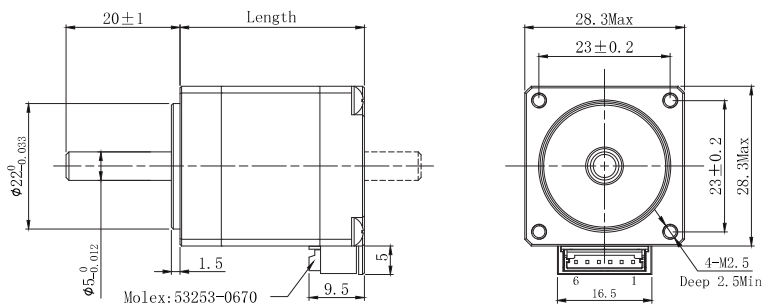
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL28STC32-0674A	0.67	5.6	4	0.065	0.005	4	9	0.11	32
FL28STC32-0956A	0.95	2.8	1	0.05	0.005	6	9	0.11	32
FL28STC40-0674A	0.67	6.8	4.8	0.097	0.006	4	12	0.14	40
FL28STC40-0956A	0.95	3.4	1.2	0.075	0.006	6	12	0.14	40
FL28STC51-0674A	0.67	9.2	5.6	0.12	0.008	4	18	0.2	51.5
FL28STC51-0956A	0.95	4.6	1.45	0.09	0.008	6	18	0.2	51.5

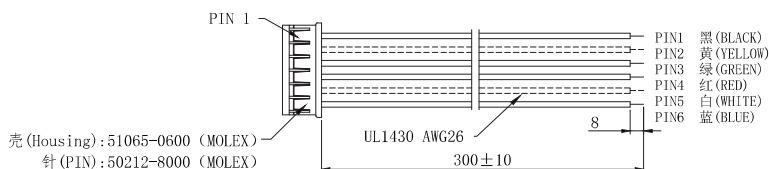
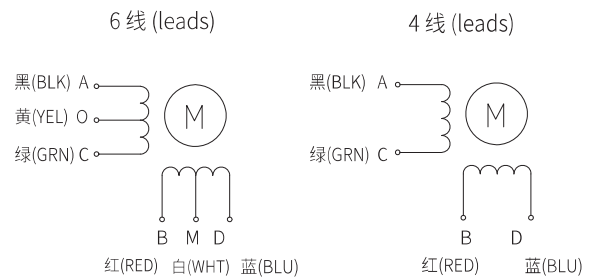
### ● 机械尺寸

(Dimension)



### ● 接线图

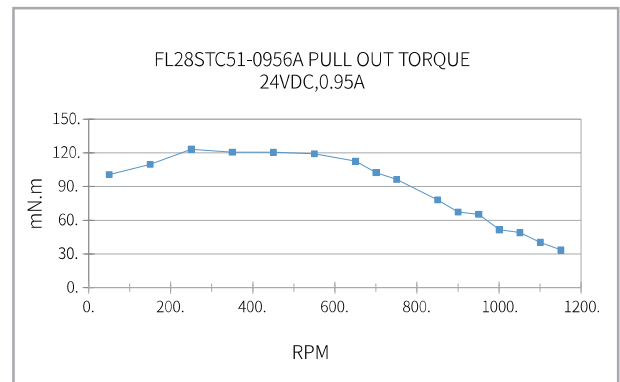
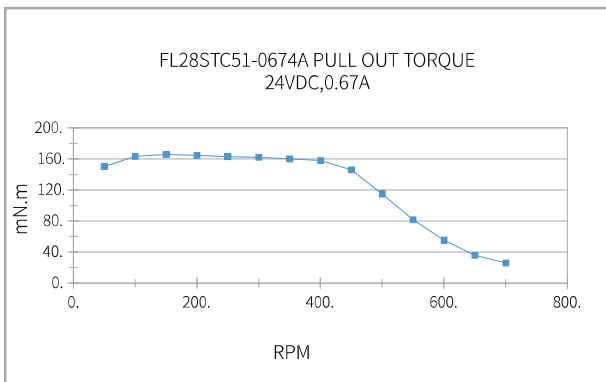
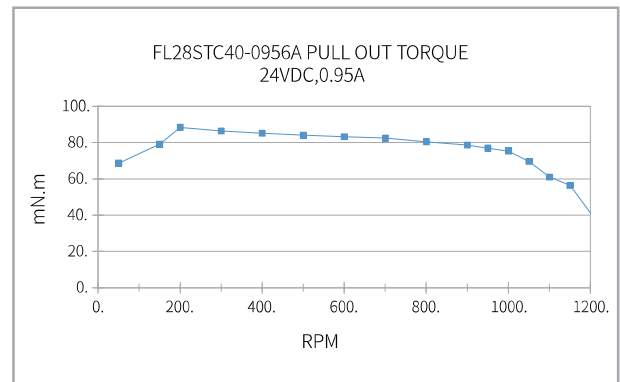
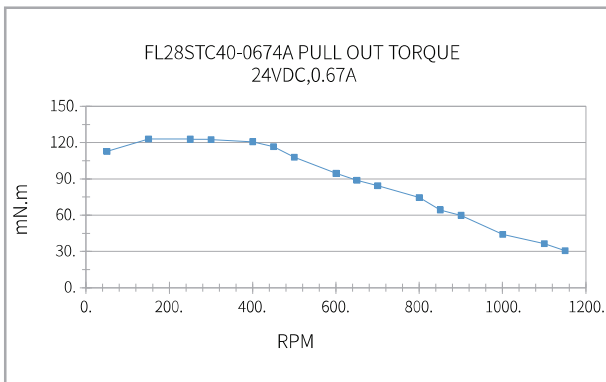
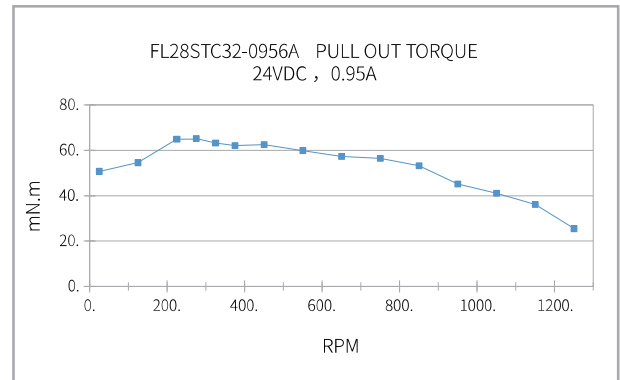
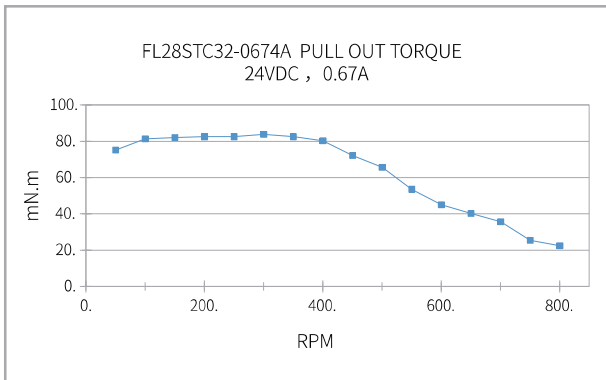
(Wiring Diagram)





● 矩频曲线

(Pull out torque curve)



# 1.8° 35mm STC

内置接插件型步进电机  
Integrated Connector Stepper Motor



## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	10N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱

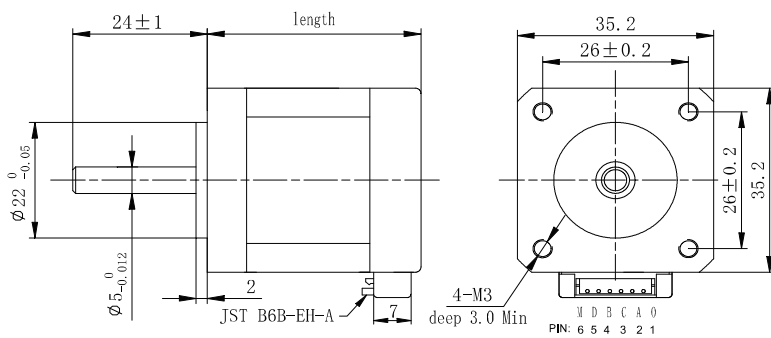
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL35STC38-1204AC	1.2	2.7	4.2	0.18	0.018	4	20	0.21	38
FL35STC44-1204AC	1.2	3.2	5.2	0.28	0.02	4	28	0.23	44

## ● 机械尺寸

(Dimension)

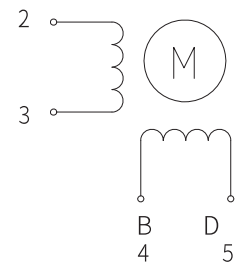
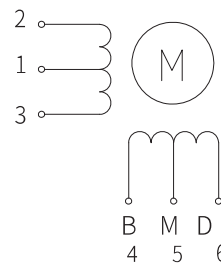


## ● 接线图

(Wiring Diagram)

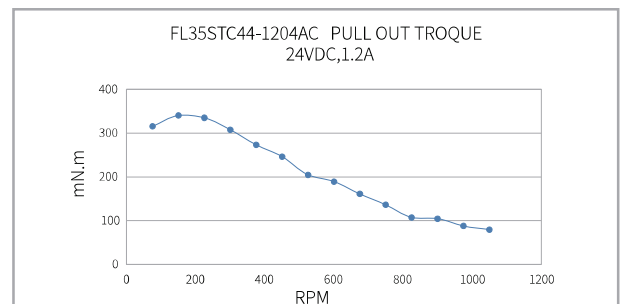
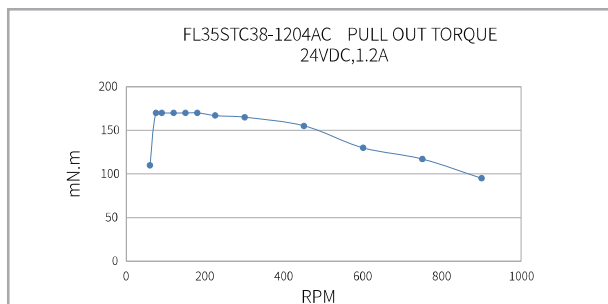
6 线 (leads)

4 线 (leads)



## ● 矩频曲线

(Pull out torque curve)



# 1.8° 42mm STC

## 内置接插件型步进电机 Integrated Connector Stepper Motor



FULLING MOTOR

### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	10N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件



齿轮箱



编码器

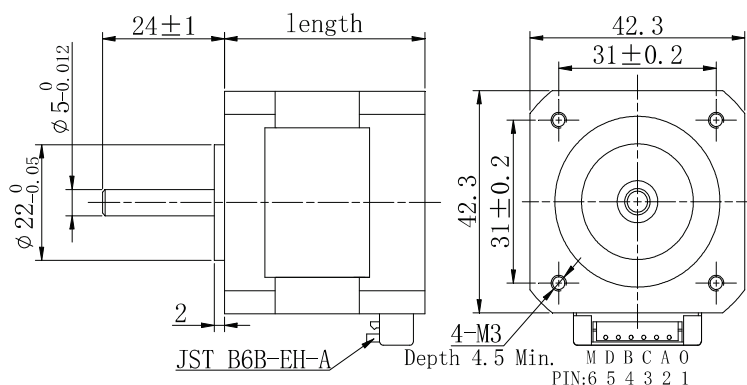
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL42STC33-0956A	0.95	4.2	2.5	0.16	0.012	6	35	0.22	33.5
FL42STC33-1334A	1.33	2.1	2.5	0.22		4			
FL42STC38-1206A	1.2	3.3	3.2	0.26	0.015	6	54	0.28	39.5
FL42STC38-1684A	1.68	1.65	3.2	0.36		4			
FL42STC47-1206A	1.2	3.3	2.8	0.317	0.02	6	68	0.35	47.5
FL42STC47-1684A	1.68	1.65	2.8	0.44		4			
FL42STC60-1206A	1.2	6	7	0.56	0.028	6	102	0.5	60

### ● 机械尺寸

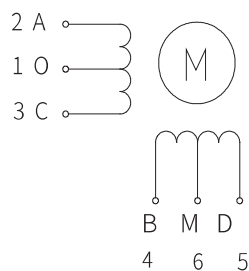
(Dimension)



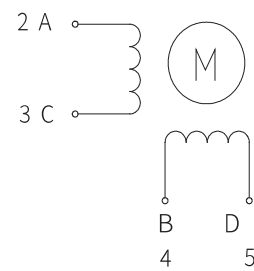
### ● 接线图

(Wiring Diagram)

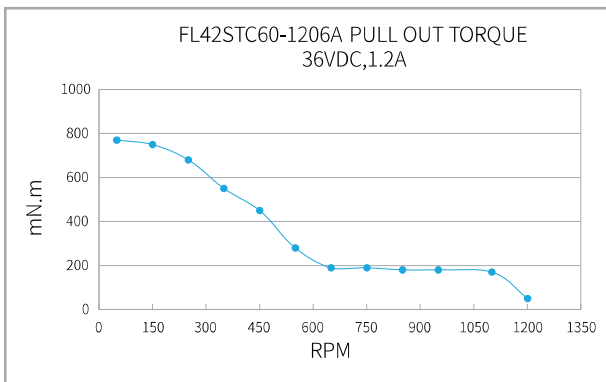
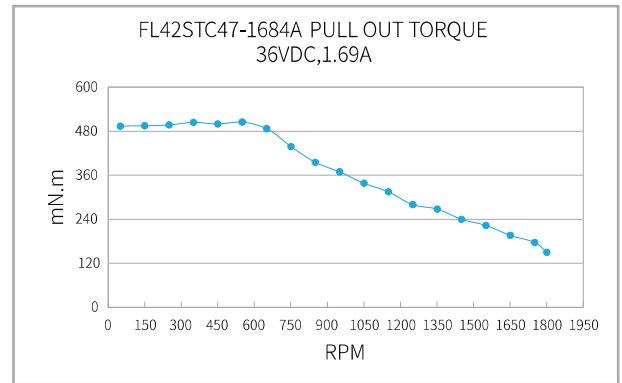
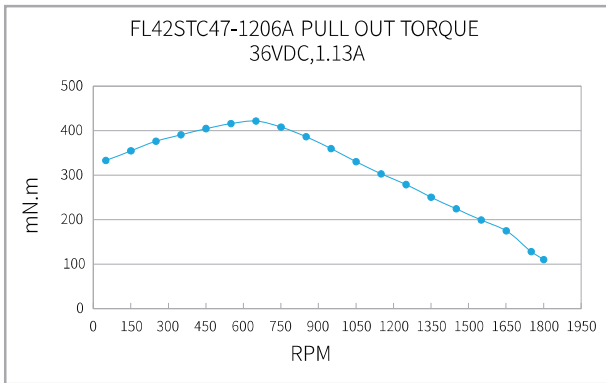
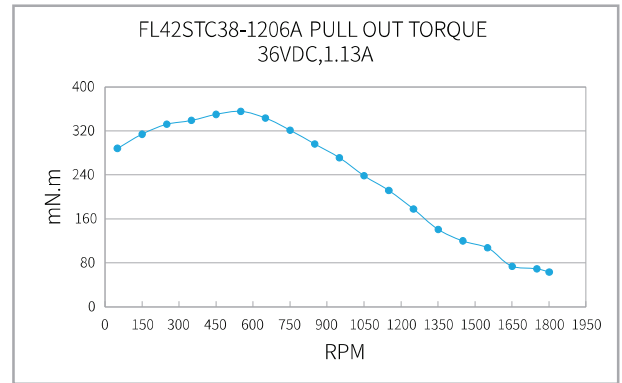
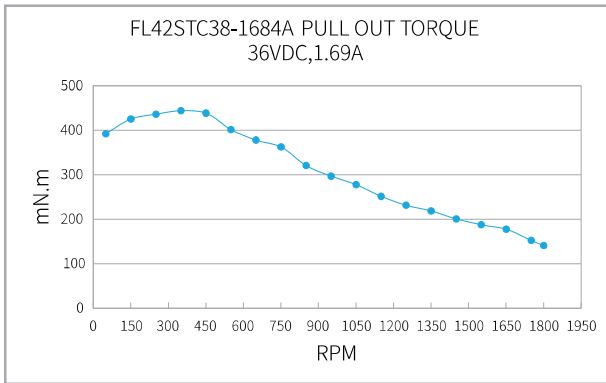
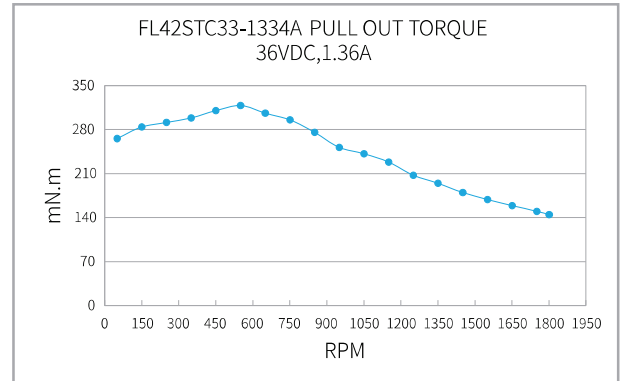
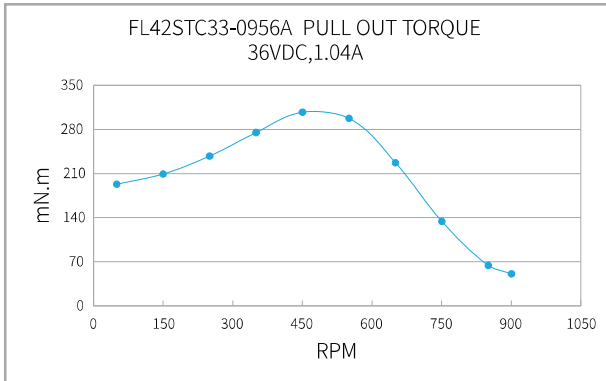
6线 (leads)



4线 (leads)



● 矩频曲线 (Pull out torque curve)





# 1.8° 57mm STC

## 内置接插件型步进电机 Integrated Connector Stepper Motor

### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	10N
最大轴向负载 (Max. axial force)	4N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件



齿轮箱



编码器



刹车

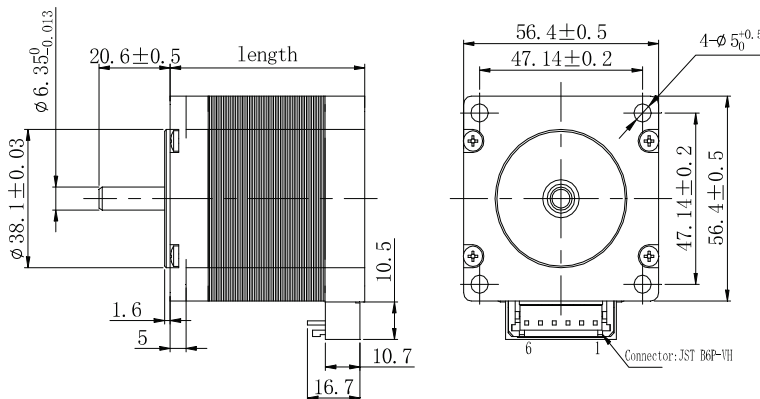
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL57STC41-2804AC	2.8	0.78	1.8	0.6	0.025	4	120	0.45	40.5
FL57STC56-2804AC	2.8	1	3.2	1.4	0.045	4	300	0.7	56
FL57STC76-2804AC	2.8	1.3	5.3	2.3	0.07	4	480	1	36

### ● 机械尺寸

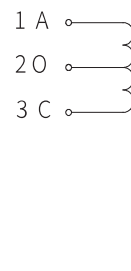
(Dimension)



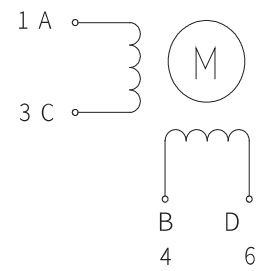
### ● 接线图

(Wiring Diagram)

6 线 (leads)

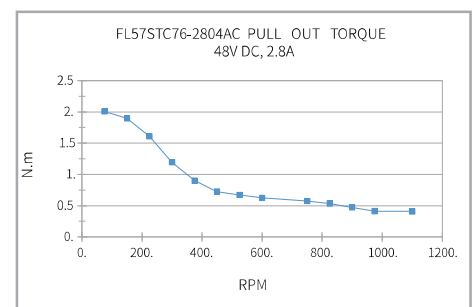
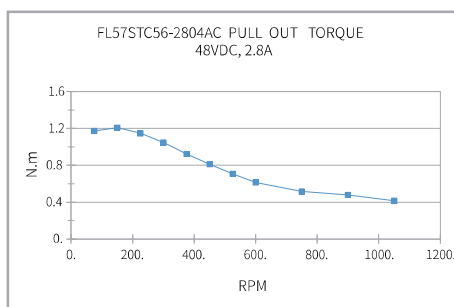
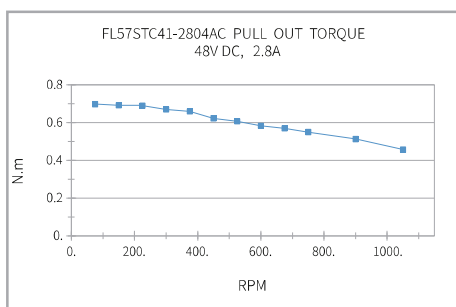


4 线 (leads)



### ● 矩频曲线

(Pull out torque curve)



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	75N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	15N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件



齿轮箱



编码器



刹车

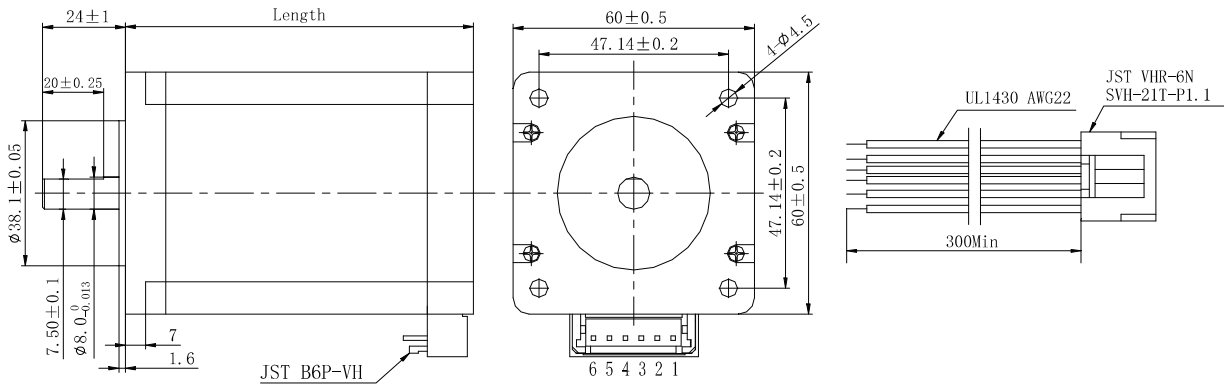
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL60STH45-2804AFC	2.8	0.75	2	1.1	0.05	4	275	0.6	47
FL60STH56-2804AFC	2.8	0.9	3.6	1.65	0.07	4	400	0.77	56
FL60STH65-2804AFC	2.8	1.2	4.6	2.1	0.09	4	570	1.2	67
FL60STH86-2804AFC	2.8	1.5	6.8	3	0.12	4	840	1.4	88

### ● 机械尺寸

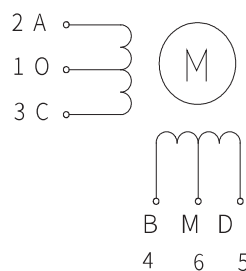
(Dimension)



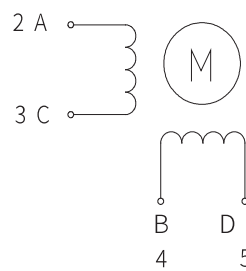
### ● 接线图

(Wiring Diagram)

6 线 (leads)



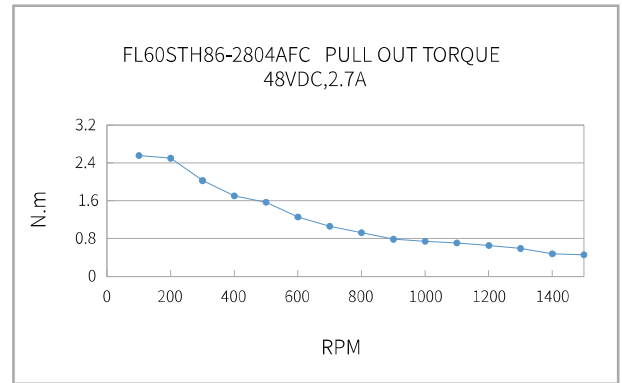
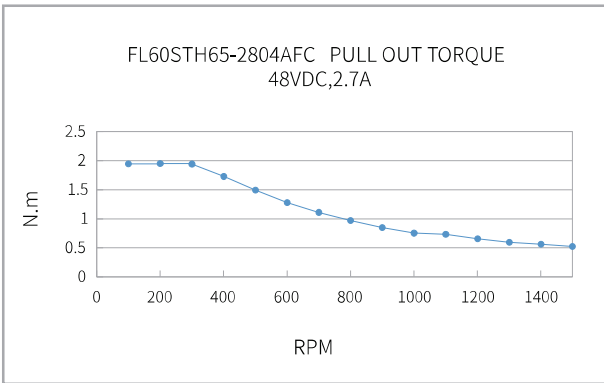
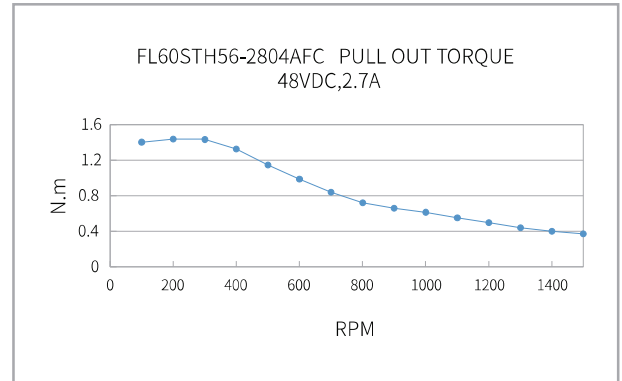
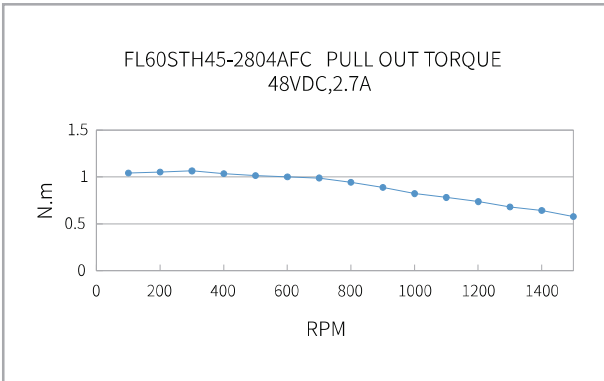
4 线 (leads)





● 矩频曲线

(Pull out torque curve)



# 1.8° 57mm STEN

## 力矩增强型步进电机 Enhanced Torque Stepper Motor



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	75N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	15N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ, 500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件



齿轮箱



编码器



刹车

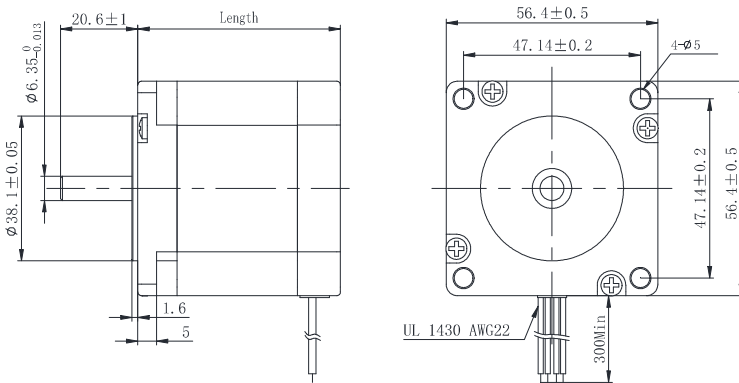
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL57STEN56-2804A	2.8	0.9	2.5	1.5	0.06	4	300	0.7	56
FL57STEN78-2004A	2	2.1	6.9	2.8	0.12	4	500	1.1	78

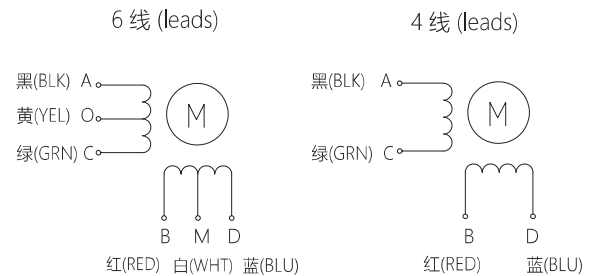
### ● 机械尺寸

(Dimension)



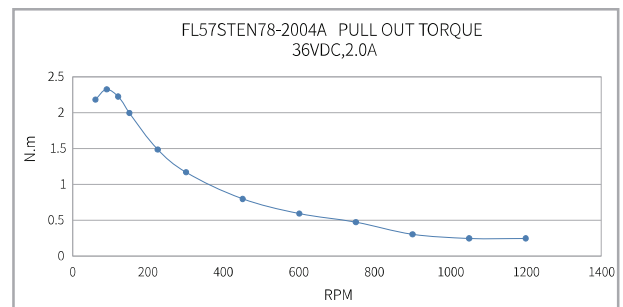
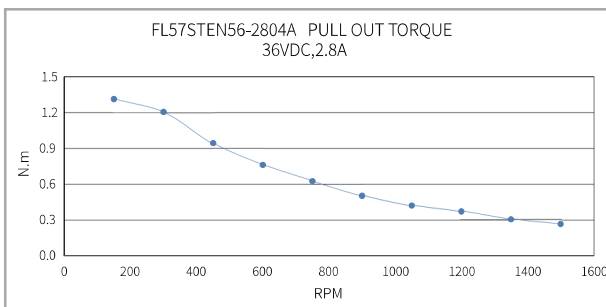
### ● 接线图

(Wiring Diagram)



### ● 矩频曲线

(Pull out torque curve)



# 1.8° 60mm STEN

## 力矩增强型步进电机 Enhanced Torque Stepper Motor

### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	75N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	15N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件



齿轮箱



编码器



刹车

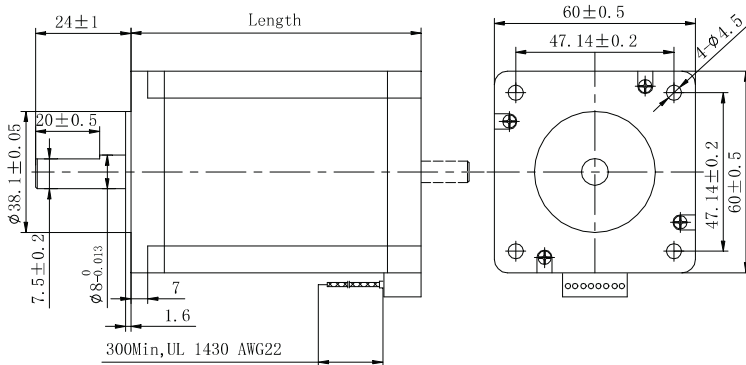
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL60STEN86-2804AF	2.8	1.47	4.5	3.6	0.24	4	920	1.5	88

### ● 机械尺寸

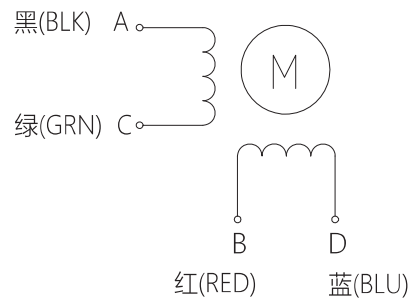
(Dimension)



### ● 接线图

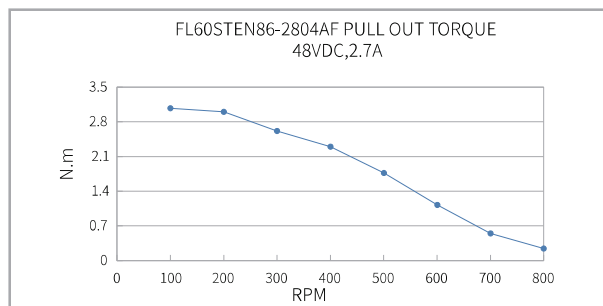
(Wiring Diagram)

4 线 (leads)



### ● 矩频曲线

(Pull out torque curve)





### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	10N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B
防护等级 (IP CODE)	IP65

选件 Options



接插件

齿轮箱

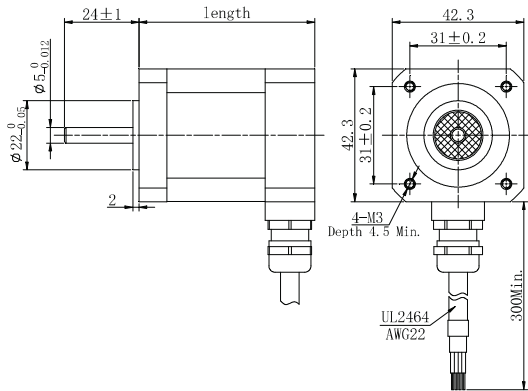
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL42STH47-1684A-IP65	1.68	1.65	2.8	0.44	0.04	4	68	0.4	56.5

### ● 机械尺寸

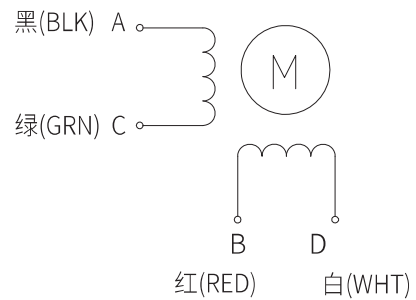
(Dimension)



### ● 接线图

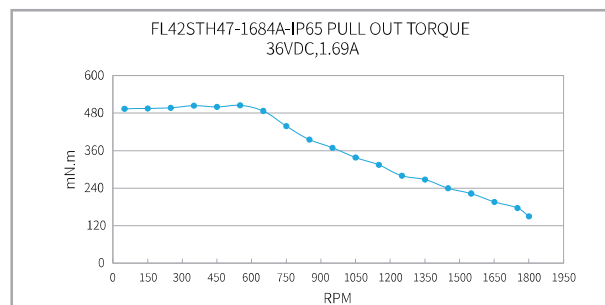
(Wiring Diagram)

4 线 (leads)



### ● 矩频曲线

(Pull out torque curve)



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步, 空载)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	75N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	15N
介电强度 (Dielectric Strength)	600VAC / 1S
绝缘电阻 (Insulation Resistance)	100MΩ, 500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B
防护等级 (IP CODE)	IP65



选件 Options



接插件 齿轮箱

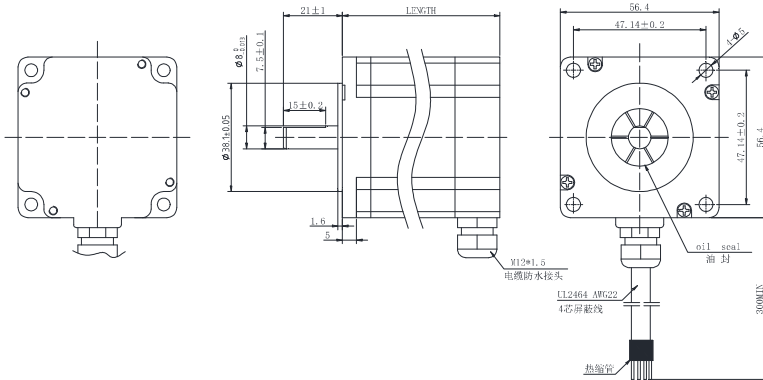
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL57STH41-2804A -IP65	2.8	0.7	1.4	0.55	0.02	4	120	0.6	46.5
FL57STH56-2804A -IP65	2.8	0.9	2.5	1.26	0.04	4	300	0.9	60.5
FL57STH76-2804A -IP65	2.8	1.13	3.6	1.89	0.068	4	480	1.2	81.5

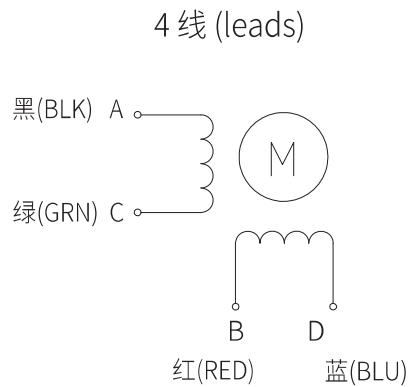
### ● 机械尺寸

(Dimension)



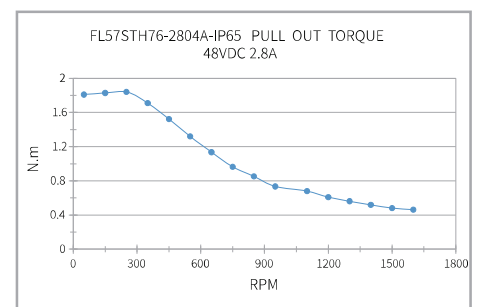
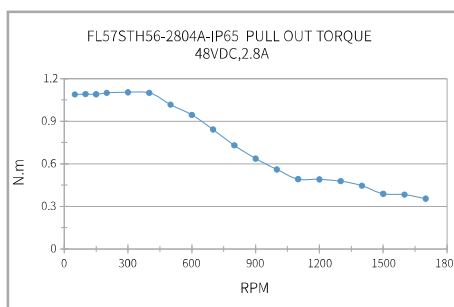
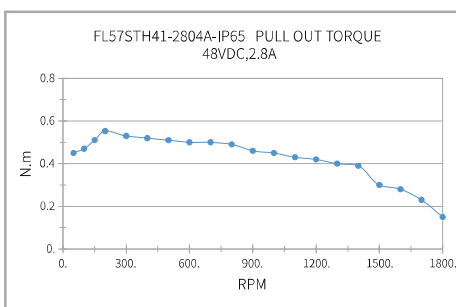
### ● 接线图

(Wiring Diagram)



### ● 矩频曲线

(Pull out torque curve)



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步, 空载)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	75N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	15N
介电强度 (Dielectric Strength)	600VAC / 1S
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B
防护等级 (IP CODE)	IP65



选件 Options



接插件 齿轮箱

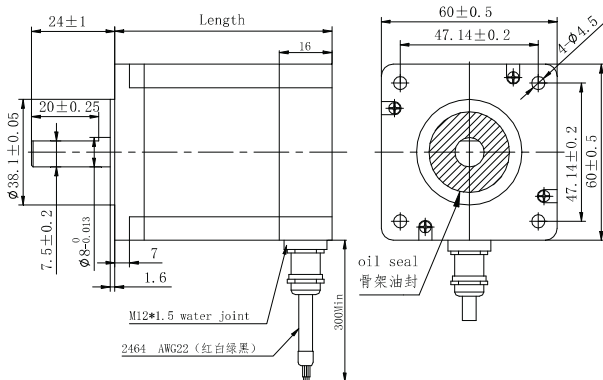
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL60STH86-2804AF -IP65	2.8	1.5	6.8	3	0.14	4	840	1.4	95

### ● 机械尺寸

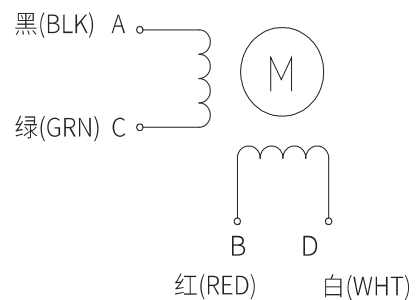
(Dimension)



### ● 接线图

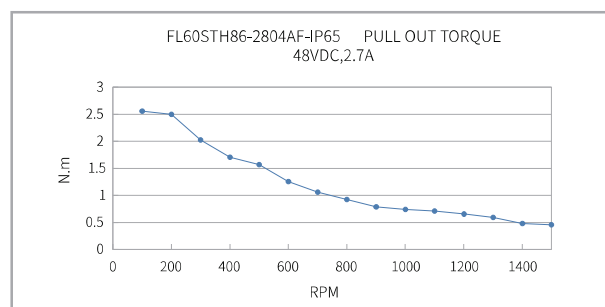
(Wiring Diagram)

4 线 (leads)



### ● 矩频曲线

(Pull out torque curve)





### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	130N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	36N
介电强度 (Dielectric Strength)	900VAC / 1S
绝缘电阻 (Insulation Resistance)	100MΩ / 500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B
防护等级 (IP CODE)	IP65



选件 Options



接插件 齿轮箱

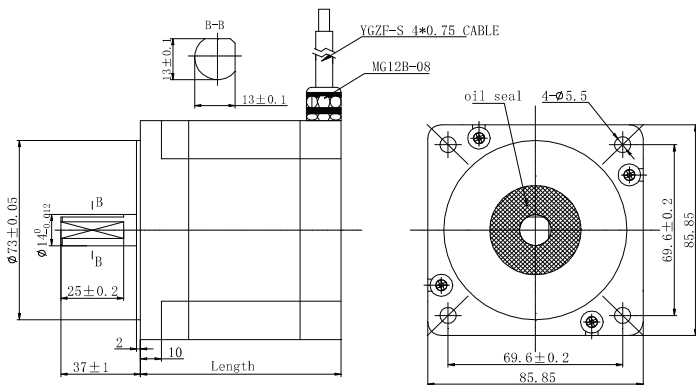
### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL86STH126-7004A-IP65	7	0.48	4.4	9	0.4	4	3000	3.95	127

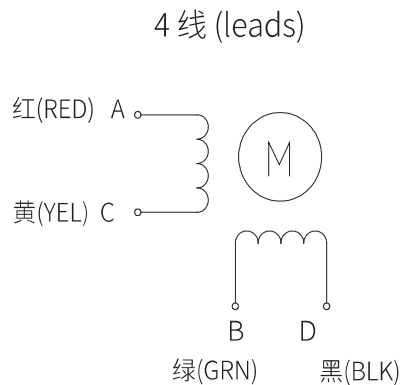
### ● 机械尺寸

(Dimension)



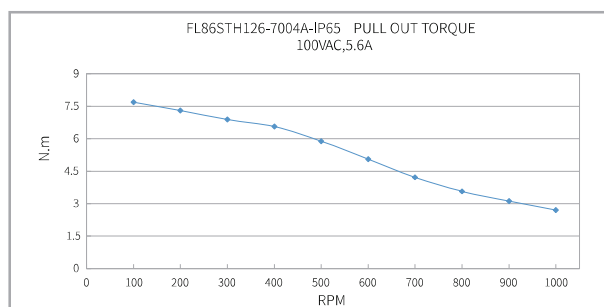
### ● 接线图

(Wiring Diagram)



### ● 矩频曲线

(Pull out torque curve)



# 1.8° 20mm STC-H

空心轴步进电机  
Stepper Motor with Hollow Shaft



## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	10N
最大轴向负载 (Max. axial force)	4N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ, 500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件

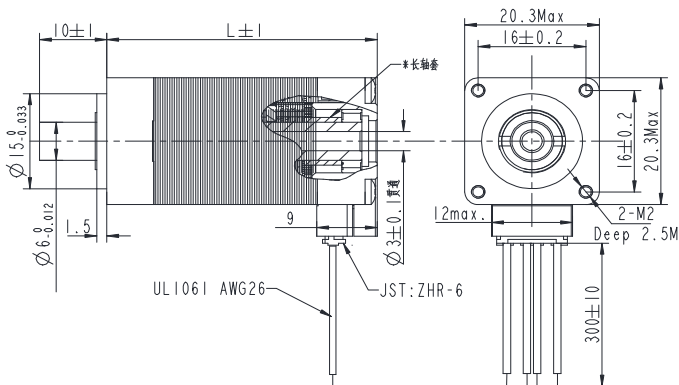
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL20STC33-0604AC -H	0.6	6.4	2.6	0.022	0.002	4	2	0.06	33
FL20STC40-0604AC -H	0.6	7.2	3.15	0.036	0.002	4	2.9	0.08	40

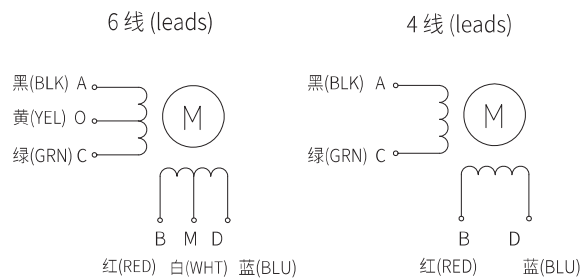
## ● 机械尺寸

(Dimension)



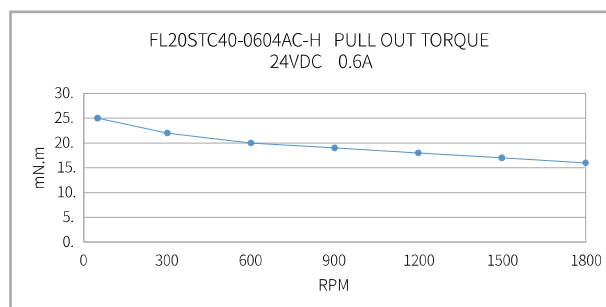
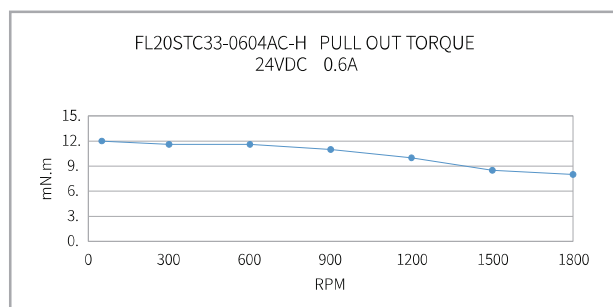
## ● 接线图

(Wiring Diagram)



## ● 矩频曲线

(Pull out torque curve)



# 1.8° 28mm STC-H

空心轴步进电机  
Stepper Motor with Hollow Shaft



## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	28N 距法兰5mm (5mm from the flange)
最大轴向负载 (Max. axial force)	7N
介电强度 (Dielectric Strength)	600VAC / 1S
绝缘电阻 (Insulation Resistance)	100MΩ, 500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件

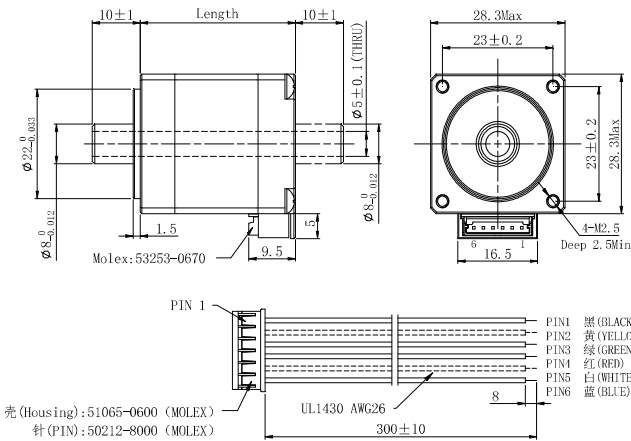
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Double shaft (双出轴)	A	Ω	mH	N.m	N.m	#	g-cm <sup>2</sup>	kg	mm
FL28STC32-0674B-H	0.67	5.6	4	0.065	0.005	4	9	0.11	32
FL28STC51-0674B-H	0.67	9.2	5.6	0.12	0.008	4	18	0.2	52

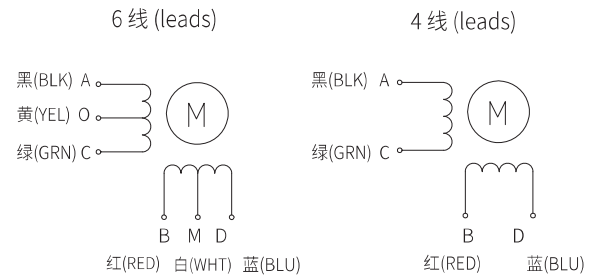
## ● 机械尺寸

(Dimension)



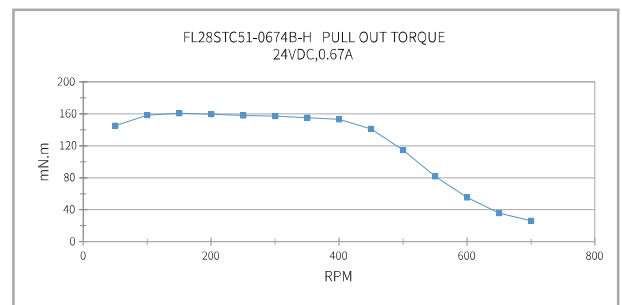
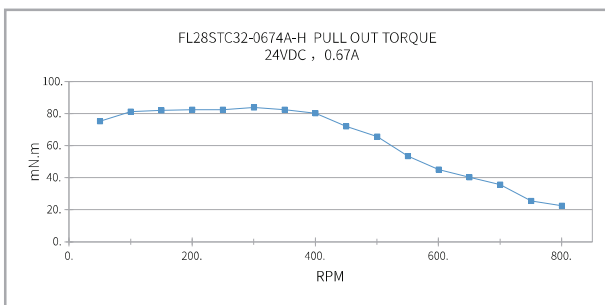
## ● 接线图

(Wiring Diagram)



## ● 矩频曲线

(Pull out torque curve)



# 1.8° 35mm STC-H

空心轴步进电机  
Stepper Motor with Hollow Shaft



## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	10N
介电强度 (Dielectric Strength)	600VAC / 1S
绝缘电阻 (Insulation Resistance)	100MΩ, 500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件

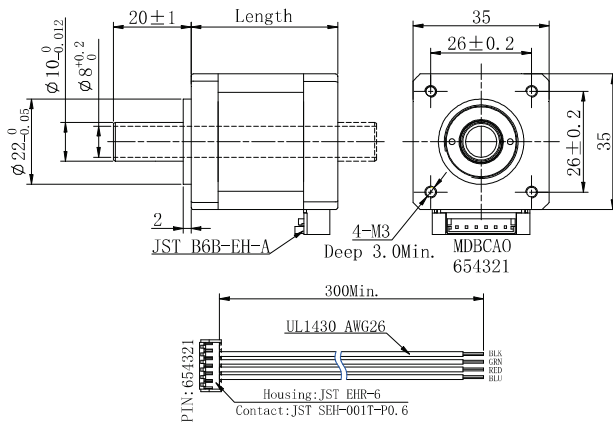
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL35STC38-1204AC-H	1.2	2.8	4	0.23	0.018	4	20	0.21	38
FL35STC44-1204AC-H	1.2	3.2	5.2	0.28	0.02	4	28	0.23	44

## ● 机械尺寸

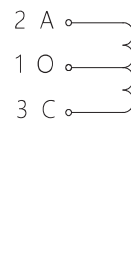
(Dimension)



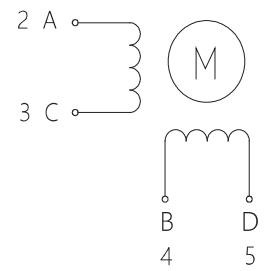
## ● 接线图

(Wiring Diagram)

6 线 (leads)

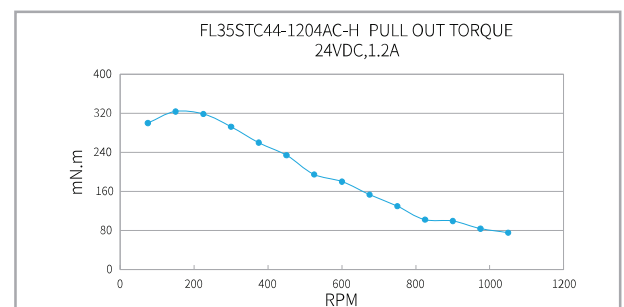
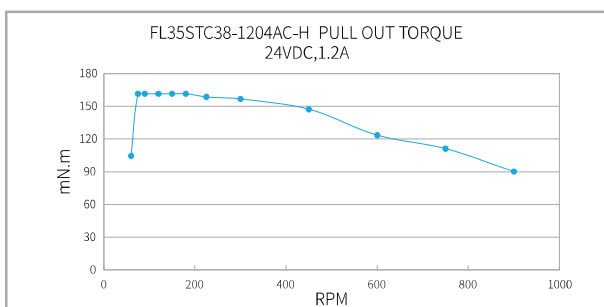


4 线 (leads)



## ● 矩频曲线

(Pull out torque curve)



# 1.8° 42mm STC-H

空心轴步进电机  
Stepper Motor with Hollow Shaft

## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	10N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件

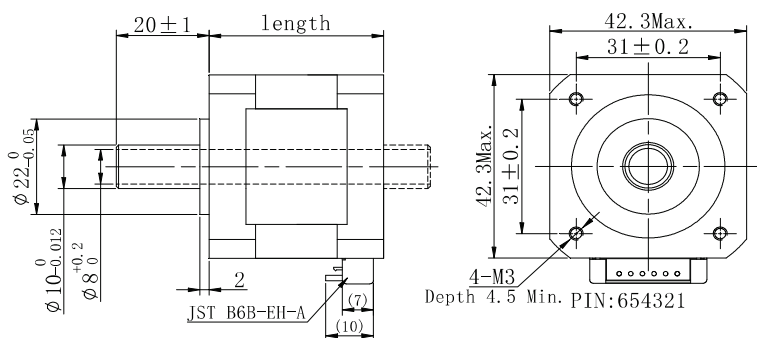
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL42STC38-1684AC-H	1.68	1.65	3.2	0.36	0.015	4	54	0.28	39.5
FL42STC47-1684AC-H	1.68	1.65	2.8	0.44	0.02	4	68	0.35	47.5

## ● 机械尺寸

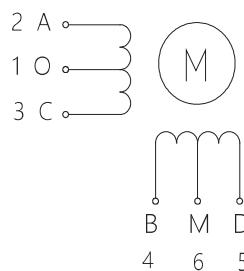
(Dimension)



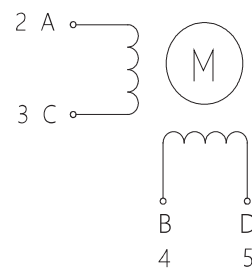
## ● 接线图

(Wiring Diagram)

6 线 (leads)

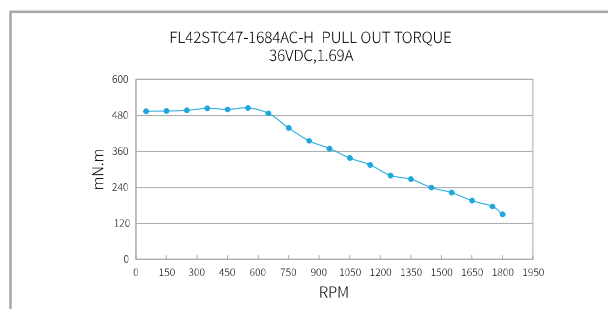
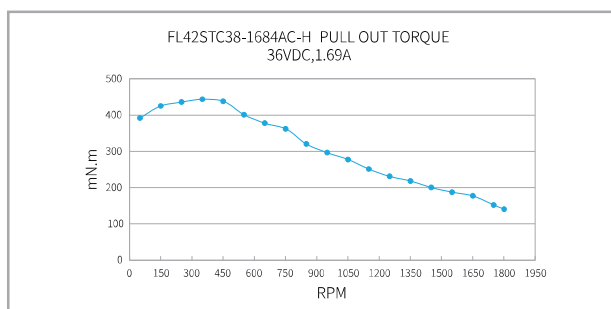


4 线 (leads)



## ● 矩频曲线

(Pull out torque curve)



# 1.8° 57mm STC-H

空心轴步进电机  
Stepper Motor with Hollow Shaft



## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	75N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	15N
介电强度 (Dielectric Strength)	600VAC / 1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件

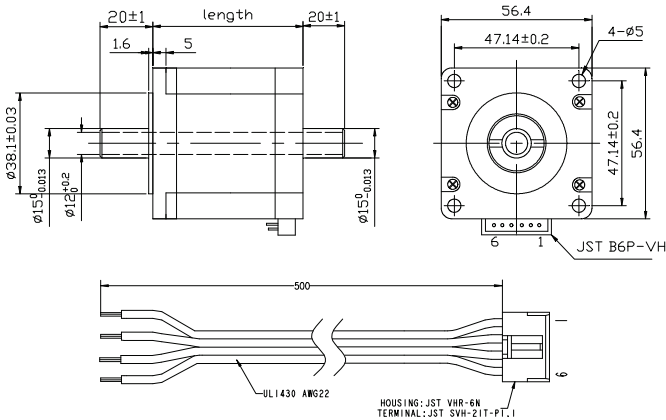
## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Double shaft (双出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL57STC41-2804B-H	2.8	0.78	1.8	0.6	0.025	4	120	0.45	40.5
FL57STC76-2804B-H	2.8	1.3	5.3	2.3	0.068	4	480	1.1	77.5

## ● 机械尺寸

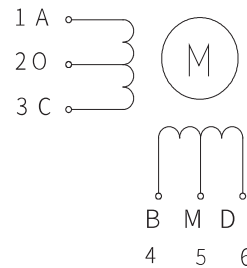
(Dimension)



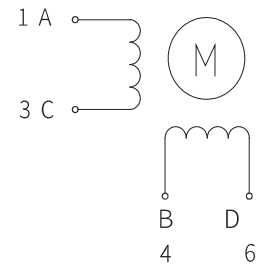
## ● 接线图

(Wiring Diagram)

6 线 (leads)

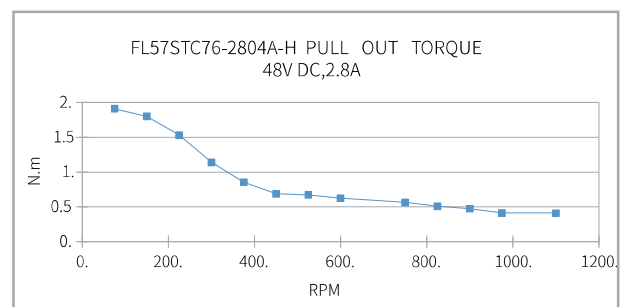
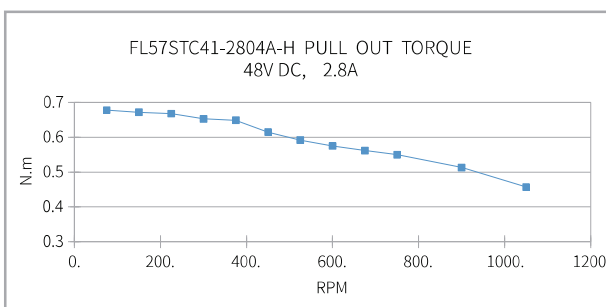


4 线 (leads)



## ● 矩频曲线

(Pull out torque curve)



# 1.8° 86mm STC-H

空心轴步进电机  
Stepper Motor with Hollow Shaft

## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Radial Play)	0.02mm@450 g
轴向间隙 (Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	130N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	36N
介电强度 (Dielectric Strength)	1200VAC / 1S
绝缘电阻 (Insulation Resistance)	100MΩ, 500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件

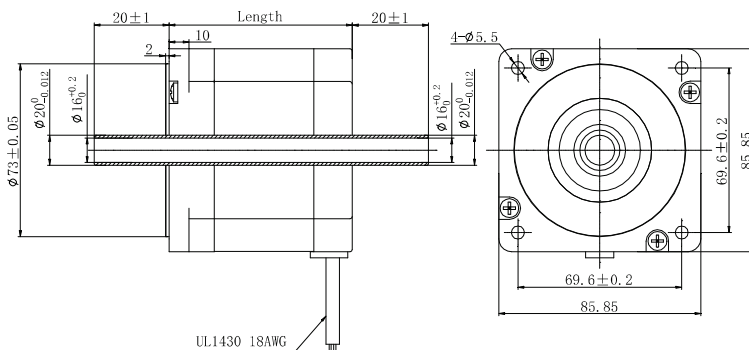
## ● 电性能

(Electrical specifications)

型号 (Model No.)		Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Double shaft(双出轴)		A	Ω	mH	N.m	N.m	#	g-cm <sup>2</sup>	kg	mm
FL86STH80-4208B-H	单极性 unipolar	4.2	0.8	3.5	3.3	0.12	8	1400	2.3	77
	串联 series	3	1.6	14	4.5					
	并联 parallel	6	0.4	3.5	4.5					
FL86STH118-4208B-H	单极性 unipolar	4.2	1.2	6.5	6	0.24	8	2700	3.8	114
	串联 series	3	2.4	26	8.5					
	并联 parallel	6	0.6	6.5	8.5					

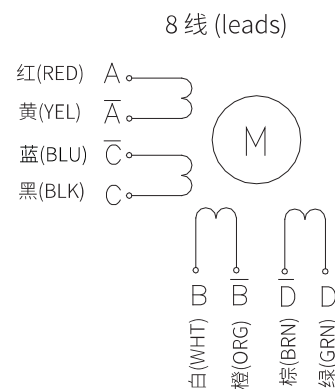
## ● 机械尺寸

(Dimension)



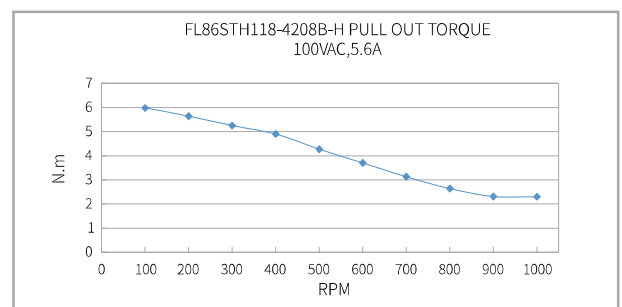
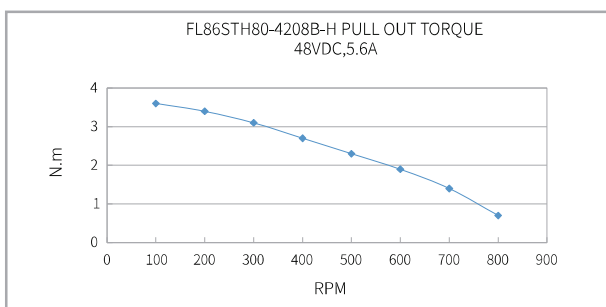
## ● 接线图

(Wiring Diagram)



## ● 矩频曲线

(Pull out torque curve)



# 1.8° 42mm STH-IE

内置驱动型步进电机  
Stepper Motor with Integrated Driver



## ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Shaft Radial Play)	0.02mm@450 g-load
轴向间隙 (Shaft Axial Play)	0.08mm@450 g-load
最大径向负载 (Max. radial force)	28N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	10N
介电强度 (Dielectric Strength)	600VAC /1s
绝缘电阻 (Insulation Resistance)	100MΩ ,500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱

## ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
FL42STH33-1334A-IE2	1.33	2.1	2.5	0.22	0.012	4	35	0.22	33.5
FL42STH38-1684A-IE4	1.68	1.65	3.2	0.36	0.015	4	54	0.28	39.5
FL42STH47-1684A-IE4	1.68	1.65	2.8	0.44	0.02	4	68	0.35	47.5

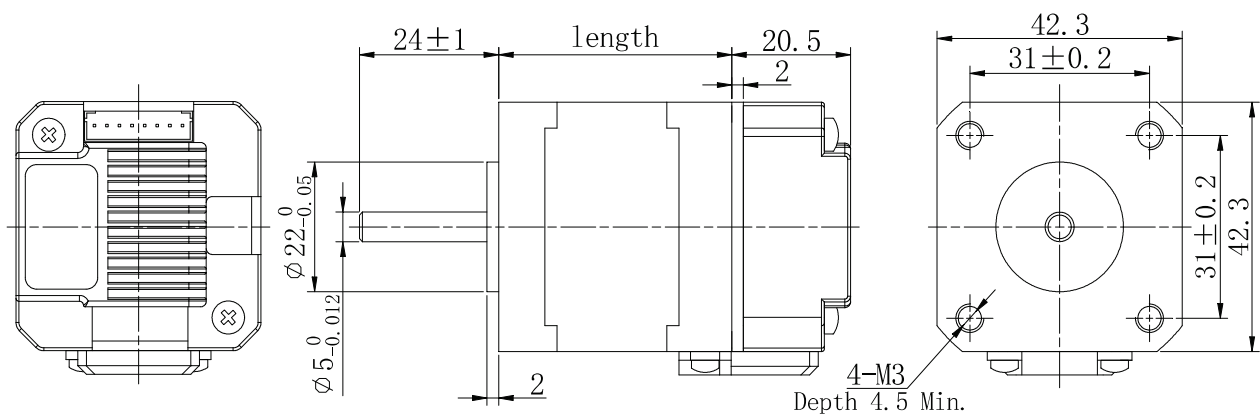
## ● 驱动器电气指标

(Drive electrical indicator)

说明 (Specifications)	最小值 (Min.)	典型值 (Typ.)	最大值 (Max.)	单位 (Unit)
输入电压 (直流) / Input voltage (DC)	12	24	32	Vdc
输出电流 (峰值) / Output current (peak)	0.5	-	2.2	A
步进脉冲频率 / Step pulse frequency	0	-	200	KHz
脉冲电压 / Pulse voltage	-	5	5	Vdc
控制信号输入电流 / Control signal input current	7	10	16	mA
绝缘电阻 / Insulation resistance	100	-	-	MΩ

## ● 机械尺寸

(Wiring Diagram)





## ● 细分设定 (Microstep Resolution Selection)

细分	2	4	8	16	20	25	32	64
PU/Rev	400	800	1600	3200	4000	5000	6400	12800
SW6	ON	ON	ON	ON	OFF	OFF	OFF	OFF
SW5	ON	ON	OFF	OFF	ON	ON	OFF	OFF
SW4	ON	OFF	ON	OFF	ON	OFF	ON	OFF

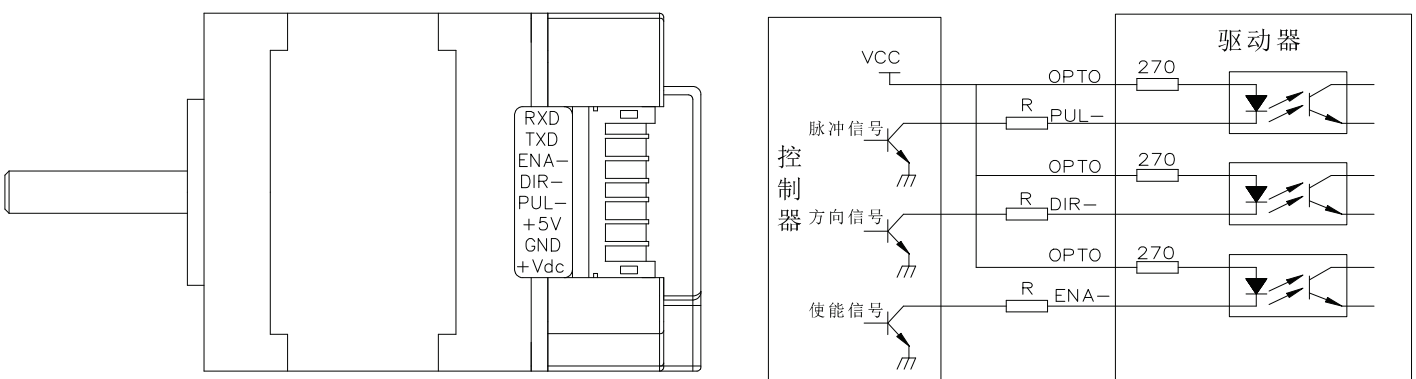
## ● 动态电流设定 (Dynamic current setting)

电流Peak	0.5A	0.7A	1.0A	1.2A	1.5A	1.8A	2.0A	2.2A
电流RMS	0.35A	0.5A	0.7A	0.85A	1.0A	1.28A	1.42A	1.58A
SW3	ON	ON	ON	ON	OFF	OFF	OFF	OFF
SW2	ON	ON	OFF	OFF	ON	ON	OFF	OFF
SW1	ON	OFF	ON	OFF	ON	OFF	ON	OFF

## ● 控制信号输入端接口 (Control signal input interface)

引脚说明 (Pin description)	功能 (Function)
+Vdc	电源电压:12~32 Vdc, 包括电压波动和EMF电压。 Power supply:12~32 Vdc, Including voltage fluctuation and EMF voltage.
GND	脉冲控制信号:脉冲上升沿有效;PUL-高电平时4~5V, 低电平时0~0.5V。为了可靠响应脉冲信号, 脉冲宽度应大于2.5如采用+12V或+24V时需串电阻。 Pulse control signal: pulse rising edge is valid; PUL-high level is 4~5V, low level is 0~0.5V. In order to respond reliably to pulse signals, the pulse width should be greater than 2.5. If +12V or +24V is used, string resistance is required.
OPTO+ (+5V)	
PUL-	
OPTO+ (+5V)	方向信号:高/低电平信号, 为保证电机可靠换向, 方向信号应先于脉冲信号至少 5 $\mu$ s建立。电机的初始运行方向与电机的接线有关, 互换任一相绕组(如A+、A-交换) 可以改变电机初始运行的方向, DIR-高电平时4~5V, 低电平时0~0.5V。 Direction signal: High/low level signal. To ensure reliable commutation of the motor, the direction signal should be established before the pulse signal is at least 5 $\mu$ s. The initial running direction of the motor is related to the wiring of the motor. Interchanging any phase winding (such as A+, A-exchange) can change the direction of the initial running of the motor, DIR-high level 4~5V, low level 0~0.5V.
DIR-	
OPTO+ (+5V)	使能信号:此输入信号用于使能或禁止。ENA+ 接+5V, ENA-接低电平(或内部光耦导通)时, 驱动器将切断电机各相的电流使电机处于自由状态, 此时步进脉冲不被响应。当不需用此功能时, 使能信号端悬空即可。 Enable signal: This input signal is used to enable or disable. When ENA+ is connected to +5V and ENA- is connected to low level (or internal optocoupler is on), the driver will cut off the current of each phase of the motor to make the motor free, and the step pulse will not be responded. When this function is not needed, the enable signal is left floating.
ENA- (ENA)	
TXD	RS232 transmit
RXD	RS232 receive

## ● 系统连接框图 (System connection diagram)



### ● 特性概要

(General specification)

项目 (Item)	说明 (Specifications)
步距角 (Step Angle)	1.8°
步距角精度 (Step Angle Accuracy)	±5% (整步无负载, full step, no load)
径向间隙 (Shaft Radial Play)	0.02mm@450 g
轴向间隙 (Shaft Axial Play)	0.08mm@450 g
最大径向负载 (Max. radial force)	75N 距法兰20mm (20mm from the flange)
最大轴向负载 (Max. axial force)	15N
介电强度 (Dielectric Strength)	600VAC / 1S
绝缘电阻 (Insulation Resistance)	100MΩ / 500VDC
环境温度 (Ambient Temperature)	-20°C~+50°C
绝缘等级 (Insulation Class)	Class B



选件 Options



接插件 齿轮箱

### ● 电性能

(Electrical specifications)

型号 (Model No.)	Current /Phase 每相电流	Resistance /Phase 每相电阻	Inductance /Phase 每相电感	Holding Torque 保持转矩	Detent Torque 定位转矩	# of Leads 引出线数	Rotor Inertia 转动惯量	Weight 重量	Length 机身长度
Single shaft (单出轴)	A	Ω	mH	N.m	N.m	#	g·cm <sup>2</sup>	kg	mm
IO57-10	2.8	0.9	2.5	1.26	0.04	4	300	0.9	54
IO57-22	5.6	0.4	1.8	2.2	0.07	4	500	1.5	80

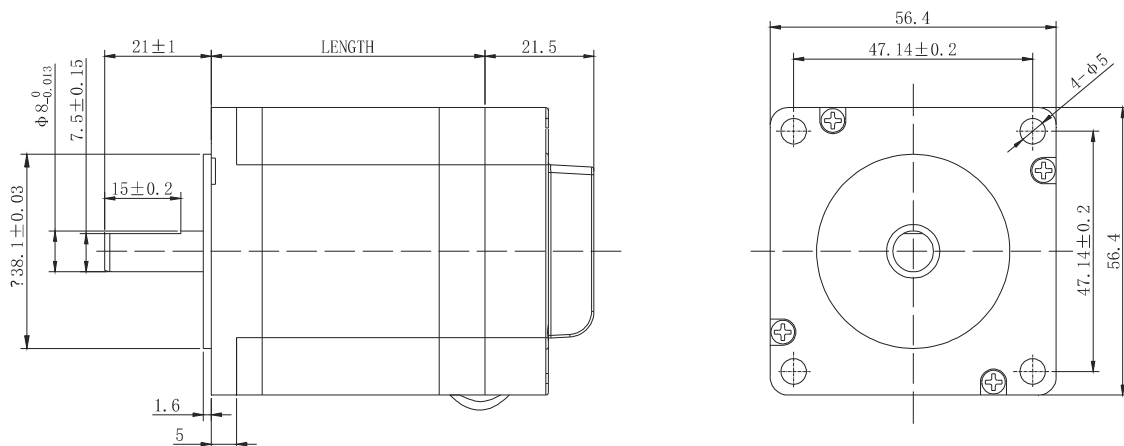
### ● 驱动器电气指标

(Drive electrical indicator)

说明 (Specifications)	最小值 (Min.)	典型值 (Typ.)	最大值 (Max.)	单位 (Unit)
输入电压 (直流) / Input voltage (DC)	20	36	50	Vdc
输出电流 (峰值) / Output current (peak)	1.5	-	5.6	A
步进脉冲频率 / Step pulse frequency	0	-	200	KHz
脉冲电压 / Pulse voltage	-	5	-	Vdc
控制信号输入电流 / Control signal input current	7	10	16	mA
绝缘电阻 / Insulation resistance	100	-	-	MΩ

### ● 机械尺寸

(Wiring Diagram)



## ● 细分设定 (Microstep Resolution Selection)

细分	2	4	8	16	20	25	32	64
PU/Rev	400	800	1600	3200	4000	5000	6400	12800
SW6	ON	ON	ON	ON	OFF	OFF	OFF	OFF
SW5	ON	ON	OFF	OFF	ON	ON	OFF	OFF
SW4	ON	OFF	ON	OFF	ON	OFF	ON	OFF

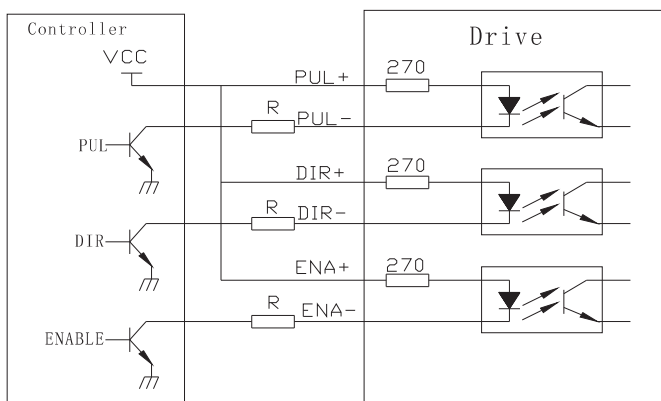
## ● 动态电流设定 (Dynamic current setting)

电流Peak	1.5A	2.1A	2.7A	3.2A	3.8A	4.3A	4.9A	5.6A
电流RMS	1.0A	1.5A	1.9A	2.3A	2.7A	3.1A	3.5A	4.0A
SW3	ON	ON	ON	ON	OFF	OFF	OFF	OFF
SW2	ON	ON	OFF	OFF	ON	ON	OFF	OFF
SW1	ON	OFF	ON	OFF	ON	OFF	ON	OFF

## ● 控制信号输入端接口 (Control signal input interface)

引脚说明 (Pin description)	功能 (Function)
+Vdc	电源电压:12~32 Vdc, 包括电压波动和EMF电压。 Power supply:12~32 Vdc, Including voltage fluctuation and EMF voltage.
GND	脉冲控制信号:脉冲上升沿有效;PUL-高电平时4~5V, 低电平时0~0.5V。为了可靠响应脉冲信号, 脉冲宽度应大于2.5如采用+12V或+24V时需串电阻。 Pulse control signal: pulse rising edge is valid; PUL-high level is 4~5V, low level is 0~0.5V. In order to respond reliably to pulse signals, the pulse width should be greater than 2.5. If +12V or +24V is used, string resistance is required.
OPTO+ (+5V)	
PUL-	
OPTO+ (+5V)	方向信号:高/低电平信号, 为保证电机可靠换向, 方向信号应先于脉冲信号至少 5 $\mu$ s建立。电机的初始运行方向与电机的接线有关, 互换任一相绕组(如A+, A-交换) 可以改变电机初始运行的方向, DIR-高电平时4~5V, 低电平时0~0.5V。 Direction signal: High/low level signal. To ensure reliable commutation of the motor, the direction signal should be established before the pulse signal is at least 5 $\mu$ s. The initial running direction of the motor is related to the wiring of the motor. Interchanging any phase winding (such as A+, A-exchange) can change the direction of the initial running of the motor, DIR-high level 4~5V, low level 0~0.5V.
DIR-	
OPTO+ (+5V)	使能信号:此输入信号用于使能或禁止。ENA+ 接+5V, ENA-接低电平(或内部光耦导通)时, 驱动器将切断电机各相的电流使电机处于自由状态, 此时步进脉冲不被响应。当不需用此功能时, 使能信号端悬空即可。 Enable signal: This input signal is used to enable or disable. When ENA+ is connected to +5V and ENA- is connected to low level (or internal optocoupler is on), the driver will cut off the current of each phase of the motor to make the motor free, and the step pulse will not be responded. When this function is not needed, the enable signal is left floating.
ENA- (ENA)	
TXD	RS232 transmit
RXD	RS232 receive

## ● 系统连接框图 (System connection diagram)



注意:VCC值为5V时, R短接;

VCC值为12V时, R为1K, 大于1/8W电阻;

VCC值为24V时, R为2K, 大于1/8W电阻;

### ● 特性概要

(General specification)

Ratio 减速比	3.6	7.2	9	10	18	36
Weight 重量	0.1kg			0.125kg	0.15kg	
Number of gear trains 减速级数	2			3	4	
Nominal torque 额定转矩	2.5N.m					
Ultimate torque 极限转矩	3.0N.m					
Efficiency 效率	81%			72%	65%	
Backlash 回差	0.6 deg			0.4deg		



选件 Options



接插件 编码器

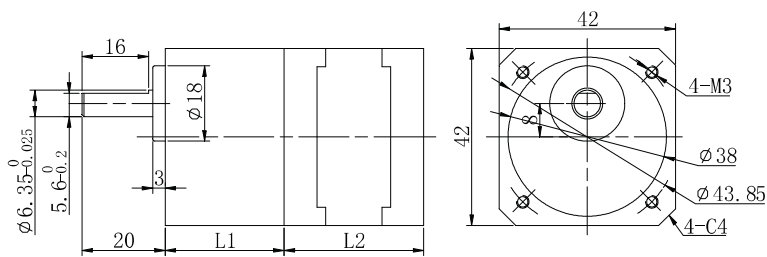
### ● 电性能

(Electrical specifications)

Ratio 减速比		3.6	7.2	9	10	18	36
FL42STH33-42JB	Torque(N.m) (at 300rpm) 转矩(N.m) (在 300rpm)	0.5	1.1	1.3	1.45	2.3	-
	speed(rpm) 转速(rpm)	83	41.5	33	30	16.5	-
	FL42STH38-42JB	Torque(N.m) (at 300rpm) 转矩(N.m) (在 300rpm)	0.73	1.45	1.8	2	--
	speed(rpm) 转速(rpm)	83	41	33	30	--	--

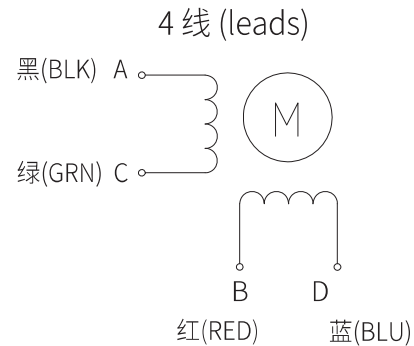
### ● 机械尺寸

(Dimension)



### ● 接线图

(Wiring Diagram)



RATIO 减速比	L2(mm)		L1(mm)
3.6---36	FL42STH33-42JB 33.5	FL42STH38-42JB 39.5	28.5

### ● 特性概要

(General specification)

Ratio 减速比	3	7.5	13	15	25	30	50	75	90	100	120	150
Weight 重量	0.24kg			0.3kg								
Number of gear trains 减速级数	2			3			4					
Nominal torque 额定转矩	10N.m											
Ultimate torque 极限转矩	15N.m											
Efficiency 效率	81%			73%			66%					
Backlash 回差	4°			3.5°			2.5°					



选件 Options



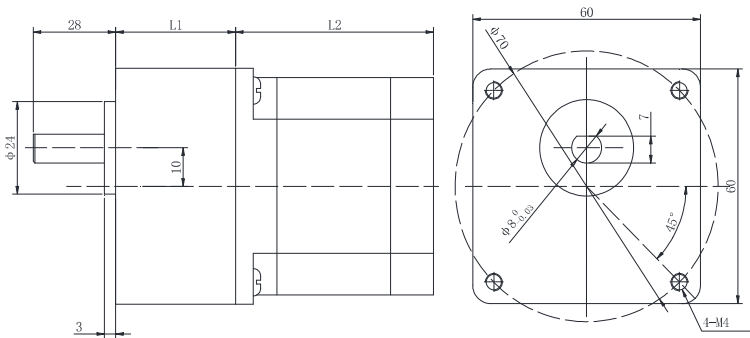
### ● 电性能

(Electrical specifications)

Ratio 减速比		3	7.5	12.5	15	25	30	50	75	90	100	120	150
FL57STH41-60JB	Torque(N.m) (at 300rpm) 转矩(N.m) (在 300rpm)	1.02	2.55	4.25	5.1	7.66	9.19	---	---	---	---	---	---
	speed(rpm) 转速(rpm)	100	40	24	20	12	10	---	---	---	---	---	---
FL57STH51-60JB	Torque(N.m) (at 300rpm) 转矩(N.m) (在 300rpm)	1.78	4.25	7.08	8.5	---	---	---	---	---	---	---	---
	speed(rpm) 转速(rpm)	100	40	24	20	---	---	---	---	---	---	---	---
FL57STH56-60JB	Torque(N.m) (at 300rpm) 转矩(N.m) (在 300rpm)	1.84	4.61	7.69	9.23	---	---	---	---	---	---	---	---
	speed(rpm) 转速(rpm)	100	40	24	20	---	---	---	---	---	---	---	---
FL57STH76-60JB	Torque(N.m) (at 300rpm) 转矩(N.m) (在 300rpm)	2.91	7.29	---	---	---	---	---	---	---	---	---	---
	speed(rpm) 转速(rpm)	100	40	---	---	---	---	---	---	---	---	---	---

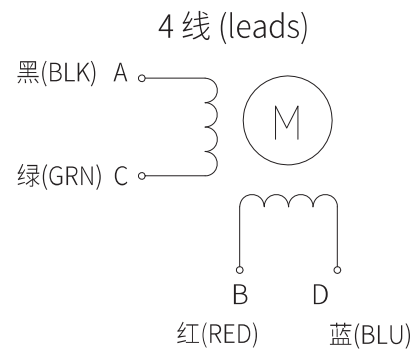
### ● 机械尺寸

(Dimension)



### ● 接线图

(Wiring Diagram)



RATIO 减速比	L2(mm)				L1(mm)
	FL57STH41-60JB	FL57STH51-60JB	FL57STH56-60JB	FL57STH76-60JB	
3---15	40	50	55	75	32
25---150					40

### ● 特性概要

(General specification)

Ratio 减速比	3	5	6	7.5	9	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120
Weight 重量	1.3kg										1.5kg									
Number of gear trains 减速级数	2										3					4				
Nominal torque 额定转矩	30N.m																			
Ultimate torque 极限转矩	45N.m																			
Efficiency 效率	81%										73%					66%				
Backlash 回差	4 deg										3.5deg					2.5deg				



选件 Options



接插件 编码器 刹车

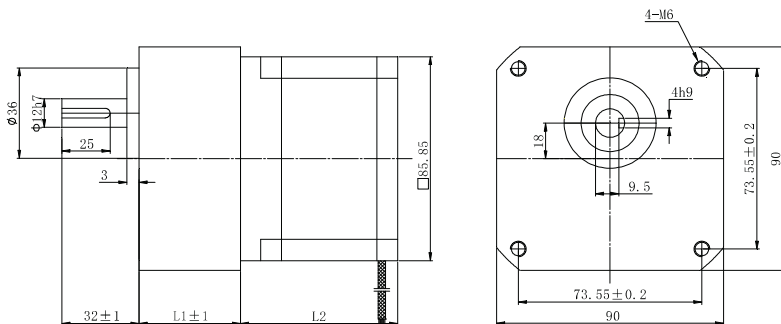
### ● 电性能

(Electrical specifications)

Ratio 减速比		3	5	6	7.5	9	10	13	15	18	20	25	30	36	40	50	60	75	90	100	120
FL86STH65-90JB	Torque(N.m) (at 400rpm) 转矩(N.m) (在 400rpm)	3.6	6	7.2	9.1	11	12	15	18	20	22	27	---	---	---	---	---	---	---	---	---
	speed(rpm) 转速(rpm)	133	80	67	53	44	40	32	27	22	20	16	---	---	---	---	---	---	---	---	---
FL86STH80-90JB	Torque(N.m) (at 400rpm) 转矩(N.m) (在 400rpm)	4.8	8.1	9.7	12	15	16	20	24	26	29	---	---	---	---	---	---	---	---	---	---
	speed(rpm) 转速(rpm)	133	80	67	53	44	40	32	27	22	20	---	---	---	---	---	---	---	---	---	---
FL86STH118-90JB	Torque(N.m) (at 400rpm) 转矩(N.m) (在 400rpm)	9.7	16	19	24	29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	speed(rpm) 转速(rpm)	133	80	67	53	44	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FL86STH156-90JB	Torque(N.m) (at 400rpm) 转矩(N.m) (在 400rpm)	12	20	24	30	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	speed(rpm) 转速(rpm)	133	80	67	53	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

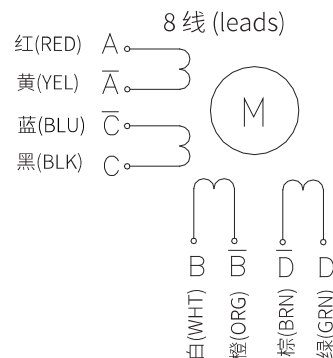
### ● 机械尺寸

(Dimension)



### ● 接线图

(Wiring Diagram)



RATIO	L2(mm)				L1(mm)
	FL86STH65-90JB	FL86STH80-90JB	FL86STH118-90JB	FL86STH156-90JB	
3---15	65	80	118	156	42
18---120					60

内齿圈材质: 金属	Φ22行星减速器, 允许转矩范围: 0.6N.m~2.0N.m	22mm Planetary Gearbox Permissible Load Range: 0.6N.m~2.0N.m
-----------	---------------------------------	---

### ● 特性概要 (General specification)

内齿圈材料 Ring material	金属 metal
输出轴轴承形式 Bearing at output	滚动轴承 Ball bearings
最大允许径向负载 (离法兰10mm处) Max. Radial load (10mm from flange)	50N
最大允许轴向负载 Max. shaft axial load	30N
径向间隙 (测量点尽量接近法兰) Radial play of shaft (near to flange)	≤0.08 mm
轴向间隙 Axial play of shaft	≤0.3 mm

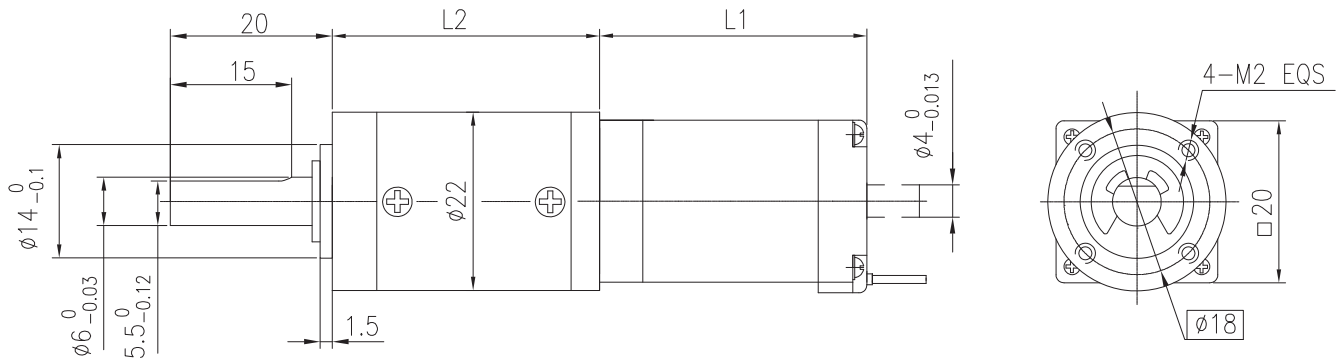
选件 Options



接插件



### ● 机械尺寸 (Dimension)



### ● FL20STH混合式步进电机性能 (FL20STH Hybrid Stepping Motor Specifications)

Model No.	额定电压	每相电流	每相电阻	每相电感	保持转矩	引出线数	转动惯量	重量	长度L1	适配减速比
	Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Length L1	Max. Gear Ratio
单轴 Single Shaft	V	A	Ω	mH	g.cm		kg·m <sup>2</sup>	g	mm	
FL20STH33-0604A	3.9	0.6	6.5	1.7	180	4	2.0x10 <sup>-7</sup>	60	33	≤1:369
FL20STH42-0804A	4.32	0.8	5.4	1.5	300	4	3.6x10 <sup>-7</sup>	80	42	≤1:264

### ● 行星减速器性能 (Planetary Gearbox Specifications)

减速比 Reduction ratio	3.71	5.18	14	19	27	51	71	100	139	189	264	369
精确减速比 Accurate Reduction Ratio	<sup>63</sup> / <sub>17</sub>	<sup>57</sup> / <sub>11</sub>	<sup>3969</sup> / <sub>289</sub>	<sup>3591</sup> / <sub>187</sub>	<sup>3249</sup> / <sub>121</sub>	<sup>250047</sup> / <sub>4913</sub>	<sup>226233</sup> / <sub>3179</sub>	<sup>204687</sup> / <sub>2057</sub>	<sup>185193</sup> / <sub>1331</sub>	<sup>538861</sup> / <sub>2857</sub>	<sup>1119000</sup> / <sub>4243</sub>	<sup>3661450</sup> / <sub>9929</sub>
减速级数 Number of gear trains	1			2			3			4		
减速器长度 (L2) Length (L2)	mm		23.4	30			36.4			42.8		
最大额定转矩 Max. rated torque	kg.cm		6	10			20			20		
瞬间允许转矩 Short time permissible torque	kg.cm		20	30			60			60		
效率 Efficiency	%		90%	81%			73%			66%		
背隙 (无负载时) Backlash at no-load			0.6°	1.0°			1.5°			1.5°		
重量 Weight	g		31	37			43			49		

# 28JMS40K-28STH

## 行星减速步进电机 Planetary Gear Stepper Motor



内齿圈材质: 金属	Φ28行星减速器, 允许转矩范围: 1.2N.m~4.0N.m	28mm Planetary Gearbox Permissible Load Range: 1.2N.m~4.0N.m
-----------	---------------------------------	---

### ● 特性概要 (General specification)

内齿圈材料 Ring material	金属 metal
输出轴轴承形式 Bearing at output	滚动轴承 Ball bearings
最大允许径向负载 (离法兰10mm处) Max. Radial load (10mm from flange)	100N
最大允许轴向负载 Max. shaft axial load	50N
径向间隙 (测量点尽量接近法兰) Radial play of shaft (near to flange)	≤0.07 mm
轴向间隙 Axial play of shaft	≤0.3 mm

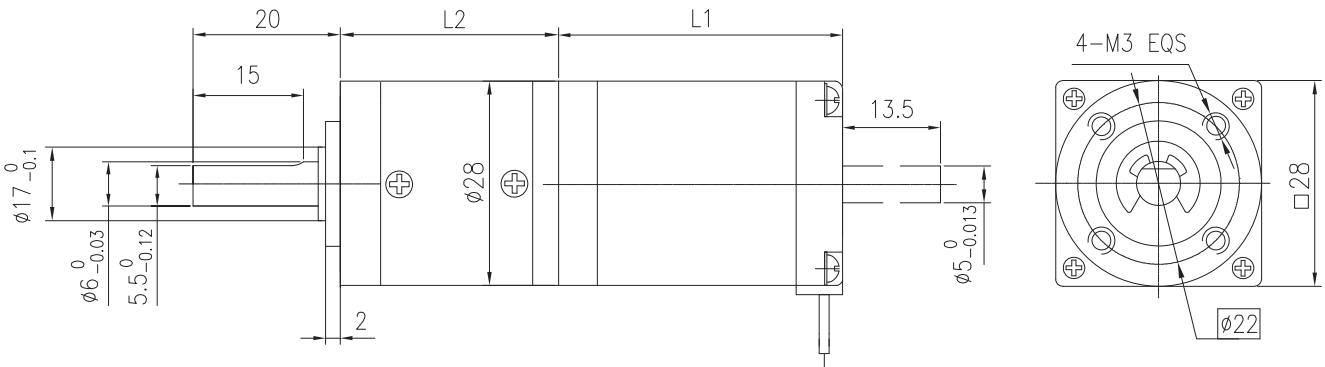
选件 Options



接插件



### ● 机械尺寸 (Dimension)



### ● FL28STH混合式步进电机性能 (FL28STH Hybrid Stepping Motor Specifications)

Model No.	额定电压	每相电流	每相电阻	每相电感	保持转矩	引出线数	转动惯量	重量	长度L1	适配减速比
	Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Length L1	Max. Gear Ratio
单轴 Single Shaft	V	A	Ω	mH	g.cm		kg·m <sup>2</sup>	g	mm	
FL28STH45-0956A	3.4	0.95	3.4	1.2	750	6	12x10 <sup>-7</sup>	44.5	44.5	≤1:189
FL28STH51-0956A	4.4	0.95	4.6	1.8	900	6	18x10 <sup>-7</sup>	50.5	50.5	≤1:189

### ● 行星减速器性能 (Planetary Gearbox Specifications)

减速比 Reduction ratio	3.71	5.18	14	19	27	51	72	100	139	189	264	369
精确减速比 Accurate Reduction Ratio	<sup>63</sup> / <sub>17</sub>	<sup>57</sup> / <sub>11</sub>	<sup>3969</sup> / <sub>289</sub>	<sup>3591</sup> / <sub>187</sub>	<sup>3249</sup> / <sub>121</sub>	<sup>250047</sup> / <sub>4913</sub>	<sup>226233</sup> / <sub>3179</sub>	<sup>204687</sup> / <sub>2057</sub>	<sup>185193</sup> / <sub>1331</sub>	<sup>538861</sup> / <sub>2857</sub>	<sup>1119000</sup> / <sub>4243</sub>	<sup>3661450</sup> / <sub>9929</sub>
减速级数 Number of gear trains	1		2		3			4				
减速器长度 (L2) Length (L2)	mm		29		36.1			43			49.9	
最大额定转矩 Max. rated torque	kg.cm		12		20			40			40	
瞬间允许转矩 Short time permissible torque	kg.cm		40		60			120			120	
效率 Efficiency	%		90%		81%			73%			66%	
背隙 (无负载时) Backlash at no-load			0.6°		1.0°			1.5°			1.5°	
重量 Weight	g		75		97			119			141	



内齿圈材质: 金属	Φ42行星减速器, 允许转矩范围: 3N.m~10N.m	42mm Planetary Gearbox Permissible Load Range: 3N.m~10N.m
-----------	------------------------------	--

### ● 特性概要 (General specification)

内齿圈材料 Ring material	金属 metal
输出轴轴承形式 Bearing at output	滚动轴承 Ball bearings
最大允许径向负载 (离法兰10mm处) Max. Radial load (10mm from flange)	100N
最大允许轴向负载 Max. shaft axial load	50N
径向间隙 (测量点尽量接近法兰) Radial play of shaft (near to flange)	≤0.07 mm
轴向间隙 Axial play of shaft	≤0.3 mm

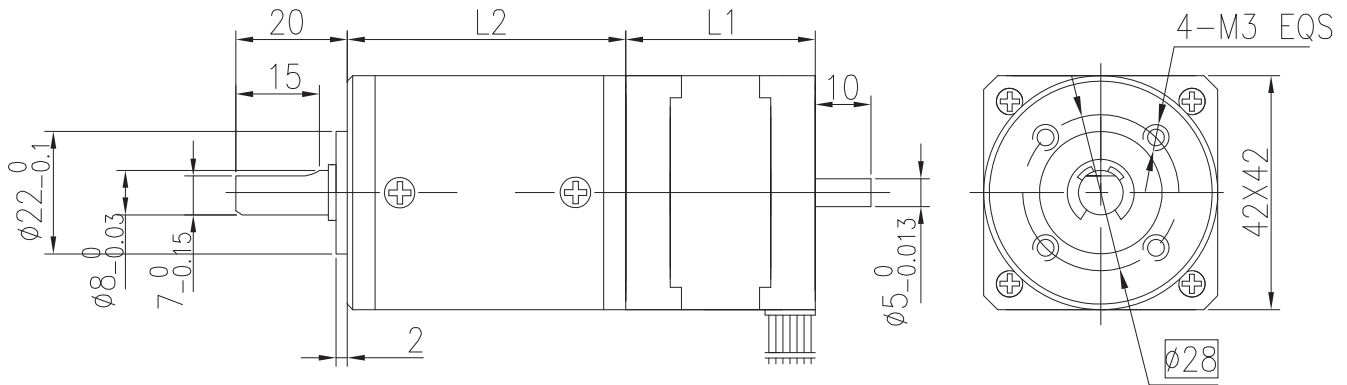
选件 Options



接插件 编码器



### ● 机械尺寸 (Dimension)



### ● FL42STH混合式步进电机性能 (FL42STH Hybrid Stepping Motor Specifications)

Model No.	额定电压	每相电流	每相电阻	每相电感	保持转矩	引出线数	转动惯量	重量	长度L1	适配减速比
	Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Length L1	Max. Gear Ratio
单轴 Single Shaft	V	A	Ω	mH	kg.cm		kg·m <sup>2</sup>	g	mm	
FL42STH33-1334A	2.8	1.33	2.1	2.5	2.2	4	35	0.22	34	≤1:118
FL42STH38-1684A	2.8	1.68	1.65	3.2	3.6	4	54	0.28	40	≤1:91

### ● 行星减速器性能 (Planetary Gearbox Specifications)

减速比 Reduction ratio	3.82	4.88	15	19	24	56	71	91	116	213	271	346
精确减速比 Accurate Reduction Ratio	<sup>42</sup> / <sub>11</sub>	<sup>39</sup> / <sub>8</sub>	<sup>1764</sup> / <sub>121</sub>	<sup>819</sup> / <sub>44</sub>	<sup>1521</sup> / <sub>64</sub>	<sup>74088</sup> / <sub>1331</sub>	<sup>17199</sup> / <sub>242</sub>	<sup>31941</sup> / <sub>352</sub>	<sup>59319</sup> / <sub>512</sub>	<sup>411889</sup> / <sub>1938</sub>	<sup>361179</sup> / <sub>1331</sub>	<sup>670761</sup> / <sub>1936</sub>
减速级数 Number of gear trains	1		2			3			4			
减速器长度 (L2) Length (L2)	mm 36.9		47.4			57.7			68			
最大额定转矩 Max. rated torque	kg.cm 30		50			100			100			
瞬间允许转矩 Short time permissible torque	kg.cm 90		150			300			300			
效率 Efficiency	% 90%		81%			73%			66%			
背隙 (无负载时) Backlash at no-load	0.5°		1.0°			1.5°			1.5°			
重量 Weight	g 229		300			371			442			

# 56JMES300K-57STH

## 行星减速步进电机 Planetary Gear Stepper Motor



内齿圈材质: 金属	Φ56行星减速器, 允许转矩范围: 9N.m~30N.m	56mm Planetary Gearbox Permissible Load Range: 9N.m~30N.m
-----------	------------------------------	--

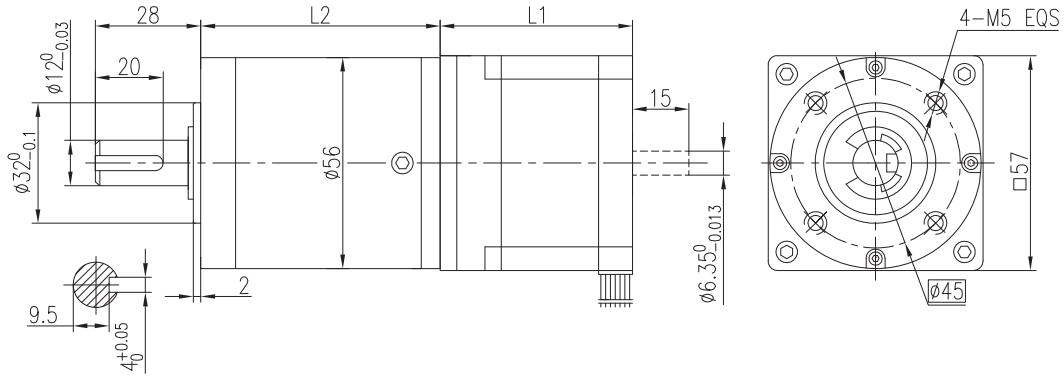
### ● 特性概要 (General specification)

内齿圈材料 Ring material	金属 metal
输出轴轴承形式 Bearing at output	滚动轴承 Ball bearings
最大允许径向负载 (离法兰10mm处) Max. Radial load (10mm from flange)	300N
最大允许轴向负载 Max. shaft axial load	200N
径向间隙 (测量点尽量接近法兰) Radial play of shaft (near to flange)	≤0.08 mm
轴向间隙 Axial play of shaft	≤0.4 mm

选件 Options



### ● 机械尺寸 (Dimension)



### ● 57STH混合式步进电机性能 (57STH Hybrid Stepping Motor Specifications)

Model No.	额定电压	每相电流	每相电阻	每相电感	保持转矩	引出线数	转动惯量	重量	长度L1	适配减速比
	Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Length L1	Max. Gear Ratio
单轴 Single Shaft	V	A	Ω	mH	kg.cm		kg·m <sup>2</sup>	g	mm	
FL57STH51-2804A	2.3	2.8	0.83	2.2	10.1	4	275	0.65	51	≤1:77
FL57STH56-2804A	2.5	2.8	0.9	2.5	12.6	4	300	0.7	56	≤1:77

### ● 行星减速器性能 (Planetary Gearbox Specifications)

减速比 Reduction ratio	3.6	4.25	13	15	18	23	47	55	65	77	96	121	154	187
精确减速比 Accurate Reduction Ratio	18/5	17/4	324/25	153/10	289/16	68/3	5932/125	1337/25	2601/40	4913/64	289/3	1088/8	30277/197	23328/125
减速级数 Number of gear trains	1		2				2				4			
减速器长度 (L2) Length (L2)	mm		37.8		49.4		60.8				71.9			
最大额定转矩 Max. rated torque	kg.cm		90		150		300				300			
瞬间允许转矩 Short time permissible torque	kg.cm		270		450		900				900			
效率 Efficiency	%		90%		81%		73%				66%			
背隙 (无负载时) Backlash at no-load			0.5°		0.5°		1.0°				1.5°			
重量 Weight	g		455		610		765				920			

内齿圈材质: 金属	Φ60行星减速器, 允许转矩范围: 9N.m~30N.m	60mm Planetary Gearbox Permissible Load Range: 9N.m~30N.m
-----------	------------------------------	--

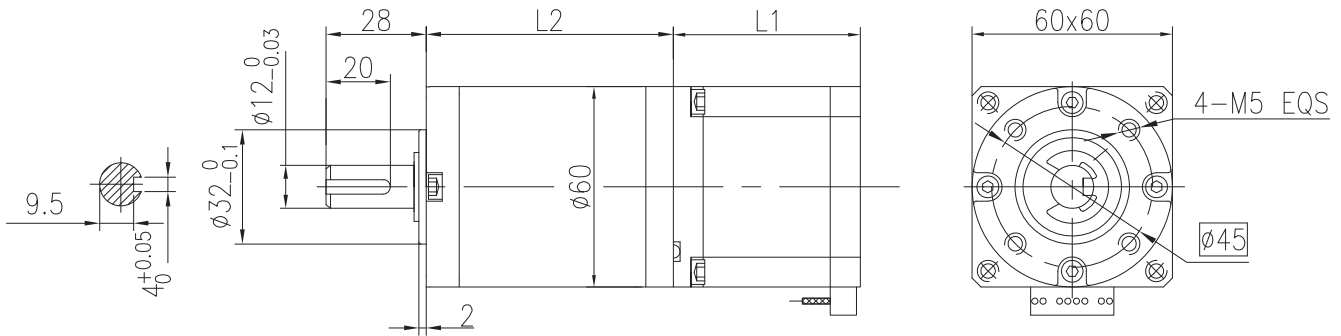
### ● 特性概要 (General specification)

内齿圈材料 Ring material	金属 metal
输出轴轴承形式 Bearing at output	滚动轴承 Ball bearings
最大允许径向负载 (离法兰10mm处) Max. Radial load (10mm from flange)	300N
最大允许轴向负载 Max. shaft axial load	200N
径向间隙 (测量点尽量接近法兰) Radial play of shaft (near to flange)	≤0.08 mm
轴向间隙 Axial play of shaft	≤0.4 mm

选件 Options



### ● 机械尺寸 (Dimension)



### ● FL60STH混合式步进电机性能 (FL60STH Hybrid Stepping Motor Specifications)

Model No.	额定电压	每相电流	每相电阻	每相电感	保持转矩	引出线数	转动惯量	重量	长度L1	适配减速比
	Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Length L1	Max. Gear Ratio
单轴 Single Shaft	V	A	Ω	mH	kg.cm		kg·m <sup>2</sup>	g	mm	
FL60STH45-2008AF 并联	2.1	2.8	0.75	2	11	8	275	0.6	47	≤1:115
FL60STH56-2008AF 并联	2.52	2.8	0.9	3.6	16.5	8	300	0.77	56	≤1:77

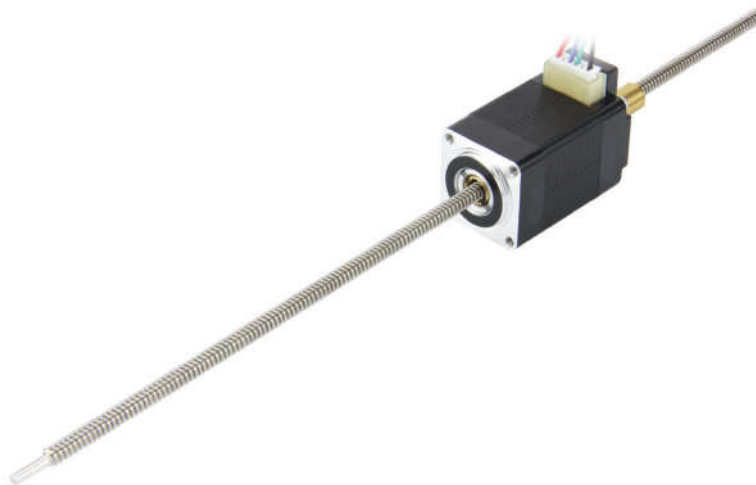
### ● 行星减速器性能 (Planetary Gearbox Specifications)

减速比 Reduction ratio	3.6	4.25	13	15	18	23	47	55	65	77	96	121		
精确减速比 Accurate Reduction Ratio	18/5	17/4	324/25	153/10	289/16	Mar-68	5932/125	1337/25	2601/40	4913/64	289/3	1088/8		
减速级数 Number of gear trains	1		2				3							
减速器长度 (L2) Length (L2)	mm		37.8				49.4						60.8	
最大额定转矩 Max. rated torque	kg.cm		90				150						300	
瞬间允许转矩 Short time permissible torque	kg.cm		270				450						900	
效率 Efficiency	%		90%				81%						73%	
背隙 (无负载时) Backlash at no-load			0.5°				1.0°						1.5°	
重量 Weight	g		500				688						876	

## 选件 Options



接插件



## ● 型号 (VERSIONS)

型号 (Type)	推力 Force N	速度 Speed mm/s	相电流 Current per Winding	分辨率 Resolution μm/步(step)	相电阻 Resistance per Winding	相电感 Inductance per Winding	丝杆直径 Thread Diameter mm	导程 Thread Lead mm	机身长度 Length A" mm	衬套长度 Socket Length L" mm	重量 Weight kg
LA201S06-A-TDBA	46	40	0.6	5	6.4	2.6	3.5	1	33	8	0.054
LA201S06-B-TDBA	46	40	0.6	5	6.4	2.6	3.5	1	33	8	0.054

## ● 配件 (ACCESSORIES)

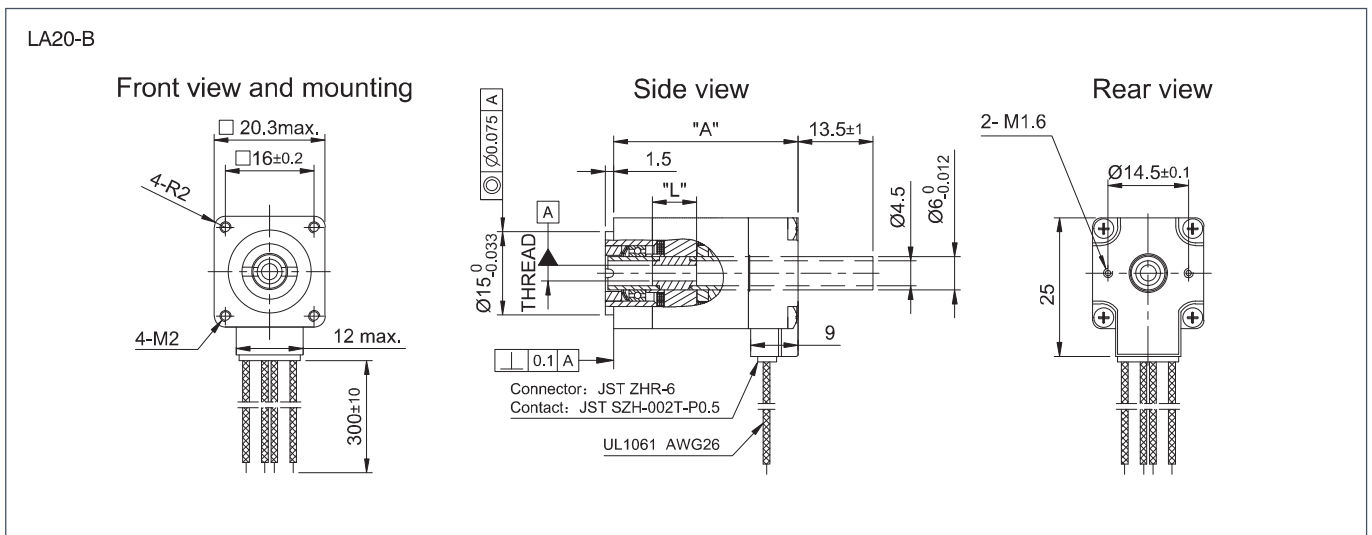
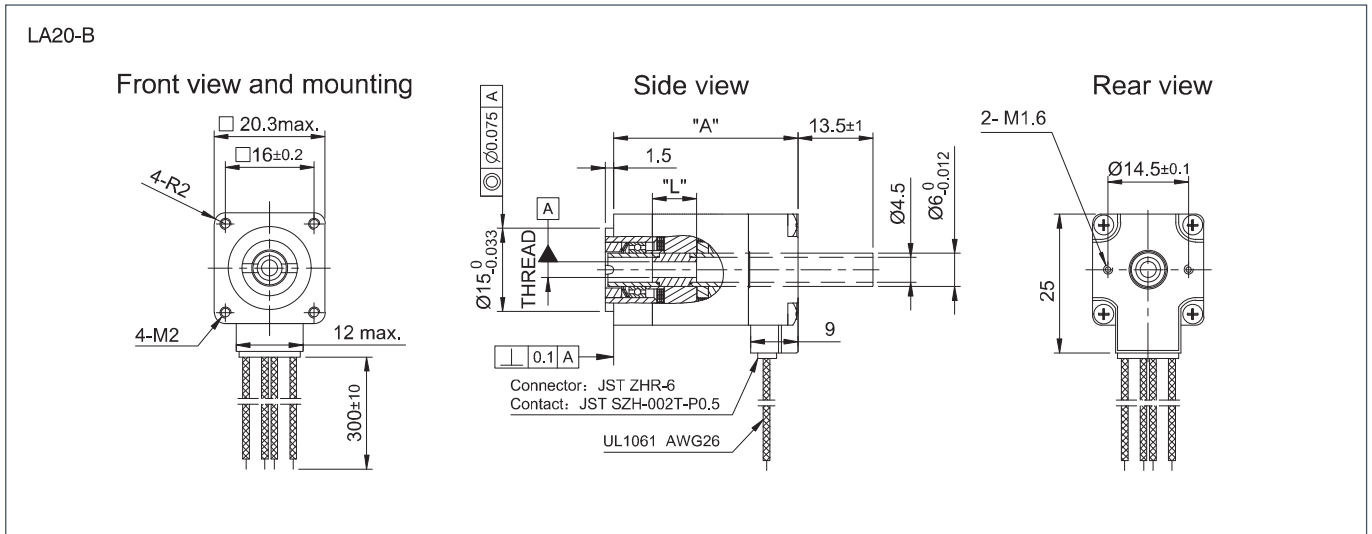
ZST3,5-1-200-1 带梯形螺纹的丝杆  
(Lead Screw with Trapezoidal Thread)  
ZST3,5-1-500 带梯形螺纹的丝杆  
(Lead Screw with Trapezoidal Thread)  
NANOLUBE-50G 润滑剂  
(Lubricant)

## ● 警告 (CAUTION)

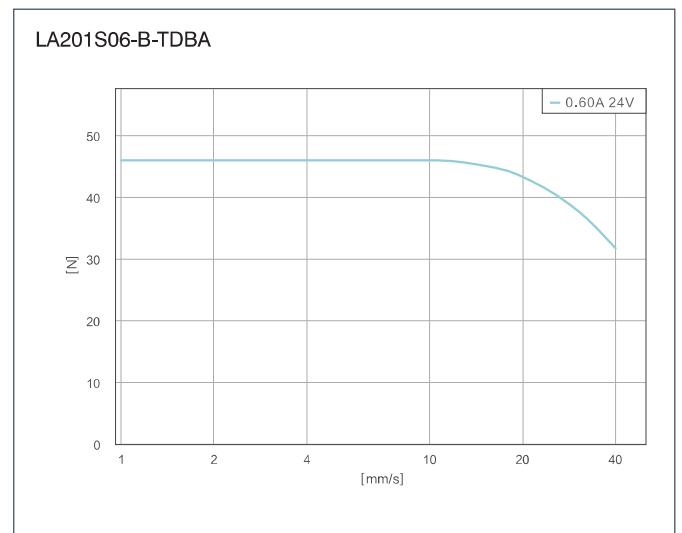
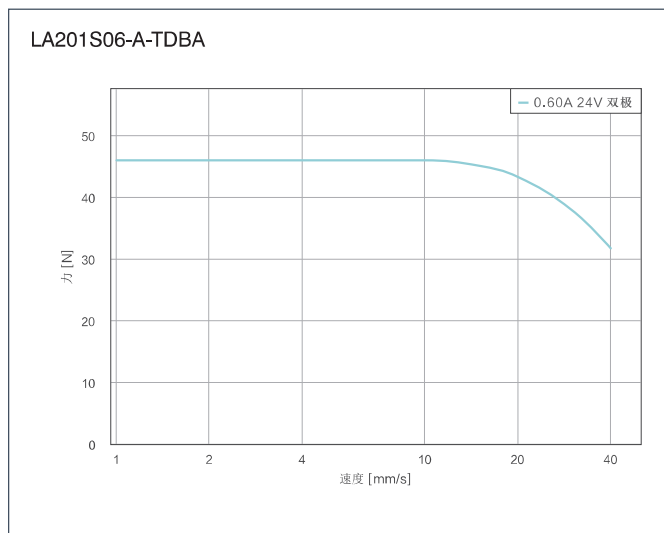


数据表中指定的力和额定功率基10%至20%的占空比, 必须将其相应降低才能获得更大的值。应避免运行至固定的限位挡块。  
(The force and power ratings specified in the data sheets are based on a duty cycle of 10% to 20% and must be reduced for higher values. Moving against fixed end stops should be avoided.)

● 机械尺寸 (DIMENSIONS)



● 速度推力曲线 (FORCE-VELOCITY CURVES)



## 选件 Options



接插件



## ● 型号 (VERSIONS)

型号 (Type)	推力 Force N	速度 Speed mm/s	相电流 Current per Winding	分辨率 Resolution μm/步(step)	相电阻 Resistance per Winding	相电感 Inductance per Winding	丝杆直径 Thread Diameter mm	导程 Thread Lead mm	机身长度 Length A" mm	行程长度 Stroke Length "X" mm	重量 Weight kg
LGA201S06-A-TDBA-019	46	40	0.6	5	6.4	2.6	3.5	1	33	19.05	0.054
LGA201S06-A-TDBA-038	46	40	0.6	5	6.4	2.6	3.5	1	33	38.1	0.15

## ● 配件 (ACCESSORIES)

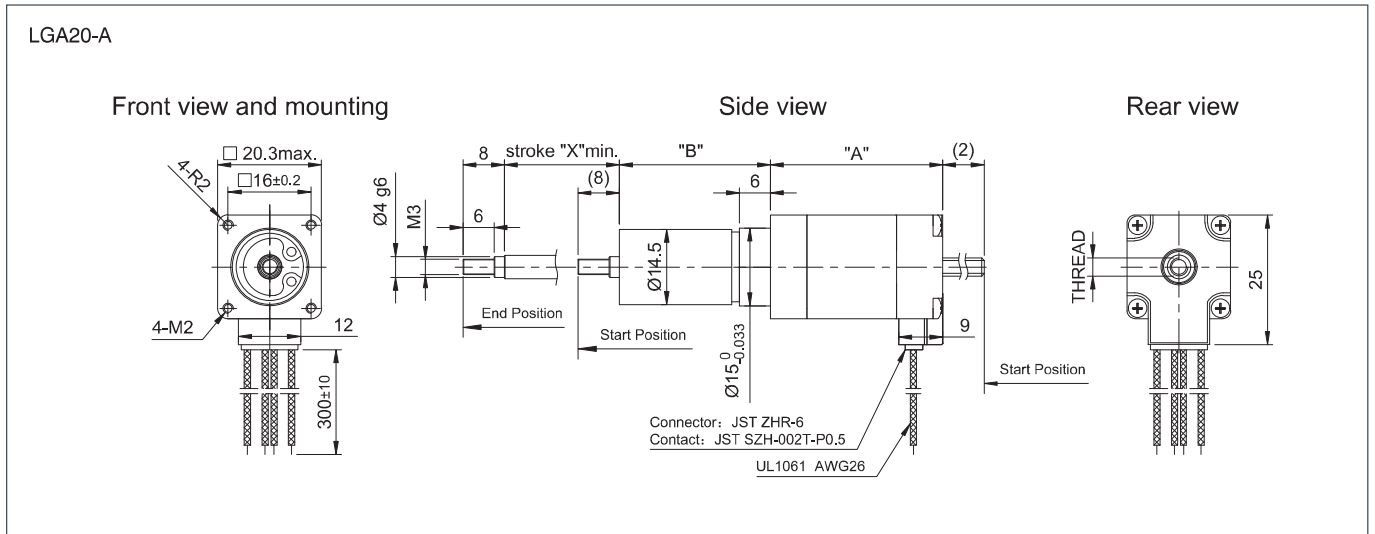
NANOLUBE-50G 润滑剂(Lubricant)

## ● 警告 (CAUTION)

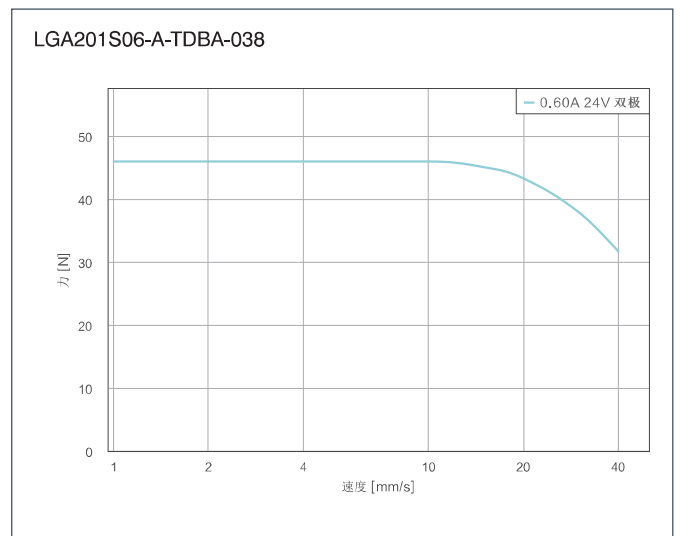
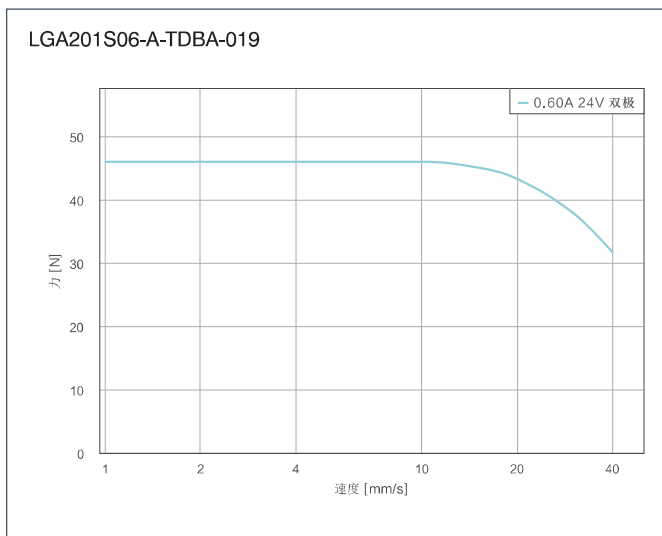


数据表中指定的力和额定功率基于 10%至 20% 的占空比, 必须将其相应降低才能获得更大的值。应避免运行至固定的限位挡块。(The force and power ratings specified in the data sheets are based on a duty cycle of 10% to 20% and must be reduced for higher values. Moving against fixed end stops should be avoided.)

● 机械尺寸 (DIMENSIONS)



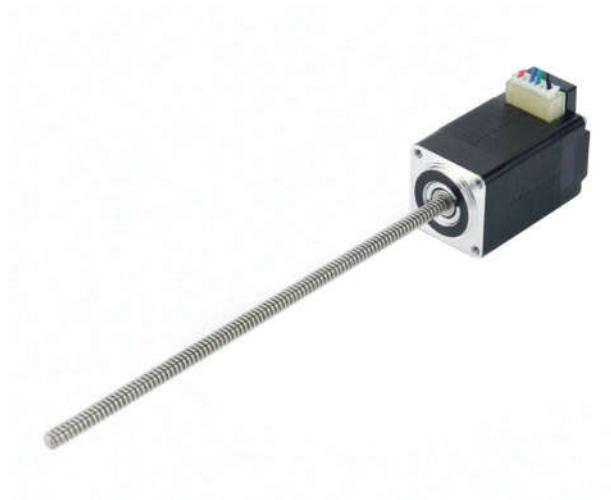
● 速度推力曲线 (FORCE-VELOCITY CURVES)



## 选件 Options



接插件



## ● 型号 (VERSIONS)

型号 (Type)	推力 Force N	速度 Speed mm/s	相电流 Current per Winding	分辨率 Resolution μm/步(step)	相电阻 Resistance per Winding	相电感 Inductance per Winding	丝杆直径 Thread Diameter mm	导程 Thread Lead mm	丝杠长度 Screw Length mm <sup>L</sup>	机身长度 Length A" mm	重量 Weight kg
LSA201S06-A-TDBA-102	46	40	0.6	5	6.4	2.6	3.5	1	102	33	0.054
LSA201S06-B-TDBA-102	46	40	0.6	5	6.4	2.6	3.5	1	102	33	0.054

## ● 配件 (ACCESSORIES)

LSNUT-AAAA-TDBA 螺纹螺母(Threaded Nut) – POM  
 LSNUT-ZERO3,5X1  
 预装螺纹螺母(Loaded Threaded Nut) -PEEK  
 NANOLUBE-50G 润滑剂(Lubricant)

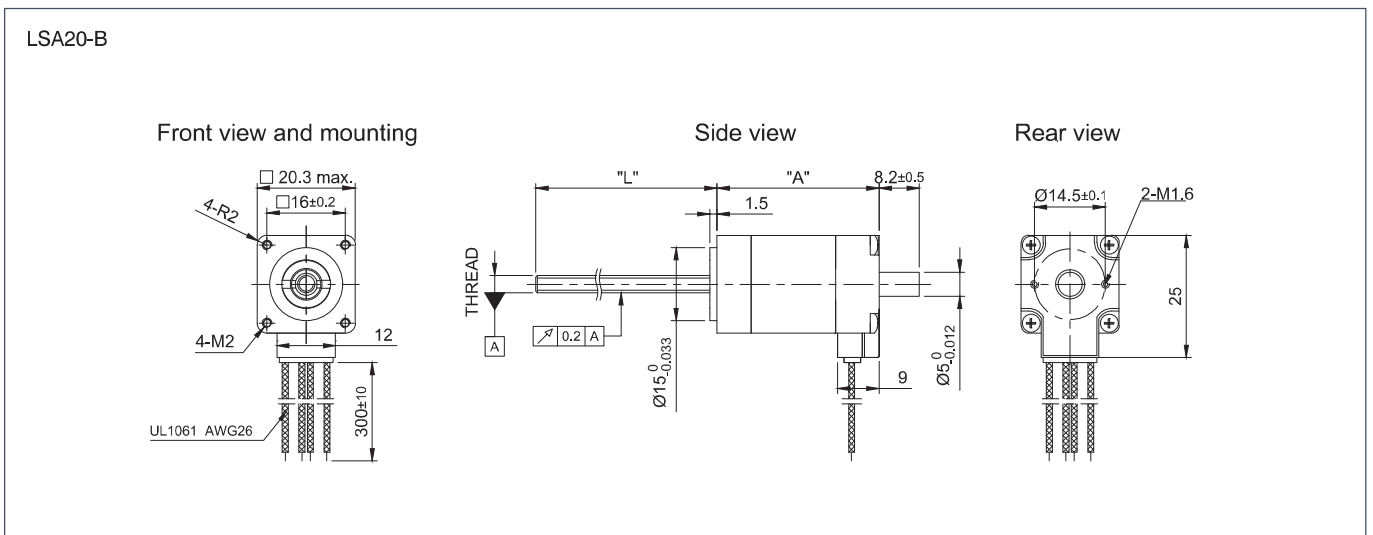
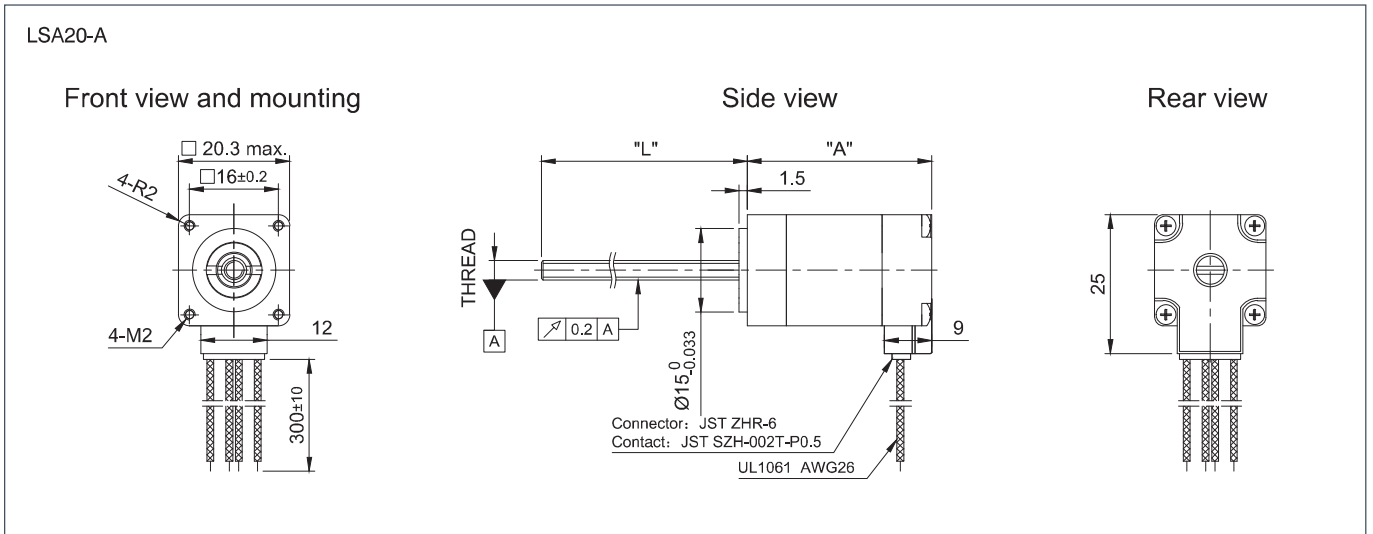
## ● 警告 (CAUTION)



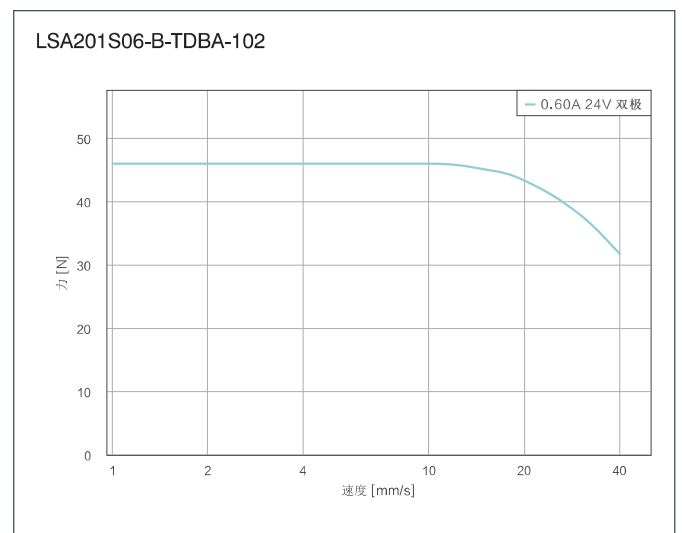
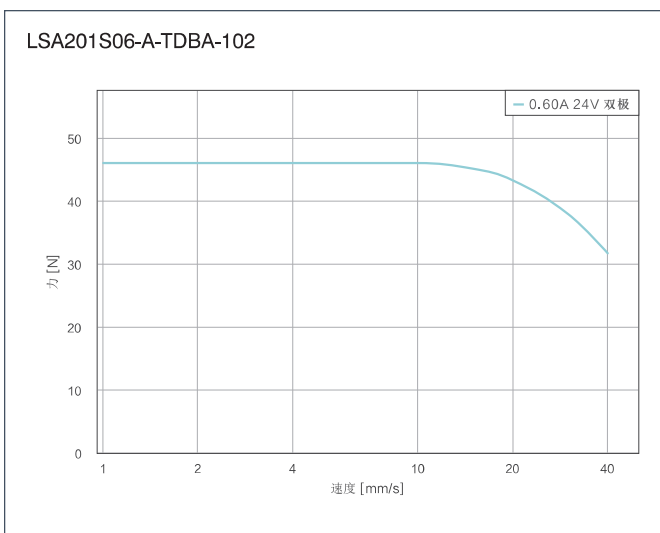
数据表中指定的力和额定功率基于 10%  
 至 20% 的占空比, 必须将其相应降低才能获得更大的值。应  
 避免运行至固定的限位挡块。(The force and power ratings  
 specified in the data sheets are based on a duty cycle of 10%  
 to 20% and must be reduced for higher values. Moving against  
 fixed end stops should be avoided.)



● 机械尺寸 (DIMENSIONS)



● 速度推力曲线 (FORCE-VELOCITY CURVES)



## 选件 Options



接插件



## ● 型号 (VERSIONS)

型号 (Type)	推力 Force N	速度 Speed mm/s	相电流 Current per Winding	分辨率 Resolution μm/步(step)	相电阻 Resistance per Winding	相电感 Inductance per Winding	丝杆直径 Thread Diameter mm	导程 Thread Lead mm	机身长度 Length mm	衬套长度 Socket Length L <sup>mm</sup>	重量 Weight kg
LA281S10A-THCA	93.4	35	1	10	2.7	2.5	5	2	33	15	0.11
LA281S10B-THCA	93.4	35	1	10	2.7	2.5	5	2	33	15	0.11
LA281S10A-UGFC	50	120	1	25.4	2.7	2.5	4.76	5.08	33	15	0.11
LA281S10B-UGFC	50	120	1	25.4	2.7	2.5	4.76	5.08	33	15	0.11
LA281S10A-UGAQ	210	19	1	3.175	2.7	2.5	4.76	0.635	33	15	0.11
LA281S10B-UGAQ	210	19	1	3.175	2.7	2.5	4.76	0.635	33	15	0.11
LA281M06-A-THCA	152	35	0.6	10	7.3	6.52	5	2	41	15	0.14
LA281M06-B-THCA	152	35	0.6	10	7.3	6.52	5	2	41	15	0.14
LA281M15A-THCA	152	35	1.5	10	1.45	1.25	5	2	41	15	0.14
LA281M15B-THCA	152	35	1.5	10	1.45	1.25	5	2	41	15	0.14

## ● 配件 (ACCESSORIES)

SCREW-ABA-UGAQ-200 带 ACME 螺纹的丝杆	Lead Screw with ACME Thread
SCREW-ABA-UGAQ-300 带 ACME 螺纹的丝杆	SCREW-ABA-UGAQ-300 Lead Screw with ACME Thread
SCREW-AAA-UGAQ-1000 带 ACME 螺纹的丝杆	Lead Screw with ACME Thread
SCREW-ABA-UGFC-200 带 ACME 螺纹的丝杆	SCREW-ABA-UGFC-200 Lead Screw with ACME Thread
SCREW-ABA-UGFC-300 带 ACME 螺纹的丝杆	SCREW-ABA-UGFC-300 Lead Screw with ACME Thread
SCREW-AAA-UGFC-1000 带 ACME 螺纹的丝杆	SCREW-AAA-UGFC-1000 Lead Screw with ACME Thread
NANOLUBE-50G 润滑剂	NANOLUBE-50G Lubricant

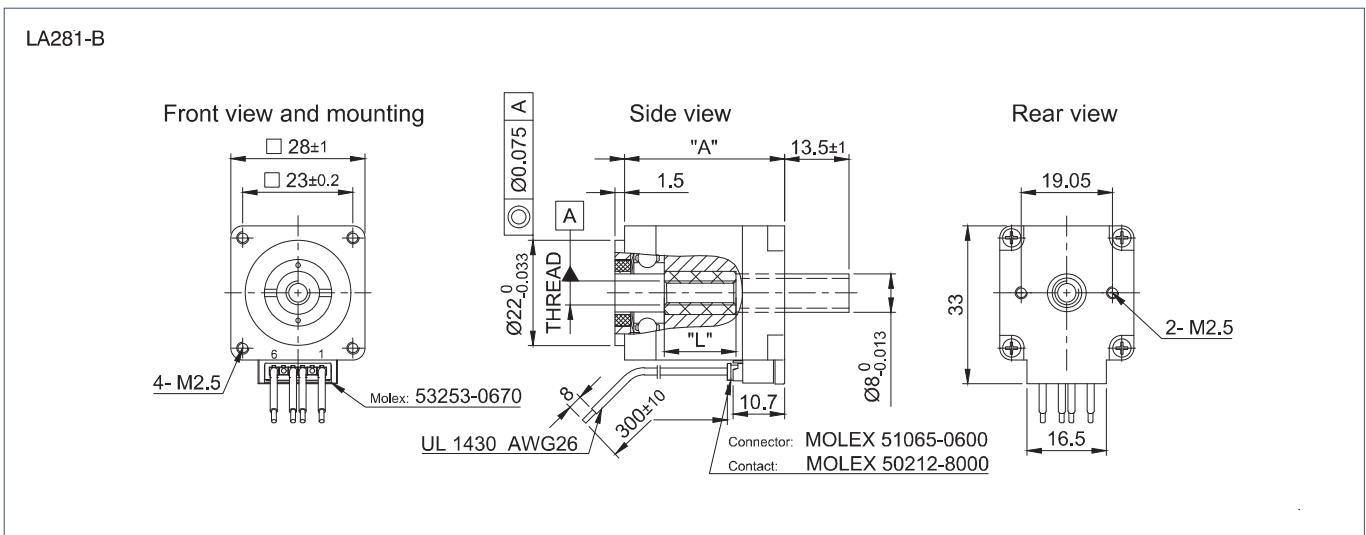
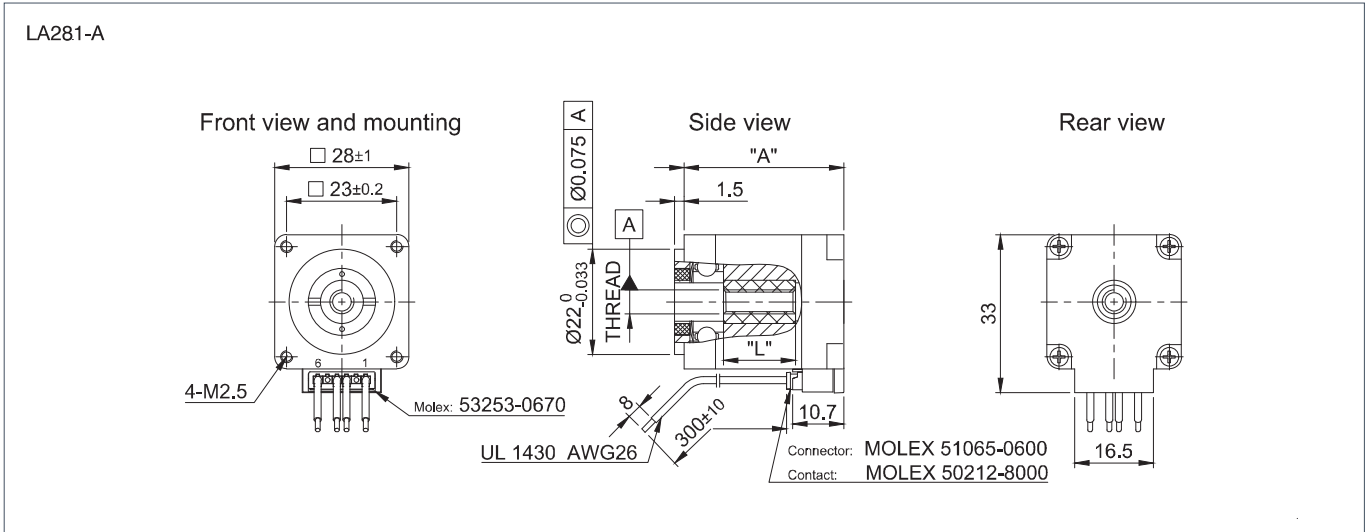
## ● 警告 (CAUTION)



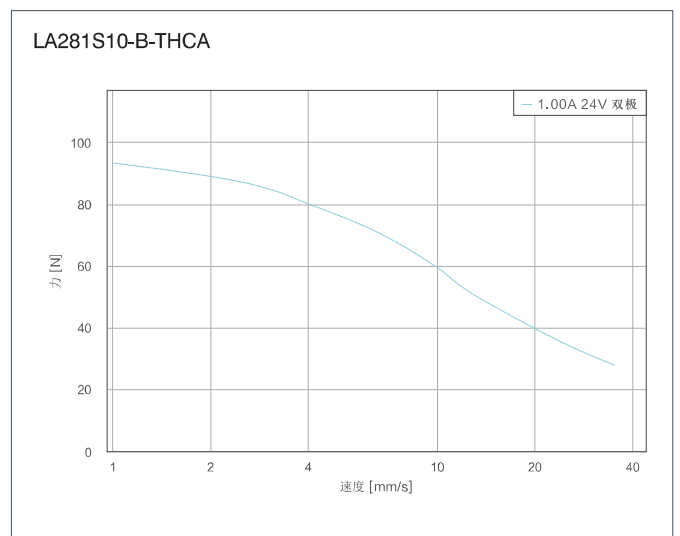
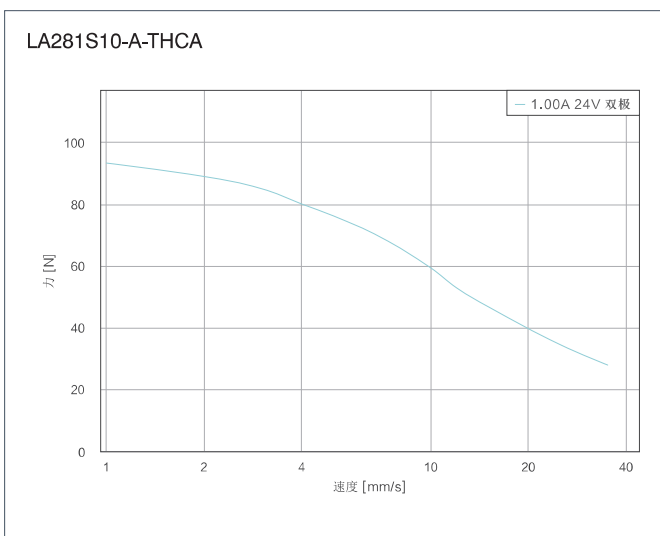
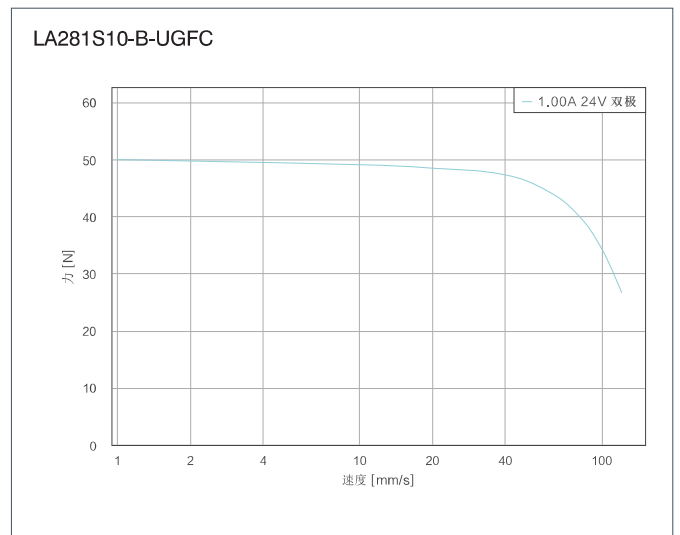
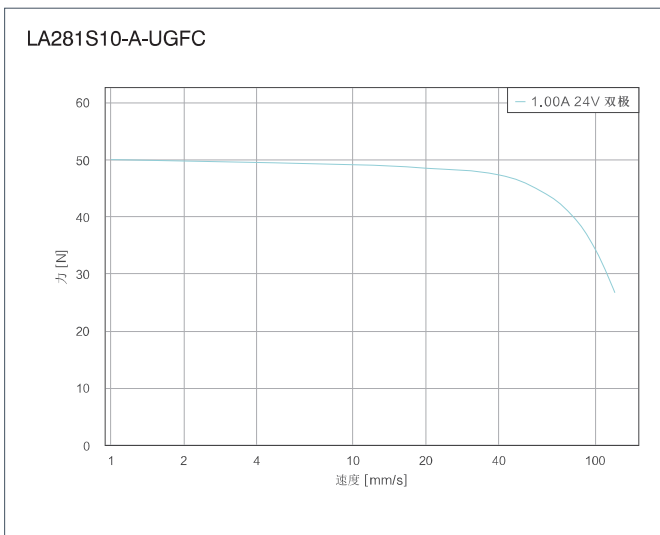
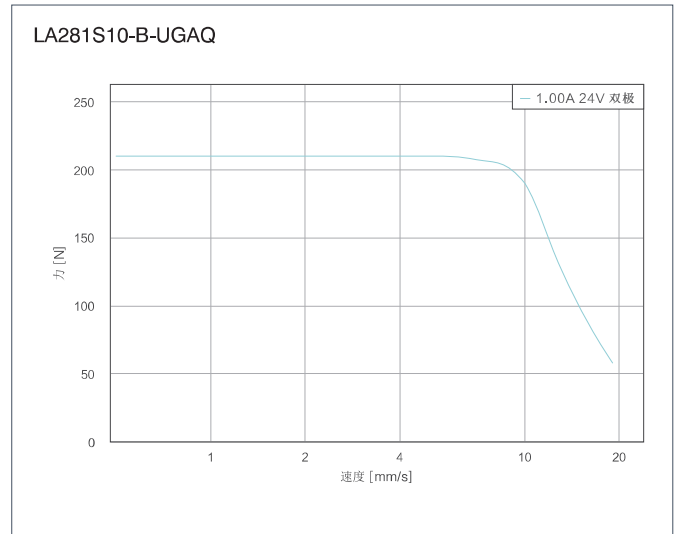
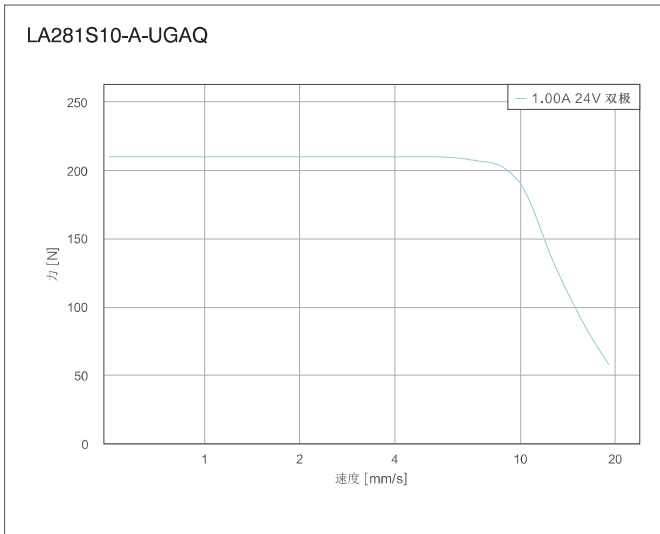
数据表中列出的力和额定输出功率基于约 10% 至 20% 的占空比, 必须相应降低才能获得更大的值。应避免运行至固定的挡块。

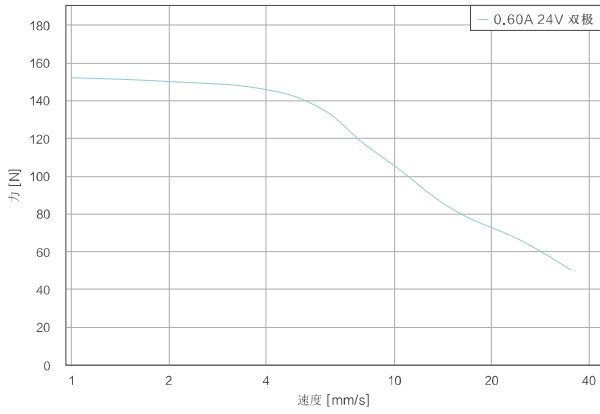
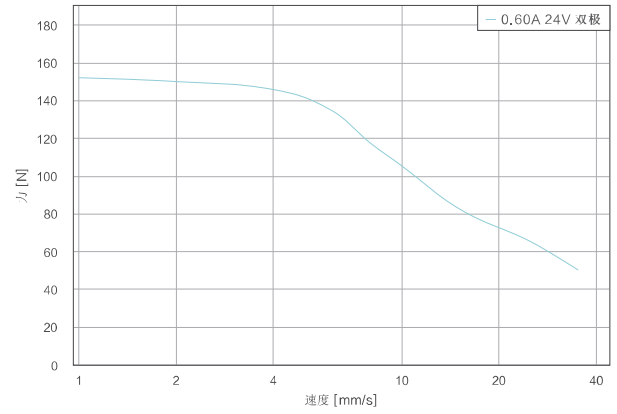
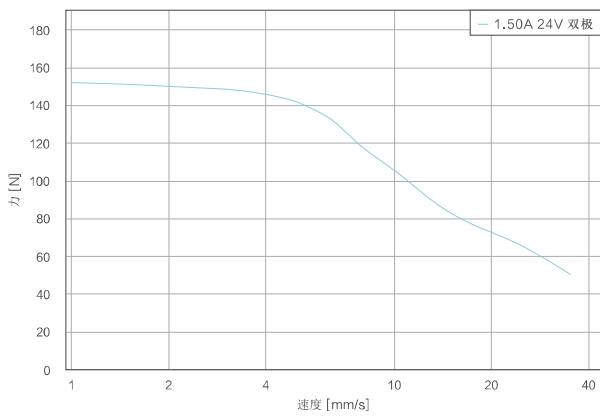
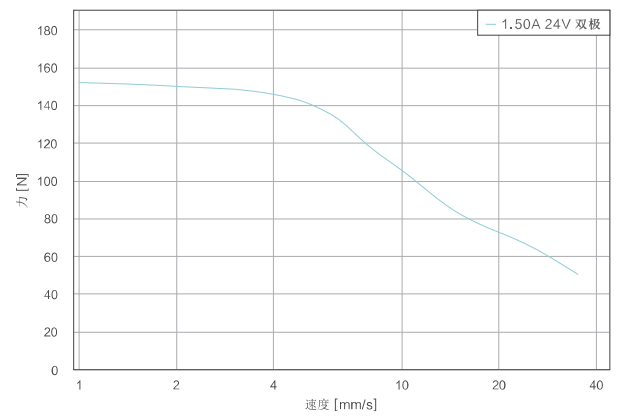
The force and output power ratings listed in the data sheets are based on a duty cycle of approx. 10% to 20% and must be reduced for higher values. Moving against fixed limit stops should be avoided.

● 机械尺寸 (DIMENSIONS)



● 速度推力曲线 (Dimension)



**LA281M06-A-THCA**

**LA281M06-B-THCA**

**LA281M15-A-THCA**

**LA281M15-B-THCA**


## 选件 Options



接插件



## ● 型号 (VERSIONS)

型号 (Type)	推力 Force N	速度 Speed mm/s	相电流 Current per Winding	分辨率 Resolution μm/步(step)	相电阻 Resistance per Winding	相电感 Inductance per Winding	丝杆直径 Thread Diameter mm	导程 Thread Lead mm	机身长度 Length A" mm	行程长度 Stroke Length X" mm	重量 Weight kg
LGA281S10-A-UGAQ-019	210	19	1	3.175	2.7	2.5	4.76	0.635	33	19.05	0.14
LGA281S10-B-UGAQ-019	210	19	1	3.175	2.7	2.5	4.76	0.635	33	19.05	0.14
LGA281S10-A-UGAQ-038	210	19	1	3.175	2.7	2.5	4.76	0.635	33	38.1	0.15
LGA281S10-B-UGAQ-038	210	19	1	3.175	2.7	2.5	4.76	0.635	33	38.1	0.15
LGA281S10-A-UGFC-019	50	120	1	25.4	2.7	2.5	4.76	5.08	33	19.05	0.14
LGA281S10-B-UGFC-019	50	120	1	25.4	2.7	2.5	4.76	5.08	33	19.05	0.15
LGA281S10-A-UGFC-038	50	120	1	25.4	2.7	2.5	4.76	5.08	33	38.1	0.14
LGA281S10-B-UGAQ-038	50	120	1	25.4	2.7	2.5	4.76	5.08	33	38.1	0.15
LGA281S10-A-THCA-019	93.4	35	1	10	2.7	2.5	5	2	33	19.05	0.14
LGA281S10-B-THCA-019	93.4	35	1	10	2.7	2.5	5	2	33	19.5	0.14
LGA281S10-A-THCA-038	93.4	35	1	10	2.7	2.5	5	2	33	38.1	0.14
LGA281S10-B-THCA-038	93.4	35	1	10	2.7	2.5	5	2	33	38.1	0.14

## ● 配件 (ACCESSORIES)

NANOLUBE-50G 润滑油  
NANOLUBE-50G Lubricant

## ● 警告 (CAUTION)

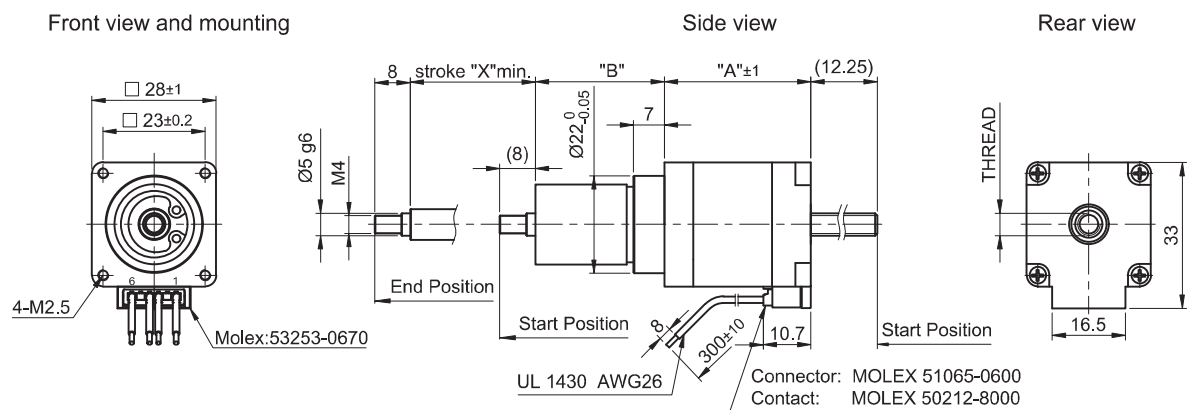


数据表中列出的力和额定输出功率基于约 10% 至 20% 的空比, 必须相应降低才能获得更大的值。应避免运行至固定的挡块。

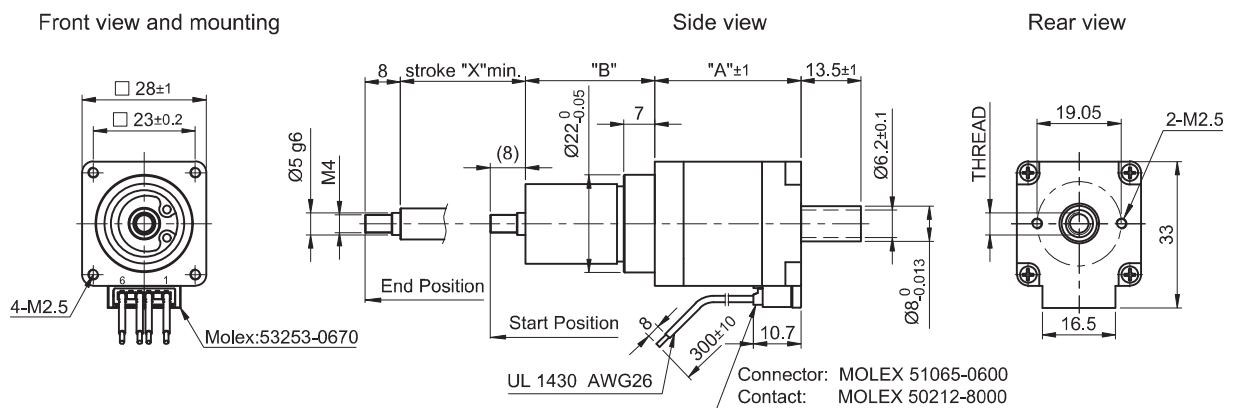
The force and output power ratings listed in the data sheets are based on a duty cycle of approx. 10% to 20% and must be reduced for higher values. Moving against fixed limit stops should be avoided.

## ● 机械尺寸 (DIMENSIONS)

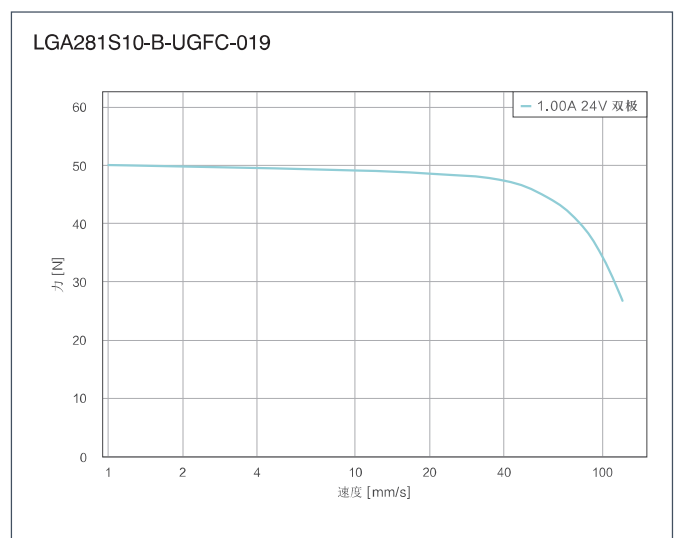
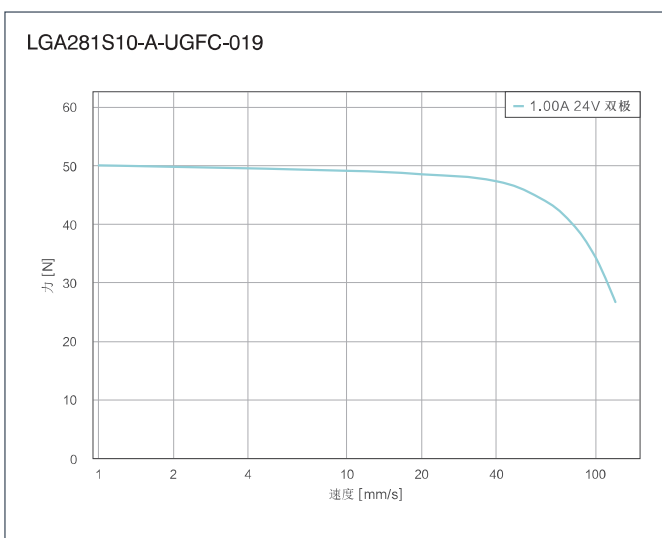
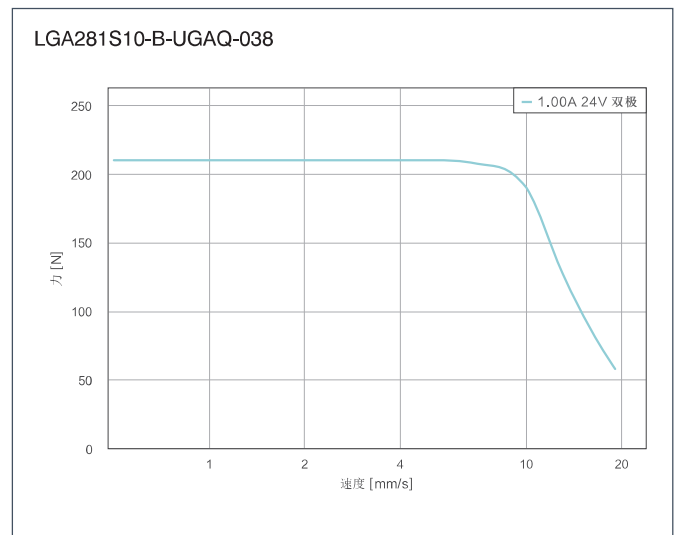
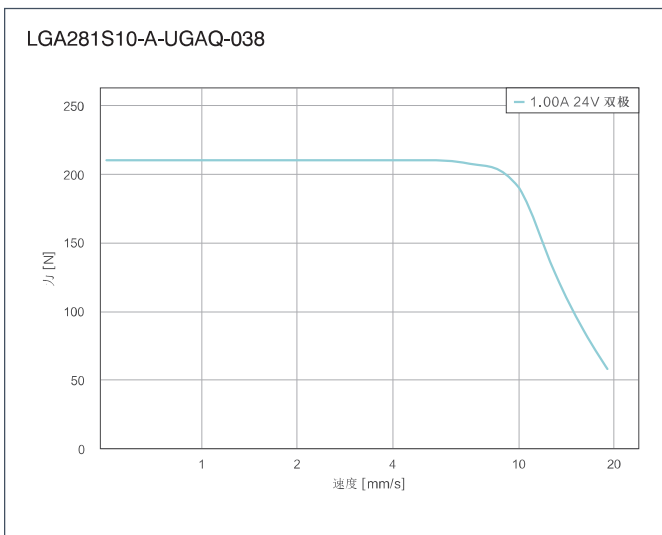
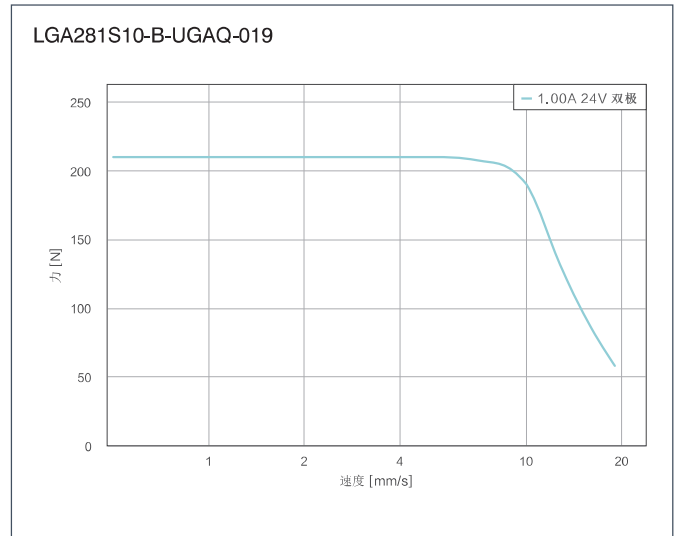
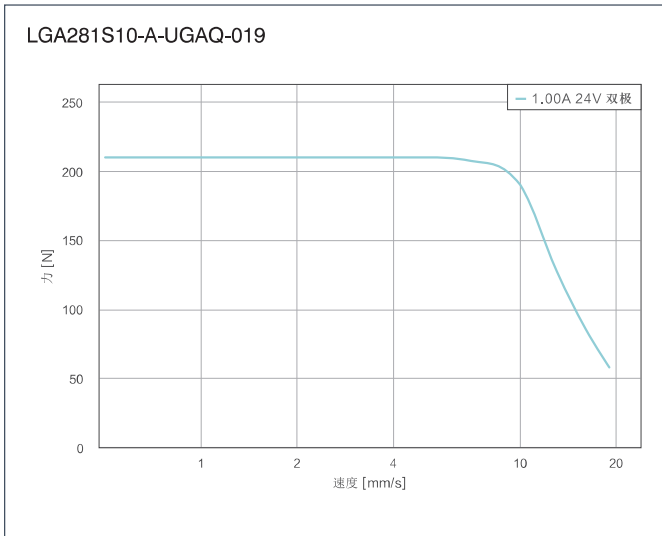
### LGA28-A



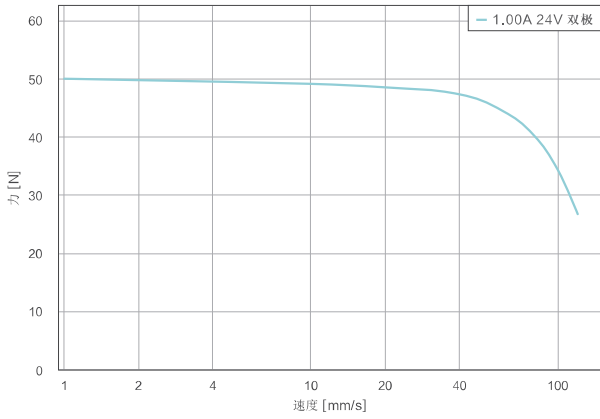
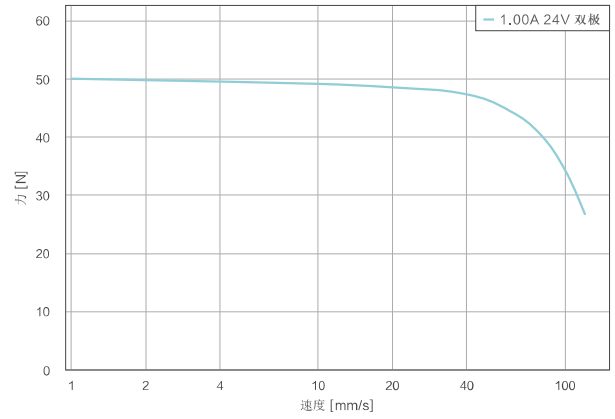
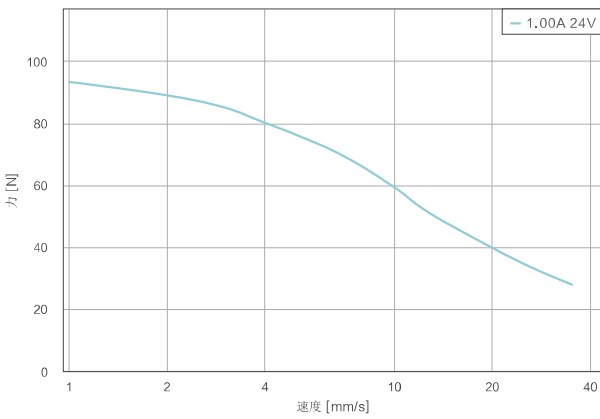
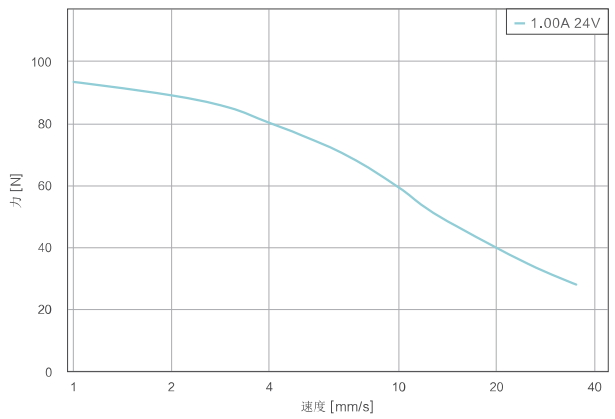
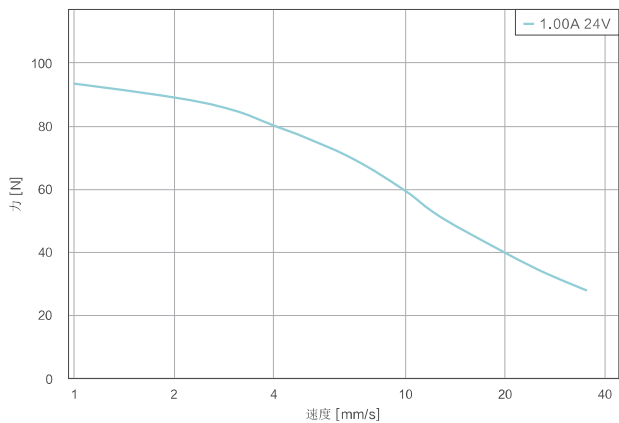
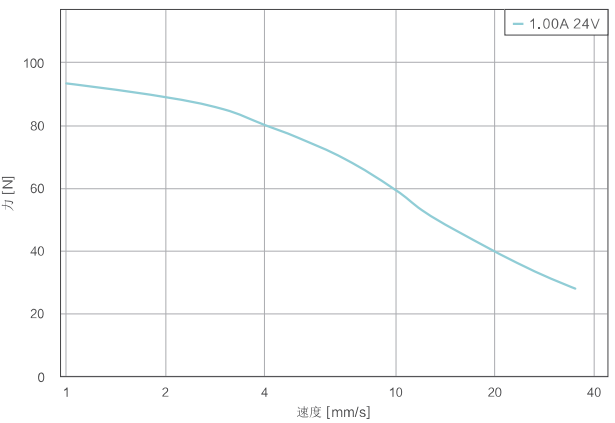
### LGA28-B



● 速度推力曲线 (FORCE-VELOCITY CURVES)





**LGA281S10-A-UGFC-038**

**LGA281S10-B-UGAQ-038**

**LGA281S10-A-THCA-019**

**LGA281S10-B-THCA-019**

**LGA281S10-A-THCA-038**

**LGA281S10-B-THCA-038**


## 选件 Options



接插件



## ● 型号 (VERSIONS)

型号 (Type)	推力 Force N	速度 Speed mm/s	相电流 Current per Winding	分辨率 Resolution μm/步(step)	相电阻 Resistance per Winding	相电感 Inductance per Winding	丝杆直径 Thread Diameter mm	导程 Thread Lead mm	机身长度 Length A" mm	丝杠长度 Screw Length L" mm	重量 Weight kg
LSA281S10-A-UGAQ -152	210	19	1	3.175	2.7	2.5	4.76	0.635	33	152	0.13
LSA281S10-B-UGAQ -152	210	19	1	3.175	2.7	2.5	4.76	0.635	33	152	0.13
LSA281S10-A-UGFC -152	50	120	1	25.4	2.7	2.5	4.76	5.08	33	152	0.13
LSA281S10-B-UGFC -152	50	120	1	25.4	2.7	2.5	4.76	5.08	33	152	0.13
LSA281S10-A-THCA -152	93.4	35	1	10	2.7	2.5	5	2	33	152	0.13
LSA281S10-B-THCA -152	93.4	35	1	10	2.7	2.5	5	2	33	152	0.13

## ● 配件 (ACCESSORIES)

LSNUT-AAAA-UGAQ 螺纹螺母 -  
POM LSNUT-AAAA-UGFC 螺纹螺母 -  
POM LSNUT-AAAA-THCA 螺纹螺母 -  
POM NANOLUBE-50G 润滑剂

LSNUT-AAAA-UGAQ Threaded Nut - POM LSNUT-AAAA-UGFC  
Threaded Nut - POM LSNUT-AAAA-THCA Threaded Nut - POM  
NANOLUBE-50G Lubricant

## ● 警告 (CAUTION)



数据表中指定的力和额定功率基于 10%  
至 20% 的占空比, 必须将其相应降低才能获得更大的值。应  
避免运行至固定的限位挡块。

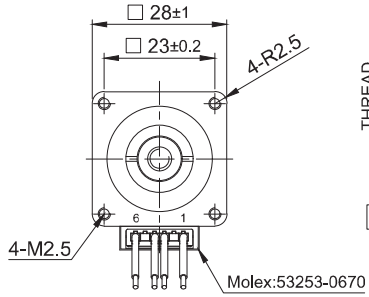
The force and power ratings specified in the data sheets  
are based on a duty cycle of 10% to 20% and must be reduced  
for higher values. Moving against fixed end stops should be  
avoided.

● 机械尺寸

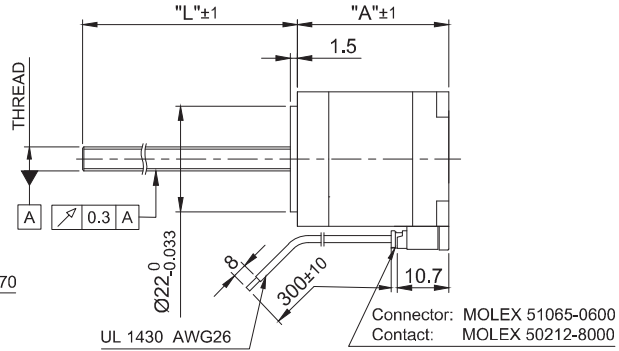
(DIMENSIONS)

LSA28-A

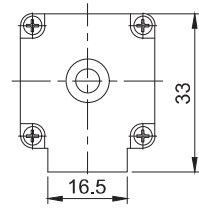
Front view and mounting



Side view

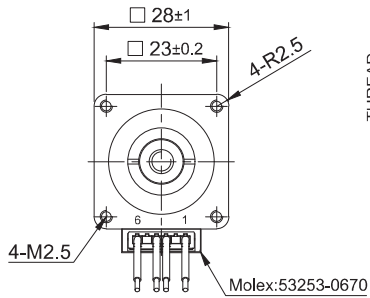


Rear view

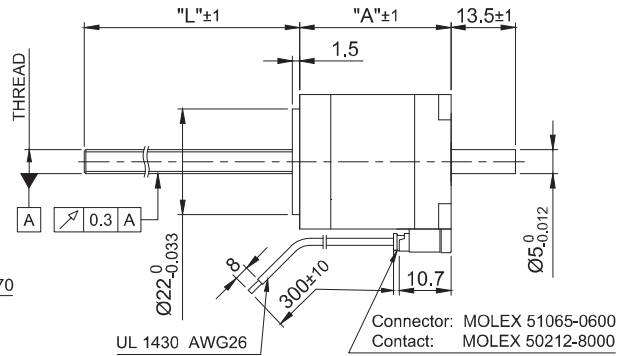


LSA28-B

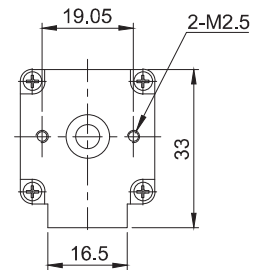
Front view and mounting



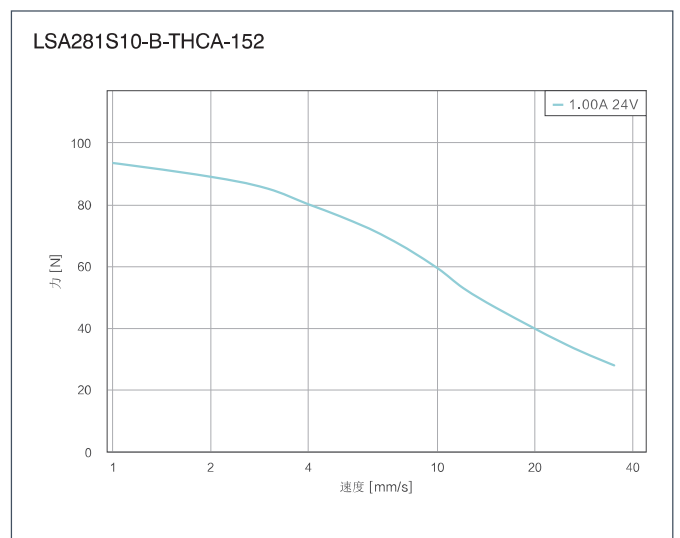
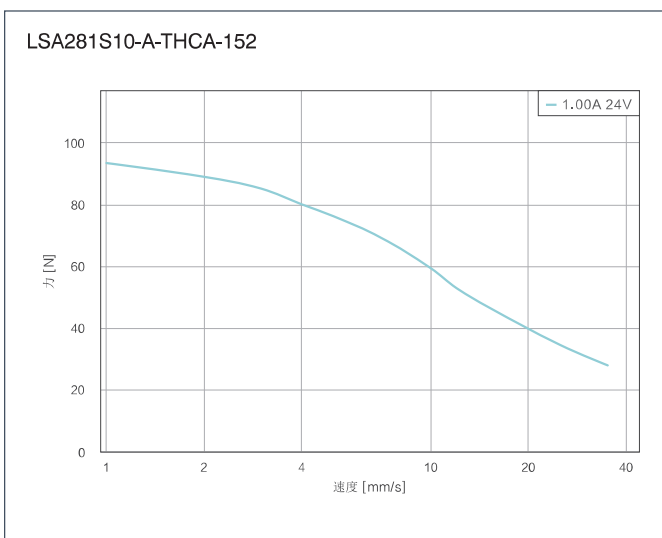
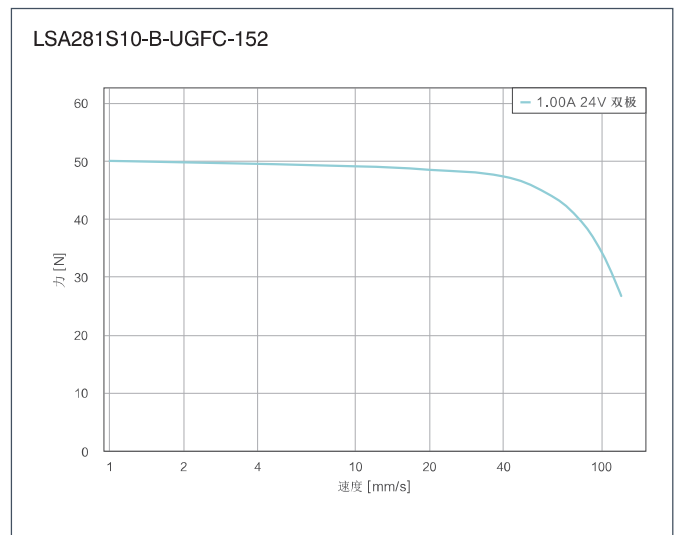
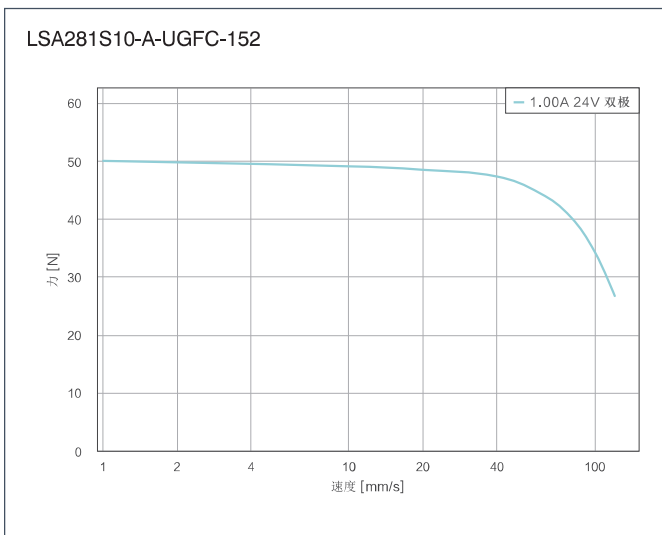
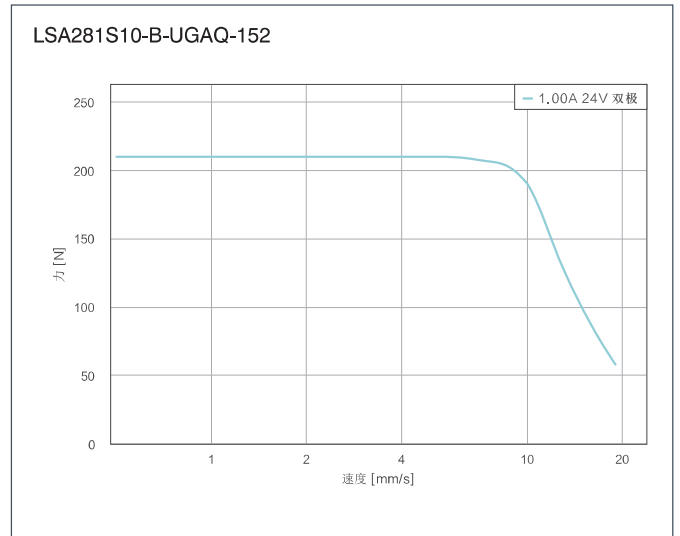
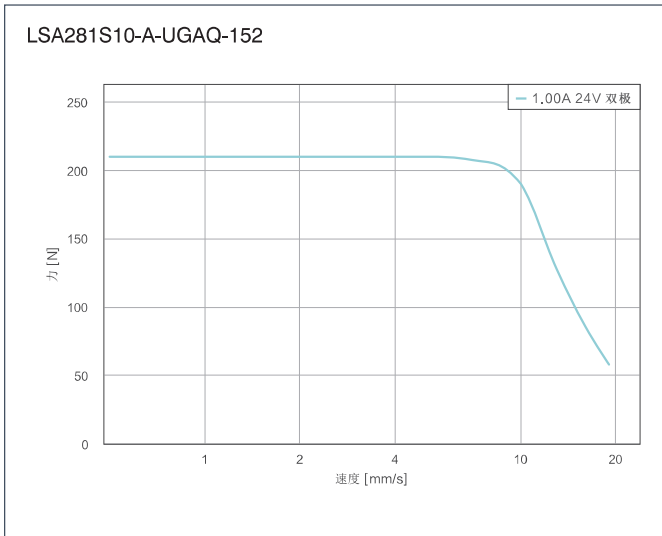
Side view



Rear view



● 速度推力曲线 (FORCE-VELOCITY CURVES)





## 选件 Options



接插件



### 型号 (VERSIONS)

型号 (Type)	推力 Force	速度 Speed	相电流 Current per	分辨率 Resolution	相电阻 Resistance per	相电感 Inductance per	丝杆直径 Thread Diameter	导程 Thread Lead	机身长度 Length A"	重量 Weight
	N	mm/s	A	μm/步	Ohm	mH	mm	mm	mm	kg
LA351S12-A-TJBA	220	24	1.2	5	1.85	2	6	1	33.6	0.15
LA351S12-B-TJBA	220	24	1.2	5	1.85	2	6	1	33.6	0.15
LA351S12-A-TJCA	150	50	1.2	10	1.85	2	6	2	33.6	0.15
LA351S12-B-TJCA	150	50	1.2	10	1.85	2	6	2	33.6	0.15
LA351S12-A-UKGI	70	100	1.2	31.75	1.85	2	6.35	6.35	33.6	0.15
LA351S12-B-UKGI	70	100	1.2	31.75	1.85	2	6.35	6.35	33.6	0.15
LA351M12-A-TJBA	350	30	1.2	5	3.2	3.4	6	1	43.6	0.22
LA351M12-B-TJBA	350	30	1.2	5	3.2	3.4	6	1	43.6	0.22
LA351M12-A-UKGI	120	110	1.2	31.75	3.2	3.4	6.35	6.35	43.6	0.22
LA351M12-B-UKGI	120	110	1.2	31.75	3.2	3.4	6.35	6.35	43.6	0.22

### 配件 (ACCESSORIES)

SCREW-ABA-TJCA-200  
带梯形螺纹的丝杆 (Lead Screw with Trapezoidal Thread)

SCREW-ABA-TJCA-300  
带梯形螺纹的丝杆 (Lead Screw with Trapezoidal Thread)

SCREW-AAA-TJCA-1000  
带梯形螺纹的丝杆 (Lead Screw with Trapezoidal Thread)

SCREW-ABA-UKGI-200  
带 ACME 螺纹的丝杆 (Lead Screw with ACME Thread)

SCREW-ABA-UKGI-300  
带 ACME 螺纹的丝杆 (Lead Screw with ACME Thread)

SCREW-AAA-UKGI-1000  
带 ACME 螺纹的丝杆 (Lead Screw with ACME Thread)

ZK-JST-EHR-6-0.5M-S  
电机线缆 0.5米 (Motor Cable 0.5 m)

NANOLUBE-50G 润滑剂 (Lubricant)

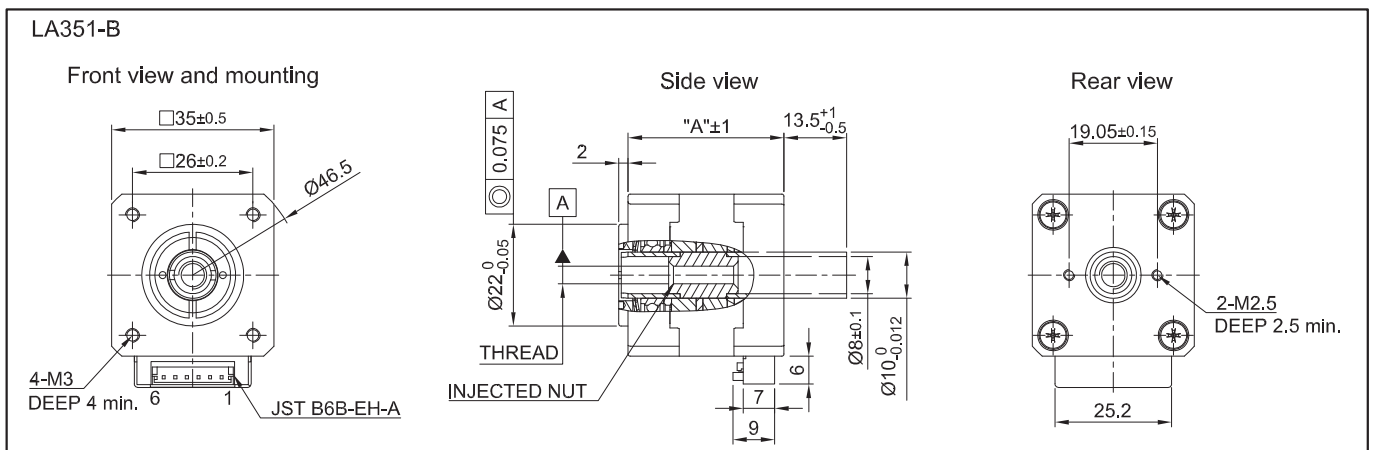
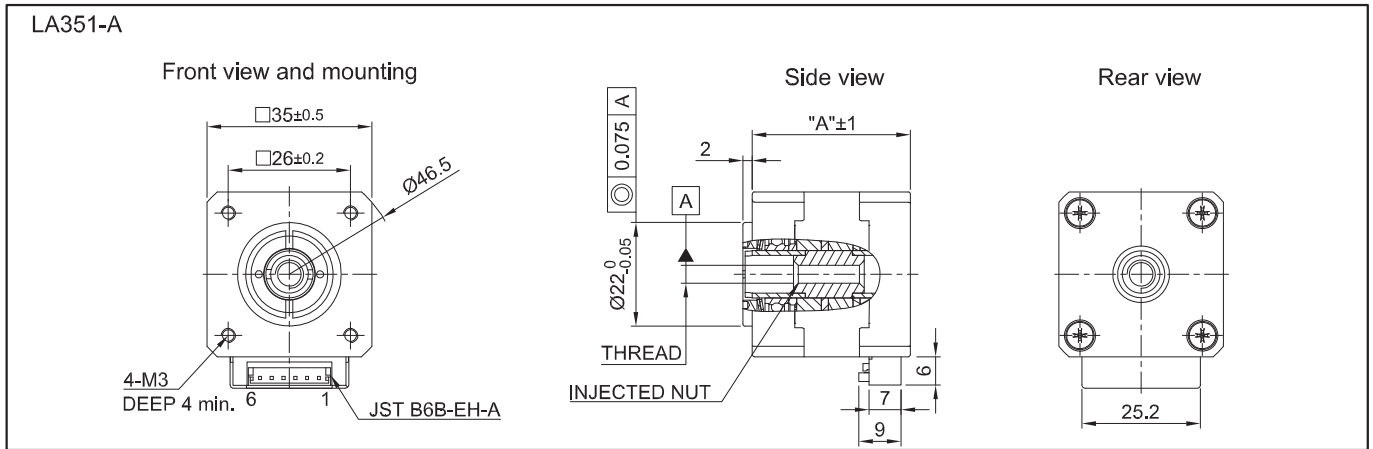
### 警告 (CAUTION)



数据表中列出的力和额定输出功率基于约 10% 至 20% 的占空比, 必须相应降低才能获得更大的值。应避免运行至固定的挡块。

(The force and output power ratings listed in the data sheets are based on a duty cycle of approx. 10% to 20% and must be reduced for higher values. Moving against fixed limit stops should be avoided.)

● 机械尺寸 (DIMENSIONS)



## 选件 Options



接插件



## ● 型号 (VERSIONS)

型号 (Type)	推力 Force N	速度 Speed mm/s	相电流 Current per Winding	分辨率 Resolution μm/步(step)	相电阻 Resistance per Winding	相电感 Inductance per Winding	丝杆直径 Thread Diameter mm	导程 Thread Lead mm	机身长度 Length mm	行程长度“X” Stroke Length mm	重量 Weight kg
LGA351S12-A-UKGI-019	70	100	1.2	31.75	1.85	2	6.35	6.35	33.6	19.05	0.2
LGA351S12-B-UKGI-019	70	100	1.2	31.75	1.85	2	6.35	6.35	33.6	19.05	0.2
LGA351S12-A-UKGI-038	70	100	1.2	31.75	1.85	2	6.35	6.35	33.6	38.1	0.2
LGA351S12-B-UKGI-038	70	100	1.2	31.75	1.85	2	6.35	6.35	33.6	38.1	0.2
LGA351M12-B-UKGI-025	120	110	1.2	31.75	3.2	3.4	6.35	6.35	43.6	25.4	0.27
LGA351M12-B-UKGI-063	120	110	1.2	31.75	3.2	3.4	6.35	6.35	43.6	63.5	0.27

## ● 配件 (ACCESSORIES)

ZK-JST-EHR-6-0.5M-S 电机线缆 0.5米  
Motor Cable 0.5 m

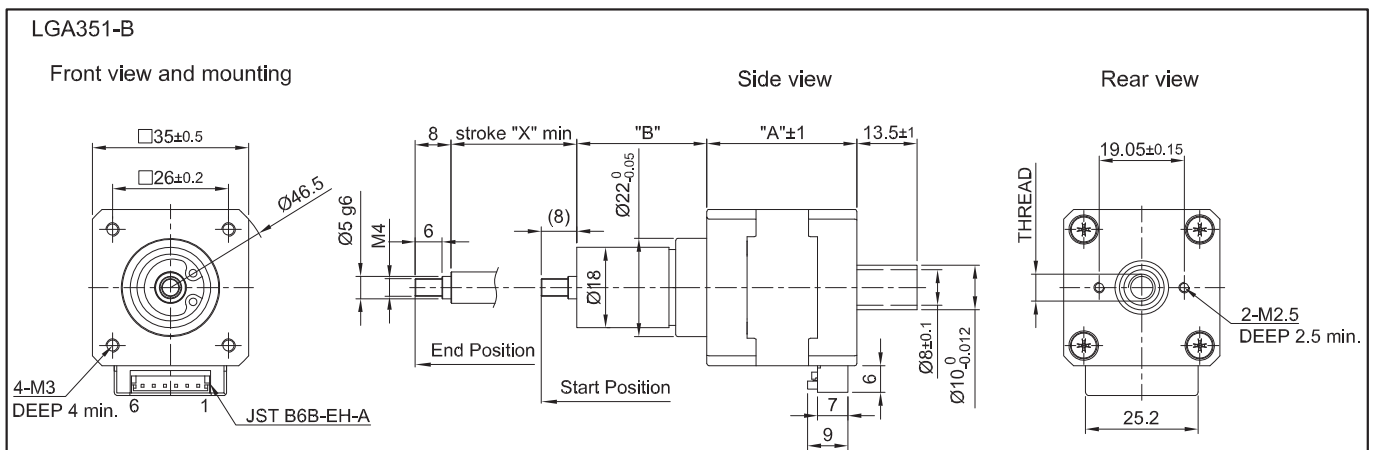
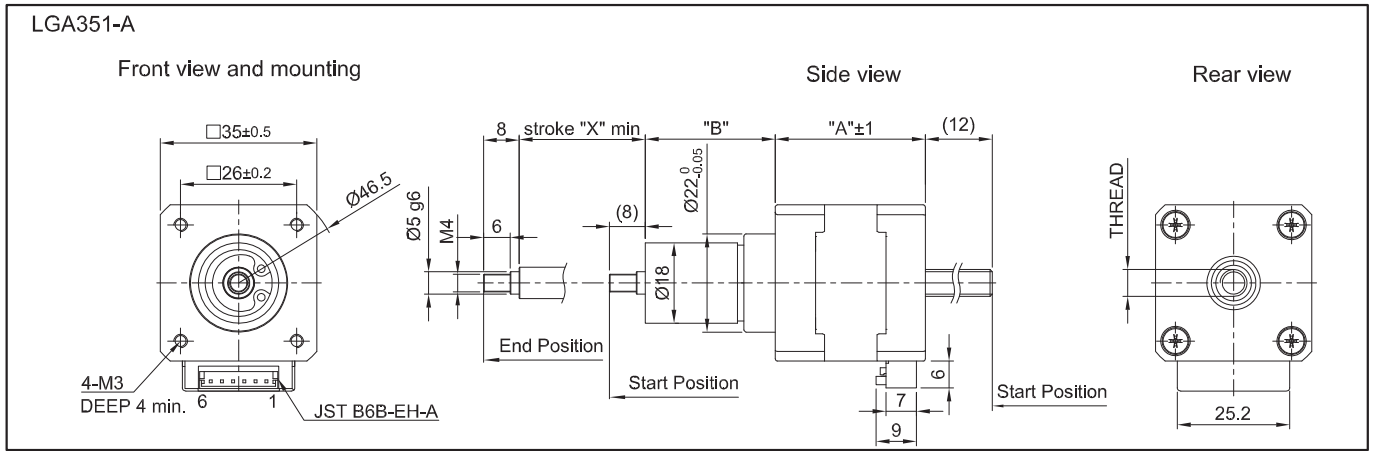
## ● 警告 (CAUTION)



数据表中列出的力和额定输出功率基于约 10% 至 20% 的占空比，必须相应降低才能获得更大的值。应避免运行至固定的挡块。  
The force and output power ratings listed in the data sheets are based on a duty cycle of approx. 10% to 20% and must be reduced for higher values. Moving against fixed limit stops should be avoided.



● 机械尺寸 (DIMENSIONS)



## 选件 Options



接插件



## ● 型号 (VERSIONS)

型号 (Type)	推力 Force N	速度 Speed mm/s	相电流 Current per Winding	分辨率 Resolution μm/步(step)	相电阻 Resistance per Winding	相电感 Inductance per Winding	丝杆直径 Thread Diameter mm	导程 Thread Lead mm	丝杠长度 Screw Length L <sup>mm</sup>	机身长度 Length A <sup>mm</sup>	重量 Weight kg
LSA351S12-A-UKGI-152	70	100	1.2	31.75	1.85	2	6.35	6.35	152	33.6	0.18
LSA351S12-B-UKGI-152	70	100	1.2	31.75	1.85	2	6.35	6.35	152	33.6	0.18
LSA351M12-B-TJCA-152	210	55	1.2	10	3.2	3.4	6	2	152	43.6	0.25
LSA351M12-B-UKGI-152	120	110	1.2	31.75	3.2	3.4	6.35	6.35	152	43.6	0.25

## ● 配件 (ACCESSORIES)

LSNUT-AAAE-TJCA 螺纹螺母 – POM (Threaded Nut – POM)  
 LSNUT-AAAE-UKGI 螺纹螺母 – POM (Threaded Nut – POM)  
 LSNUT-AEAE-TJCA  
 预装螺纹螺母 – POM (pre-Loaded Threaded Nut - POM)  
 LSNUT-AEAE-UKGI  
 预装螺纹螺母 – POM (Loaded Threaded Nut - POM)  
 ZK-JST-EHR-6-0.5M-S 电机线缆 0.5米 (Motor Cable 0.5 m)  
 NANOLUBE-50G 润滑剂 (Lubricant)

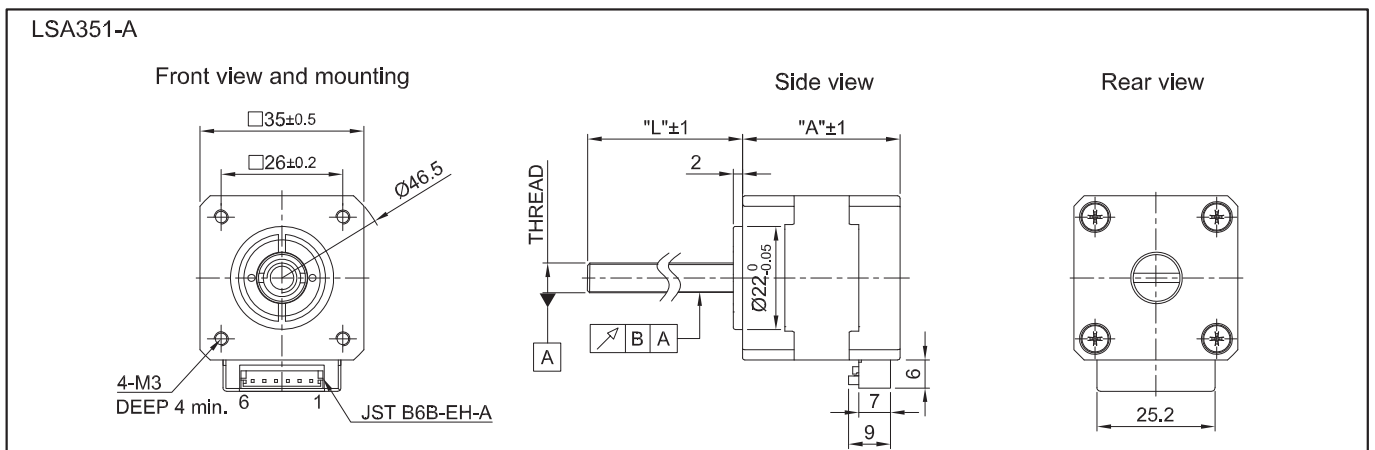
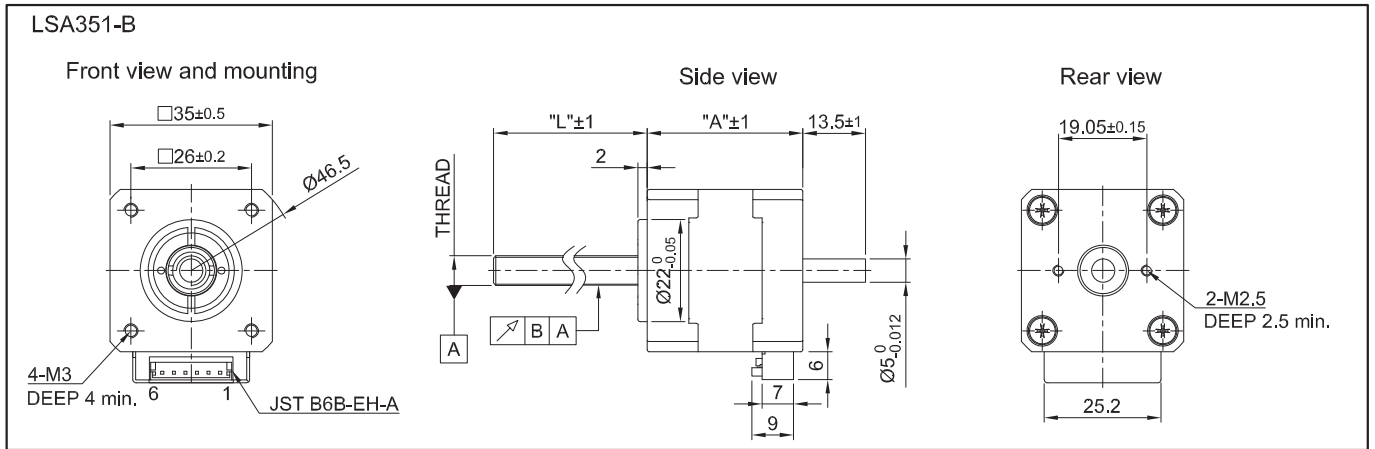
## ● 警告 (CAUTION)



数据表中指定的力和额定功率基于 10%  
 至 20% 的占空比, 必须将其相应降低才能获得更大的值。应  
 避免运行至固定的限位挡块。

The force and power ratings specified in the data sheets  
 are based on a duty cycle of 10% to 20% and must be reduced  
 for higher values. Moving against fixed end stops should be  
 avoided

● 机械尺寸 (DIMENSIONS)



## 选件 Options



Connector

接插件



## ● 型号 (VERSIONS)

型号 (Type)	推力 Force N	速度 Speed mm/s	相电流 Current per Winding	分辨率 Resolution μm/步(step)	相电阻 Resistance per Winding	相电感 Inductance per Winding	丝杆直径 Thread Diameter mm	导程 Thread Lead mm	机身长度 Length A" mm	衬套长度 Socket Length L" mm	重量 Weight kg
LA421S07-A-TJCA	258	55	0.7	10	9.3	12.8	6	2	33.4	15	0.2
LA421S07-B-TJCA	258	55	0.7	10	9.3	12.8	6	2	33.4	15	0.2
LA421S14-A-TJCA	258	55	1.4	10	2	2.8	6	2	33.4	15	0.2
LA421S14-A-UKGI	152	80	1.4	31.75	2	2.8	6.35	6.35	33.4	15	0.2
LA421S14-B-UKGI	152	80	1.4	31.75	2	2.8	6.35	6.35	33.4	15	0.2
LA421S14-B-TJCA	258	55	1.4	10	2	2.8	6	2	33.4	15	0.2
LA421L13-A-TJCA	369	50	1.3	10	3.8	6.15	6	2	47.4	15	0.34
LA421L13-B-TJCA	369	50	1.3	10	3.8	6.15	6	2	47.4	15	0.34
LA421L18-A-TJCA	369	50	1.8	10	1.75	3.25	6	2	47.4	15	0.34
LA421L18-B-TJCA	369	50	1.8	10	1.75	3.25	6	2	47.4	15	0.34
LA421L18-B-UKGI	275	80	1.8	31.75	1.75	3.4	6.35	6.35	47.4	15	0.34

## ● 配件 (ACCESSORIES)

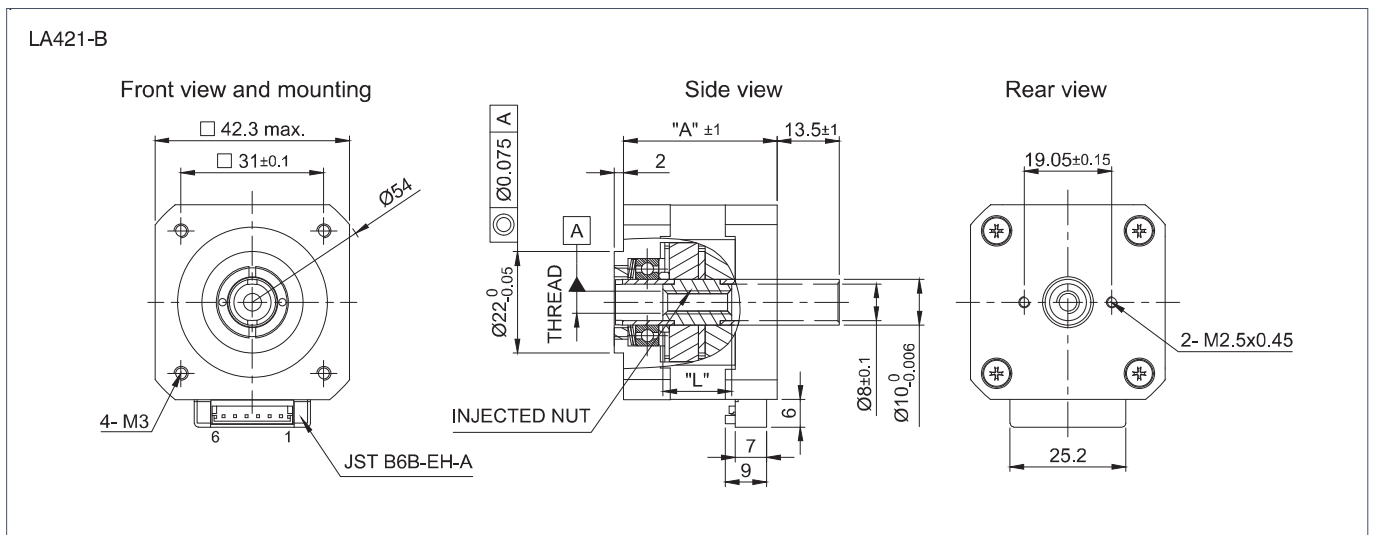
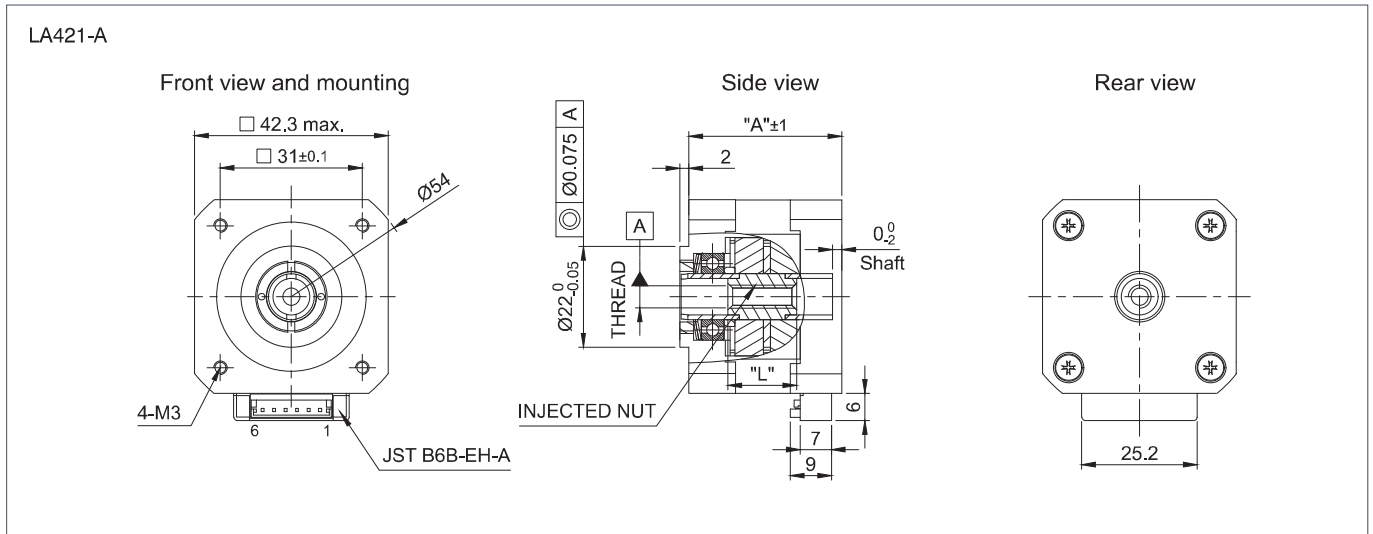
SCREW-ABA-TJCA-200  
带梯形螺纹的丝杆 (Lead Screw with Trapezoidal Thread)  
SCREW-ABA-TJCA-300  
带梯形螺纹的丝杆 (Lead Screw with Trapezoidal Thread)  
SCREW-AAA-TJCA-1000  
带梯形螺纹的丝杆 (Lead Screw with Trapezoidal Thread)  
SCREW-ABA-UKGI-200  
带 ACME 螺纹的丝杆 (Lead Screw with ACME Thread)  
SCREW-ABA-UKGI-300  
带 ACME 螺纹的丝杆 (Lead Screw with ACME Thread)  
SCREW-AAA-UKGI-1000  
带 ACME 螺纹的丝杆 (Lead Screw with ACME Thread)  
ZK-JST-EHR-6-0.5M-S  
电机线缆 0.5米 (Motor Cable 0.5 m)  
NANOLUBE-50G 润滑剂 (Lubricant)

## ● 警告 (CAUTION)

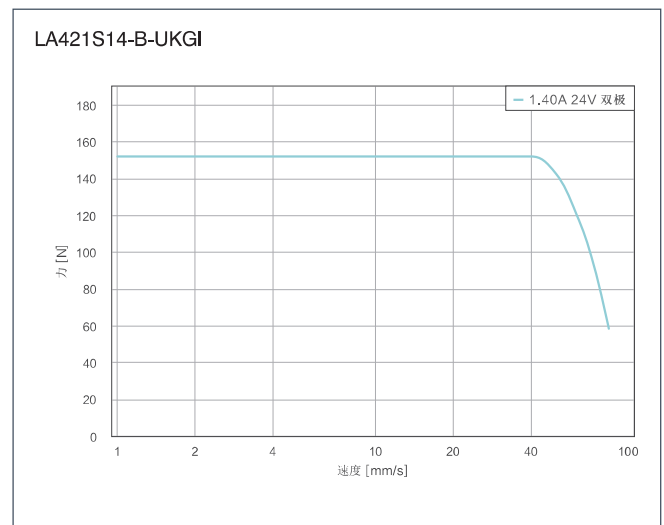
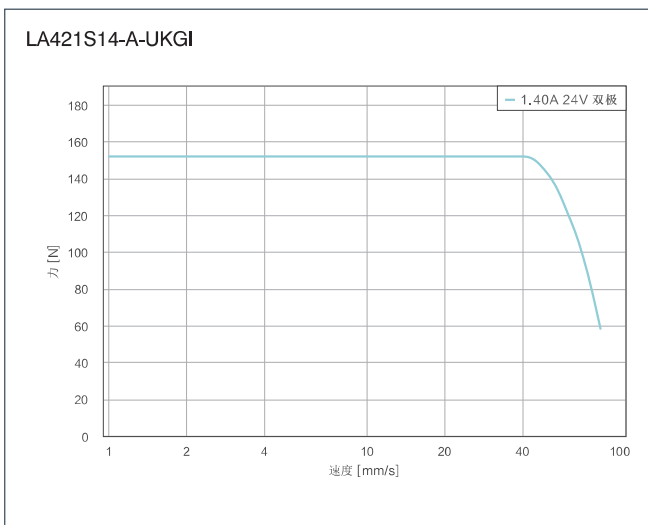
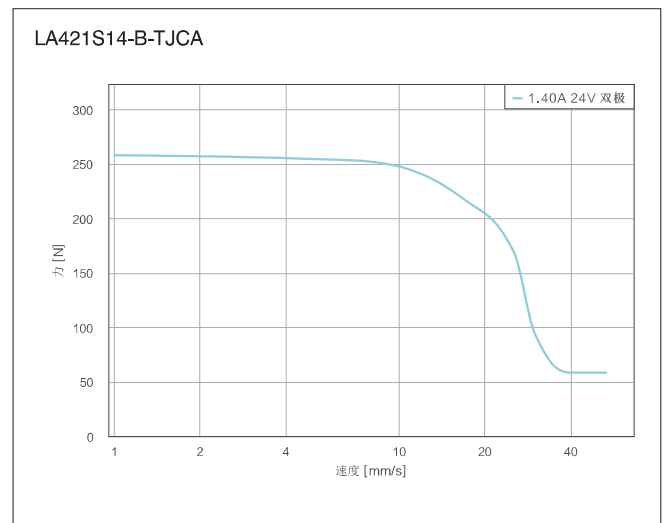
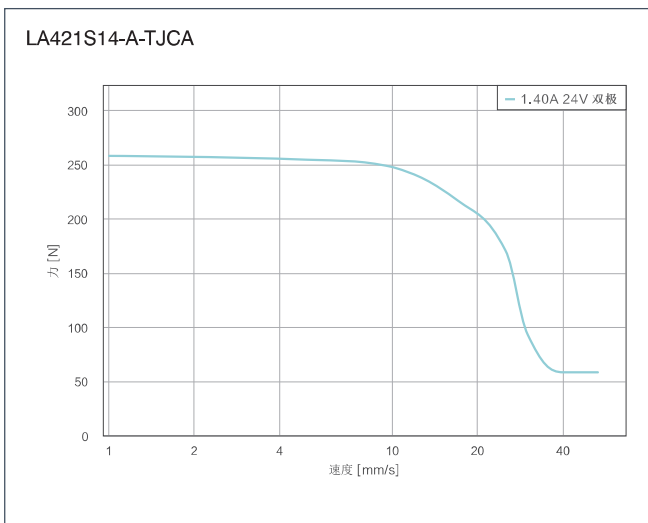
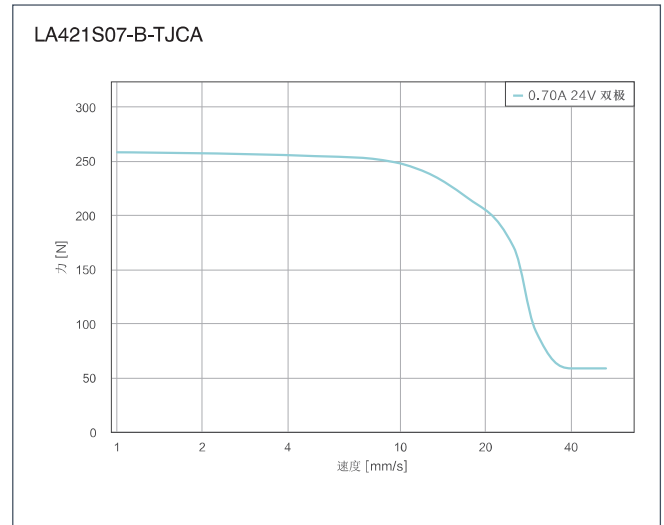
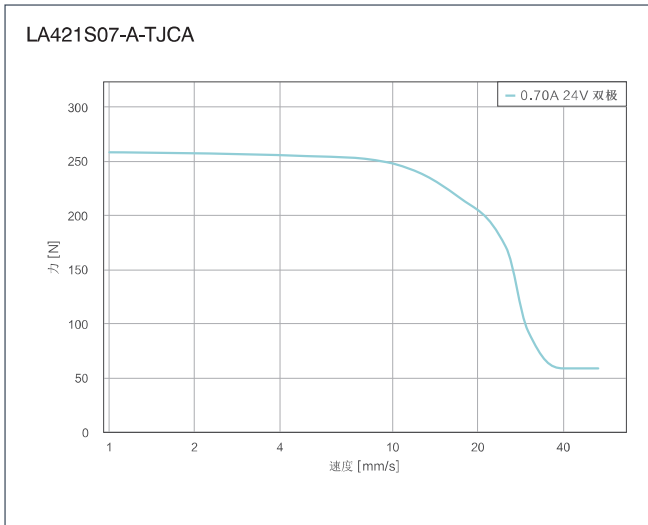


数据表中列出的力和额定输出功率基于约 10% 至 20% 的占空比, 必须相应降低才能获得更大的值。应避免运行至固定的挡块。(The force and output power ratings listed in the data sheets are based on a duty cycle of approx. 10% to 20% and must be reduced for higher values. Moving against fixed limit stops should be avoided.)

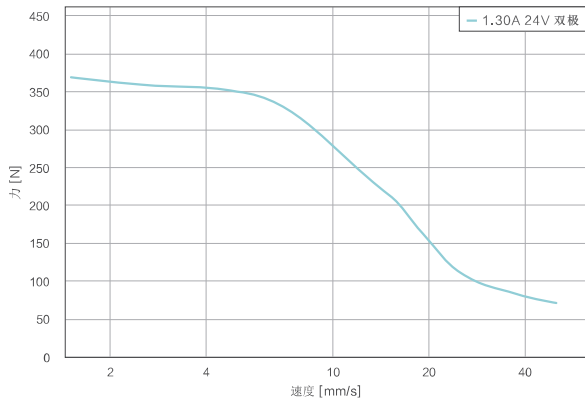
● 机械尺寸 (DIMENSIONS)



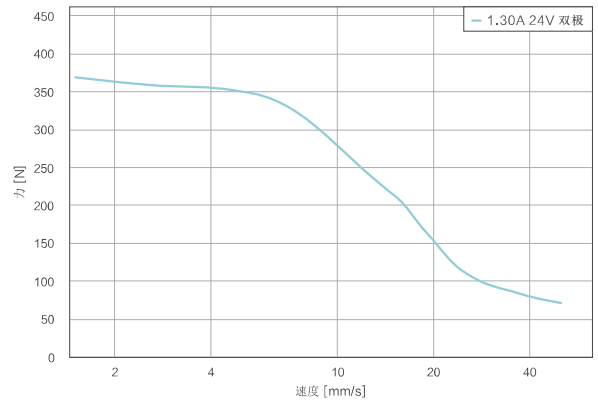
● 速度推力曲线 (FORCE-VELOCITY CURVES)



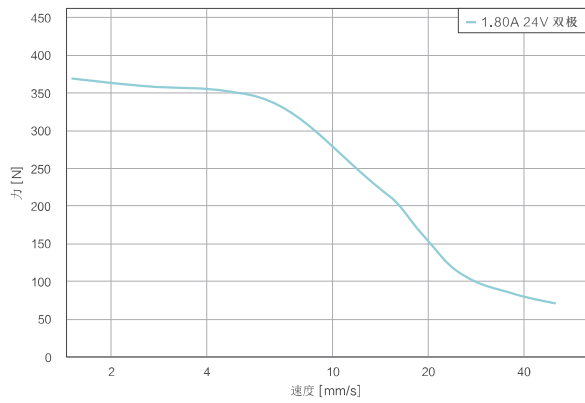
LA421L13-A-TJCA



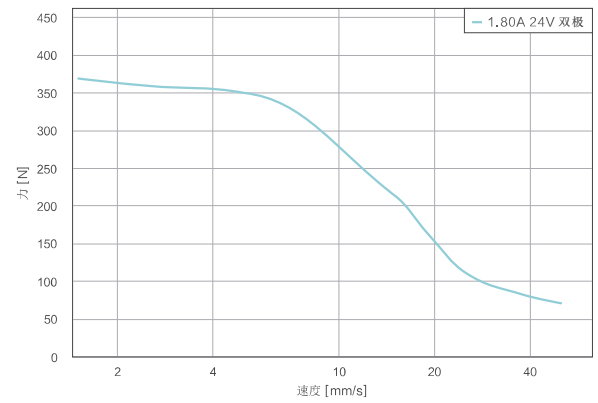
LA421L13-B-TJCA



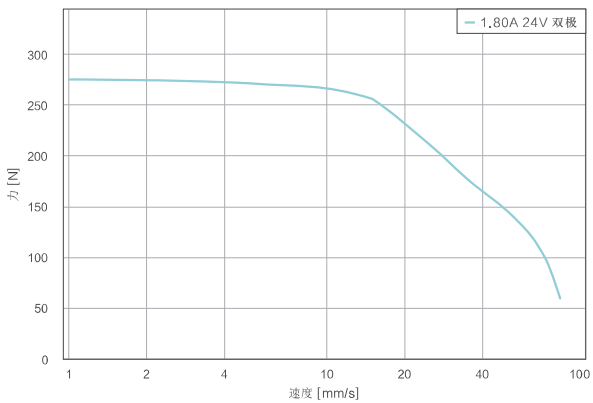
LA421L18-A-TJCA



LA421L18-B-TJCA



LA421L18-B-UKGI



## 选件 Options



接插件



## ● 型号 (VERSIONS)

型号 (Type)	推力 Force N	速度 Speed mm/s	相电流 Current per Winding	分辨率 Resolution μm/步(step)	相电阻 Resistance per Winding	相电感 Inductance per Winding	丝杆直径 Thread Diameter mm	导程 Thread Lead mm	机身长度 Length A" mm	行程长度 Stroke Length L" mm	重量 Weight kg
LGA421S14-A-UKGI-019	152	80	1.4	31.75	2	2.8	6.35	6.35	33.4	19.05	0.24
LGA421S14-B-UKGI-019	152	80	1.4	31.75	2	2.8	6.35	6.35	33.4	19.05	0.24
LGA421S14-A-UKGI-038	152	80	1.4	31.75	2	2.8	6.35	6.35	33.4	38.1	0.25
LGA421S14-B-UKGI-038	152	80	1.4	31.75	2	2.8	6.35	6.35	33.4	38.1	0.25
LGA421L18-B-UKGI-025	275	80	1.8	31.75	1.75	3.4	6.35	6.35	47.4	25.4	0.34
LGA421L18-B-UKGI-063	275	80	1.8	31.75	1.75	3.4	6.35	6.35	47.4	63.5	0.39

## ● 配件 (ACCESSORIES)

ZK-JST-EHR-6-0.5M-S  
电机线缆 0.5米(Motor Cable 0.5 m)

## ● 警告 (CAUTION)



数据表中列出的力和额定输出功率基于约 10% 至 20% 的占空比, 必须相应降低才能获得更大的值。应避免运行至固定的挡块。(The force and output power ratings listed in the data sheets are based on a duty cycle of approx. 10% to 20% and must be reduced for higher values. Moving against fixed limit stops should be avoided)

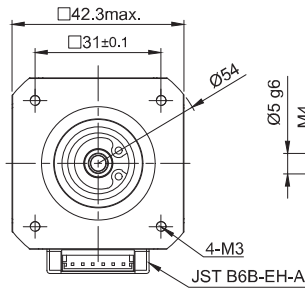


● 机械尺寸

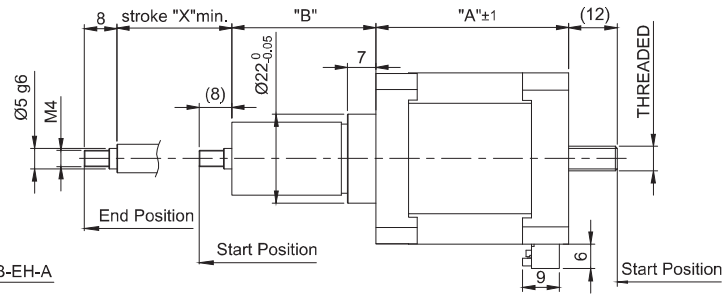
(DIMENSIONS)

LGA421-A

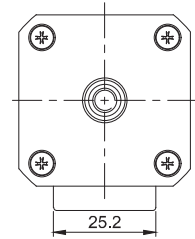
Front view and mounting



Side view

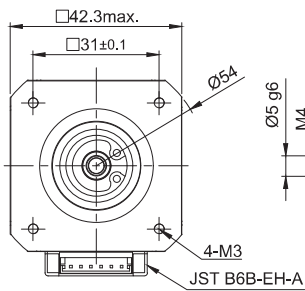


Rear view

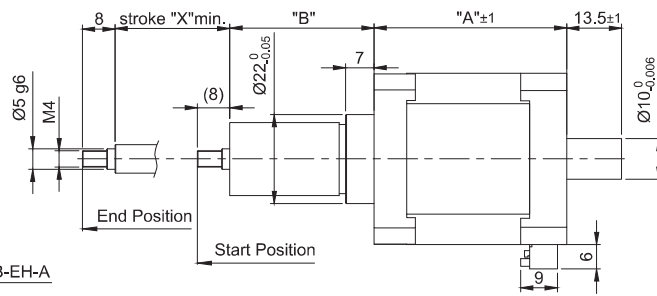


LGA421-B

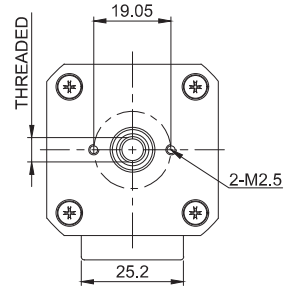
Front view and mounting



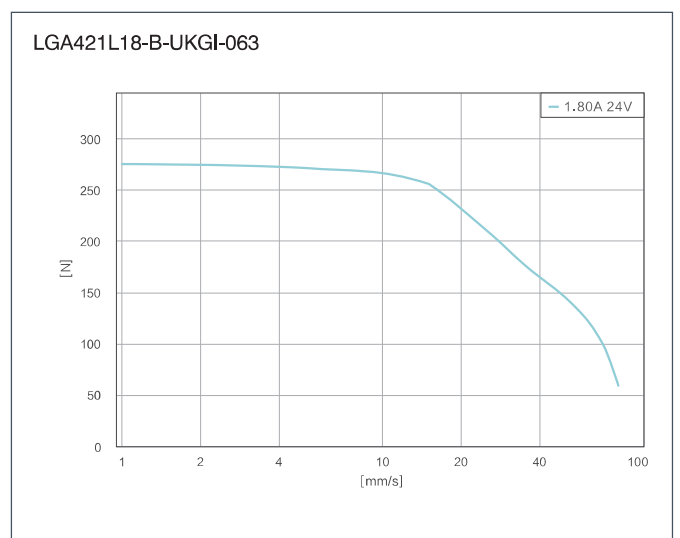
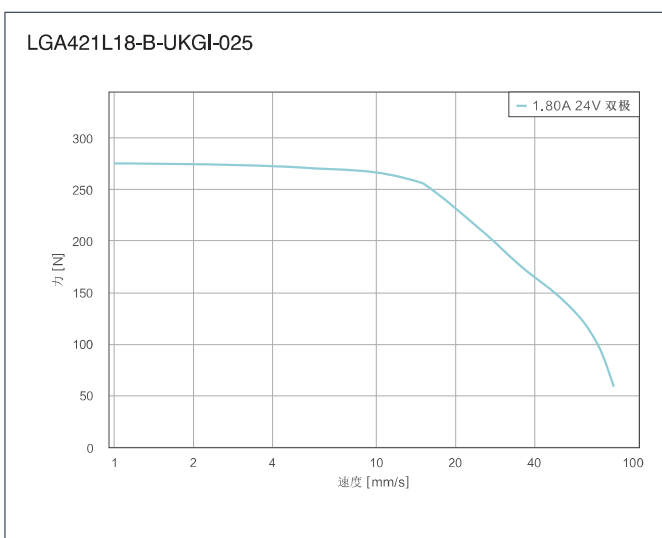
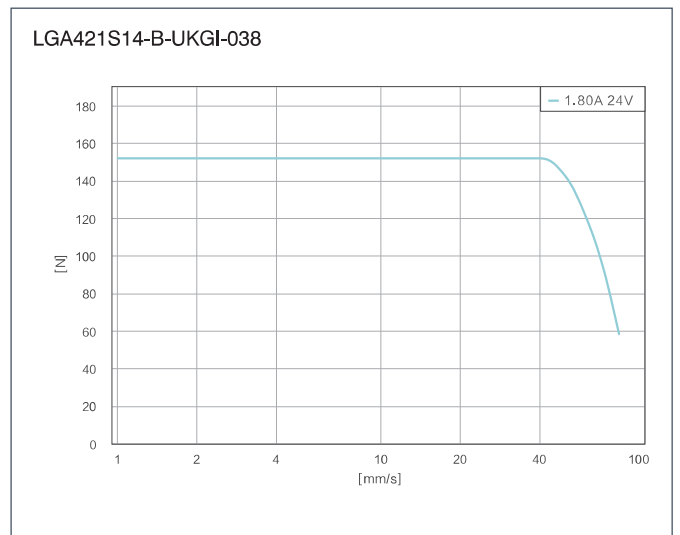
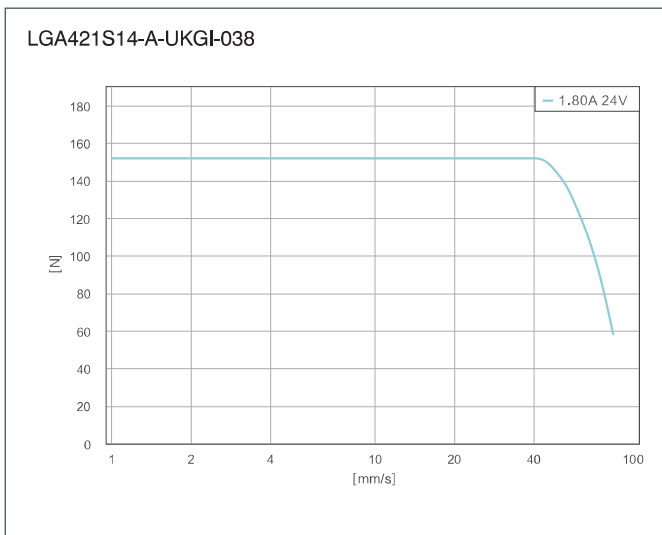
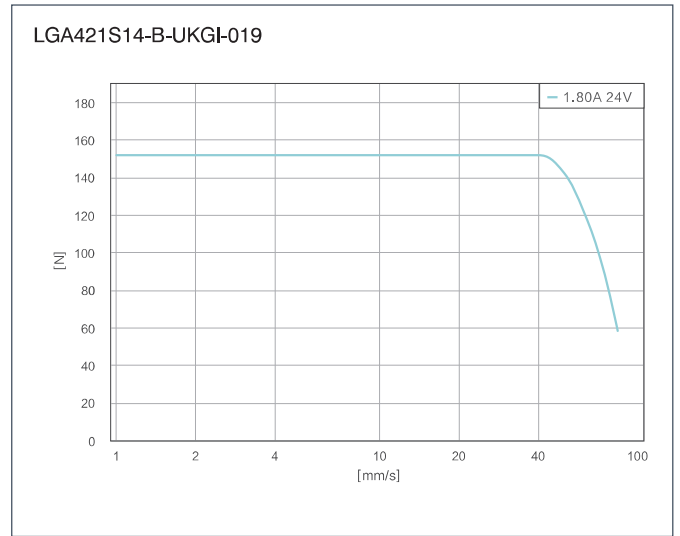
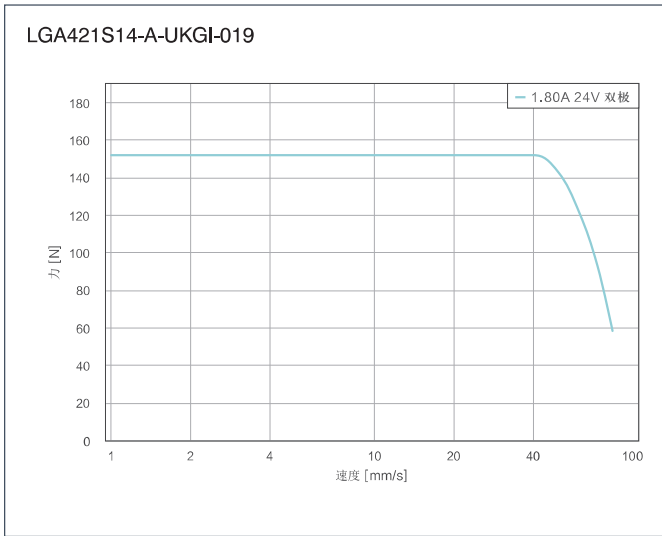
Side view



Rear view



● 速度推力曲线 (FORCE-VELOCITY CURVES)



## 选件 Options



接插件



## ● 型号 (VERSIONS)

型号 (Type)	推力 Force N	速度 Speed mm/s	相电流 Current per Winding	分辨率 Resolution μm/步(step)	相电阻 Resistance per Winding	相电感 Inductance per Winding	丝杆直径 Thread Diameter mm	导程 Thread Lead mm	丝杠长度 Screw Length L <sup>mm</sup>	机身长度 Length mm	重量 Weight kg
LSA421S14-A-UKGI-152	152	80	1.4	31.75	2	2.8	6.35	6.35	152	33.4	0.26
LSA421S14-B-UKGI-152	152	80	1.4	31.75	2	2.8	6.35	6.35	152	33.4	0.26
LSA421L18-B-TJCA-152	369	50	1.8	10	1.75	3.25	6	2	152	47.4	0.4
LSA421L18-B-UKGI-152	275	80	1.8	31.75	1.75	3.4	6.35	6.35	152	47.4	0.4

## ● 配件 (ACCESSORIES)

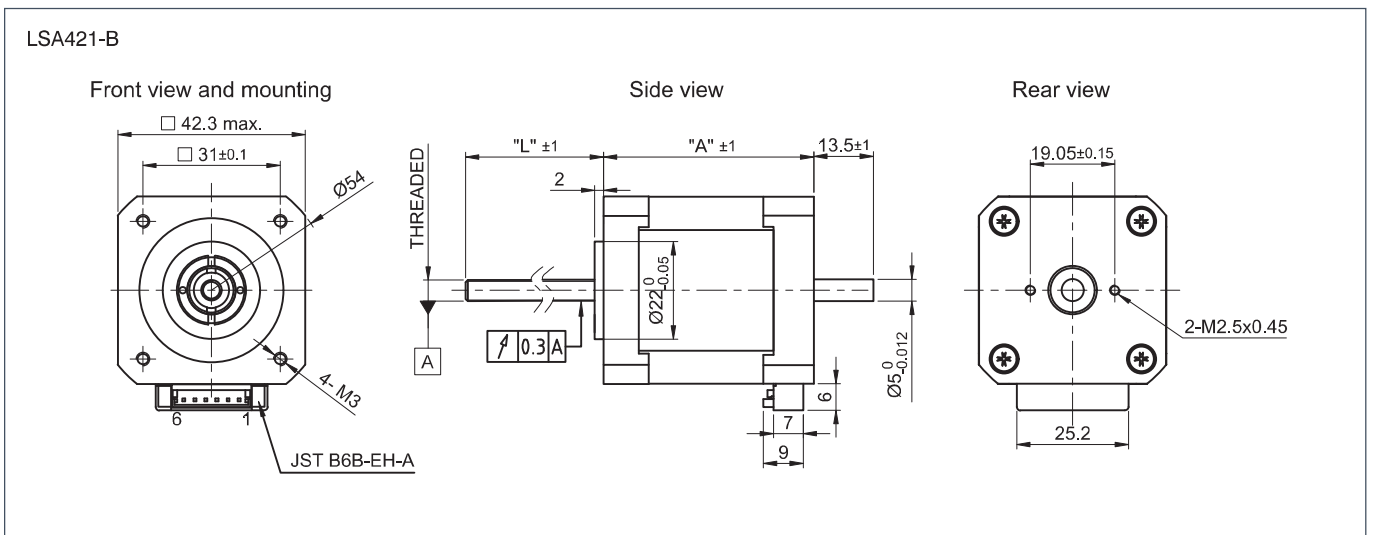
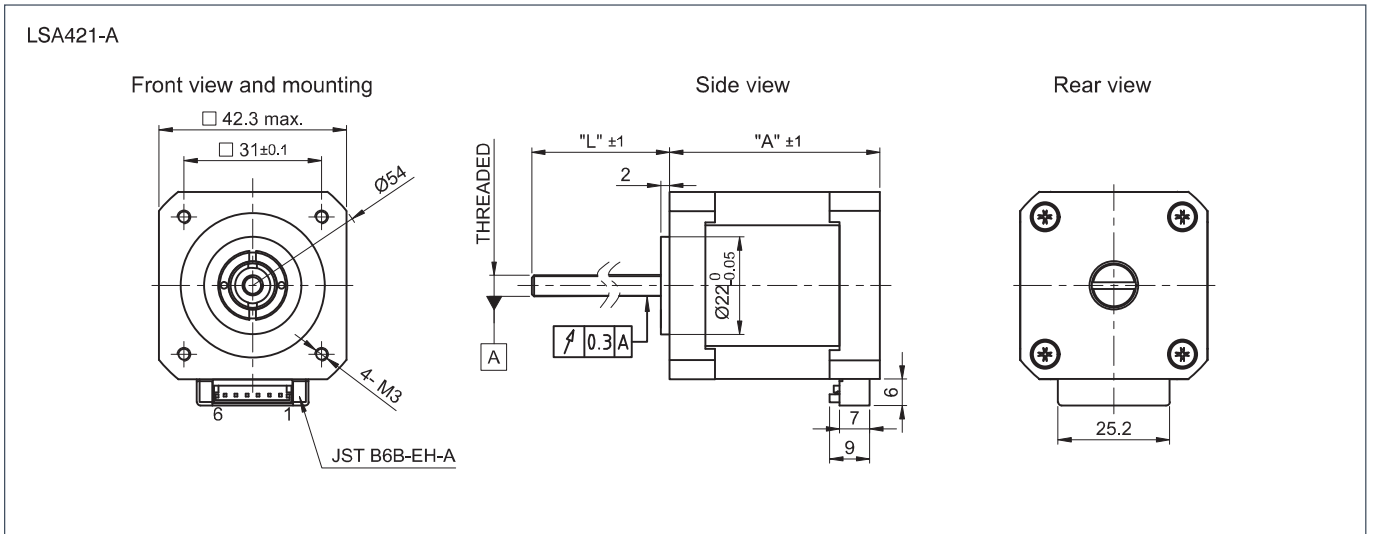
LSNUT-AAAE-TJCA 螺纹螺母(Threaded Nut) – POM  
 LSNUT-AAAE-UKGI 螺纹螺母(Threaded Nut) – POM  
 LSNUT-AEAE-TJCA 预装螺纹螺母(Loaded Threaded Nut) – POM  
 LSNUT-AEAE-UKGI 预装螺纹螺母(Loaded Threaded Nut) – POM  
 ZK-JST-EHR-6-0.5M-S 电机线缆 0.5米(Motor Cable 0.5 m)  
 NANOLUBE-50G 润滑剂(Lubricant)

## ● 警告 (CAUTION)

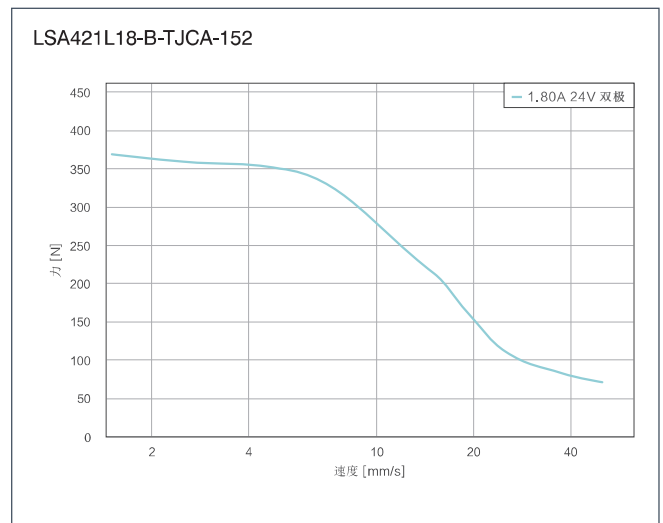
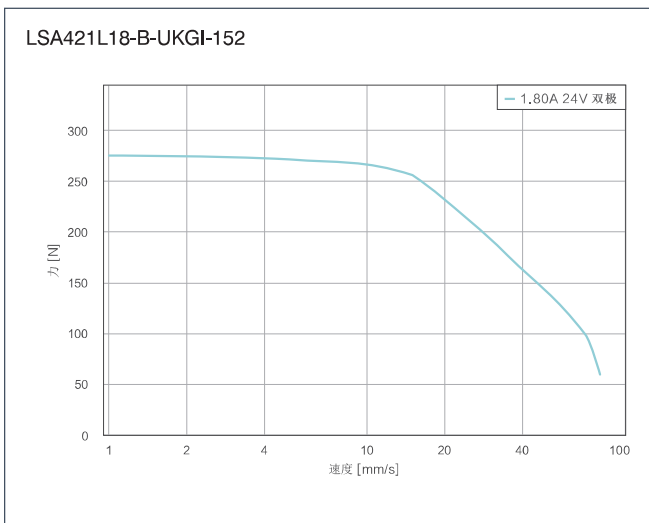
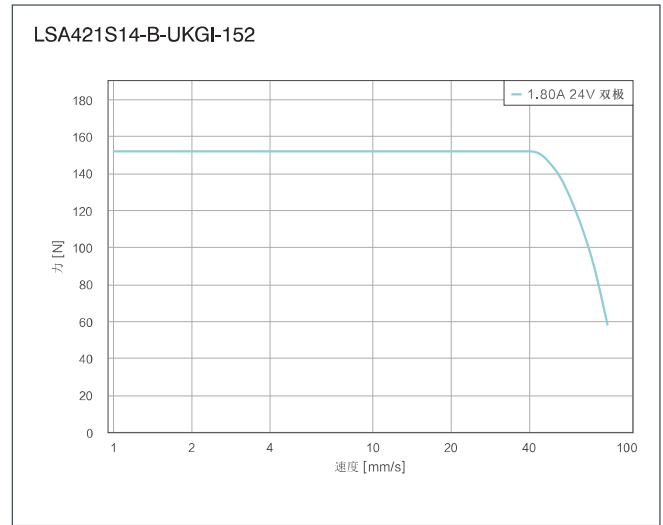
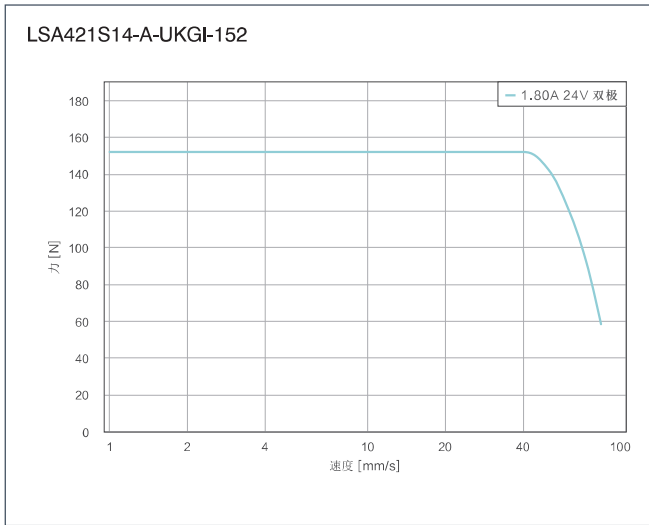


数据表中指定的力和额定功率基于 10%至 20% 的占空比, 必须将其相应降低才能获得更大的值。应避免运行至固定的限位挡块。(The force and power ratings specified in the data sheets are based on a duty cycle of 10% to 20% and must be reduced for higher values. Moving against fixed end stops should be avoided.)

● 机械尺寸 (DIMENSIONS)



● 速度推力曲线 (FORCE-VELOCITY CURVES)



## 选件 Options



接插件


● 型号 (VERSIONS)

型号 (Type)	推力 Force N	速度 Speed mm/s	相电流 Current per A	分辨率 Resolution μm/步	相电阻 Resistance per Ohm	相电感 Inductance per mH	丝杆直径 Thread Diameter mm	导程 Thread Lead mm	机身长度 Length A" mm	重量 Weight kg
LA561S20-A-TSCA	800	50	2	10	1.6	3.5	10	2	50.3	0.65
LA561S20-B-TSCA	800	50	2	10	1.6	3.5	10	2	50.3	0.65
LA561S20-A-TSGA	500	130	2	30	1.6	3.5	10	6	50.3	0.65
LA561S20-B-TSGA	500	130	2	30	1.6	3.5	10	6	50.3	0.65
LA561S20-A-UQBG	1000	40	2	6.35	1.6	3.5	9.525	1.27	50.3	0.65
LA561S20-B-UQBG	1000	40	2	6.35	1.6	3.5	9.525	1.27	50.3	0.65
LA561S20-A-UQCN	750	65	2	12.7	1.6	3.5	9.525	2.54	50.3	0.65
LA561S20-B-UQCN	750	65	2	12.7	1.6	3.5	9.525	2.54	50.3	0.65
LA561L42-A-TSCA	1000	60	4.2	10	0.54	2.4	10	2	77.3	1
LA561L42-B-TSCA	1000	60	4.2	10	0.54	2.4	10	2	77.3	1
LA561L42-A-TSGA	700	150	4.2	30	0.54	2.4	10	6	77.3	1
LA561L42-B-TSGA	700	150	4.2	30	0.54	2.4	10	6	77.3	1
LA561L42-A-UQBG	1200	45	4.2	6.35	0.54	2.4	9.525	1.27	77.3	1
LA561L42-B-UQBG	1200	45	4.2	6.35	0.54	2.4	9.525	1.27	77.3	1
LA561L42-A-UQCN	1100	60	4.2	12.7	0.54	2.4	9.525	2.54	77.3	1
LA561L42-B-UQCN	1100	60	4.2	12.7	0.54	2.4	9.525	2.54	77.3	1

**● 配件**

(ACCESSORIES)

SCREW-ABA-TSCA-200  
 带梯形螺纹的丝杆  
 Lead Screw with Trapezoidal Thread  
 SCREW-ABA-TSCA-300  
 带梯形螺纹的丝杆  
 Lead Screw with Trapezoidal Thread  
 SCREW-AAA-TSCA-1000  
 带梯形螺纹的丝杆  
 Lead Screw with Trapezoidal Thread  
 SCREW-ABA-UQBG-200  
 带 ACME 螺纹的丝杆  
 Lead Screw with ACME Thread  
 SCREW-ABA-UQBG-300  
 带 ACME 螺纹的丝杆  
 Lead Screw with ACME Thread  
 SCREW-AAA-UQBG-1000  
 带 ACME 螺纹的丝杆  
 Lead Screw with ACME Thread  
 ZK-JST-VHR-6N-0.5M-S  
 电机线缆 0.5米  
 Motor Cable 0.5 m  
 NANOLUBE-50G 润滑剂Lubricant

**● 警告**

(CAUTION)

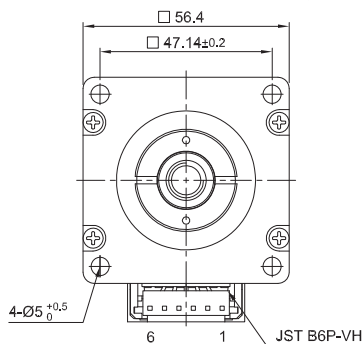
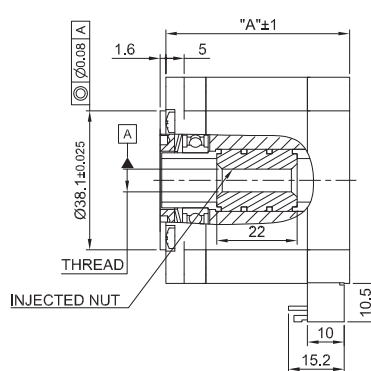
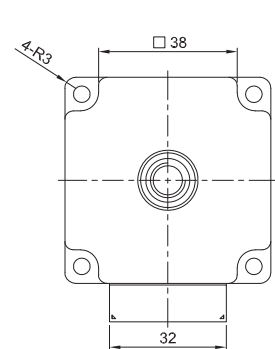
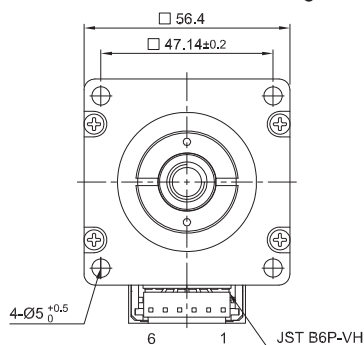
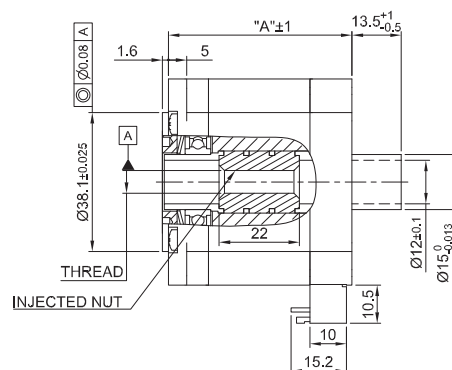
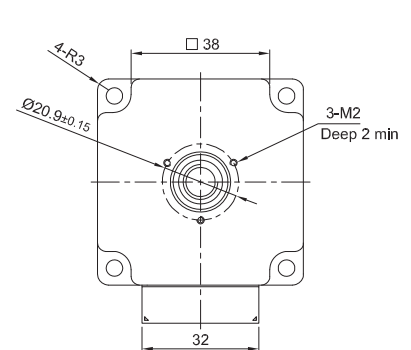


数据表中列出的力和额定输出功率基于约 10% 至 20% 的占空比, 必须相应降低才能获得更大的值。应避免运行至固定的挡块。

The force and output power ratings listed in the data sheets are based on a duty cycle of approx. 10% to 20% and must be reduced for higher values. Moving against fixed limit stops should be avoided.

**● 机械尺寸**

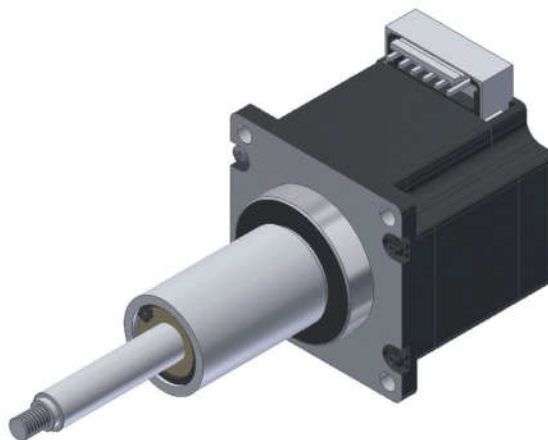
(DIMENSIONS)

**LA561-A**
**Front view and mounting**

**Side view**

**Rear view**

**LA561-B**
**Front view and mounting**

**Side view**

**Rear view**


## 选件 Options



接插件



## ● 型号 (VERSIONS)

型号 (Type)	推力 Force N	速度 Speed mm/s	相电流 Current per Winding	分辨率 Resolution μm/步(step)	相电阻 Resistance per Winding	相电感 Inductance per Winding	丝杆直径 Thread Diameter mm	导程 Thread Lead mm	机身长度 Length "A" "B" mm	行程长度 Stroke Length "X" mm	重量 Weight kg
LGA561S20-A-TSCA-019	800	50	2	10	1.6	3.5	10	2	50.3/31.15	19.05	0.8
LGA561S20-B-TSCA-019	800	50	2	10	1.6	3.5	10	2	50.3/31.15	19.05	0.8
LGA561S20-A-TSCA-038	800	50	2	10	1.6	3.5	10	2	50.3/50.2	38.1	0.85
LGA561S20-B-TSCA-038	800	50	2	10	1.6	3.5	10	2	50.3/50.2	38.1	0.85
LGA561L42-B-UQBG-025	1200	45	4.2	6.35	0.54	2.4	9.525	1.27	77.3/37.1	25.4	1.2
LGA561L42-B-UQBG-063	1200	45	4.2	6.35	0.54	2.4	9.525	1.27	77.3/75.6	63.5	1.35
LGA561L42-B-UQCN-025	1100	60	4.2	12.7	0.54	2.4	9.525	2.54	77.3/37.1	25.4	1.2
LGA561L42-B-UQCN-063	1100	60	4.2	12.7	0.54	2.4	9.525	2.54	77.3/75.6	63.5	1.35

## ● 配件 (ACCESSORIES)

ZK-JST-VHR-6N-0.5M-S 电机线缆 0.5米  
ZK-JST-VHR-6N-0.5M-S  
Motor Cable 0.5 m

## ● 警告 (CAUTION)



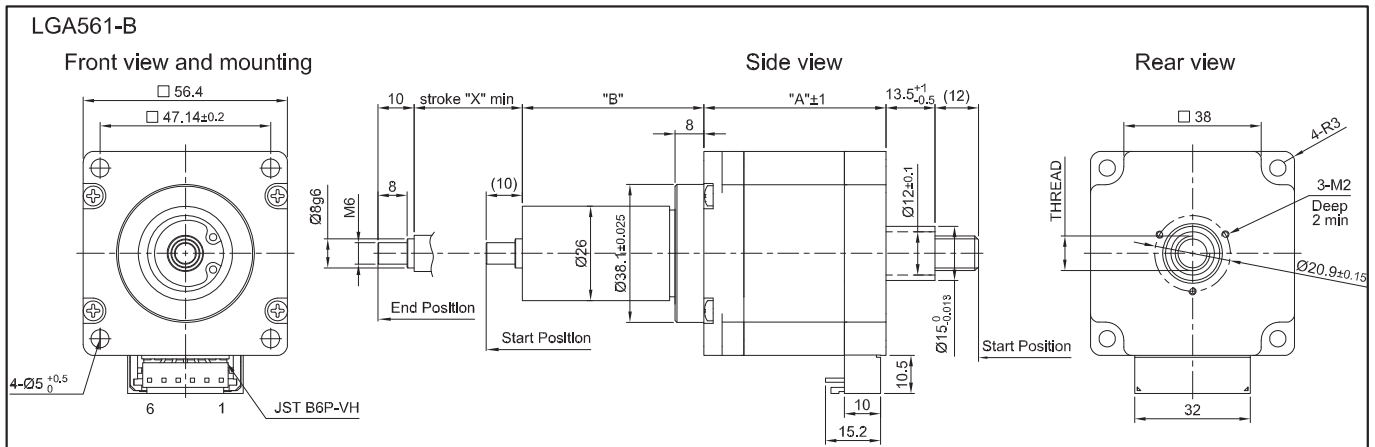
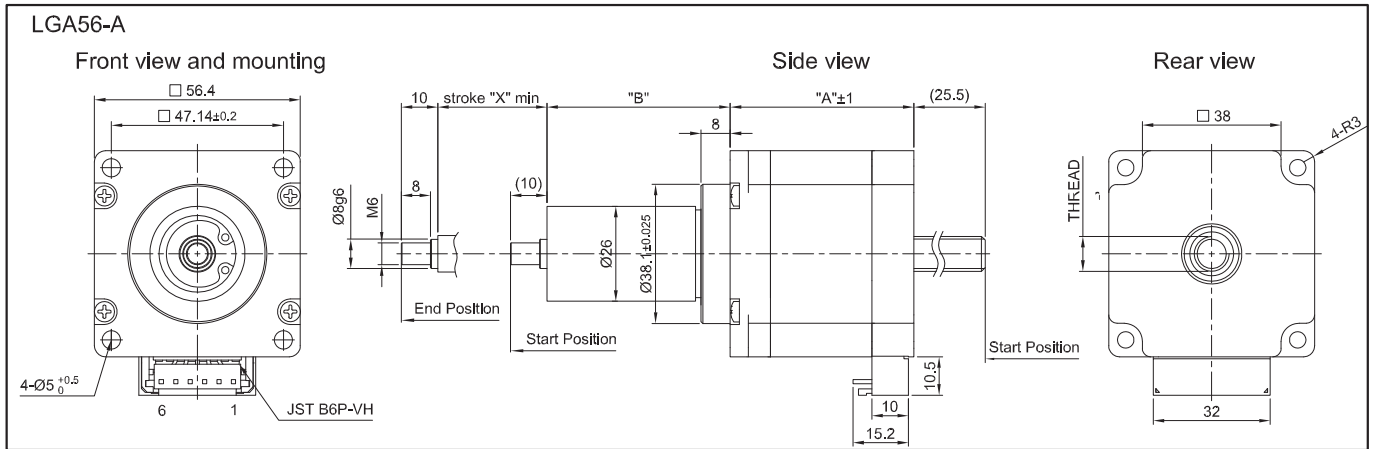
数据表中列出的力和额定输出功率基于约 10% 至 20% 的占空比, 必须相应降低才能获得更大的值。应避免运行至固定的挡块。

The force and output power ratings listed in the data sheets are based on a duty cycle of approx. 10% to 20% and must be reduced for higher values. Moving against fixed limit stops should be avoided.



● 机械尺寸

(DIMENSIONS)



## 选件 Options



接插件



### 型号 (VERSIONS)

型号 (Type)	推力 Force N	速度 Speed mm/s	相电流 Current per Winding	分辨率 Resolution μm/步(step)	相电阻 Resistance per Winding	相电感 Inductance per Winding	丝杆直径 Thread Diameter mm	导程 Thread Lead mm	丝杠长度 Screw Length L <sup>mm</sup>	机身长度 Length A <sup>mm</sup>	重量 Weight kg
LSA561S20-A-TSCA-152	800	50	2	10	1.6	3.5	10	2	152	50.3	0.82
LSA561S20-B-TSCA-152	800	50	2	10	1.6	3.5	10	2	152	50.3	0.82
LSA561S20-A-TSGA-152	500	130	2	30	1.6	3.5	10	6	152	50.3	0.82
LSA561S20-B-TSGA-152	500	130	2	30	1.6	3.5	10	6	152	50.3	0.82
LSA561S20-A-UQBG-152	1000	40	2	6.35	1.6	3.5	9.525	1.27	152	50.3	0.82
LSA561S20-B-UQBG-152	1000	40	2	6.35	1.6	3.5	9.525	1.27	152	50.3	0.82
LSA561S20-A-UQCN-152	750	65	2	12.7	1.6	3.5	9.525	2.54	152	50.3	0.82
LSA561S20-B-UQCN-152	750	65	2	12.7	1.6	3.5	9.525	2.54	152	50.3	0.82

### 配件 (ACCESSORIES)

LSNUT-AAAG-TSCA 螺纹螺母 – POM  
Threaded Nut – POM  
LSNUT-AAAG-UQBG 螺纹螺母 – POM  
Threaded Nut – POM  
LSNUT-AEAG-TSCA  
预装螺纹螺母 – POM  
Loaded Threaded Nut - POM  
LSNUT-AEAG-UQBG  
预装螺纹螺母 – POM  
Loaded Threaded Nut - POM  
ZK-JST-VHR-6N-0.5M-S 电机线缆 0.5米  
Motor Cable 0.5 m  
NANOLUBE-50G 润滑剂  
NANOLUBE-50G Lubricant

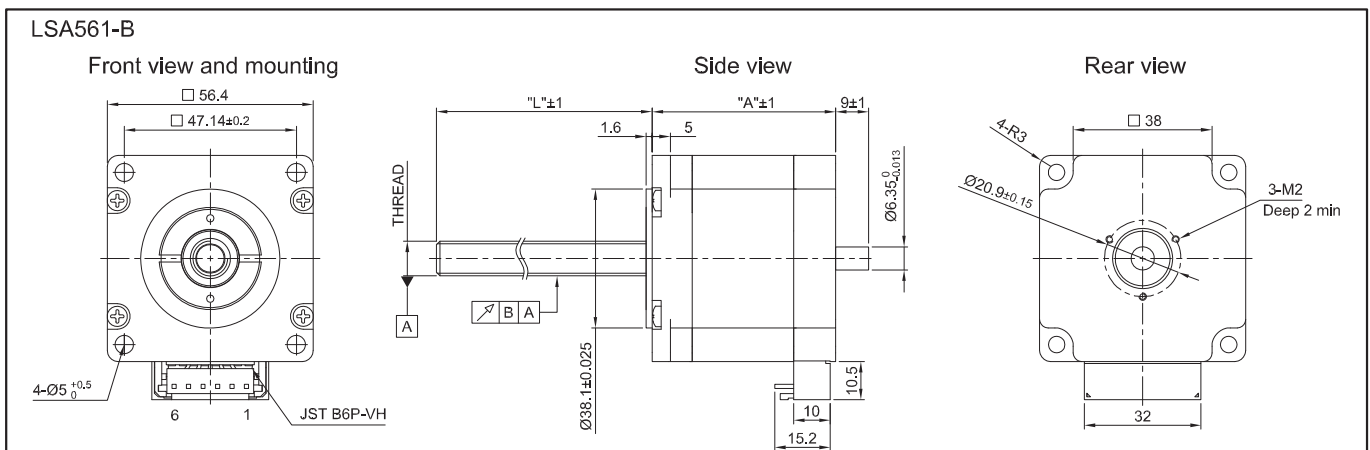
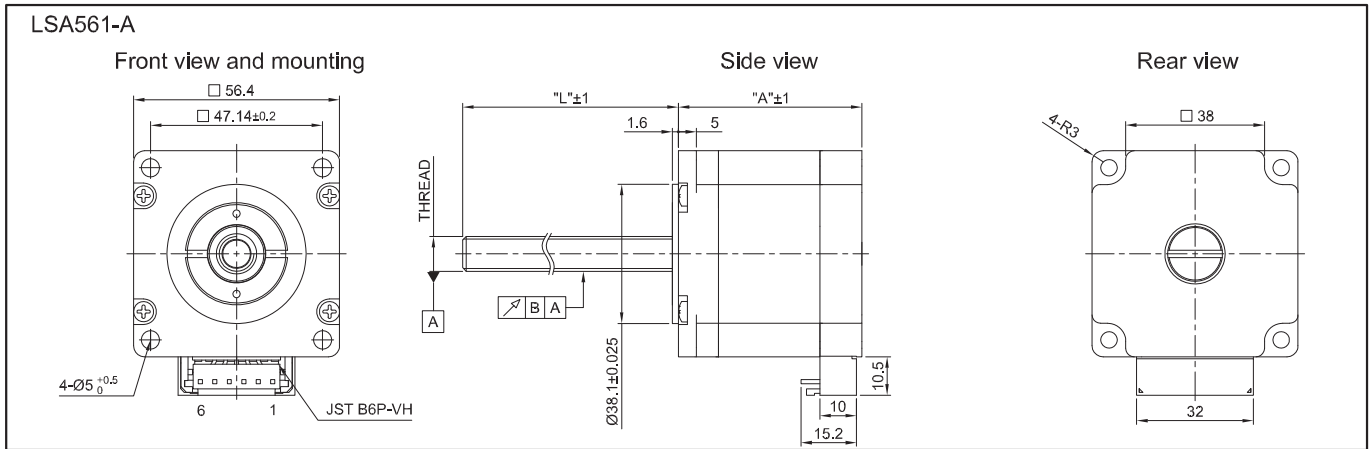
### 警告 (CAUTION)



数据表中指定的力和额定功率基于 10% 至 20% 的占空比，必须将其相应降低才能获得更大的值。应避免运行至固定的限位挡块。  
The force and power ratings specified in the data sheets are based on a duty cycle of 10% to 20% and must be reduced for higher values. Moving against fixed end stops should be avoided.

● 机械尺寸

(DIMENSIONS)



### ● 特性概要

(General specification)

Item	Specifications
步距角精度 Step Angle Accuracy	±7% (整步空载 full step, no load)
电阻公差 Resistance Accuracy	±10%
电感公差 Inductance Accuracy	±20%
温升 Temperature Rise	80°C Max. (额定电流, 2相通电 rated current, 2 phase on)
环境温度 Ambient Temperature	-20°C+50°C
绝缘电阻 Insulation Resistance	100MΩ Min. ,500VDC
介电强度 Dielectric Strength	500VAC/1s
径向间隙 Shaft Radial Play	0.06Max. (450 g-load)
轴向间隙 Shaft Axial Play	0.08Max. (450 g-load)



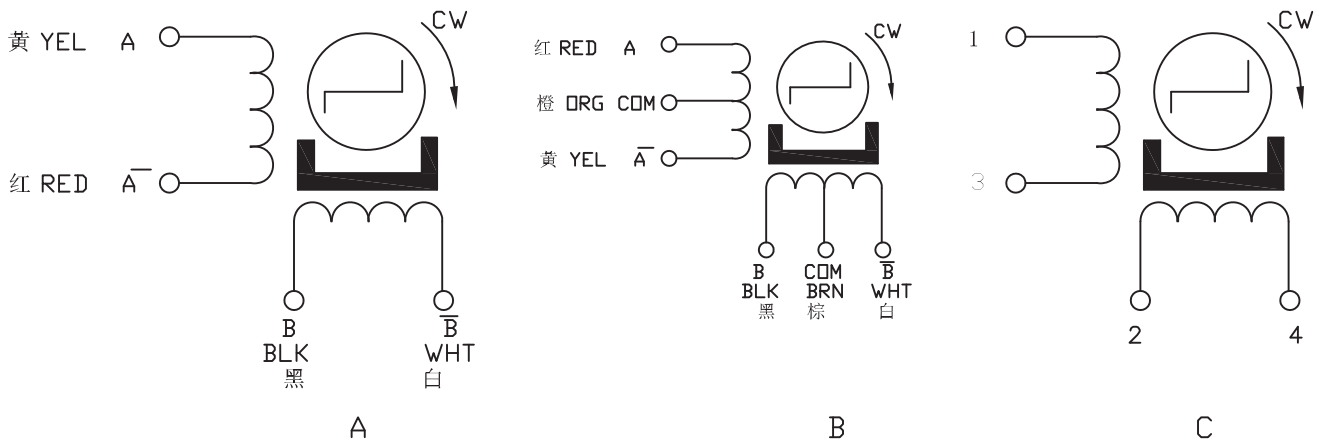
### ● 电性能

(Electrical specifications)

型号 Model	步距角 Step Angle (Deg.)	相数 No. of Phase	电压 Voltage (V)	相电流 Current /Phase (A)	相电阻 Resistance /Phase (ohms)	保持力矩 Holding Torque (g.cm)	定位力矩 Detent Torque (g.cm)	转子惯量 Rotor Inertia (g.cm <sup>2</sup> )	接线图 Wire Diagram
PM1020L03	18	2	3.3	0.22	15	16.3	10	<1	A
PM1020L06-1	18	2	3.3	0.22	15	16.3	10		A
PM1512-01	18	2	12	0.04	300	40	10		A
PM1512-02	18	2	5	0.5	10	27	6		c
PM2018-01	18	4	12	0.24	50	80	25		B
PM2018-02	18	2	5	0.5	10	60	20		A
PM2516-01	15	4	9	0.45	20	140	75		B
PM2515-01	7.5	2	12	0.24	50	170	45		A
PM2515-02	7.5	4	12	0.25	50	160	35		B

### ● 接线图

(WIRING DIAGRAM)



● 机械尺寸 (Dimension)

Fig1 备注: PM1020L03

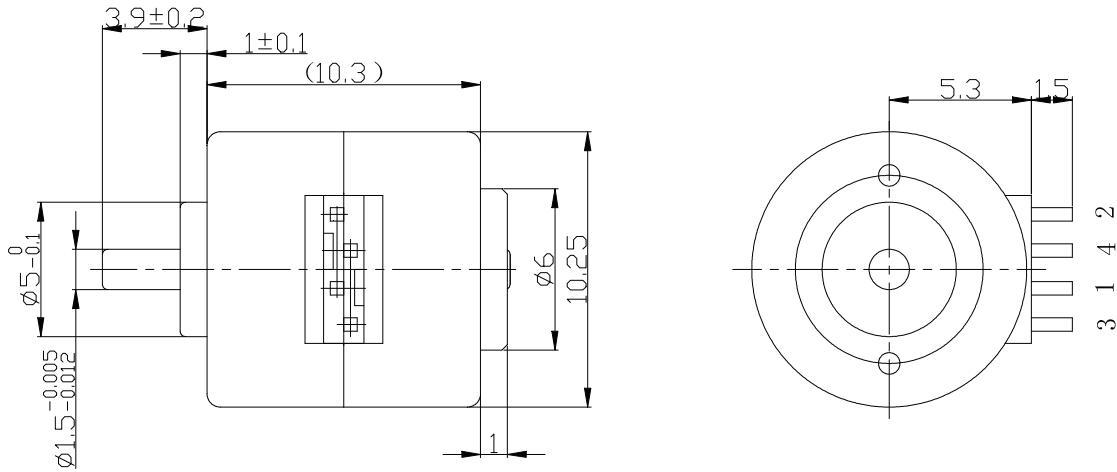
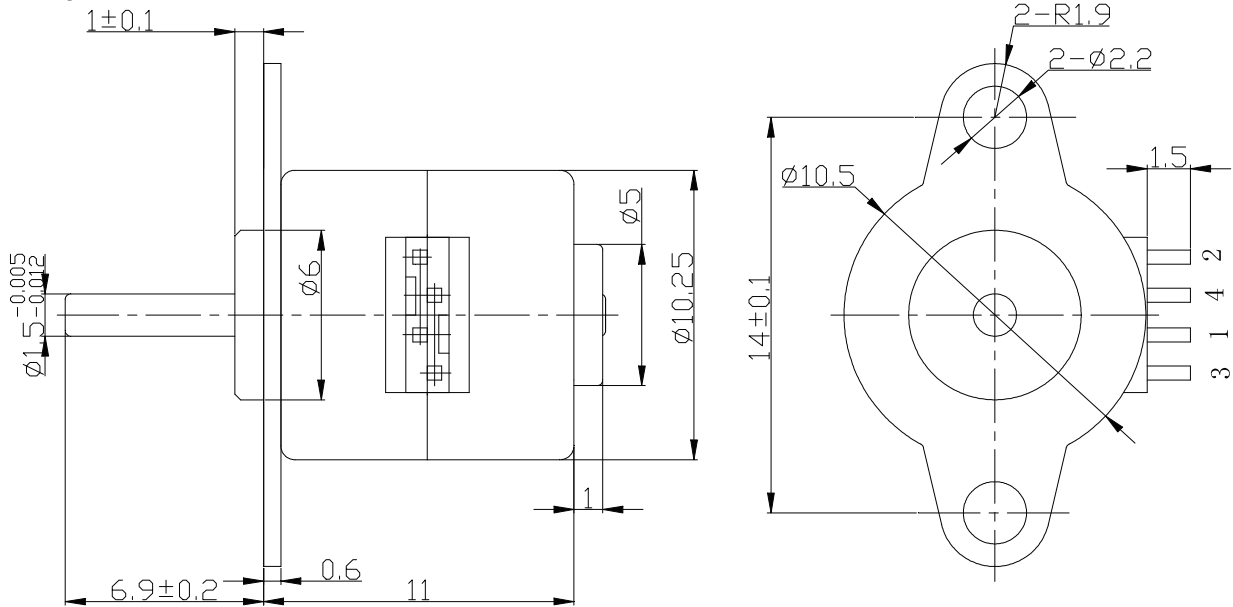


Fig2 备注: PM1020L06-1

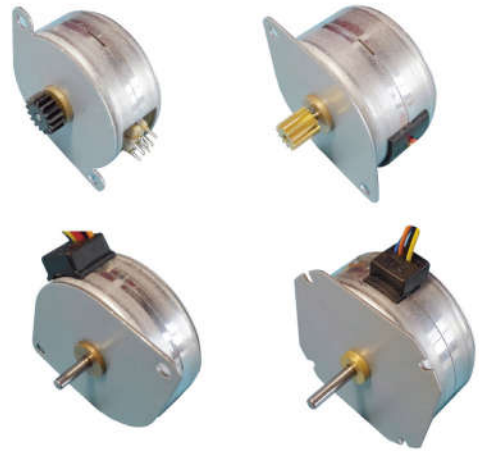




### ● 特性概要

(General specification)

Item	Specifications
步距角精度 Step Angle Accuracy	±7% (整步空载 full step, no load)
电阻公差 Resistance Accuracy	±10%
电感公差 Inductance Accuracy	±20%
温升 Temperature Rise	80°C Max. (额定电流, 2相通电 rated current, 2 phase on)
环境温度 Ambient Temperature	-20°C+50°C
绝缘电阻 Insulation Resistance	100MΩ Min., 500VDC
介电强度 Dielectric Strength	500VAC/1s
径向间隙 Shaft Radial Play	0.06 Max. (450 g-load)
轴向间隙 Shaft Axial Play	0.08 Max. (450 g-load)



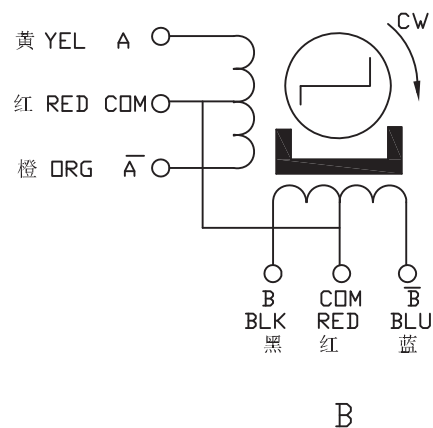
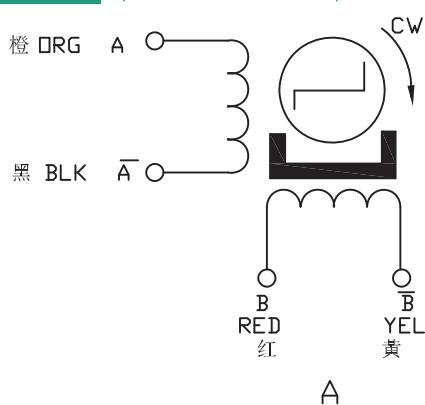
### ● 电性能

(Electrical specifications)

型号 Model	步距角 Step Angle (Deg.)	相数 No. of Phase	电压 Voltage (V)	相电流 Current /Phase (A)	相电阻 Resistance /Phase (ohms)	保持力矩 Holding Torque (g.cm)	定位力矩 Detent Torque (g.cm)	转子惯量 Rotor Inertia (g.cm <sup>2</sup> )	接线图 Wire Diagram
PM3522 -01A	15	2	5	0.46	11	335	125	7.5	A
PM3522 -02A	15	4	5	0.46	11	300			B
PM3522 -01B	7.5	4	5	0.862	5.8	550	7.5	A	
PM3522 -02B	7.5	2	5	0.5	10			B	
PM3522 -03B	7.5	2	12	0.2	60.8	300	65	A	
PM3516-01	7.5	4	12	0.255	47	350	75	B	
PM3516-02	7.5	2	5	0.42	12	800	210	A	
PM4222 -01A	7.5	4	12	0.8	15	800	210	B	
PM4222 -02A	7.5	2	4.2	0.6	7	550	100	A	
PM4222 -01B	7.5	2	12	0.13	95	600	110	B	
PM4222 -02B	7.5	4	5	0.81	6.2	500	100	A	
PM4217-01	7.5	4	12	0.24	50	1700	350	9.6	
PM4217-02	7.5	2	5	0.59	8.6	1500	425	9.6	
PM4930 -01	7.5	2	5	0.9	5.5	1200	425	<14.5	
PM5725 -01	7.5	4	12	0.6	21			<12.5	
PM5725 -02	7.5	2	5.6	0.625	9				

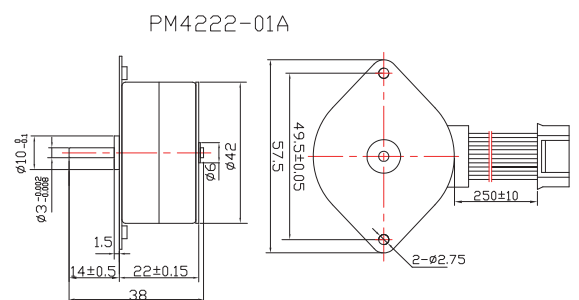
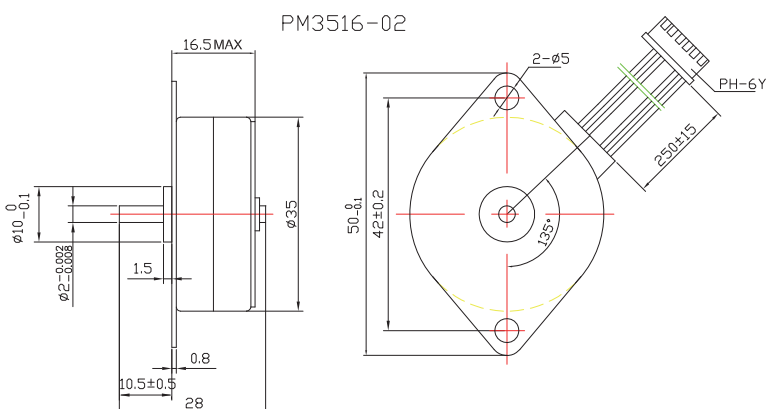
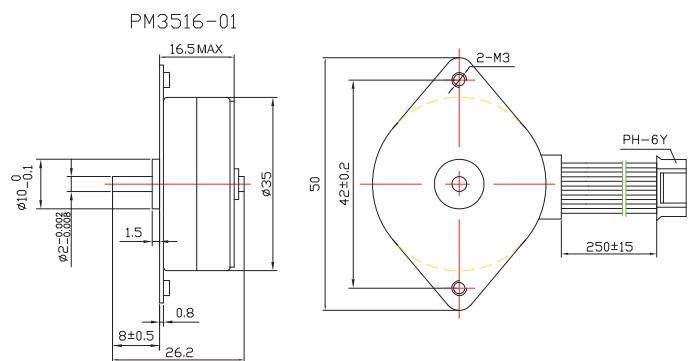
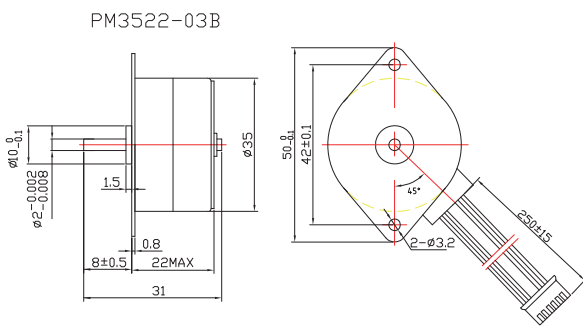
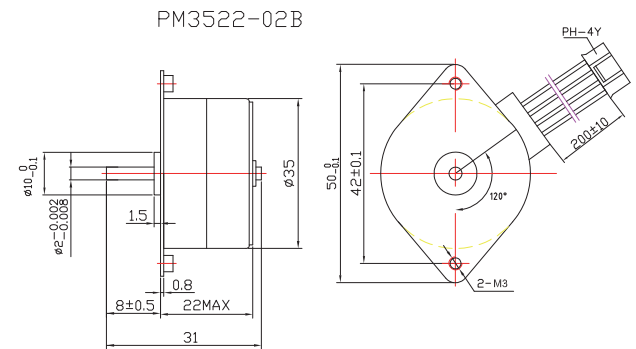
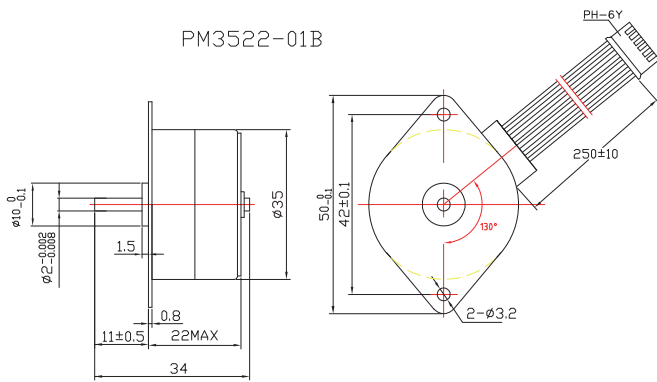
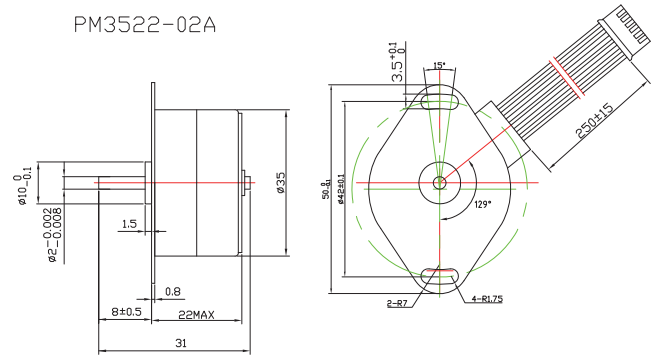
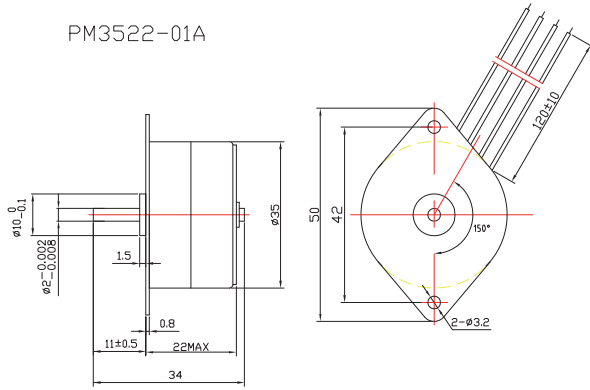
### ● 接线图

(WIRING DIAGRAM)



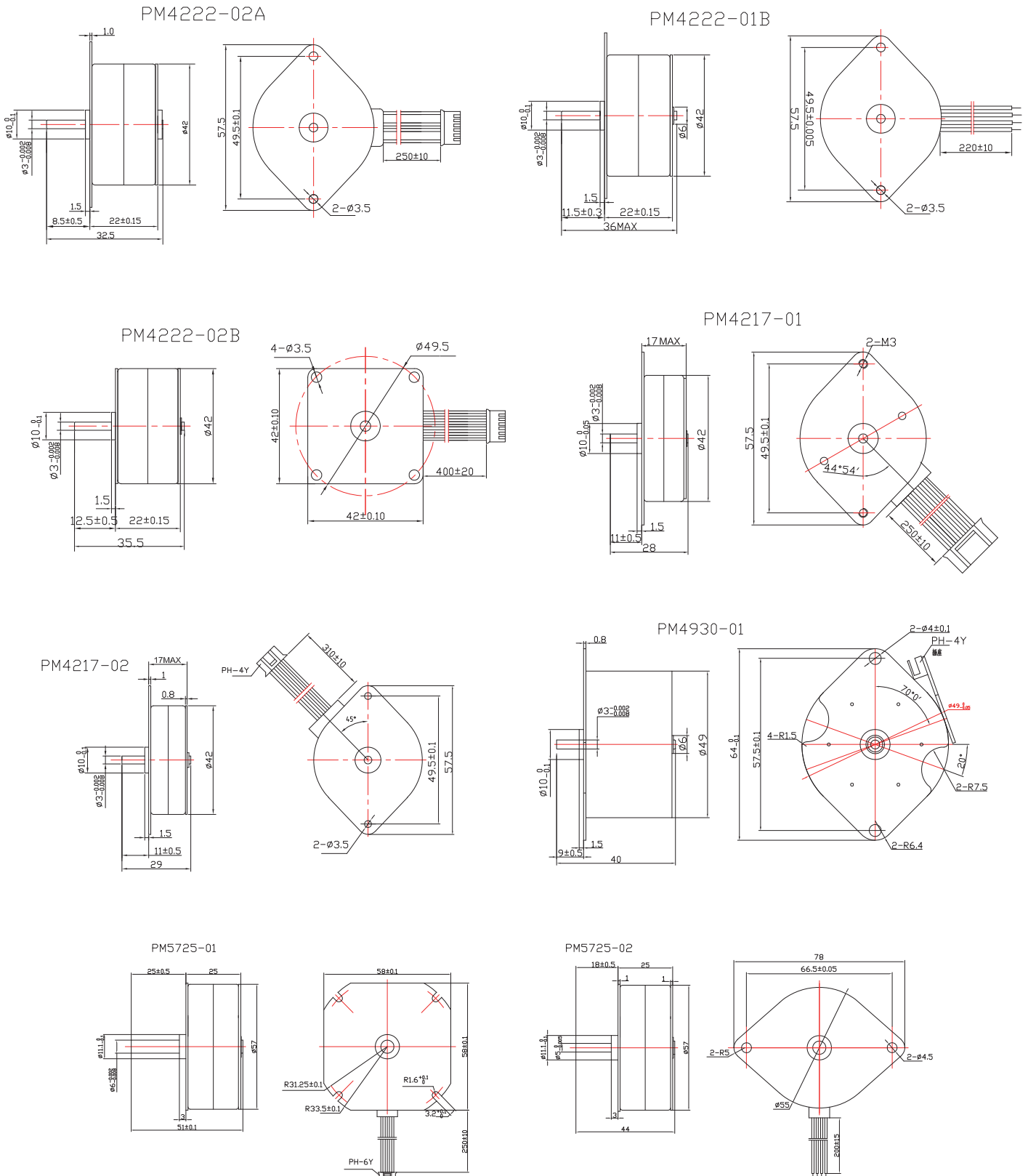
# 机械尺寸

(Dimension)





● 机械尺寸 (Dimension)



### ● 特性概要

(General specification)

Item	Specifications
步距角精度 Step Angle Accuracy	±7% (整步, 空载 full step, no load)
电阻公差 Resistance Accuracy	±10%
电感公差 Inductance Accuracy	±20%
温升 Temperature Rise	65K Max. ambient temperature 40°C 65K 环境温度 40°C
环境温度 Ambient Temperature	-10°C~+50°C
绝缘电阻 Insulation Resistance	100MΩ Min. ,500VDC
绝缘等级 Insulation Class	Class E
介电强度 Dielectric Strength	650VAC for one second, leakage current 1mA 650VAC 一秒, 漏电电流 1mA



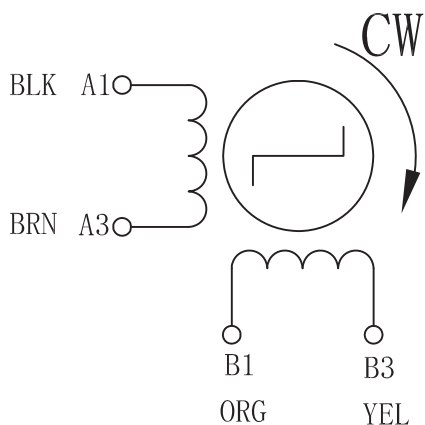
### ● 电性能

(Electrical specifications)

型号 Model	步距角 Step Angle (Deg.)	相数 No. of Phase	电压 Voltage (V)	相电流 Current /Phase (A)	相电阻 Resistance /Phase (ohms)	相电感 Inductance /Phase (mH)	牵入力矩 Pull-in Torque (g.cm)	最大牵入频率 Max. Pull-In Rate (pps) No Load, 5VDC	保持力矩 Holding Torque (g.cm)	减速比 Ratio	重量 Weight (g)
PMG1550-01	18/50	2	5	0.5	10	2.3	360 @200pps	1280	1350	1:50	12.2
PMG1550-03	18/50	2	5	0.5	10	2.8	140 @200pps	1150	2000	1:50	13
PMG15102-01	18/102.5	2	5	0.5	10	2.3	350 @200pps	1000	2000	1:102.5	12.2

### ● 接线图

(WIRING DIAGRAM)



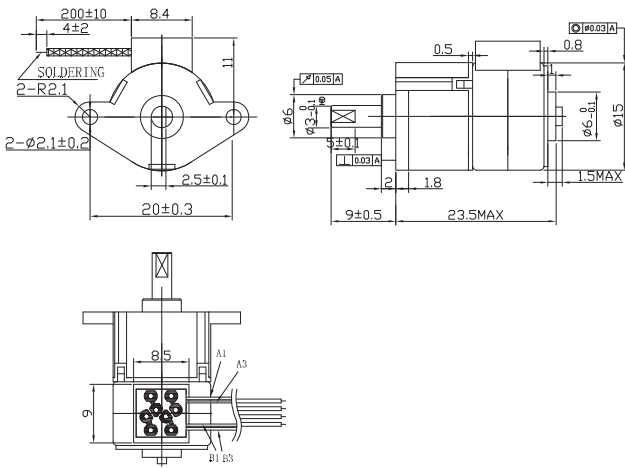
Pin No.	STEP			
	黑 BLK	棕 BRN	橙 ORG	黄 YEL
1	-	+	+	-
2	-	+	-	+
3	+	-	-	+
4	+	-	+	-

↓ CW      ↑ CCW

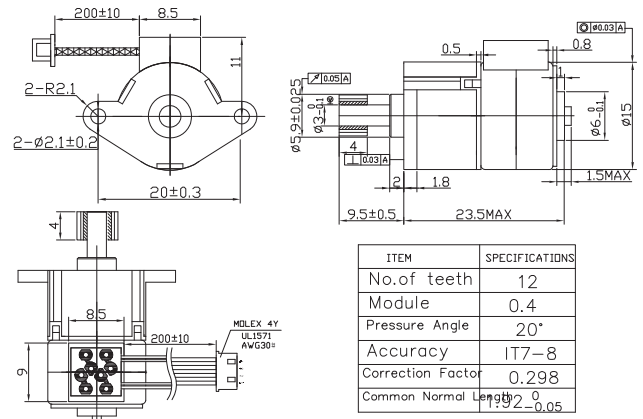
● 机械尺寸

(Dimension)

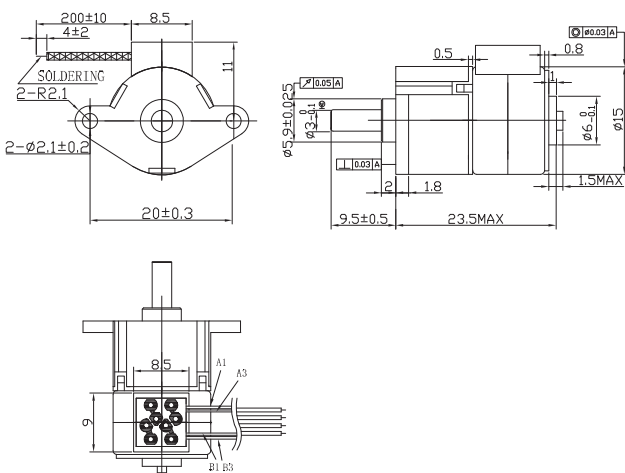
PMG1550-01



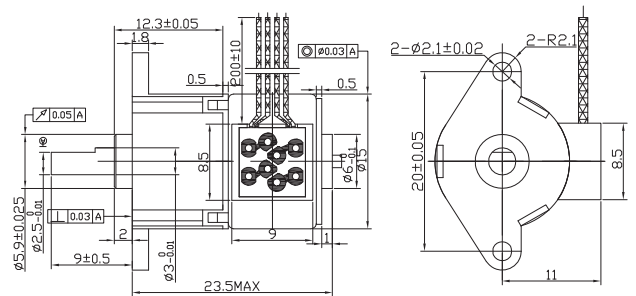
PMG1550-02



PMG1550-03



PMG15102-01



### ● 特性概要

(General specification)

Item	Specifications
步距角精度 Step Angle Accuracy	±7% (整步, 空载 full step, no load)
电阻公差 Resistance Accuracy	±10%
电感公差 Inductance Accuracy	±20%
温升 Temperature Rise	80K Max. ambient temperature 40. C 80K 环境温度 40°C
环境温度 Ambient Temperature	-10°C~+50°C
绝缘电阻 Insulation Resistance	100MΩ Min., 500VDC
绝缘等级 Insulation Class	Class E
介电强度 Dielectric Strength	650VAC for one second, leakage current 1mA 650VAC 一秒, 漏电电流 1mA



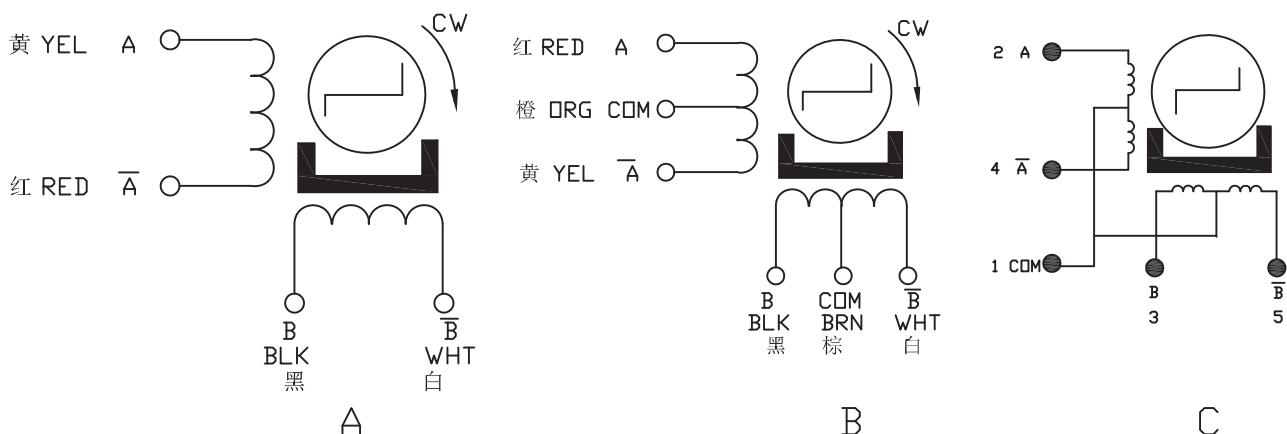
### ● 电性能

(Electrical specifications)

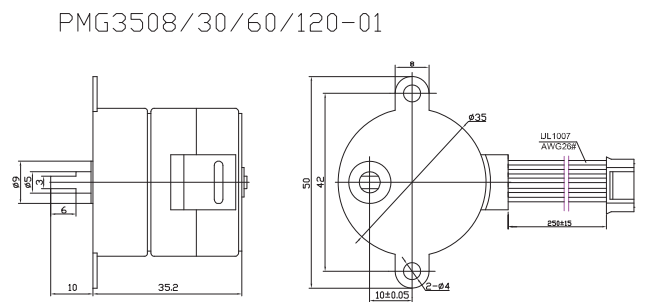
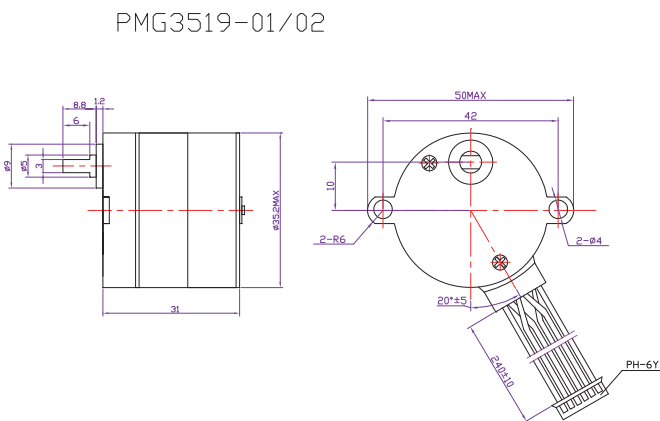
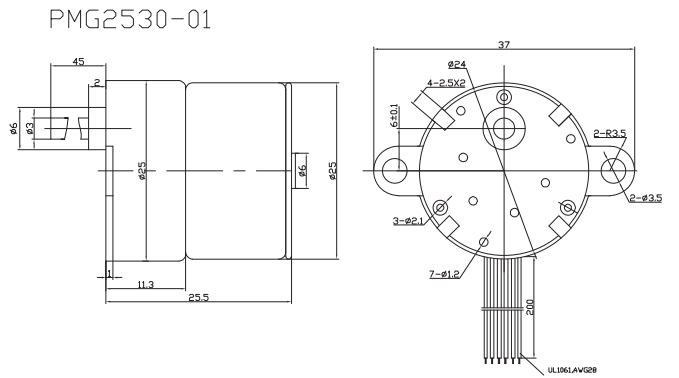
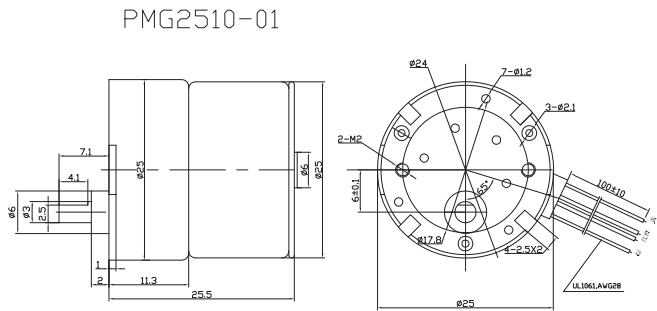
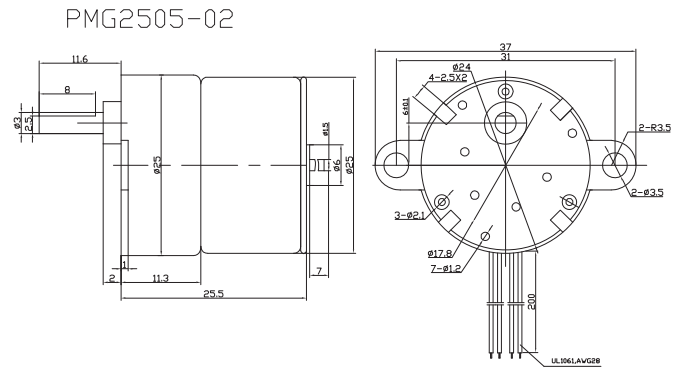
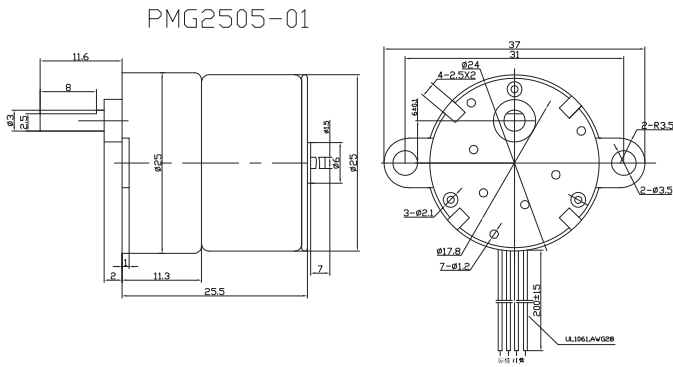
型号 Model	步距角 Step Angle (Deg.)	相数 No. of Phase	电压 Voltage (V)	相电流 Current /Phase (A)	相电阻 Resistance /Phase (ohms)	空载牵入频率 No-load Pull-in Frequency (pps)	牵入扭矩 Pull-in Torque (g.cm)	保持力矩 Holding Torque (g.cm)olHol	定位力矩 Detent Torque (g.cm)	减速比 Ratio	接线图 Wire Diagram
PMG2505 -01	7.5/5	2	2.6	0.52	5	450	75 at 200pps	450	<150	1:05	A
PMG2505 -02	5/15	2	3.5	0.365	9.6	420	100 at 100pps	500	<150	1:05	
PMG2510 -01	7.5/10	2	2.8	0.467	6	550	200 at 200pps	1400	<500	1:10	
PMG2530 -01	7.5/30	4	13.3	0.11	120	680	750 at 100pps	4000	<1400	1:30	B
PMG3519 -01	7.5/19	4	24	0.218	110	360	2280 at 200pps	4500	<2280	1:19	C
PMG3519 -02	7.5/19	4	12	0.4	30	360	1900 at 200pps	4000	<2600	1:19	
PMG3508 -01	7.5/8.4	4	12	0.4	30	500	840 at 400pps	1150	<500	1:8.4	
PMG3530 -01	7.5/30	4	12	0.4	30	500	3000 at 400pps	5000	<1500	1:30	
PMG3560 -01	7.5/60	4	12	0.4	30	420	6000 at 400pps	8000	<3000	1:60	
PMG35120 -01	7.5/120	4	12	0.4	30	400	8000 at 300pps	10000	<6000	1:120	

### ● 接线图

(WIRING DIAGRAM)



● 机械尺寸 (Dimension)

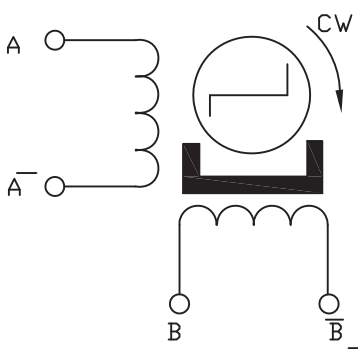




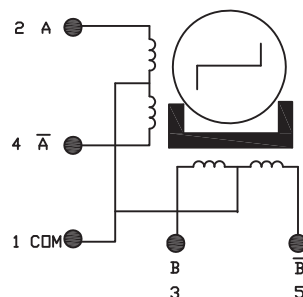
### ● 电性能参数 (Specifications)

型号 Model	步距角 Step Angle (Deg.)	相数 No. of Phase	电压 Voltage (V)	电流 Current (A)	电阻 Resistance (Ω)	电感 Inductance (mH)	减速比 Ratio	空载启动频率 No-load Starting Frequency (pps)	牵出力矩 Pull-out (g.cm)	引出线数 Leads	接线图 Wdg	外形图 Fig
42BYHJ01	7.5	4	12	0.44	27	15.1	1/24	380	1600	UL 1007 26#	b	1
42BYHJ3-01	7.5	2	12	0.22	54	58	1/3	270	800	UL 1007 26#	a	2
42BYHJ05-01	7.5	4	12	0.5	10.7	5.2	1/5	450	1300	UL 1007 26#	c	3
42BYHJ7-01	7.5	2	12	0.22	54	57.6	1/7	300	1000	UL 1007 26#	a	2
42BYHJ10-06	7.5	2	24	0.133	180	260	1/10	260	1600	UL 1007 26#	a	4
42BYHJ12.25-01	3.6	2	12	0.16	75	75	1/12.25	350	90N(push)	AF 200 24#	a	5
42BYHJ15-01	7.5	4	12	0.18	66	31.6	1/15	270	1500	UL 1061 28#	c	6
42BYHJ20-01	15	4	12	0.18	66	41.6	1/20	240	1200	UL 1095 28#	c	7
42BYHJ25-02	7.5	4	12	0.44	27	63	1/24	380	1660	UL 1007 26#	b	1
42BYHJ50-08	15	4	24	0.08	300	175	1/50	210	2100	UL 1007 24#	c	8

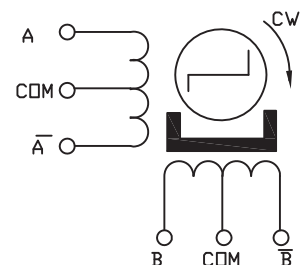
### ● 接线图 (WIRING DIAGRAM)



A



B



C

● 机械尺寸 (Dimension)

Fig1

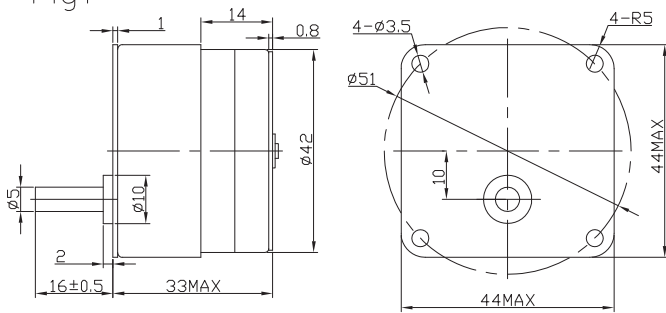


Fig2

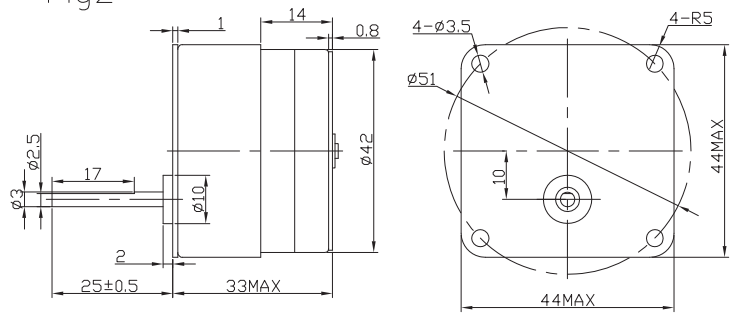


Fig3

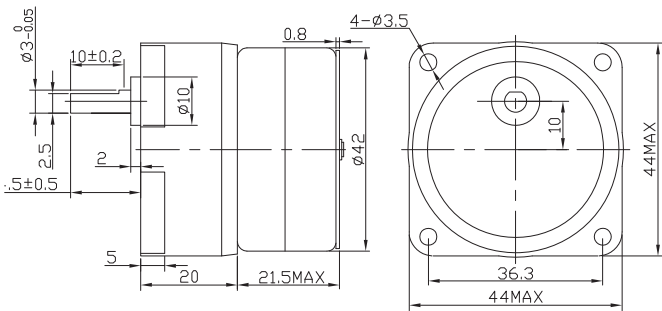


Fig4

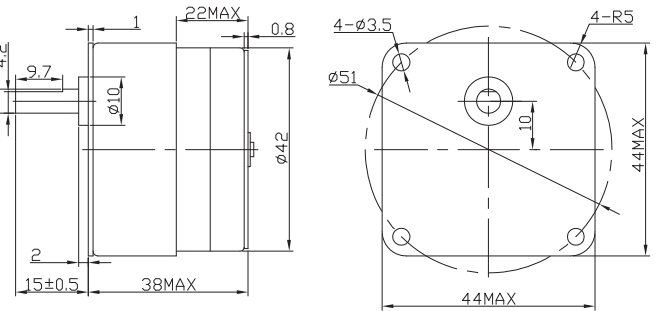


Fig5

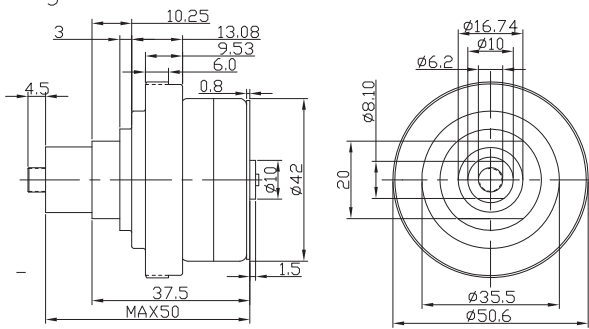


Fig6

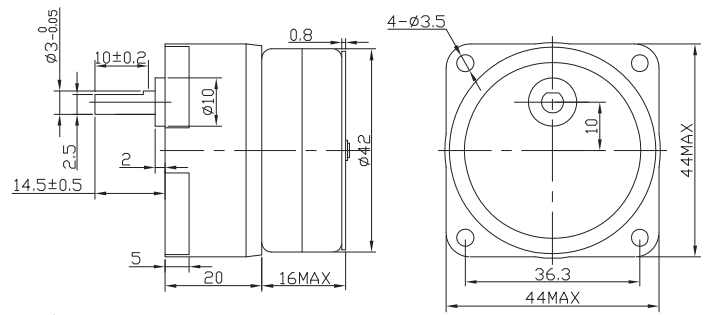


Fig7

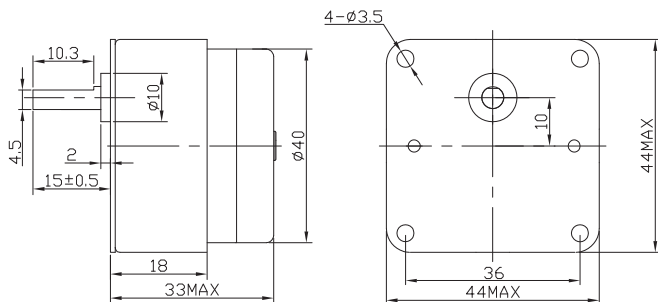
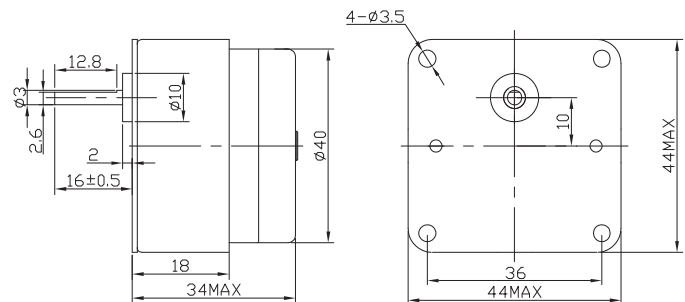


Fig8





### 电性能参数

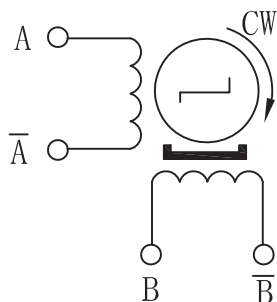
(Specifications)

型号 Model	步距角 Step Angle (Deg.)	相数 No. of Phase	电压 Voltage (V)	电流 Current (A)	电阻 Resistance (Ω)	电感 Inductance (mH)	保持力矩 Holding Torque (g.cm)	牵出力矩 / 推力 Pull-in Torque (g.cm) // Push Torque(N)	定位力矩 Detent Torque (g.cm)	引出线型号 Leads	接线图 Wdg	外形图 Fig
15BYT-01	18	2	12	0.07	170	28	25	5g.cm	10	UL 157130#	a	1
18BY30Z-01	18	2	12	0.11	110			6N			a	2
20BYT-01	18	2	5	0.5	10	4.6	60	10g.cm	20	UL 1068 28#	a	3
20BYZ-09	18	2	12	0.6	20	12.8		10N		UL 157128#	a	4
25BY24T-04	15	2	12	0.48	25	10.9	180	45g.cm	35	UL 1068 28#	a	6
25BY24T-12	15	2	3.3	0.33	10	4.7	100	25g.cm	40	UL 1068 28#	a	5
25BY48T-12	7.5	2	12	0.143	84	48	150	50g.cm	30	UL 1068 28#	a	7
25BY48T-31	7.5	2	3.3	0.33	10	4.7	100	25g.cm	40	UL 1068 28#	a	5
35BY24LZ-01	15	4	24	0.28	85	32.9	450	110g.cm	130	UL 1007 26#	b	8
35BY48LZ-01	7.5	4	12	0.2	60	31.6	520	50g.cm	125	UL 1007 26#	b	8
35BY48SZ-01	7.5	4	5	0.71	7	3	450	60g.cm	75	UL 1007 26#	b	9
42BY48LZ-01	7.5	4	12	0.18	70	50.5	500	60g.cm	125	UL 1007 26#	c	10
42BY48SZ-01	7.5	4	12	0.3	40	20.7	550	70g.cm	100	UL 1095 26#	b	11
57BY48Z-01	7.5	4	12	0.6	21	23.5	1500	320g.cm	425	UL 1007 26#	b	12

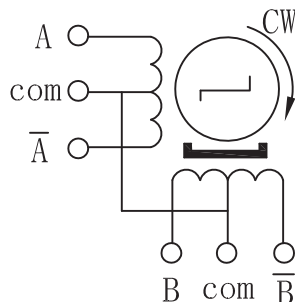
### 接线图

(WIRING DIAGRAM)

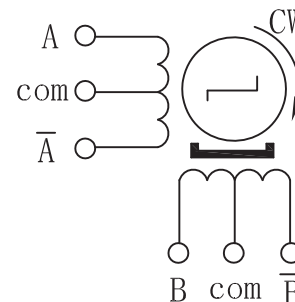
Wdg a



Wdg b



Wdg c





● 机械尺寸 (Dimension)

Fig1

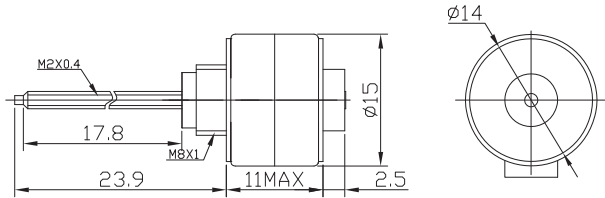


Fig2

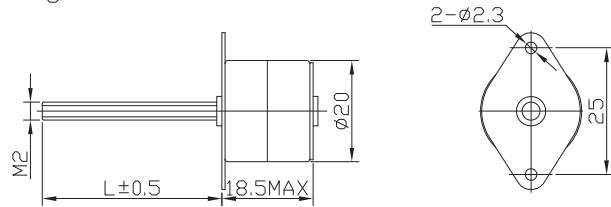


Fig3

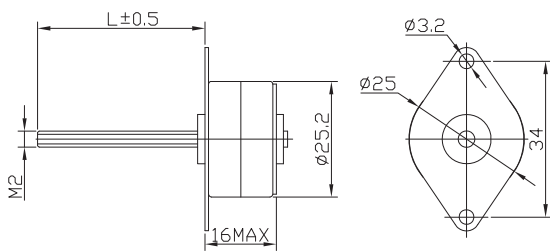


Fig4

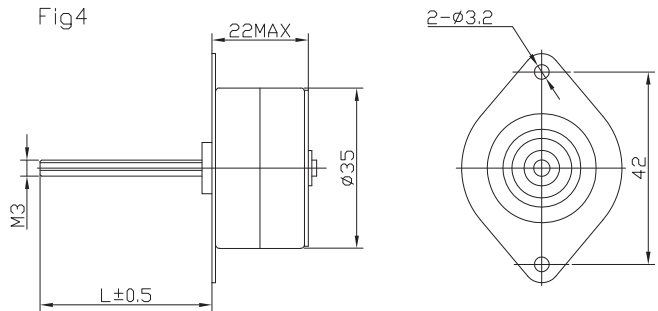


Fig5

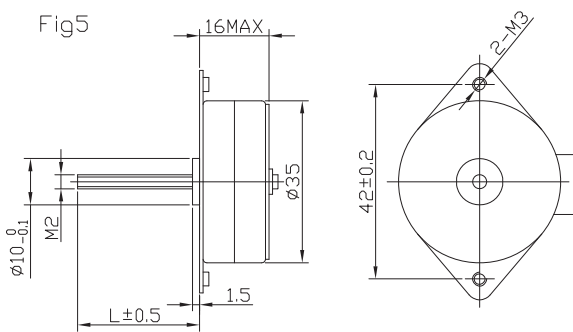


Fig6

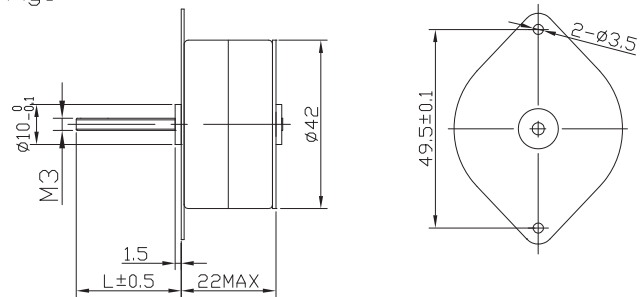


Fig7

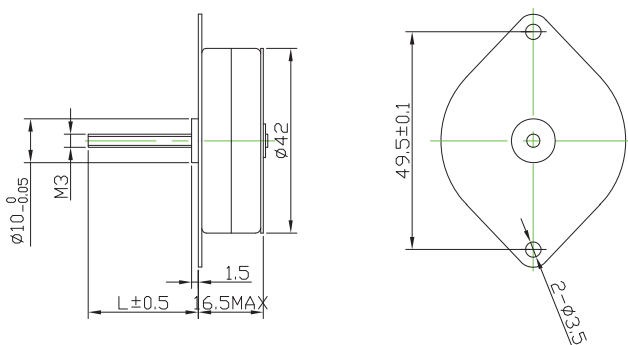
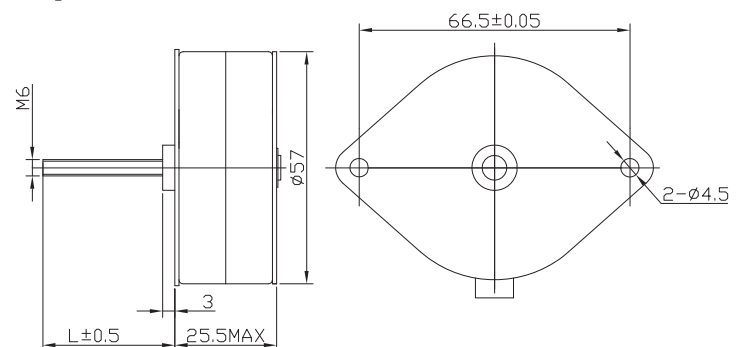


Fig8

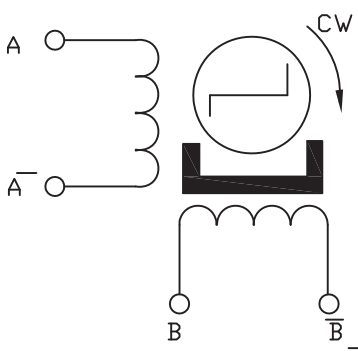




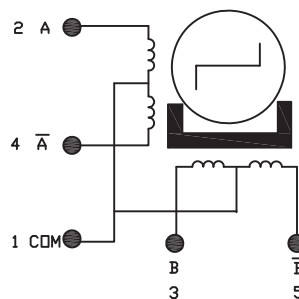
## ● 电性能参数 (Specifications)

规格型号 Model	步距角 Step Angle (Deg.)	相数 No. of Phase	电压 Voltage (V)	电流 Current (A)	电阻 Resistance (Ω)	电感 Inductance (mH)	步长 Step Avail (mm)	推拉力 Push/ Pull Torque (N)	行程 Journey (mm)	引出线型号 Leads	接线图 Wdg	外形图 Fig
15BYZ-13	18	2	24	0.1	30	6	0.02	4	≥12	UL1061 30#	a	1
25BYZ-A04	15	4	5	0.23	22	4.3	0.0417	7	≥12	UL1061 28#	c	2
25BYZ-A01(09)	15	2	12	0.23	53	23.5	0.0417	25	≥12	AF-200 28#	a	3
25BYZ-A022	15	4	2	0.23	53	9	0.0417	15	≥22	UL1061 28#	c	4
25BYZ-A035B	7.5	2	12	0.14	84	48	0.0127	33	≥14	UL1061 28#	a	5
25BYZ-B01	15	2	12	0.23	53	23.5	0.0417	20	≥40	UL1061 28#	a	6
25BYZ-B058A	15	2	5	0.625	8	4.7	0.0508	20	≥35	UL1061 26#	a	7
25BYZ-C06	7.5	2	5	0.34	14.7	7.5	0.0254	30	≥13	UL1061 26#	a	8
25BYZ-C07	7.5	2	5	0.34	14.7	7.5	0.0254	30	≥13	UL1061 26#	a	9
25BYZ-C017	7.5	2	7	0.15	47	17.8	0.0254	9.8	≥13	UL1095 28#	a	10

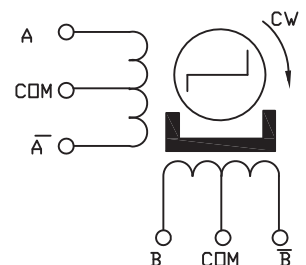
## ● 接线图 (WIRING DIAGRAM)



A



B



C

**● 机械尺寸**

(Dimension)

Fig1

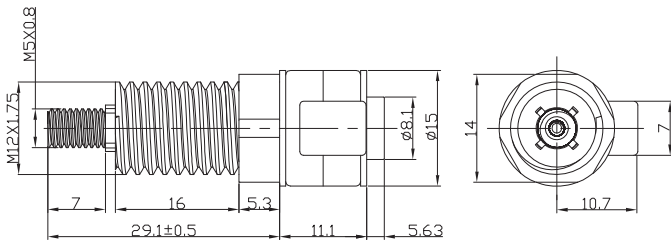


Fig2

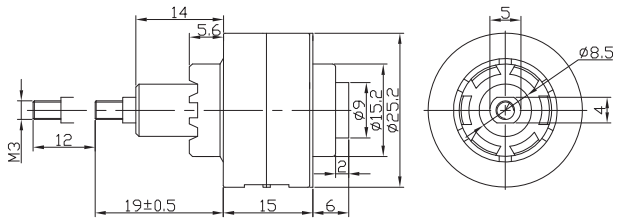


Fig3

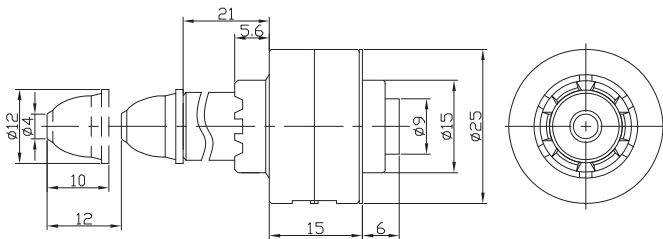


Fig4

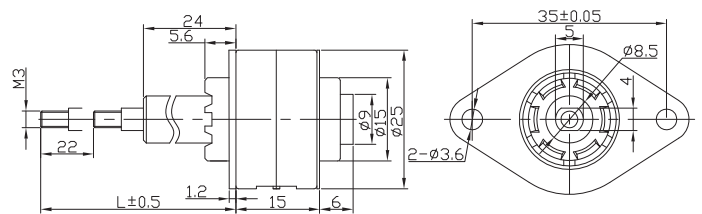


Fig5

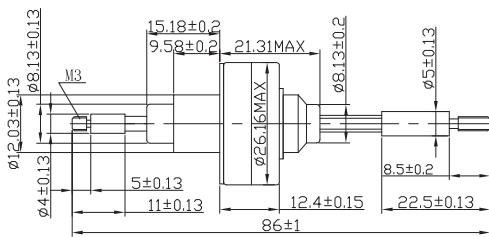


Fig6

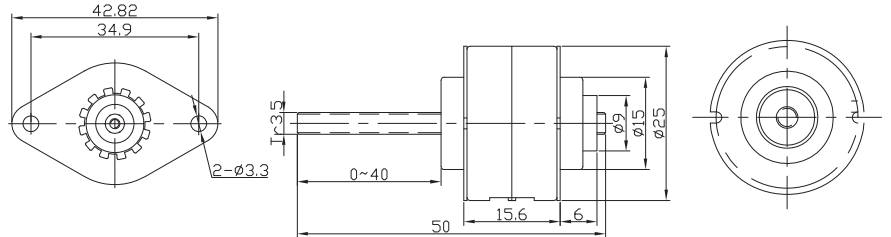


Fig7

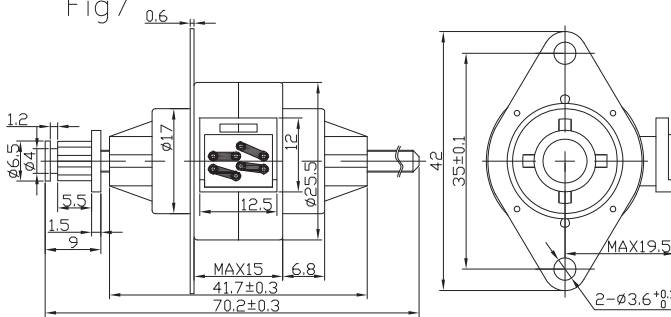


Fig8

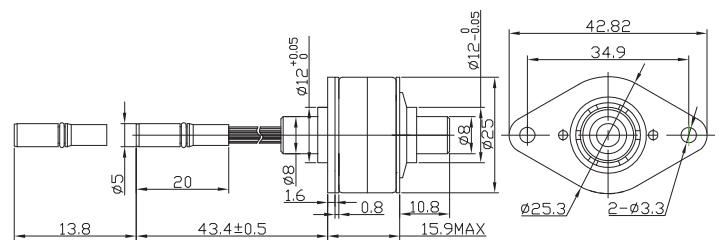


Fig9

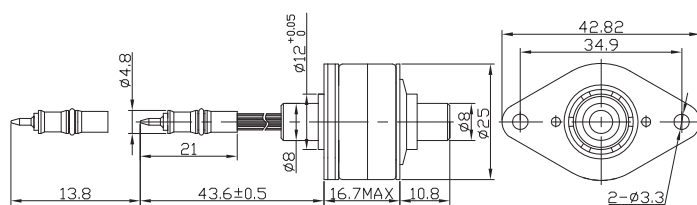
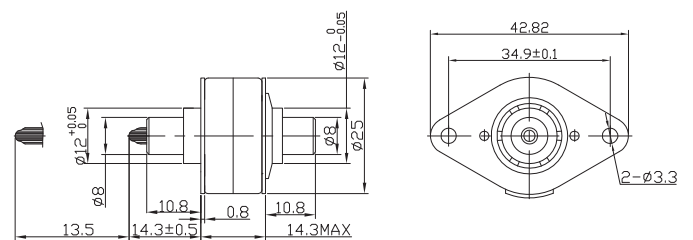


Fig10

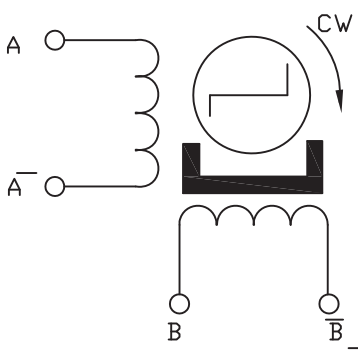




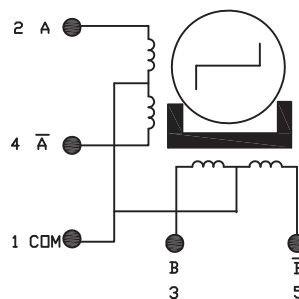
## ● 电性能参数 (Specifications)

规格型号	步距角	相数	电压	电流	电阻	电感	步长	推拉力	行程	引出线型号	接线图	外形图
Model	Step Angle	No. of Phase	Voltage	Current	Resistance	Inductance	Step Avail	Push/Pull Torque	Journey	Leads	Wdg	Fig
	(Deg.)		(V)	(A)	(Ω)	(mH)	(mm)	(N)	(mm)			
28BYZ-09	15	2	5	0.46	10.8	/	0.0417	40	≥87	/	a	1
28BYZ-A01	15	2	24	0.16	150	85	0.0417	65	≥12	/	a	2
35BY16Z	7.5	2	9	0.5	7.7	8.1	0.0167	35	≥14	UL1332 24#	a	3
35YC25Z-A02	7.5	2	12	0.6	11	8.2	0.0254	100	≥5.3	UL1061 28#	a	4
35BYZ-B01F	7.5	4	5	0.46	11	/	0.0254	40	≥75	UL1061 28#	c	5
57BYZ-B022	7.5	4	12	0.67	18	18.7	0.0254	90	≥130	UL1007 26#	c	6

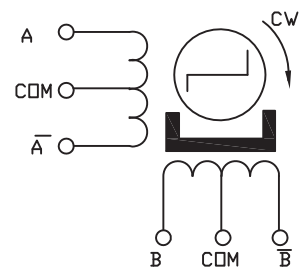
## ● 接线图 (WIRING DIAGRAM)



A

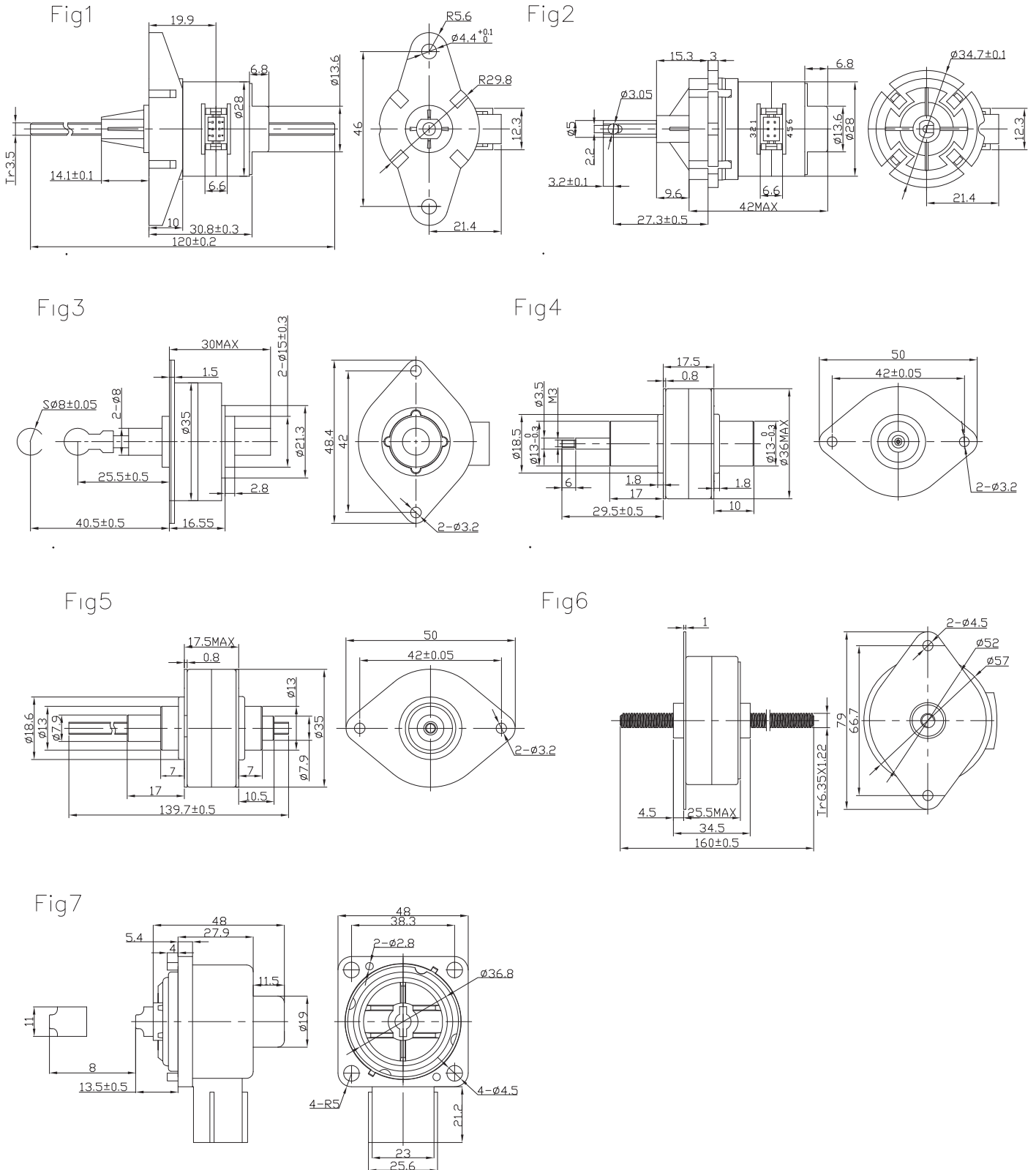


B



C

● 机械尺寸 (Dimension)



便签

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

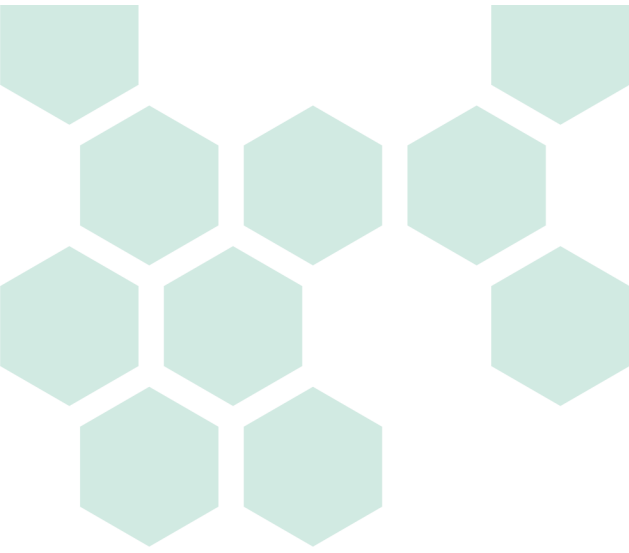
---

---

---

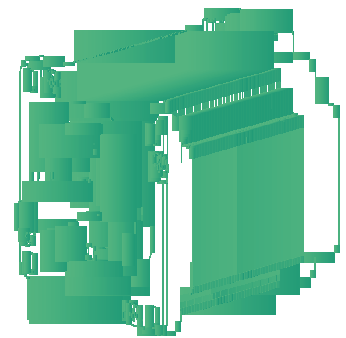
**注意事项:** 本样册中所有信息均为参考值。因检测和测量方法不同,可能存在偏差。请直接联系我们,以了解详细信息。我们原则上保留技术变更的权利。

**Attentions:** All figures are approximate values. Variations are possible and may arise for example due to non-standardized inspection and measurement methods. For more detailed information, please contact us directly. Fulling Motor company always reserves the right to make technical modifications.



## 常州富兴机电有限公司 Changzhou Fulling Motor Co.,Ltd

地址:江苏省常州市新北区昆仑路69号  
69 Kunlun Road, New North District,  
Changzhou City, Jiangsu Province, China  
邮编:213022  
电话:+86-519-85132957  
传真:+86-519-85132956  
邮箱:info@fullingmotor.com  
网址:www.fullingmotor.com



微信公众号



公司主页



抖音



 FILLING MOTOR

**STEPPER MOTOR**

2024