

MU CHUN
木春电机

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This information is for reference only. the specific parameters and functions are subject to the product specification. the company reserves the right to improve the design and specification of the product without prior notice.

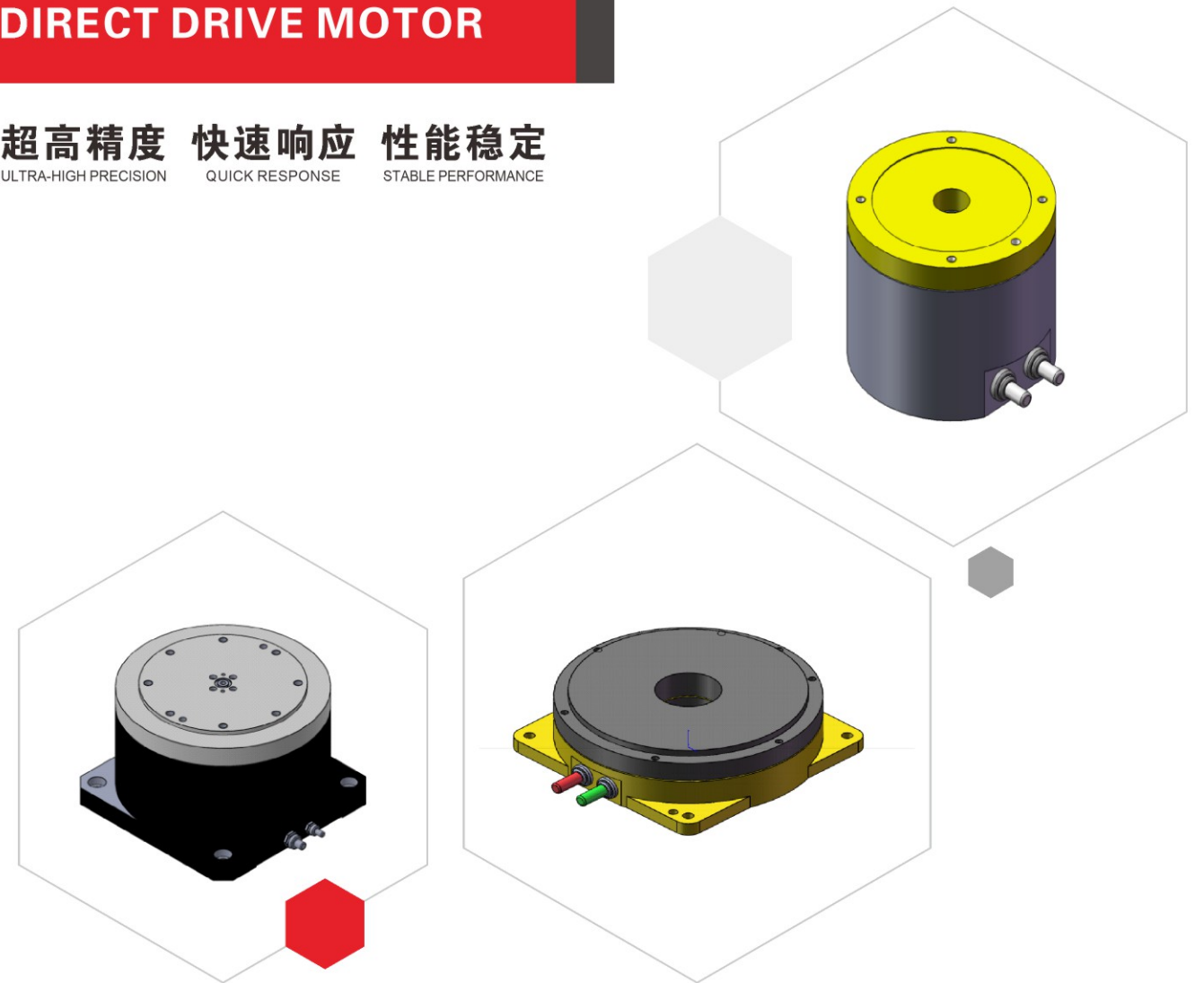
授权经销商:

MU CHUN
木春电机

MU CHUN MOTOR

直驱电机 DIRECT DRIVE MOTOR

超高精度 快速响应 性能稳定
ULTRA-HIGH PRECISION QUICK RESPONSE STABLE PERFORMANCE



广东木春电机工业有限公司
GUANG DONG MU CHUN MOTOR INDUSTRY CO., LTD.



公司简介

Company profile

广东木春电机工业有限公司成立于2017年，是一家专注于DD马达、力矩电机、直线电机、特种电机及运动控制系统研发、设计、生产、销售及服务的高新科技企业。

公司总部位于广东东莞，致力于广大客户服务和质量标准的同时提供最佳的产品。广东木春电机工业有限公司与多家高校及科研院所建立并保持长期战略合作，不断在技术和创新方面自我突破，致力于为客户提供质量可靠、性能稳定，技术领先的自动化产品。

Guangdong muchun motor Industry Co., Ltd.. was established in 2017. It is a high-tech enterprise specializing in the research, development, design, production, sales and service of DD motors, torque motors, linear motors, special motors and motion control systems.

The company's headquarters is located in Dongguan, Guangdong Province. It strives to provide the best products while serving customers and adhering to quality standards. Guangdong muchun motor Industry Co., Ltd.. has established and maintained long-term strategic cooperation with many universities and research institutions, constantly breaking through in technology and innovation, and is committed to providing customers with reliable quality, stable performance and technologically advanced automation products.

► 研发优势/Research and development advantages

精密的电磁仿真设计，保证最佳的磁极比合理的硅钢片齿形，木春与中国科学院材料所团队合作，设计的电机磁场同类产品高30%~40%，使客户提高产能，同时面向高端智造。

Precise electromagnetic simulation design ensures the optimal magnetic pole ratio and reasonable silicon steel sheet tooth shape. Mengchun collaborates with the team from the Institute of Materials of the Chinese Academy of Sciences to design motor magnetic fields that are 30% – 40% higher than similar products on the market. This enables customers to increase production capacity and also caters to high-end manufacturing.

MU CHUN MOTOR

直驱电机

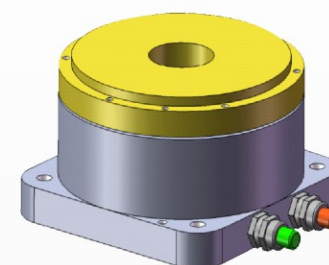
DIRECT DRIVE MOTOR

超高精度 快速响应 性能稳定

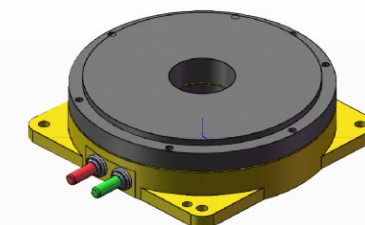
ULTRA-HIGH PRECISION

QUICK RESPONSE

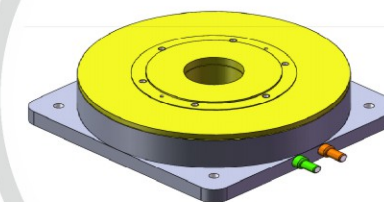
STABLE PERFORMANCE



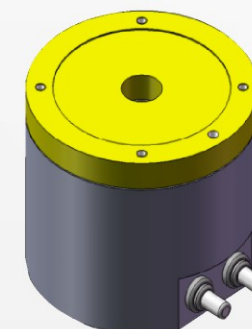
DMZ112065-008-240NP-26L003



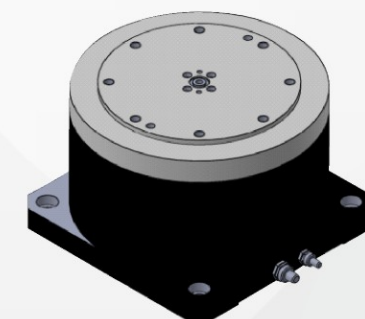
DMZ168050-010-240NP-26L003



DMZ224062-050-180NP-26L003



DMR85067-003-240NP-30L003



DMZ230152-150-180NP-26L005

直驱产品介绍说明及选型

Direct drive product introduction and selection guide

力矩电机(DDR)

力矩电机(DDR)的含义

1. Direct Driver – 直接驱动。
2. 由于转矩大, 又被称为力矩伺服。
3. 技术指标体现的高性能 – 伺服产品系列中的精品。

为什么要选择力矩电机(DDR)

1. 高刚性、结构紧凑、使用效率高。
2. 力矩电机(DDR)的刚性很强, 与负载结构后特性很硬, 对于其驱动器要求很高。
3. 马达中空独特的设计不但减轻了自身惯量, 也给客户提供了很多安装形式。
- 结合后的机械结构更加紧凑, 使用效率比其它方式更高。

产品原理

1. DD motor 从字面上理解是直接驱动马达 (Direct Drive), 但实际上其并不是普通的伺服, 而是一种结构非常复杂、高精度、高性能的特殊交流马达。之所以称之为直接驱动因为其采取转子和运动载体直接连接的方式, 中间不再用其它的过渡连接 (减速机构、联轴器等)。
2. 力矩电机(DDR)的结构分为内转子和外转子两种形式, 内部采用的向心轴承可承受一定的轴向力。其编码器的角解析度高, 一般为500,000ppr (ppr即每转脉冲数) 以上, 由于高水准的制成工艺保证和高精度的测量反馈, 此种编码器的定位精度可达角秒级 (1度=3600角秒)。

选型

1. 负载惯量 [负荷倍率 $K=J_l/J_m$ (K值大小和应用要求密切相关)]。(如: 低速运转 $K \leq 150$; 高速应用场合 $K \leq 10$)
2. 转矩 力矩电机其结构优势瞬间可达3倍输出扭矩。
3. 响应速度 力矩电机在驱动负载时, 不需经过传动装置(如传动皮带等), 其响应速度是经过传动装置的数倍甚至十数倍。
4. 精度 高精度是其最大特点, 要点是选用得当, 避免不必要的浪费。

力矩电机(DDR)选型计算说明

机械结构参数

圆盘直径	$D_T = \_\_ \text{m}$	其它常数	$G = 9.8$ $\pi = \pi$
圆盘质量	$M' = \_\_ \text{kg}$		
工装质量	$M_w = \_\_ \text{kg}$		
工装数量	$n = \_\_ \text{个}$	电机需要最小转矩 电机需要最低转速 圆盘材质密度 圆盘厚度 圆盘质量	$T_{\text{motor}} = \_\_ \text{Nm}$ $N_{\text{motor}} = \_\_ \text{rpm}$ $\beta = \_\_ \text{kg/m}^3$ $L_T = \_\_ \text{m}$ $M' = \_\_ \text{kg}$
由分度盘中心至工装中心的距离	$l = \_\_ \text{m}$		
定位角度	$\theta = \_\_ ^\circ$		
定位时间	$t = \_\_ \text{s}$		
加速时间比	$A = \_\_$		
减速机减速比	$i = \_\_$		
减速机效率	$\eta_g = \_\_$		

计算顺序

1. 决定加减速时间

加速时间

$t_0 = t \cdot A \quad (\text{s})$

2. 电机转速

输出轴角加速度

$\beta_g = \frac{\theta \times 2\pi}{360 \cdot t_0(t-t_0)} \quad (\text{rad/s}^2)$

输出轴最大转速

$N = \frac{\beta_g \times t_0}{2\pi} \times 60 \quad (\text{rpm})$

3. 计算负载转矩

因为摩擦负载极小故忽略

$T_L = 0 \quad (\text{Nm})$

4. 计算电机轴加速转矩 (克服惯量)

工作台的惯量

$J_T = \frac{1}{8} M T^2 D T^2 \quad (\text{kgm}^2)$

工作物的惯量

$J_{w1} = n \cdot M_w \cdot l^2 \quad (\text{kgm}^2)$

(工作物同时绕工作中心轴旋转, 如果工作物没有自转, 可以不考虑这部分惯量。)

电机惯量

$J_M = \quad (\text{kgm}^2)$

全负载惯量

$J_L = J_T + J_w \quad (\text{kgm}^2)$

5. 加速转矩

负载折算到电机轴上的惯量

$J_{LM} = J_L / i^2 \quad (\text{kgm}^2)$

电机轴加速转矩

$T_s = \frac{(J_{LM} + J_M) \beta_m}{\eta_g} \quad (\text{Nm})$

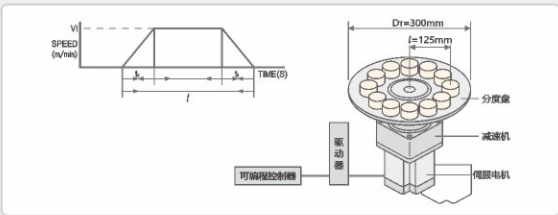
6. 必须转矩

$T = (T_s + T_L) \cdot S \quad (\text{Nm})$

安全系数 S

7. 负荷与电机惯量比
惯量比

$N1 = \frac{J_L}{i^2} / J_m$

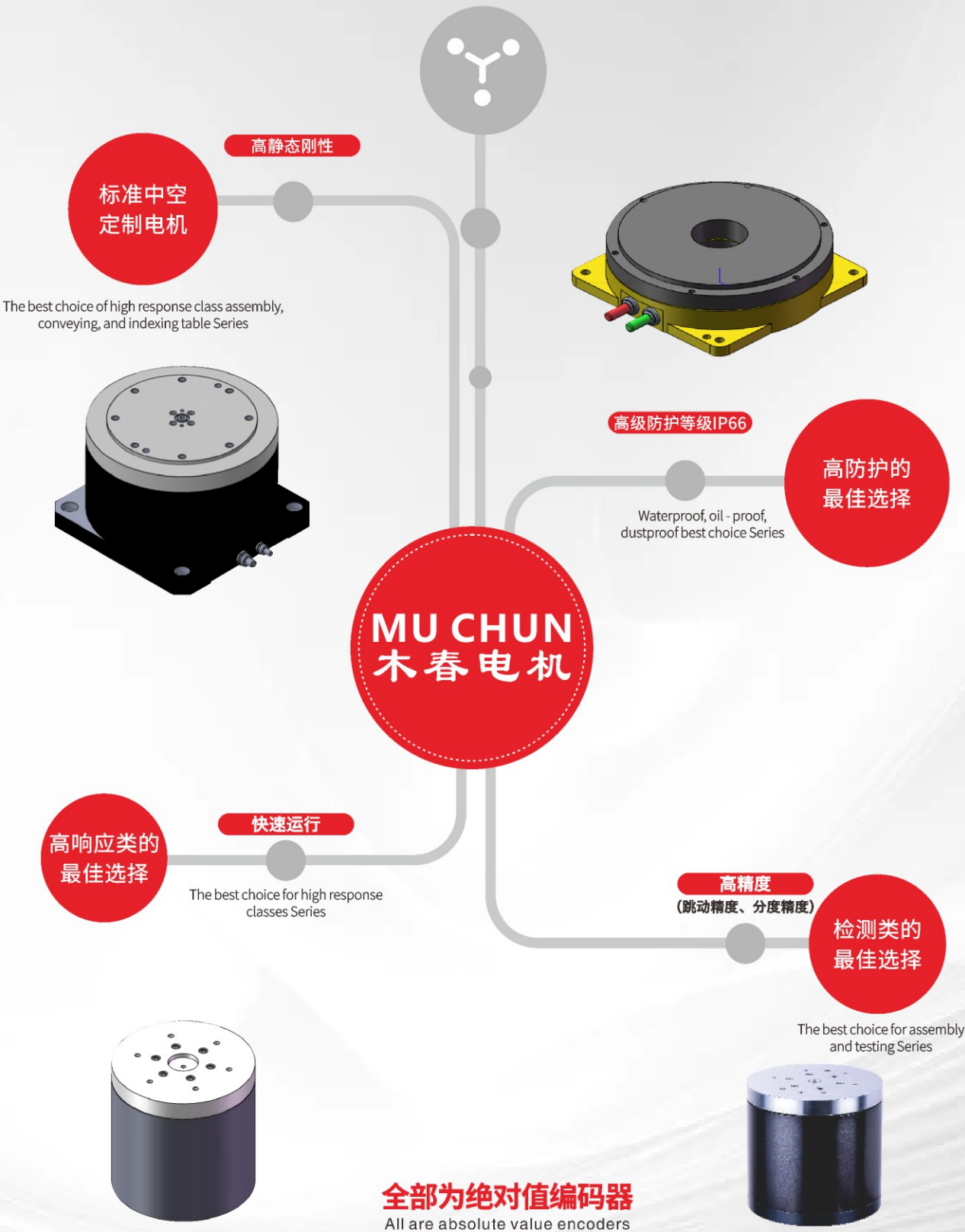


注意事项

1. 安装 同心度 (10μm), 环境保证, 反馈线绕走线无干扰。
2. 控制精度 上位控制器需要保证输出稳定可靠的高频信号 (一般用M级), 否则会因速度要求降低使用精度。

可根据用途和应用场合的选择

It can be selected based on the purpose and application scenario.



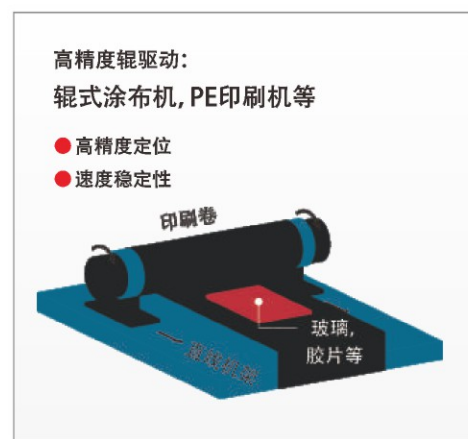
标准中空定制电机

Standard hollow custom-made motor

Point! 非常适用于要求大惯量负载时也需要稳定旋转的设备
It is highly suitable for equipment that requires both a large inertia load and stable rotation.

►使用例/Example usage

- 切割设备 / ■ FPD贴合设备 / ■ 网版印刷设备 / ■ FPD检查设备
- 晶圆切割设备 / ■ 包装设备 / ■ 晶圆加工设备 / ■ 晶圆检测设备
- X射线分析仪 / ■ PE印刷设备 / ■ 精密加工设备和测量设备 / ■ 压铸机



高响应类的最佳选择

The best choice for high-response type applications

Point! 适合于要求高速并且高精度的设备
Suitable for equipment that requires high speed and high precision

►使用例/Example usage

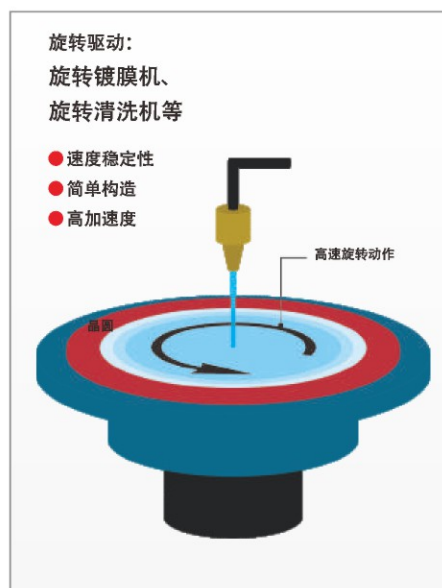
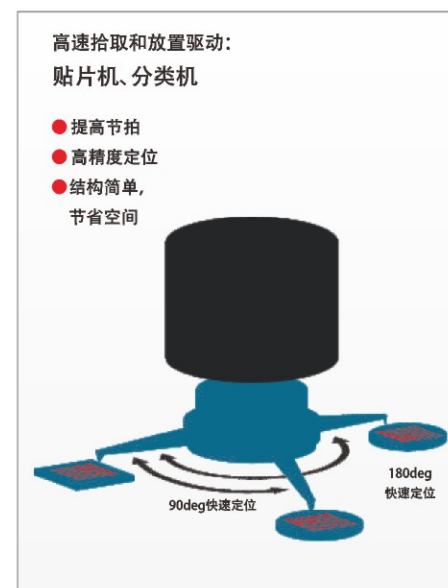
- 贴片机
- 分类机
- 旋转镀膜机
- 旋转清洗机

高速定位例

90deg定位时间：36msec

180deg定位时间：60msec

臂尖的精度：±4μm (完成范围：±10脉冲)



检测类的最佳选择

The best choice for detection type

Point! 从AC伺服马达+减速机构到直驱化是最适合的
From the AC servo motor + reduction mechanism to direct drive is the most suitable option.

►使用例/Example usage

- 晶圆搬运设备 / ■ 食品搬运设备 / ■ 充填机 / ■ 打栓机 / ■ 辊式给料机
- 激光加工机 / ■ 覆膜机 / ■ FPD贴合设备 / ■ 模压切割机
- 网版印刷机 / ■ 接触，非接触测试设备 / ■ 各种分度台

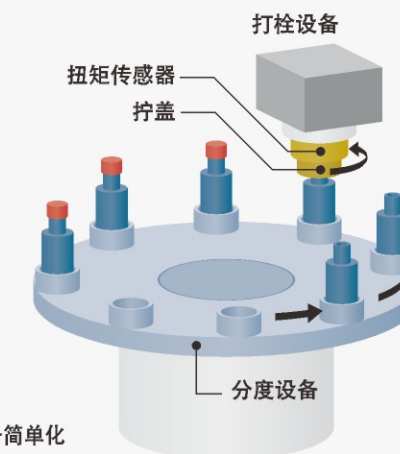
索引驱动·卷合驱动：
分度设备·打栓设备

【分度设备】

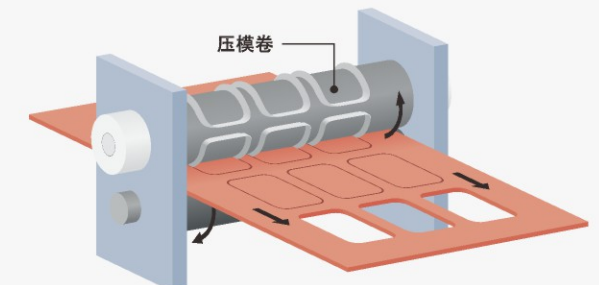
- 高精度，自在地索引
- 简单构造
- 静音性能
- 提高保养性

【打栓设备】

- 因为是中空结构，使设备简单化
- 提高响应性

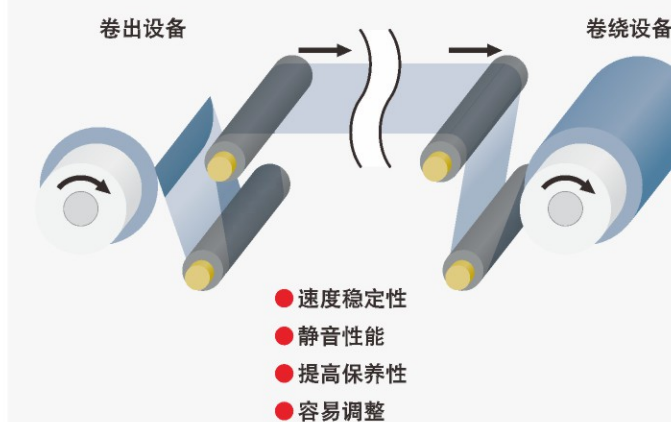


轮转印刷机驱动：
模压切割机，印刷机械等

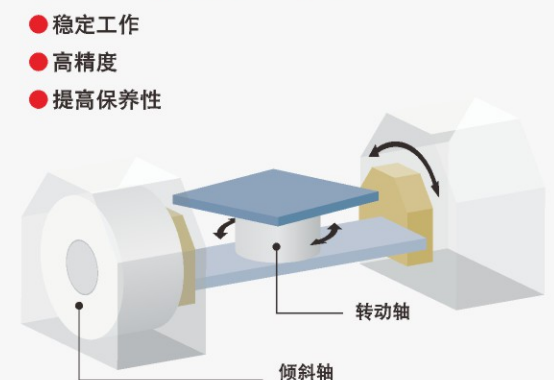


- 速度稳定性
- 简单构造
- 提高保养性

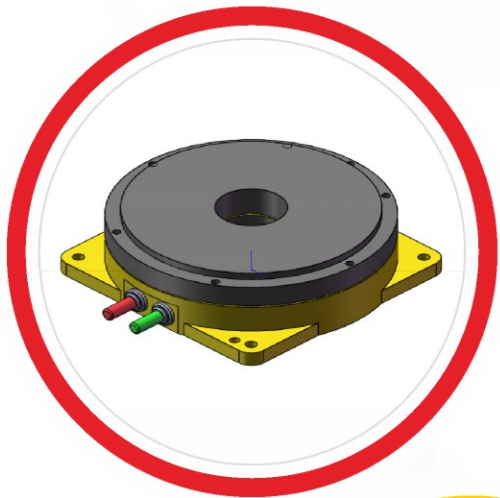
出卷，卷绕驱动(卷to卷应用设备)：
覆膜机，镀膜机，表面分析装置等
从电磁粉末离合器，制动器调换



工作台驱动：
激光加工机，各种加工机等

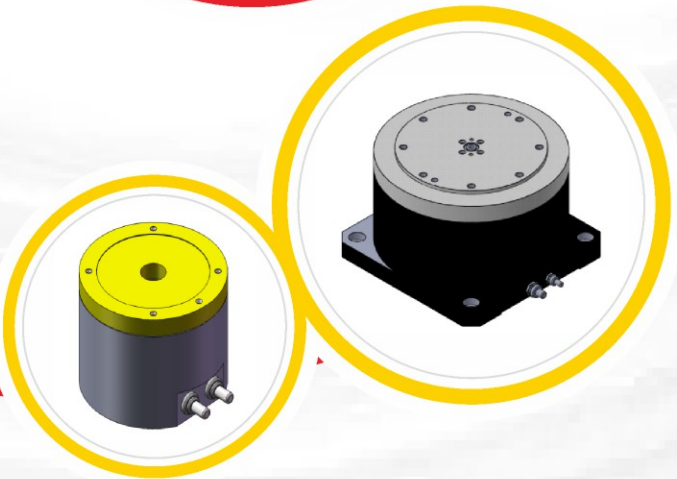


DD马达命名标准
 DD Motor Naming Standard



功能特点

- ◆ 零背隙，定位精度极高。
- ◆ 高刚性带来的强抗干扰能力。
- ◆ 高扭矩、低转速（低速平稳性极佳）。
- ◆ 瞬时响应，加减速极快。



DMR85067-003-240NP-30L003

▶ 通用规格/Specifications

电机绕组绝缘等级：F类，绝缘耐压：1分钟1500V，绝缘电阻：10MΩ以上（500VDC）

其他构造：外转子型，励磁方式：3相

(注)标称扭矩为安装在热容量足够大的金属机座上时的数值。

位置分辨率为建议值，根据驱动器设定。

负载安装面机械精度是安装面的轴向偏差和径向偏差。

表中，如无明确说明则表示为200~230VAC电源。

注:使用环境温度-10℃~50℃，湿度≤85%；无腐蚀性气体，油雾，尘埃，强电磁污染；海拔1000米以下。

Motor winding section: Insulation class: F, Insulation withstand voltage: 1500V for 1 minute, Insulation resistance: above 10MΩ (500VDC)

Other: Construction: Outer rotor type, Excitation method: 3-phase

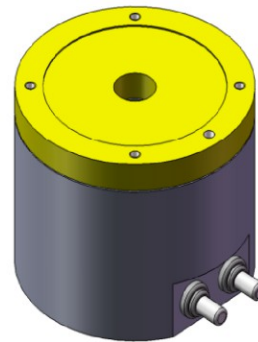
(Notes) Nominal torque is the value when installed on a metal base with sufficient heat capacity.

Position resolution is a recommended value and is set according to the driver.

Mechanical accuracy of the load installation surface is the axial and radial deviation of the installation surface.

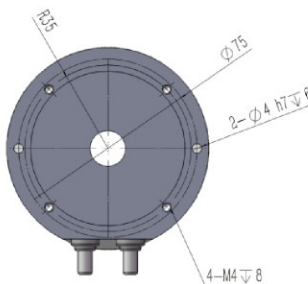
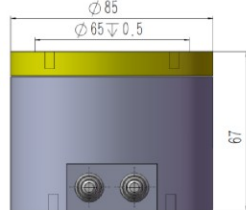
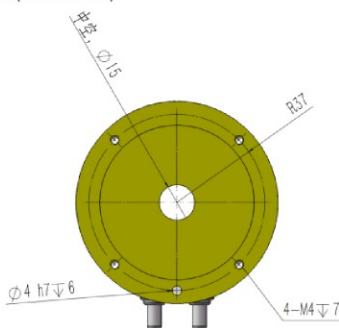
In the table, if there is no explicit statement, it is indicated as a 200~230VAC power supply.

Note: Operating environment temperature: -10℃ to 50℃, humidity: ≤85%; no corrosive gas, oil mist, dust, strong electromagnetic pollution; altitude: below 1000 meters.



规格名称 SpecificationName			DMR85067-003-240NP-30L003
瞬时最大输出扭矩	Instantaneous maximum output torque	N · m	3.5
连续最大扭矩	Continuous maximum torque	N · m	1
最大转速	Maximum speed	rpm	240
额定转速	Rated speed	rpm	120
线电阻	Line resistance	Ohm	3.8
线电感	Line Inductance	mH	4
力矩常数	Torque constant	Nm/Arms	0.6
反电势常数	Back EMF constant	Vp/(krpm)	51
连续电流	Continuous current	Arms	1.5
峰值电流	Peak current	Arms	5
极对数	Number of pole pairs	p	11
精度要求 Accuracy requirement	编码器分辨率 Encoder resolution	pulse/rev	1048576
	绝对精度 Absolute accuracy	arc-sec	± 32
	重复定位精度 Repeat positioning accuracy	arc-sec	± 1.5
原点脉冲数	Home puls ecount	pulse/rev	1
最大功率	Maximumpower	KVA	0.40
额定功率	Rated power	KVA	0.10
转子惯量	Rotor inertia	kgcm ²	6.35
允许负载 Allowable load	轴向负荷 Axial load	正 Positive	N
		逆 Reverse	N
	径向负荷 Radial load	N · m	10
负载安装面机械精度	Mechanical accuracy of load mounting surface	um	15,5orless
重量	Weight	kg	1.6

外形图(单位:mm)



DMR138140-020-300NP-20L002

►通用规格/Specifcations

电机绕组绝缘等级：F类，绝缘耐压：1分钟1500V，绝缘电阻：10MΩ以上（500VDC）

其他构造：外转子型，励磁方式：3相

（注）标称扭矩为安装在热容量足够大的金属机座上时的数值。

位置分辨率为建议值，根据驱动器设定。

负载安装面机械精度是安装面的轴向偏差和径向偏差。

表中，如无明确说明则表示为200-230VAC电源。

注：使用环境温度-10℃~50℃，湿度≤85%；无腐蚀性气体，油雾，尘埃，强电磁污染；海拔1000米以下。

Motor winding section: Insulation class: F type, Insulation withstand voltage: 1500V for 1 minute, Insulation resistance: above 10 MΩ (500VDC)

Other: Construction: Outer rotor type, Excitation method: 3-phase

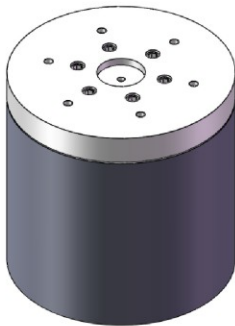
(Notes) Nominal torque is the value when installed on a metal base with sufficient heat capacity.

Position resolution is a recommended value, depending on the driver settings.

Mechanical accuracy of the load installation surface is the axial and radial deviation of the installation surface.

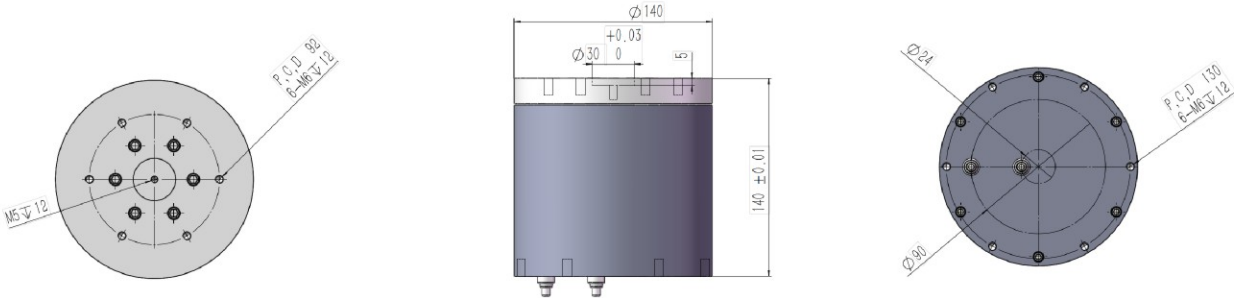
In the table, if there is no explicit statement, it indicates a 200-230VAC power supply.

Note: Operating environment temperature: -10℃ to 50℃, humidity: ≤85%; no corrosive gases, oil mist, dust, strong electromagnetic pollution; altitude: below 1000 meters.



规格名称 SpecificationName			DMR138140-020-300NP-20L002
瞬时最大输出扭矩	Instantaneous maximum output torque	N・m	10
连续最大扭矩	Continuous maximum torque	N・m	20
最大转速	Maximum speed	rpm	300
额定转速	Rated speed	rpm	150
线电阻	Line resistance	Ohm	10.6
线电感	Line Inductance	mH	23.8
力矩常数	Torque constant	Nm/Arms	4.2
反电势常数	Back EMF constant	Vp/(krpm)	753
连续电流	Continuous current	Arms	2.5
峰值电流	Peak current	Arms	5.2
极对数	Number of pole pairs	p	15
精度要求 Accuracy requirement	编码器分辨率 Encoder resolution	pulse/rev	8088608
	绝对精度 Absolute accuracy	arc-sec	± 20
	重复定位精度 Repeat positioning accuracy	arc-sec	± 1.5
原点脉冲数	Home puls ecount	pulse/rev	1
最大功率	Maximumpower	KVA	0.7
额定功率	Rated power	KVA	0.3
转子惯量	Rotor inertia	kgcm ²	10
允许负载 Allowable load	轴向负荷 Axial load	正 Positive	N
		逆 Reverse	N
	径向负荷 Radial load		N・m
负载安装面机械精度	Mechanical accuracy of load mounting surface		um
重量	Weight		kg

外形图(单位:mm)



DMR264128-250-120NP-20L003

►通用规格/Specifcations

电机绕组绝缘等级：F类，绝缘耐压：1分钟1500V，绝缘电阻：10MΩ以上（500VDC）

其他构造：外转子型，励磁方式：3相

（注）标称扭矩为安装在热容量足够大的金属机座上时的数值。

位置分辨率为建议值，根据驱动器设定。

负载安装面机械精度是安装面的轴向偏差和径向偏差。

表中，如无明确说明则表示为200-230VAC电源。

注：使用环境温度-10℃~50℃，湿度≤85%；无腐蚀性气体，油雾，尘埃，强电磁污染；海拔1000米以下。

Motor winding section: Insulation class: F type, Insulation withstand voltage: 1500V for 1 minute, Insulation resistance: above 10 MΩ (500VDC)

Other: Construction: Outer rotor type, Excitation method: 3-phase

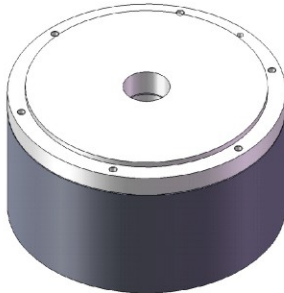
(Notes) Nominal torque is the value when installed on a metal base with sufficient heat capacity.

Position resolution is a recommended value, depending on the driver settings.

Mechanical accuracy of the load installation surface is the axial and radial deviation of the installation surface.

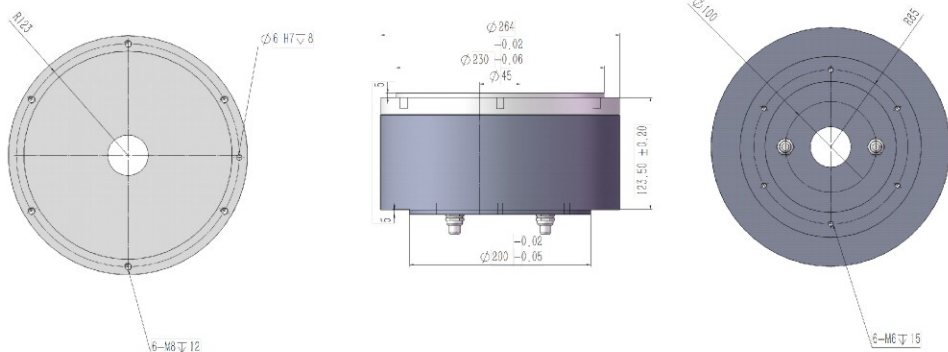
In the table, if there is no explicit statement, it is indicated as 200-230VAC power supply.

Note: Operating environment temperature: -10℃ to 50℃, humidity: ≤85%; no corrosive gases, oil mist, dust, strong electromagnetic pollution; altitude: below 1000 meters.



规格名称 SpecificationName			DMR264128-250-120NP-20L003
瞬时最大输出扭矩	Instantaneous maximum output torque	N・m	250
连续最大扭矩	Continuous maximum torque	N・m	100
最大转速	Maximum speed	rpm	120
额定转速	Rated speed	rpm	72
线电阻	Line resistance	Ohm	8.5
线电感	Line Inductance	mH	37.4
力矩常数	Torque constant	Nm/Arms	24
反电势常数	Back EMF constant	Vp/(krpm)	2052
连续电流	Continuous current	Arms	4.2
峰值电流	Peak current	Arms	10.5
极对数	Number of pole pairs	p	30
精度要求 Accuracy requirement	编码器分辨率 Encoder resolution	pulse/rev	8388608
	绝对精度 Absolute accuracy	arc-sec	± 20
	重复定位精度 Repeat positioning accuracy	arc-sec	± 1.5
原点脉冲数	Home puls ecount	pulse/rev	1
最大功率	Maximumpower	KVA	2.31
额定功率	Rated power	KVA	0.92
转子惯量	Rotor inertia	kgcm ²	1440
允许负载 Allowable load	轴向负荷 Axial load	正 Positive	N
		逆 Reverse	N
	径向负荷 Radial load		N・m
负载安装面机械精度	Mechanical accuracy of load mounting surface		um
重量	Weight		kg

外形图(单位:mm)



DMR264160-450-120NP-20L003

►通用规格/Specifcations

电机卷线部绝缘等级：F类，绝缘耐压：1分钟1500V，绝缘电阻：10MΩ以上（500VDC）

其他构造：外转子型，励磁方式：3相

（注）标称扭矩为安装在热容量足够大的金属机座上时的数值。

位置分辨率为建议值，根据驱动器设定。

负载安装面机械精度是安装面的轴向偏差和径向偏差。

表中，如无明确说明则表示为200-230VAC电源。

注：使用环境温度-10℃~50℃，湿度≤85%；无腐蚀性气体，油雾，尘埃，强电磁污染；海拔1000米以下。

Motor winding section: Insulation class: F type, Insulation withstand voltage: 1500V for 1 minute, Insulation resistance: above 10 MΩ (500VDC)

Other features: Outer rotor type, Excitation method: 3-phase

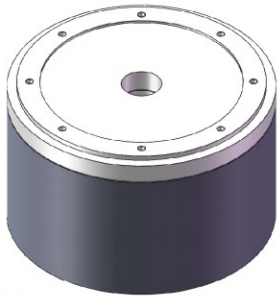
(Notes) Nominal torque is the value when installed on a metal base with sufficient heat capacity.

Position resolution is the recommended value and is set according to the driver.

Mechanical accuracy of the load installation surface is the axial and radial deviation of the installation surface.

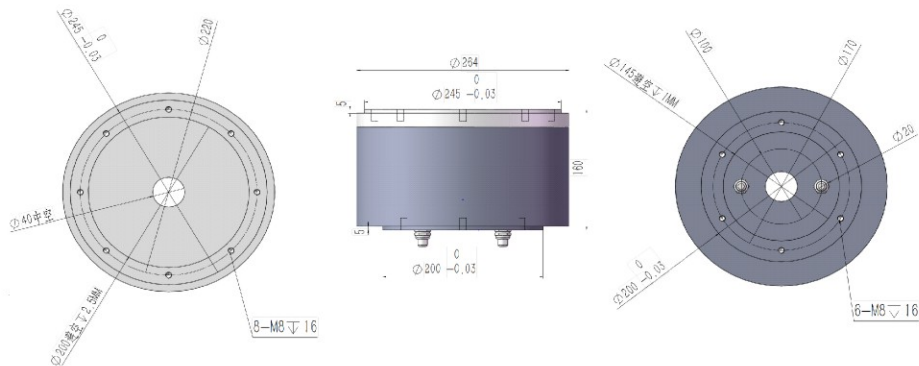
In the table, if there is no explicit statement, it indicates a 200-230VAC power supply.

Note: Operating environment temperature: -10℃ to 50℃, humidity: ≤85%; no corrosive gases, oil mist, dust, strong electromagnetic pollution; altitude: below 1000 meters.



规格名称 SpecificationName			DMR264160-450-120NP-20L003	
瞬时最大输出扭矩		Instantaneous maximum output torque	N・m	450
连续最大扭矩		Continuous maximum torque	N・m	180
最大转速		Maximum speed	rpm	120
额定转速		Rated speed	rpm	60
线电阻		Line resistance	Ohm	12
线电感		Line Inductance	mH	52
力矩常数		Torque constant	Nm/Arms	38
反电势常数		Back EMF constant	Vp/(krpm)	1265
连续电流		Continuous current	Arms	5
峰值电流		Peak current	Arms	13.5
极对数		Number of pole pairs	p	30
精度要求 Accuracy requirement	编码器分辨率	Encoder resolution	pulse/rev	8388608
	绝对精度	Absolute accuracy	arc-sec	± 20
	重复定位精度	Repeat positioning accuracy	arc-sec	± 1.5
原点脉冲数		Home puls ecount	pulse/rev	1
最大功率		Maximumpower	KVA	1.98
额定功率		Rated power	KVA	0.99
转子惯量		Rotor inertia	kgcm ²	1296
允许负载 Allowable load	轴向负荷 Axial load	正 Positive	N	50000
		逆 Reverse	N	20000
	径向负荷 Radial load		N・m	400
负载安装面机械精度		Mechanical accuracy of load mounting surface	um	8orless
重量		Weight	kg	42

外形图(单位:mm)



DMR270152-450-110NP-20L003

►通用规格/Specifcations

电机卷线部绝缘等级：F类，绝缘耐压：1分钟1500V，绝缘电阻：10MΩ以上（500VDC）

其他构造：内转子型，励磁方式：3相

（注）标称扭矩为安装在热容量足够大的金属机座上时的数值。

位置分辨率为建议值，根据驱动器设定。

负载安装面机械精度是安装面的轴向偏差和径向偏差。

表中，如无明确说明则表示为380VAC电源。

注：使用环境温度-10℃~50℃，湿度≤85%；无腐蚀性气体，油雾，尘埃，强电磁污染；海拔1000米以下。

Motor winding section: Insulation class: F type, Insulation withstand voltage: 1500V for 1 minute, Insulation resistance: above 10 MΩ (500VDC)

Other: Construction: Inner rotor type, Excitation method: 3-phase

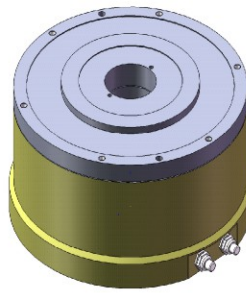
(Notes) Nominal torque is the value when installed on a metal base with sufficient heat capacity.

Position resolution is a recommended value, depending on the driver settings.

Mechanical accuracy of the load installation surface is the axial and radial deviation of the installation surface.

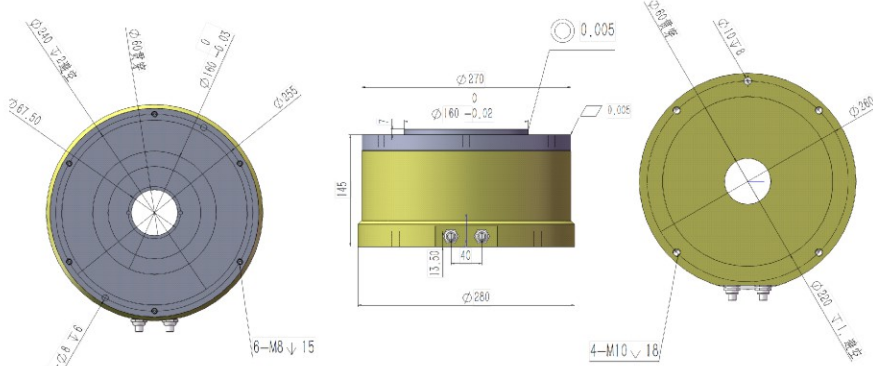
In the table, if there is no explicit statement, it is indicated as a 380VAC power supply.

Note: Operating environment temperature: -10℃ to 50℃, humidity: ≤85%; no corrosive gases, oil mist, dust, strong electromagnetic pollution; altitude: below 1000 meters.



规格名称 SpecificationName			DMR270152-450-110NP-20L003	
瞬时最大输出扭矩		Instantaneous maximum output torque	N・m	450
连续最大扭矩		Continuous maximum torque	N・m	150
最大转速		Maximum speed	rpm	110
额定转速		Rated speed	rpm	60
线电阻		Line resistance	Ohm	4.6
线电感		Line Inductance	mH	38.9
力矩常数		Torque constant	Nm/Arms	50
反电势常数		Back EMF constant	Vp/(krpm)	2536
连续电流		Continuous current	Arms	3
峰值电流		Peak current	Arms	9
极对数		Number of pole pairs	p	30
精度要求 Accuracy requirement	编码器分辨率	Encoder resolution	pulse/rev	8388608
	绝对精度	Absolute accuracy	arc-sec	± 20
	重复定位精度	Repeat positioning accuracy	arc-sec	± 1.5
原点脉冲数		Home puls ecount	pulse/rev	1
最大功率		Maximumpower	KVA	6
额定功率		Rated power	KVA	2
转子惯量		Rotor inertia	kgcm ²	3900
允许负载 Allowable load	轴向负荷 Axial load	正 Positive	N	50000
		逆 Reverse	N	20000
	径向负荷 Radial load		N・m	600
负载安装面机械精度		Mechanical accuracy of load mounting surface	um	15orless
重量		Weight	kg	38

外形图(单位:mm)



DMR375175-1200-60NP-20H006

► 通用规格/Specifcations

电机卷线部绝缘等级：F类，绝缘耐压：1分钟1500V，绝缘电阻：10MΩ以上（500VDC）

其他构造：内转子型，励磁方式：3相

(注) 标称扭矩为安装在热容量足够大的金属机座上时的数值。

位置分辨率为建议值，根据驱动器设定。

负载安装面机械精度是安装面的轴向偏差和径向偏差。

表中, 如无明确说明则表示为380VAC电源。

注：使用环境温度-10℃~50℃，湿度≤85%；无腐蚀性气体，油雾，尘埃，强电磁污染；海拔1000米以下。

Motor winding section: Insulation class: F type, Insulation withstand voltage: 1500V for 1 minute, Insulation resistance: above 10 MΩ (500VDC)

Other: Construction: Inner rotor type, Excitation method: 3-phase
(Notes) Nominal torque is the value when installed on a metal base.

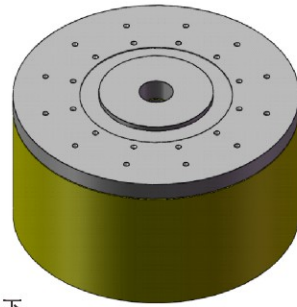
(Notes) Nominal torque is the value when installed on a metal base with sufficient heat capacity.
Position resolution is a recommended value, depending on the driver settings.

Position resolution is a recommended value, depending on the driver settings.
Mechanical accuracy of the load installation surface is the axial and radial deviation.

Mechanical accuracy of the load installation surface is the axial and radial deviation of the installation surface. In the table, if there is no explicit statement, it indicates a 380VAC power supply.

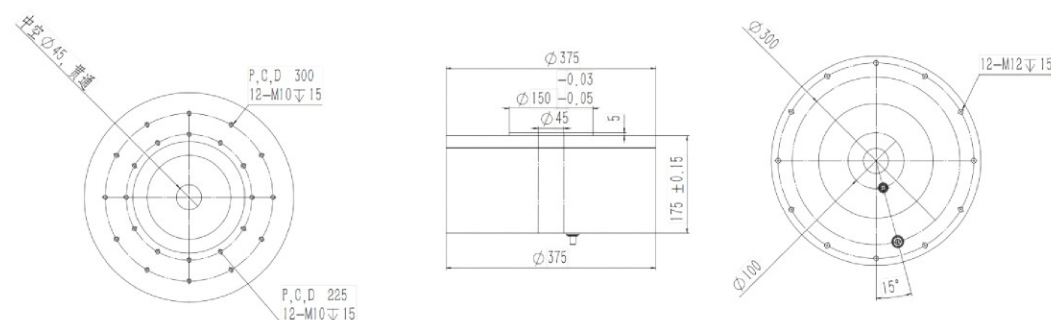
Operating environment temperature: -10°C to 50°C ; humidity: $\leq 85\%$; no corrosive

Note: Operating environment temperature: -10°C to 50°C , humidity: $\leq 85\%$, no corrosive gases, oil mist, dust, strong electromagnetic pollution; altitude: below 1000 meters.



规格名称 SpecificationName				DMR375175-1200-60NP-20H006	
瞬时最大输出扭矩		Instantaneous maximum output torque		N · m	1200
连续最大扭矩		Continuous maximum torque		N · m	500
最大转速		Maximum speed		rpm	60
额定转速		Rated speed		rpm	30
线电阻		Line resistance		Ohm	21
线电感		Line Inductance		mH	76
力矩常数		Torque constant		Nm/Arms	46.2
反电势常数		Back EMF constant		Vp/(krpm)	4950
连续电流		Continuous current		Arms	6
峰值电流		Peak current		Arms	15
极对数		Number of pole pairs		p	30
精度要求 Accuracy requirement	编码器分辨率	Encoder resolution		pulse/rev	67108864
	绝对精度	Absolute accuracy		arc-sec	± 20
	重复定位精度	Repeat positioning accuracy		arc-sec	± 1.5
原点脉冲数		Home puls ecount		pulse/rev	1
最大功率		Maximumpower		KVA	8.74
额定功率		Rated power		KVA	3.5
转子惯量		Rotor inertia		kgcm ²	5200
允许负载 Allowable load	轴向负荷 Axial load	正 Positive	N	50000	
		逆 Reverse	N	20000	
	径向负荷 Radial load		N · m	600	
负载安装面机械精度		Mechanical accuracy of load mounting surface		um	15orless
重量		Weight		kg	125

外形图(单位:mm)



DMZ112065-008-240NP-26L003

► 通用规格/Specifcations

电机卷线部绝缘等级：F类，绝缘耐压：1分钟1500V，绝缘电阻：10MΩ以上（500VDC）

其他构造：外转子型，励磁方式：3相

(注) 标称扭矩为安装在热容量足够大的金属机座上时的数值。

位置分辨率为建议值，根据驱动器设定。

负载安装面机械精度是安装面的轴向偏差和径向偏差。

表中，如无明确说明则表示为200-230VAC电源。

注：使用环境温度-10℃~50℃，湿度≤85%；无腐蚀性气体，油雾，尘埃，强电磁污染；海拔1000米以下。

Motor winding section: Insulation class: F type, Insulation withstand voltage: 1500V for 1 minute, Insulation resistance: above 10 MΩ (500VDC)

Other: Construction: Outer rotor type, Excitation method: 3-phase
(Notes) Nominal torque is the value when installed on a metal base.

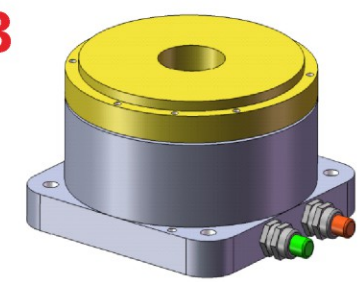
(Notes) Nominal torque is the value when installed on a metal base with sufficient heat capacity.
Position resolution is a recommended value, depending on the driver settings.

Position resolution is a recommended value, depending on the driver settings.
Mechanical accuracy of the load installation surface is the axial and radial de-

Mechanical accuracy of the load installation surface is the axial and radial deviation of the installation surface. In the table, if there is no explicit statement, it indicates a 200–230VAC power supply.

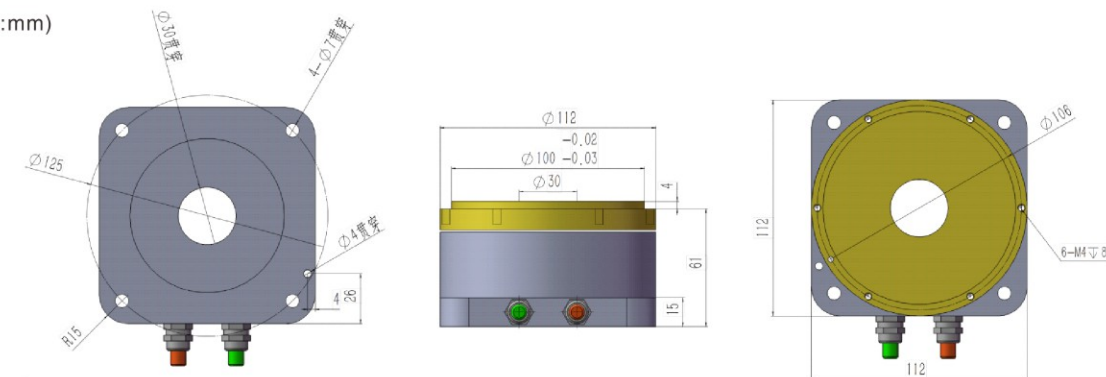
Operating environment temperature: -10°C to 50°C ; humidity: $\leq 85\%$; no corrosive gas

Note: Operating environment temperature: -10°C to 50°C , humidity: $\approx 85\%$; no corrosive gases, oil mist, dust, strong electromagnetic pollution; altitude: below 1000 meters.



规格名称 SpecificationName			DMZ112065-008-240NP-26L003	
瞬时最大输出扭矩	Instantaneous maximum output torque		N · m	8
连续最大扭矩	Continuous maximum torque		N · m	4
最大转速	Maximum speed		rpm	240
额定转速	Rated speed		rpm	120
线电阻	Line resistance		Ohm	4.7
线电感	Line Inductance		mH	5.7
力矩常数	Torque constant		Nm/Arms	2
反电势常数	Back EMF constant		Vp/(krpm)	171
连续电流	Continuous current		Arms	2
峰值电流	Peak current		Arms	5
极对数	Number of pole pairs		p	10
精度要求 Accuracy requirement	编码器分辨率	Encoder resolution	pulse/rev	1048576
	绝对精度	Absolute accuracy	arc-sec	± 26
	重复定位精度	Repeat positioning accuracy	arc-sec	± 1.2
原点脉冲数	Home puls ecount		pulse/rev	1
最大功率	Maximumpower		KVA	0.40
额定功率	Rated power		KVA	0.10
转子惯量	Rotor inertia		kgcm ²	26
允许负载 Allowable load	轴向负荷 Axial load	正 Positive	N	1000
		逆 Reverse	N	600
	径向负荷 Radial load		N · m	30
负载安装面机械精度	Mechanical accuracy of load mounting surface		um	15orless
重量	Weight		kg	2.8

外形图(单位:mm)



DMZ168050-010-240NP-26L003

►通用规格/Specifcations

电机绕组部绝缘等级：F类，绝缘耐压：1分钟1500V，绝缘电阻：10MΩ以上（500VDC）

其他构造：外转子型，励磁方式：3相

（注）标称扭矩为安装在热容量足够大的金属机座上时的数值。

位置分辨率为建议值，根据驱动器设定。

负载安装面机械精度是安装面的轴向偏差和径向偏差。

表中，如无明确说明则表示为200-230VAC电源。

注：使用环境温度-10℃～50℃，湿度≤85%；无腐蚀性气体，油雾，尘埃，强电磁污染；海拔1000米以下。

Motor winding section: Insulation class: F type, Insulation withstand voltage: 1500V for 1 minute, Insulation resistance: above 10 MΩ (500VDC)

Other: Construction: Outer rotor type, Excitation method: 3-phase

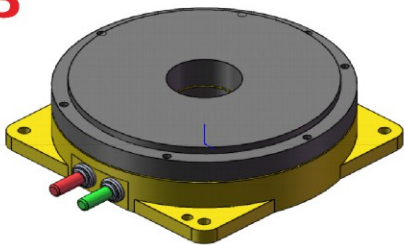
(Notes) Nominal torque is the value when installed on a metal base with sufficient heat capacity.

Position resolution is a recommended value, depending on the driver settings.

Mechanical accuracy of the load installation surface is the axial and radial deviation of the installation surface.

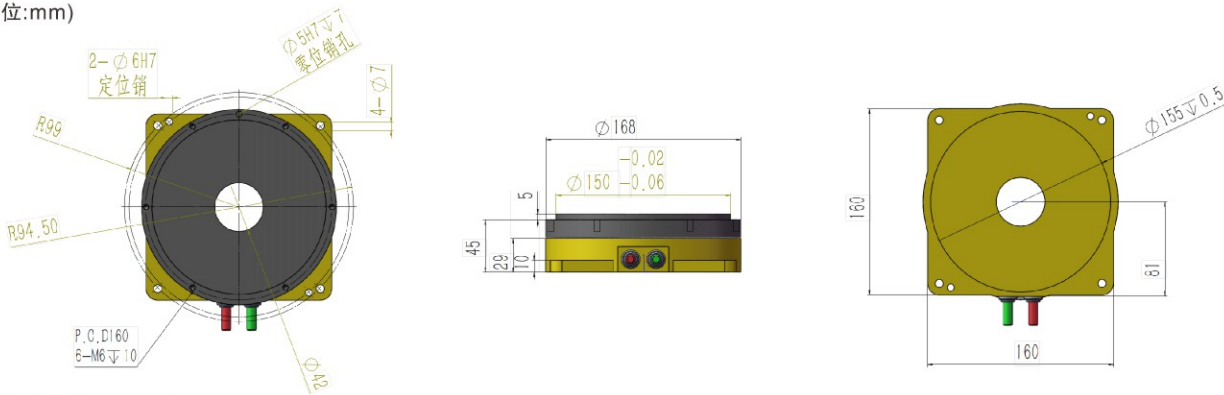
In the table, if there is no explicit statement, it indicates a 200-230VAC power supply.

Note: Operating environment temperature: -10℃ to 50℃, humidity: ≤85%; no corrosive gases, oil mist, dust, strong electromagnetic pollution; altitude: below 1000 meters.



规格名称 SpecificationName			DMZ168050-010-240NP-26L003	
瞬时最大输出扭矩	Instantaneous maximum output torque		N・m	10
连续最大扭矩	Continuous maximum torque		N・m	4
最大转速	Maximum speed		rpm	240
额定转速	Rated speed		rpm	120
线电阻	Line resistance		Ohm	9.2
线电感	Line Inductance		mH	24
力矩常数	Torque constant		Nm/Arms	3.4
反电势常数	Back EMF constant		Vp/(krpm)	290
连续电流	Continuous current		Arms	1.5
峰值电流	Peak current		Arms	4
极对数	Number of pole pairs		p	14
精度要求 Accuracy requirement	编码器分辨率	Encoder resolution	pulse/rev	8388608
	绝对精度	Absolute accuracy	arc-sec	± 26/ ± 10（可选高精度）
	重复定位精度	Repeat positioning accuracy	arc-sec	± 1.2
原点脉冲数	Home puls ecount		pulse/rev	1
最大功率	Maximumpower		KVA	0.88
额定功率	Rated power		KVA	0.33
转子惯量	Rotor inertia		kgcm ²	100
允许负载 Allowable load	轴向负荷 Axial load	正 Positive	N	2200
		逆 Reverse	N	1200
	径向负荷 Radial load		N・m	60
负载安装面机械精度	Mechanical accuracy of load mounting surface		um	10orless
重量	Weight		kg	6.2

外形图(单位:mm)



DMZ224062-050-180NP-26L003

►通用规格/Specifcations

电机绕组部绝缘等级：F类，绝缘耐压：1分钟1500V，绝缘电阻：10MΩ以上（500VDC）

其他构造：内转子型，励磁方式：3相

（注）标称扭矩为安装在热容量足够大的金属机座上时的数值。

位置分辨率为建议值，根据驱动器设定。

负载安装面机械精度是安装面的轴向偏差和径向偏差。

表中，如无明确说明则表示为200-230VAC电源。

注：使用环境温度-10℃～50℃，湿度≤85%；无腐蚀性气体，油雾，尘埃，强电磁污染；海拔1000米以下。

Motor winding section: Insulation class: F type, Insulation withstand voltage: 1500V for 1 minute, Insulation resistance: above 10 MΩ (500VDC)

Other: Construction: Internal rotor type, Excitation method: 3-phase

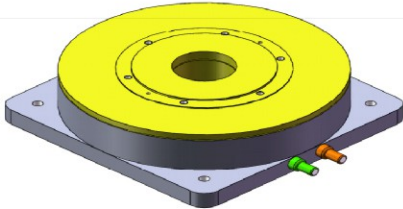
(Notes) Nominal torque is the value when installed on a metal base with sufficient heat capacity.

Position resolution is a recommended value, depending on the driver settings.

Mechanical accuracy of the load installation surface is the axial and radial deviation of the installation surface.

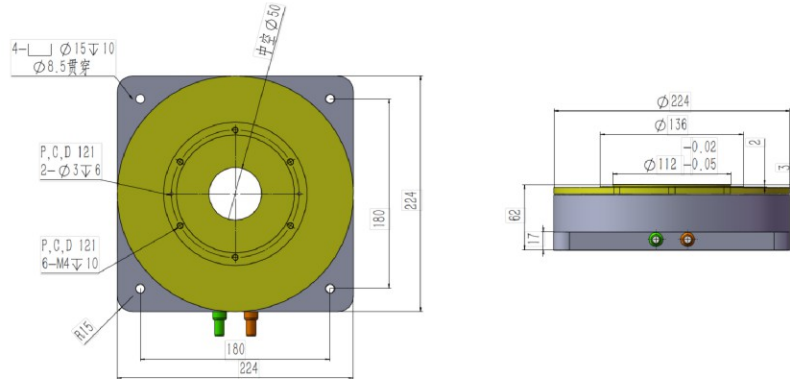
In the table, if there is no explicit statement, it is indicated as 200-230VAC power supply.

Note: Operating environment temperature: -10℃ to 50℃, humidity: ≤85%; no corrosive gases, oil mist, dust, strong electromagnetic pollution; altitude: below 1000 meters.



规格名称 SpecificationName			DMZ224062-050-180NP-26L003	
瞬时最大输出扭矩	Instantaneous maximum output torque		N · m	50
连续最大扭矩	Continuous maximum torque		N · m	35
最大转速	Maximum speed		rpm	180
额定转速	Rated speed		rpm	90
线电阻	Line resistance		Ohm	20
线电感	Line Inductance		mH	85
力矩常数	Torque constant		Nm/Arms	11.5
反电势常数	Back EMF constant		Vp/(krpm)	1026
连续电流	Continuous current		Arms	3
峰值电流	Peak current		Arms	6
极对数	Number of pole pairs		p	30
精度要求 Accuracy requirement	编码器分辨率	Encoder resolution	pulse/rev	8388608
	绝对精度	Absolute accuracy	arc-sec	± 26/ ± 10（可选高精度）
	重复定位精度	Repeat positioning accuracy	arc-sec	± 1
原点脉冲数	Home puls ecount		pulse/rev	1
最大功率	Maximumpower		KVA	1.32
额定功率	Rated power		KVA	0.66
转子惯量	Rotor inertia		kgcm ²	120
允许负载 Allowable load	轴向负荷 Axial load	正 Positive	N	33000
		逆 Reverse	N	16000
	径向负荷 Radial load		N · m	120
负载安装面机械精度	Mechanical accuracy of load mounting surface		um	3orless
重量	Weight		kg	14.6

外形图(单位:mm)



DMZ230152-150-180NP-26L005

►通用规格/Specifcations

电机卷线部绝缘等级：F类，绝缘耐压：1分钟1500V，绝缘电阻：10MΩ以上（500VDC）

其他构造：外转子型，励磁方式：3相

（注）标称扭矩为安装在热容量足够大的金属机座上时的数值。

位置分辨率为建议值，根据驱动器设定。

负载安装面机械精度是安装面的轴向偏差和径向偏差。

表中，如无明确说明则表示为200-230VAC电源。

注：使用环境温度-10℃~50℃，湿度≤85%；无腐蚀性气体，油雾，尘埃，强电磁污染；海拔1000米以下。

Motor winding section: Insulation class: F type, Insulation withstand voltage: 1500V for 1 minute, Insulation resistance: above 10 MΩ (500VDC)

Other: Construction: Outer rotor type, Excitation method: 3-phase

(Notes) Nominal torque is the value when installed on a metal base with sufficient heat capacity.

Position resolution is a recommended value, depending on the driver settings.

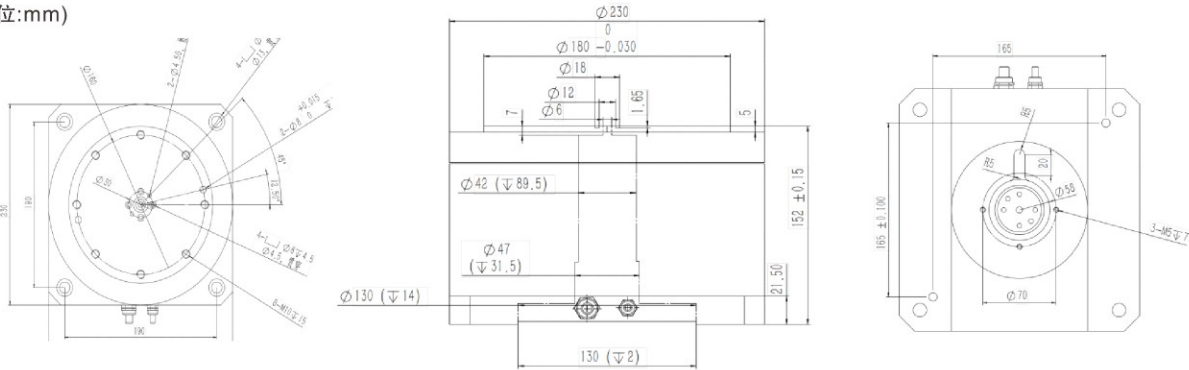
Mechanical accuracy of the load installation surface is the axial and radial deviation of the installation surface.

In the table, if there is no explicit statement, it is indicated as 200-230VAC power supply.

Note: Operating environment temperature: -10℃ to 50℃, humidity: ≤85%; no corrosive gases, oil mist, dust, strong electromagnetic pollution; altitude: below 1000 meters.

规格名称 SpecificationName			DMZ230152-150-180NP-26L005	
瞬时最大输出扭矩	Instantaneous maximum output torque		N · m	50
连续最大扭矩	Continuous maximum torque		N · m	150
最大转速	Maximum speed		rpm	180
额定转速	Rated speed		rpm	120
线电阻	Line resistance		Ohm	8.9
线电感	Line Inductance		mH	48.9
力矩常数	Torque constant		Nm/Arms	13
反电势常数	Back EMF constant		Vp/(krpm)	1051
连续电流	Continuous current		Arms	4
峰值电流	Peak current		Arms	12
极对数	Number of pole pairs		p	25
精度要求 Accuracy requirement	编码器分辨率	Encoder resolution	pulse/rev	8088608
	绝对精度	Absolute accuracy	arc-sec	± 15
	重复定位精度	Repeat positioning accuracy	arc-sec	± 1.5
原点脉冲数	Home puls ecount		pulse/rev	1
最大功率	Maximumpower		KVA	2
额定功率	Rated power		KVA	0.7
转子惯量	Rotor inertia		kgcm ²	60.35
允许负载 Allowable load	轴向负荷 Axial load	正 Positive	N	8000
		逆 Reverse	N	6000
	径向负荷 Radial load		N · m	400
负载安装面机械精度	Mechanical accuracy of load mounting surface		um	15,5orless
重量	Weight		kg	35

外形图(单位:mm)



DD直驱电机客户登记表

DD Direct Drive Motor Customer Registration Form

1	安装方式	①正装	②侧装	③倒装	
2	尺寸要求	外径大小:	高度	中空:	其他:
3	负载结构	圆盘转台:		圆盘半径:	重量:
		矩形转台:		长宽高:	重量:
		工作距马达中心半径:			重量:
		夹具距马达中心半径:			重量:
		夹具/工作数量:			
4	运行	旋转角度:	旋转时间:	停顿时间:	
		最大速度:	加速时间或加速度:		
5	精度	重复精度: (角秒)		定位精度: (角秒)	
		轴向跳动: (MM)		径向跳动: (MM)	
6	控制方式	①EtherCAT总线	②脉冲	③其他	
7	配线长度	① 3米	② 5米	③ 8米	④10米
8	备注				
9	客户行业	锂电 光伏 半导体 激光 面板 3C 医疗 喷涂 其他			
10	设备信息	名称:		单机用量:	
11	计划出货量	量产计划:			