



上海赢双电机科技股份有限公司

Shanghai Yingshuang Electric Machinery Technology Co.,Ltd

全球专业旋变供应商
Global Resolver Supplier



上海赢双电机科技股份有限公司
Shanghai Yingshuang Electric Machinery Technology Co.,Ltd

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中国·上海
China. Shanghai



Company PROFILE

公司简介

上海赢双电机科技股份有限公司成立于2005年，公司位于上海市闵行区颛桥镇北吴路1230号，是一家致力于旋转变压器研发、生产和提供系统解决方案的高新技术企业。

公司成立以来，坚持以市场为导向，走产学研发展的道路，已参加和承担多项国家863、上海市科委科研项目。已获取60多项专利。

公司一直坚持以客户为中心、企业价值产生于客户价值的理念。公司于2010年通过ISO9001质量体系认证，2014年通过TS16949汽车质量管理体系认证，并于2018年通过IATF16949:2016/ISO9001:2015体系认证；2012年被授予“上海市高新技术企业”，2015年被授予上海市“专精特新”企业，2016年被授予“小巨人”企业，2022年被国家工信部授予“专精特新小巨人”企业，同时也是“科技小巨人”企业。

公司磁阻式旋转变压器应用于新能源汽车、高铁、轨道交通、矿山机械等诸多电驱动领域；绕线式旋转变压器主要应用于工业伺服系统、机器人、国防军工等领域。

公司本着“同发展、共进步、利益共享、实现双赢”的经营理念，于国内外广大企业携手共进，为实现提升中国电机科技水平的愿望而奋斗。

Founded in 2005, Shanghai Yingshuang Electric Machinery Technology Co., Ltd. is a high-tech enterprise specialized in the resolver research & development and providing system solutions.

Since its establishment, the company adheres to the market-oriented approach and takes the road of Production, Education and Research. It has participated in and undertaken a number of national 863 and Shanghai Science and Technology Commission scientific research projects. More than 60 patents have been obtained.

The company has always adhered to the concept of customer-centered and enterprise value arising from customer value. The company has passed ISO9001 quality system certification since 2010 and TS16949 automotive quality management certification since 2014, and has passed IATF 16949:2016 / ISO9001:2015 system certification in 2018. In 2012, the company was honored as Shanghai High-tech Enterprise. In 2015, it was awarded as Shanghai Newly Exclusive Specialized Professional Enterprise. In 2022, it was awarded as Newly Exclusive Specialized Professional Enterprise by the National Industry and Information Technology Ministry.

The company's reluctance resolver is used in many electric drive fields such as new energy vehicles, high-speed rail, rail transit, mining machinery, etc; Brushless resolver is mainly used in industrial servo systems, robots, national defense and military industries etc.

Based on the business philosophy of Develop & Improve together, Share benefit & Achieve win-win, the company is making progress with enterprises at home and abroad to improve China's electrical technology level.

Catalogue / 目录

◎ 单级或多级旋变

Single or multi pole pairs resolver

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◎ 高精度双通道旋变

High accurate two speed resolver

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产品简介 Product introduction

绕线式旋变工作原理与普通变压器相似，通过定、转子绕组电磁耦合产生感生电动势，使输出绕组的感生电压随转子转角变化做相应的正弦或余弦变化的角度传感元件。广泛的应用于军工、航空航天、工业、伺服等领域。

The working principle of brushless resolver is similar to that of ordinary transformer. It is an angle sensing element that generates induced electromotive force through electromagnetic coupling of stator and rotor windings to make the induced voltage of output winding change sine or cosine with rotor angle change. It is widely used in military, aerospace, industrial, servo fields.

产品具有以下特点 The product has the following characteristics.

- 高精度的绝对式检测，适应高转速应用需求；
High precision absolute detection to meet the requirements of high speed applications.
- 结构紧凑、安装使用方便；
Compact structure, convenient installation and use.
- 可靠性高、寿命长、免维护、尤其适用于恶劣工况；
High reliability, long life, suitable for harsh environment, maintenance-free, especially for harsh working conditions;
- 性价比高；
High cost performance.
- 独有专利技术；
Unique patented technology.

电气原理 SCHEMATIC

旋转变压器是输出电压与转子转角成一定函数关系的特种电机，其一、二次侧绕组分别放在定、转子上，一次侧绕组与二次侧绕组之间的电磁耦合程度与转子的转角密切相关。

Resolver is a special motor with output voltage a function of the rotor angle. Its primary and secondary windings are placed on the stator and rotor respectively. The degree of electromagnetic coupling between the primary and secondary windings is closely related to the rotor angle.

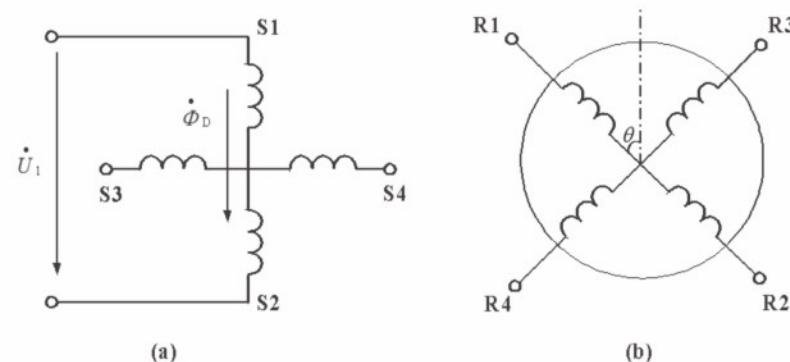
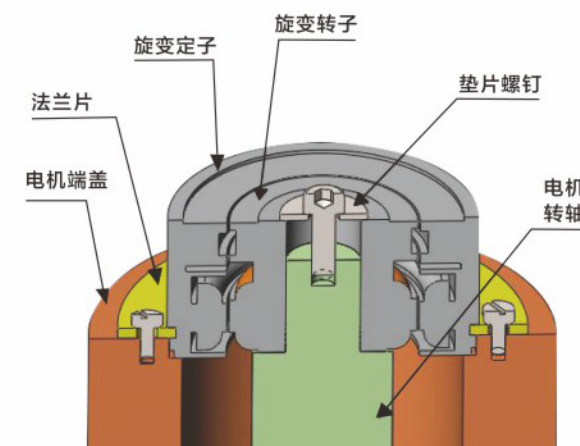
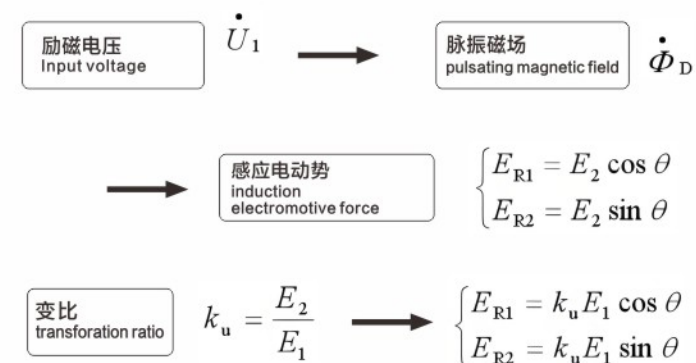


图1-1 旋转变压器的绕组结构
(a)定子绕组 (b)转子绕组



安装说明 Installation

1、对于绕线式旋转变压器的安装，建议采用（间隙配合）：H7/h6与h6/H7；

For the fit condition of brushless resolver, it is recommended to adopt (transition fit): H7/h6与h6/H7;

2、电机转轴和旋变转子、定子轴中心的偏差一般要求 $\leq 0.03\text{mm}$ ；

The deviation between the motor shaft and the center of resolver rotor and stator shaft is generally required to be $\leq 0.03\text{mm}$;

3、电机端盖与旋变定子、电机转轴与旋变转子的配合端面垂直度 $\leq 0.05\text{mm}$ ；

The verticality of the mating end face between the motor end cover and the resolver stator, the motor shaft and the resolver rotor is $\leq 0.05\text{mm}$;

4、对于一体式旋转变压器（定子与转子已用轴承装配在一起），除上述要求外，电机转轴和旋变转子之间不能直接硬联接，而是需要经过专门的联轴节实现联接。

For the fabricated resolver (stator and rotor assembled together with bearings), in addition to the above requirements, the motor shaft and resolver rotor can not be directly connected forcibly, but need to be connected through a special coupling.

绕线式 | 20系列

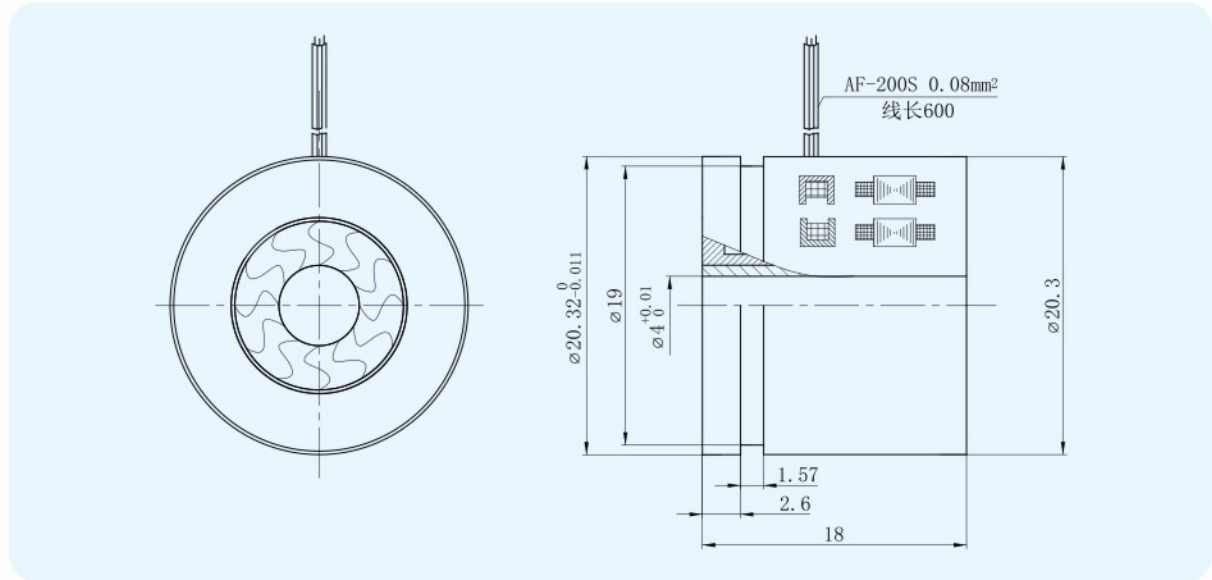
Brushless resolver 20 series

J20XFW975 >>



主要参数 main parameters	
极对数 (Pole pairs)	1
激磁电压 (Input voltage)	AC 7Vrms
激磁频率(Input frequency)	10KHz
变压比 (Transformation ratio)	0.5 ± 10%
电气误差 (Accuracy)	± 10' max
相位移 (Phase shift)	15° ± 5°
输入阻抗(Input impedance)	(80 ± 12) Ω
输出阻抗(Output impedance)	(130 ± 20) Ω
耐电压(Dielectric strength)	AC 500Vrms 1min
绝缘电阻(Insulation resistance)	100MΩ MIN
允许最大转速(Max operating speed)	20000 rpm
工作温度范围(Operating temperature range)	-55℃ ~ +155℃
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)

外形及安装尺寸图 Outline(dimension:mm)



绕线式 | 26系列

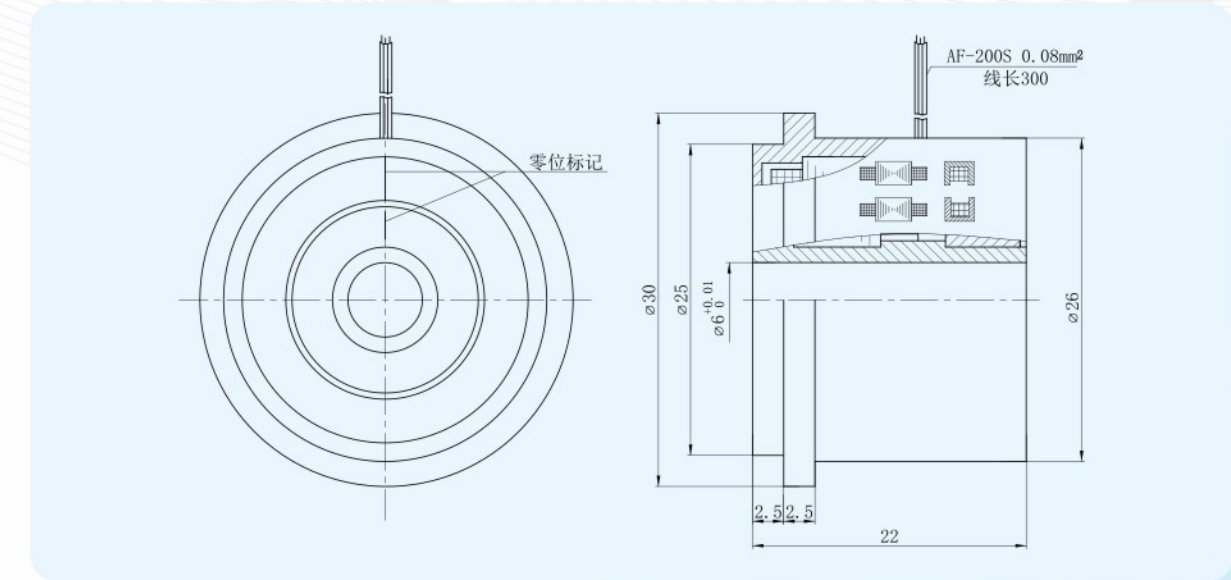
Brushless resolver 26 series

J26XFW975 >>



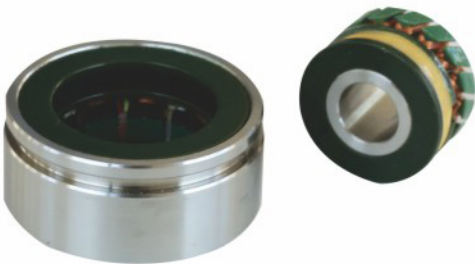
主要参数 main parameters	
极对数 (Pole pairs)	1
激磁电压 (Input voltage)	AC 7Vrms
激磁频率(Input frequency)	10KHz
变压比 (Transformation ratio)	0.5 ± 10%
电气误差 (Accuracy)	± 10' max
相位移 (Phase shift)	0° ± 10°
输入阻抗(Input impedance)	≥ 100 Ω
输出阻抗(Output impedance)	≤ 350 Ω
耐电压(Dielectric strength)	AC 500Vrms 1min
绝缘电阻(Insulation resistance)	100MΩ MIN
允许最大转速(Max operating speed)	20000 rpm
工作温度范围(Operating temperature range)	-55℃ ~ +155℃
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)

外形及安装尺寸图 Outline(dimension:mm)

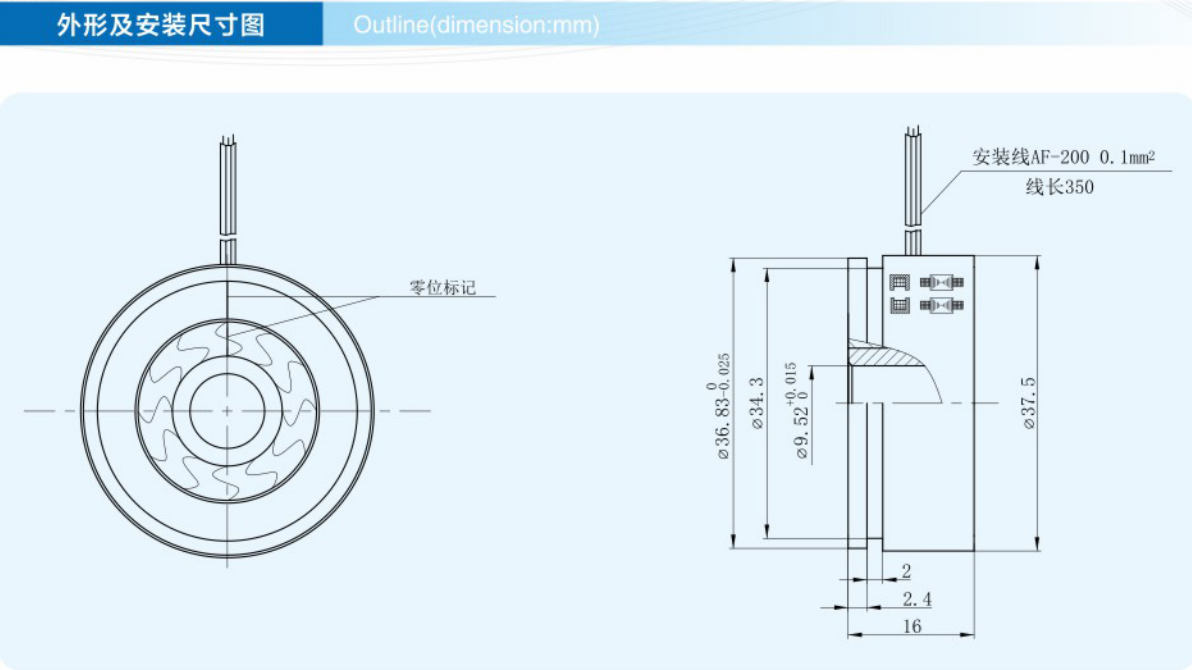


绕线式 | 36 系列

Brushless resolver 36 series



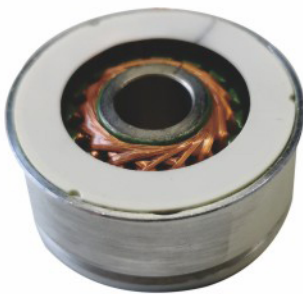
主要参数	main parameters			
型号 (Type)	J36XFW975BX	J36XFDW9752	J36XFDW9753	J36XFDW9754
极对数 (Pole pairs)	1	2	3	4
激励电压 (Input voltage)	AC 7Vrms	AC 7Vrms	AC 7Vrms	AC 7Vrms
激励频率(Input frequency)	10KHz	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.5±10%	0.5±10%	0.5±10%	0.5±10%
电气误差 (Accuracy)	±10' max	±10' max	±10' max	±8' max
相位移 (Phase shift)	0° ±10°	0° ±10°	15° ±3°	0° ±10°
输入阻抗(Input impedance)	(90±14)Ω	(100±15)Ω	≥90Ω	(80±12)Ω
输出阻抗(Output impedance)	(390±59)Ω	(440±66)Ω	≤600Ω	(800±120)Ω
耐电压(Dielectric strength)	AC 500Vrms 1min			
绝缘电阻(Insulation resistance)	250MΩ MIN			
允许最大转速(Max operating speed)	20000 rpm			15000rpm
工作温度范围(Operating temperature range)	-55℃ ~ +155℃			
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)			



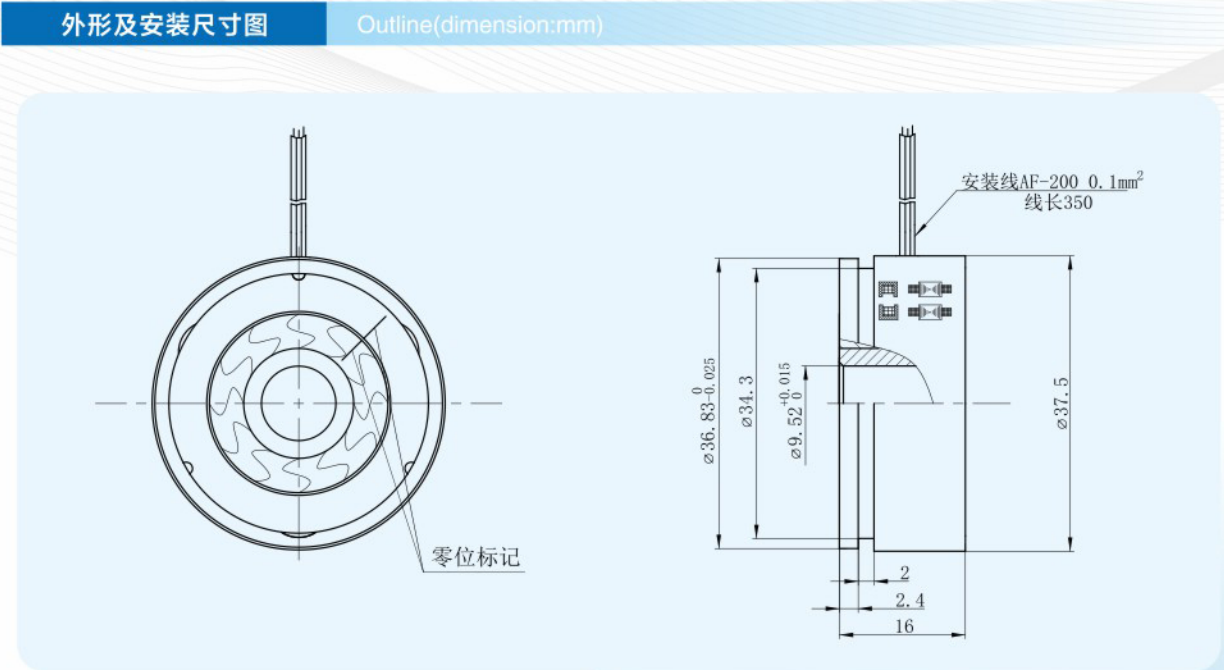
绕线式 | 36 系列

Brushless resolver 36 series

J36XFW975M >>



主要参数	main parameters
极对数 (Pole pairs)	1
激励电压 (Input voltage)	AC 7Vrms
激励频率(Input frequency)	10KHz
变压比 (Transformation ratio)	0.5±10%
电气误差 (Accuracy)	±10' max
相位移 (Phase shift)	0° ±5°
输入阻抗(Input impedance)	(120±24)Ω
输出阻抗(Output impedance)	(350±70)Ω
耐电压(Dielectric strength)	AC 500Vrms 1min
绝缘电阻(Insulation resistance)	250MΩ MIN
允许最大转速(Max operating speed)	20000 rpm
工作温度范围(Operating temperature range)	-55℃ ~ +155℃
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)



绕线式 | 36系列

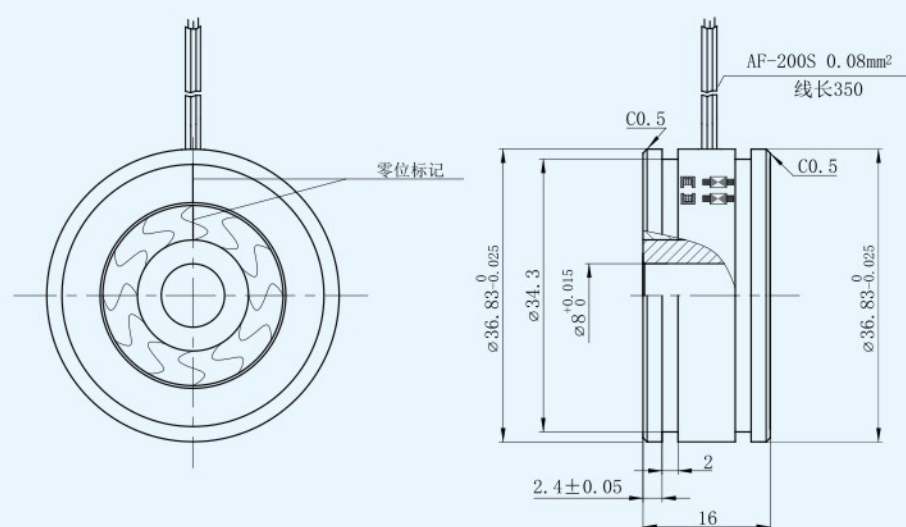
Brushless resolver 36 series

J36XFW575B >>



主要参数		main parameters	
极对数 (Pole pairs)		1	
激磁电压 (Input voltage)		AC 7Vrms	
激磁频率(Input frequency)		5KHz	
变压比 (Transformation ratio)		0.5 ± 10%	
电气误差 (Accuracy)		± 10' max	
相位移 (Phase shift)		8° ± 3°	
输入阻抗(Input impedance)		(95 ± 15) Ω	
输出阻抗(Output impedance)		(230 ± 35) Ω	
耐电压(Dielectric strength)		AC 500Vrms 1min	
绝缘电阻(Insulation resistance)		250MΩ MIN	
允许最大转速(Max operating speed)		20000 rpm	
工作温度范围(Operating temperature range)		-55℃ ~ +155℃	
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)		

外形及安装尺寸图



绕线式 | 36系列

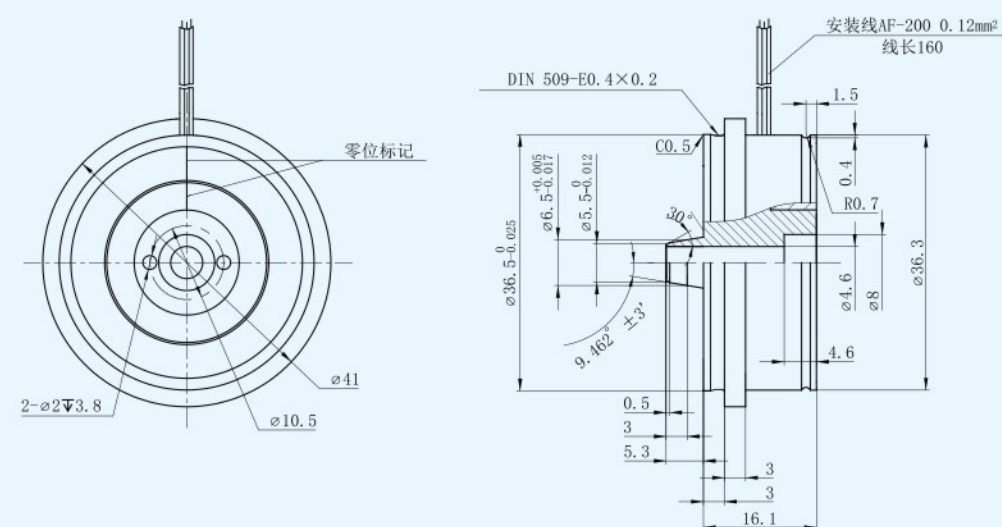
Brushless resolver 36 series

J36XFW975BX-L9 >>



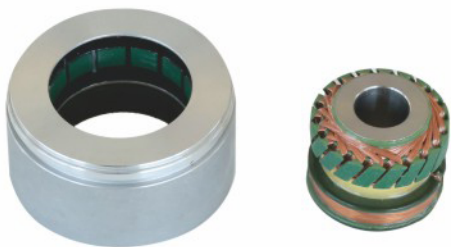
主要参数		main parameters	
极对数 (Pole pairs)		1	
激磁电压 (Input voltage)		AC 7Vrms	
激磁频率(Input frequency)		10KHz	
变压比 (Transformation ratio)		0.5 ± 10%	
电气误差 (Accuracy)		± 10' max	
相位移 (Phase shift)		0° ± 10°	
输入阻抗(Input impedance)		(160 ± 24) Ω	
输出阻抗(Output impedance)		(440 ± 66) Ω	
耐电压(Dielectric strength)		AC 500Vrms 1min	
绝缘电阻(Insulation resistance)		250M Ω MIN	
允许最大转速(Max operating speed)		20000 rpm	
工作温度范围(Operating temperature range)		-55℃ ~ +155℃	
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)		

外形及安装尺寸图



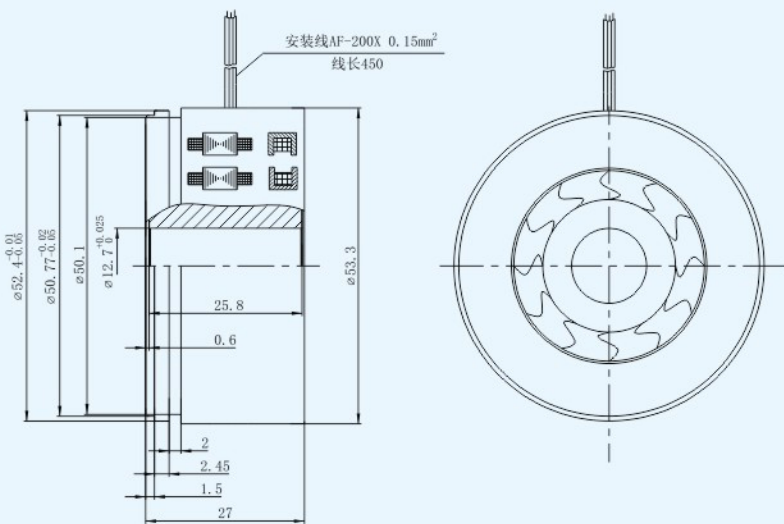
绕线式 | 52系列

Brushless resolver 52 series



主要参数	main parameters				
型号 (Type)	J52XFW975BL	J52XFDW9752	J52XFDW9753	J52XFDW9754	J52XFDW9755
极对数 (Pole pairs)	1	2	3	4	5
激磁电压 (Input voltage)	AC 7Vrms	AC 7Vrms	AC 7Vrms	AC 7Vrms	AC 7Vrms
激磁频率(Input frequency)	10KHz	10KHz	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.5±10%	0.5±10%	0.5±10%	0.5±10%	0.5±10%
电气误差 (Accuracy)	±10' max	±10' max	±10' max	±10' max	±10' max
相位移 (Phase shift)	9° ±3°	9° ±3°	7° ±3°	4° ±3°	0±10°
输入阻抗(Input impedance)	(120±18)Ω	(175±27)Ω	(170±26)Ω	(90±14)Ω	(85±13)Ω
输出阻抗(Output impedance)	(360±54)Ω	(490±74)Ω	(577±87)Ω	(530±80)Ω	(1650±248)Ω
耐电压(Dielectric strength)	AC 500V 1min				
绝缘电阻(Insulation resistance)	250MΩ MIN				
允许最大转速(Max operating speed)	20000 rpm			15000rpm	12000rpm
工作温度范围(Operating temperature range)	-55℃ ~ +155℃				
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)				

外形及安装尺寸图 Outline(dimension:mm)



绕线式 | 52系列

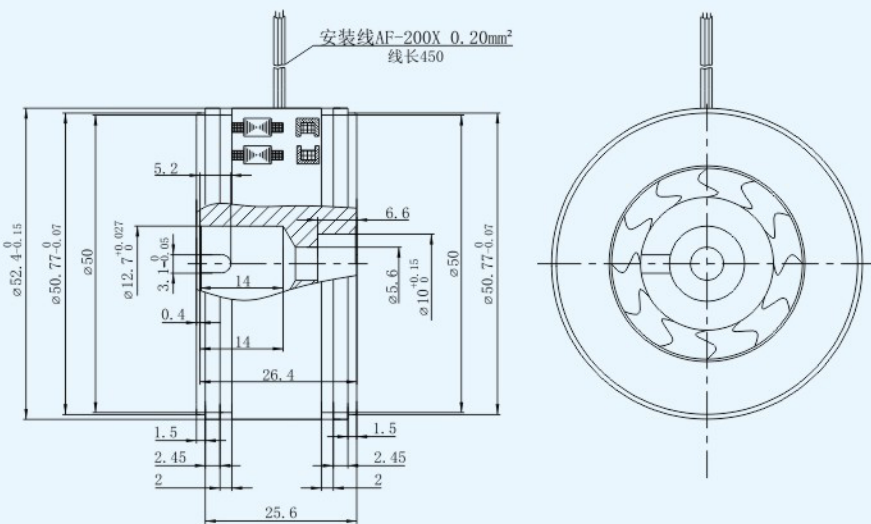
Brushless resolver 52 series

J52XFW575 >>



主要参数	main parameters
极对数 (Pole pairs)	1
激磁电压 (Input voltage)	AC 7Vrms
激磁频率(Input frequency)	5KHz
变压比 (Transformation ratio)	0.5±10%
电气误差 (Accuracy)	±12' (P-P)
相位移 (Phase shift)	0° ±3°
输入阻抗(Input impedance)	(130±26)Ω
输出阻抗(Output impedance)	(500±100)Ω
耐电压(Dielectric strength)	AC 500Vrms 1min
绝缘电阻(Insulation resistance)	250MΩ MIN
允许最大转速(Max operating speed)	20000 rpm
工作温度范围(Operating temperature range)	-55℃ ~ +155℃
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)

外形及安装尺寸图 Outline(dimension:mm)



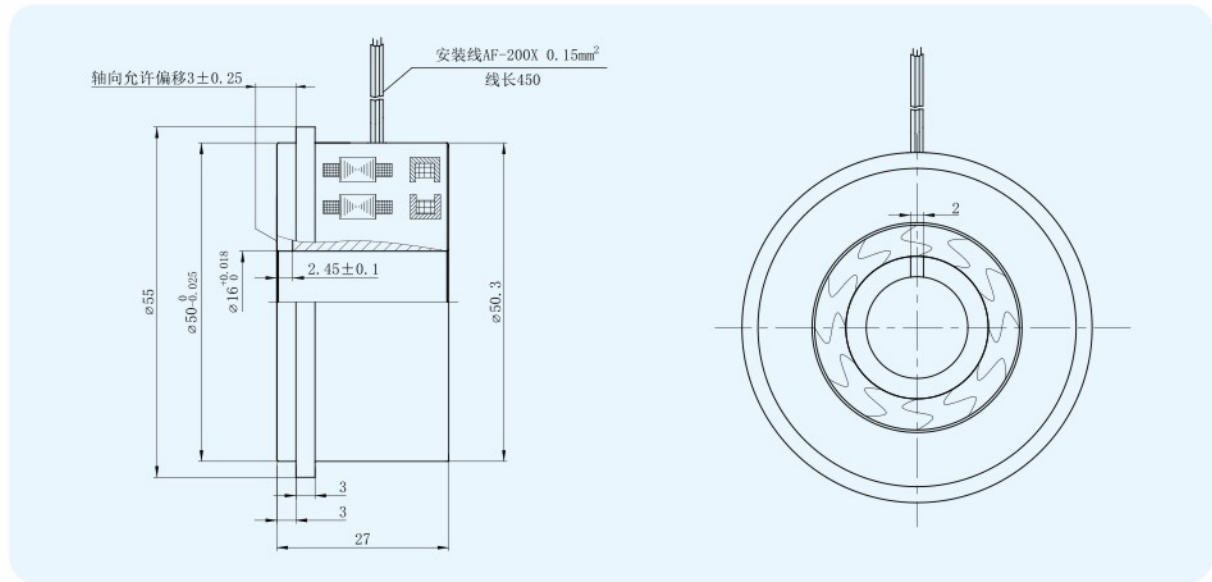
绕线式 | 55系列

Brushless resolver 55 series
J55XFW975B >>



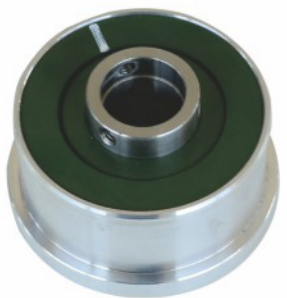
主要参数 main parameters	
极对数 (Pole pairs)	1
激磁电压 (Input voltage)	AC 7Vrms
激磁频率(Input frequency)	10KHz
变压比 (Transformation ratio)	0.5 ± 10%
电气误差 (Accuracy)	± 10' max
相位移 (Phase shift)	9° ± 3°
输入阻抗(Input impedance)	(120 ± 18) Ω
输出阻抗(Output impedance)	(360 ± 54) Ω
耐电压(Dielectric strength)	AC 500V 1min
绝缘电阻(Insulation resistance)	250MΩ MIN
允许最大转速(Max operating speed)	20000 rpm
工作温度范围(Operating temperature range)	-55℃ ~ +155℃
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)

外形及安装尺寸图 Outline(dimension:mm)



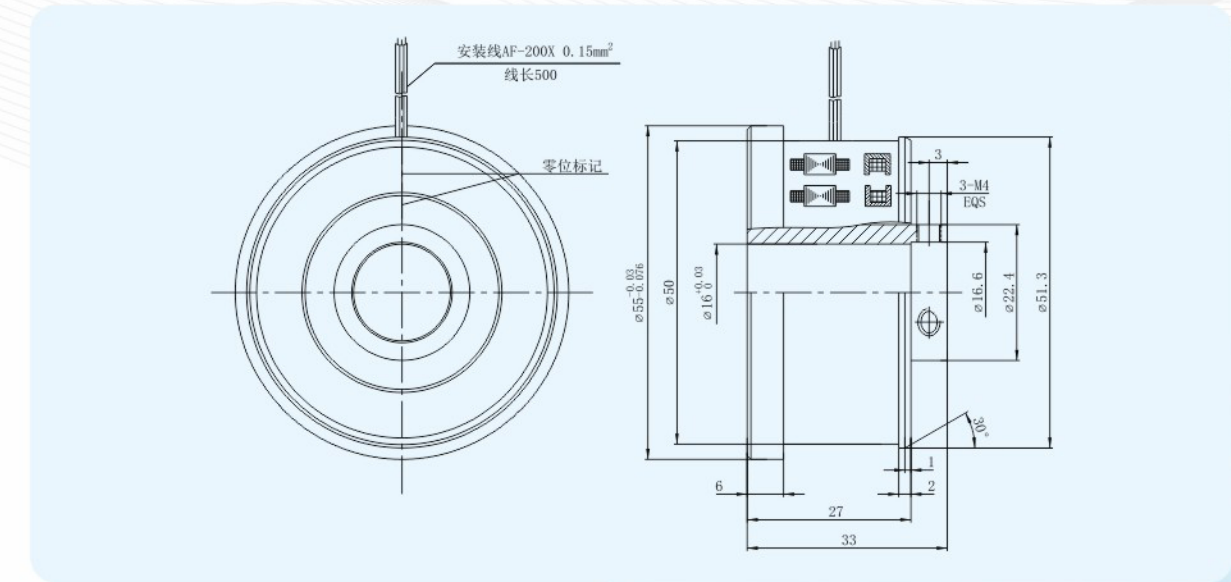
绕线式 | 55系列

Brushless resolver 55 series
J55XFW775 >>



主要参数 main parameters	
极对数 (Pole pairs)	1
激磁电压 (Input voltage)	AC 7Vrms
激磁频率(Input frequency)	7KHz
变压比 (Transformation ratio)	0.45 ± 10%
电气误差 (Accuracy)	± 10' max
相位移 (Phase shift)	15° ± 3°
输入阻抗(Input impedance)	(235 ± 35) Ω
输出阻抗(Output impedance)	(480 ± 72) Ω
耐电压(Dielectric strength)	AC 500V 1min
绝缘电阻(Insulation resistance)	250MΩ MIN
允许最大转速(Max operating speed)	20000 rpm
工作温度范围(Operating temperature range)	-55℃ ~ +155℃
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)

外形及安装尺寸图 Outline(dimension:mm)



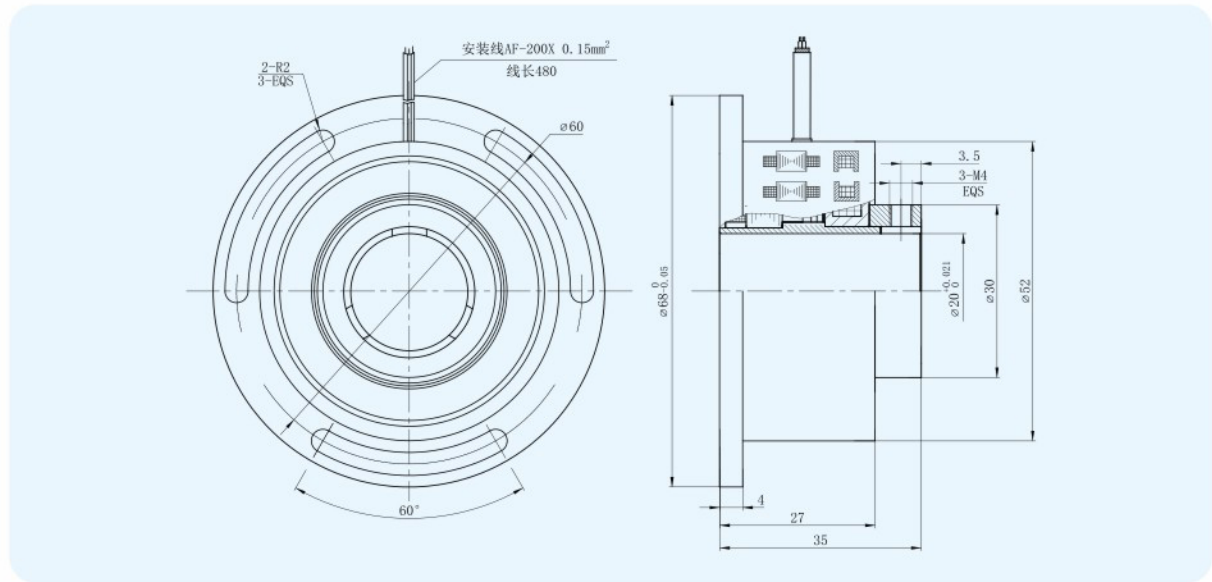
绕线式 | 68系列

Brushless resolver 68 series
J68XFW975 >>



主要参数	main parameters
极对数 (Pole pairs)	1
激磁电压 (Input voltage)	AC 7Vrms
激磁频率(Input frequency)	10KHz
变压比 (Transformation ratio)	0.5 ± 10%
电气误差 (Accuracy)	± 10' max
相位移 (Phase shift)	9° ± 3°
输入阻抗(Input impedance)	(120 ± 18) Ω
输出阻抗(Output impedance)	(360 ± 54) Ω
耐电压(Dielectric strength)	AC 500V 1min
绝缘电阻(Insulation resistance)	250MΩ MIN
允许最大转速(Max operating speed)	15000 rpm
工作温度范围(Operating temperature range)	-55℃ ~ +155℃
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)

外形及安装尺寸图 Outline(dimension:mm)



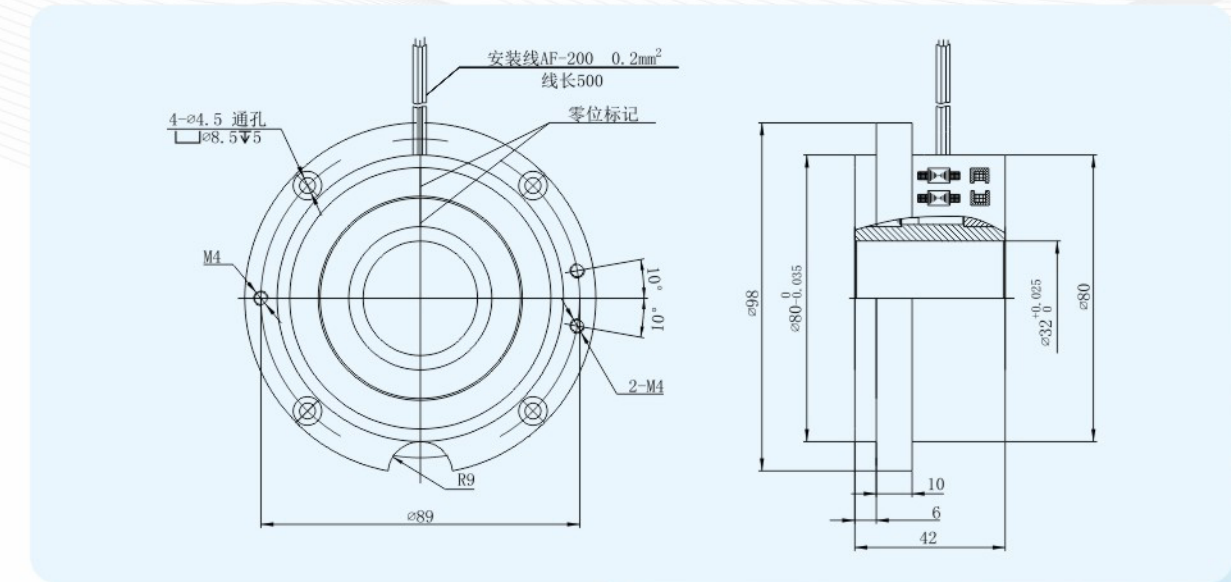
绕线式 | 80系列

Brushless resolver 80 series
80XFW975A >>



主要参数	main parameters
极对数 (Pole pairs)	1
激磁电压 (Input voltage)	AC 7Vrms
激磁频率(Input frequency)	10KHz
变压比 (Transformation ratio)	0.5 ± 10%
电气误差 (Accuracy)	± 10' max
相位移 (Phase shift)	-23° ± 3°
输入阻抗(Input impedance)	(140 ± 21) Ω
输出阻抗(Output impedance)	(450 ± 90) Ω
耐电压(Dielectric strength)	AC 500V 1min
绝缘电阻(Insulation resistance)	250MΩ MIN
允许最大转速(Max operating speed)	20000 rpm
工作温度范围(Operating temperature range)	-55℃ ~ +155℃
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)

外形及安装尺寸图 Outline(dimension:mm)



绕线式 | 86系列

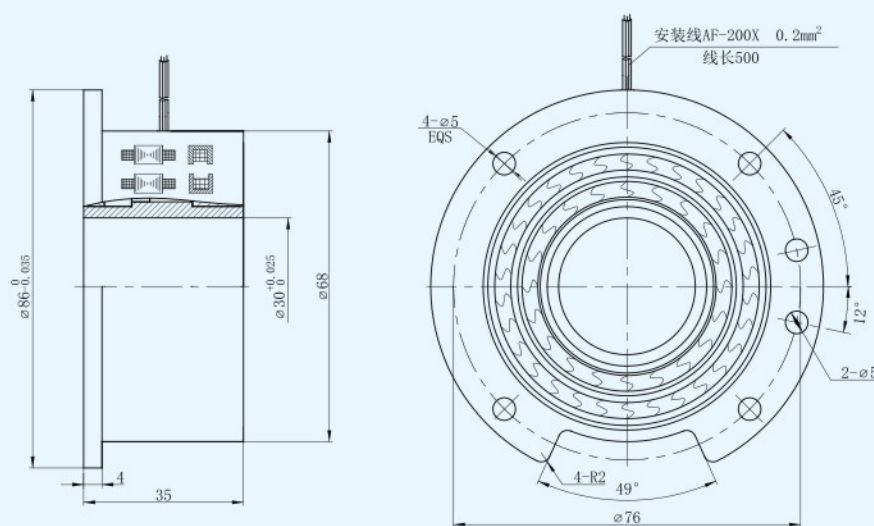
Brushless resolver 86 series

86XFW975 >>



主要参数		main parameters	
极对数 (Pole pairs)		1	
激磁电压 (Input voltage)		AC 7Vrms	
激磁频率(Input frequency)		10KHz	
变压比 (Transformation ratio)		0.5 ± 10%	
电气误差 (Accuracy)		± 10' max	
相位移 (Phase shift)		-22° ± 3°	
输入阻抗(Input impedance)		(116 ± 17) Ω	
输出阻抗(Output impedance)		(400 ± 60) Ω	
耐电压(Dielectric strength)		AC 500V 1min	
绝缘电阻(Insulation resistance)		250M Ω MIN	
允许最大转速(Max operating speed)		20000 rpm	
工作温度范围(Operating temperature range)		-55℃ ~ +155℃	
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)		

外形及安装尺寸图



绕线式 110系列

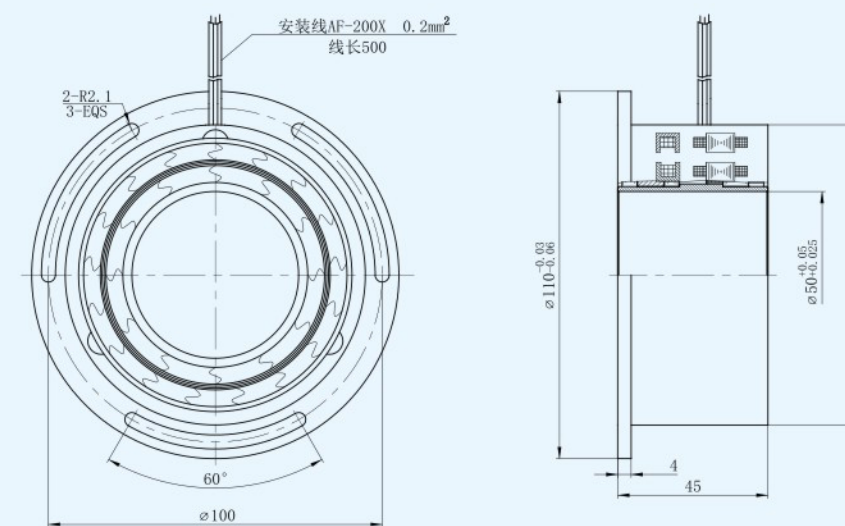
Brushless resolver 110 series

110XFW975 >>



主要参数		main parameters	
极对数 (Pole pairs)		1	
激磁电压 (Input voltage)		AC 7Vrms	
激磁频率(Input frequency)		10KHz	
变压比 (Transformation ratio)		0.5 ± 10%	
电气误差 (Accuracy)		± 10' max	
相位移 (Phase shift)		-22° ± 3°	
输入阻抗(Input impedance)		(225 ± 34) Ω	
输出阻抗(Output impedance)		(576 ± 86) Ω	
耐电压(Dielectric strength)		AC 500V 1min	
绝缘电阻(Insulation resistance)		250M Ω MIN	
允许最大转速(Max operating speed)		20000 rpm	
工作温度范围(Operating temperature range)		-55℃ ~ +155℃	
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)		

外形及安装尺寸图



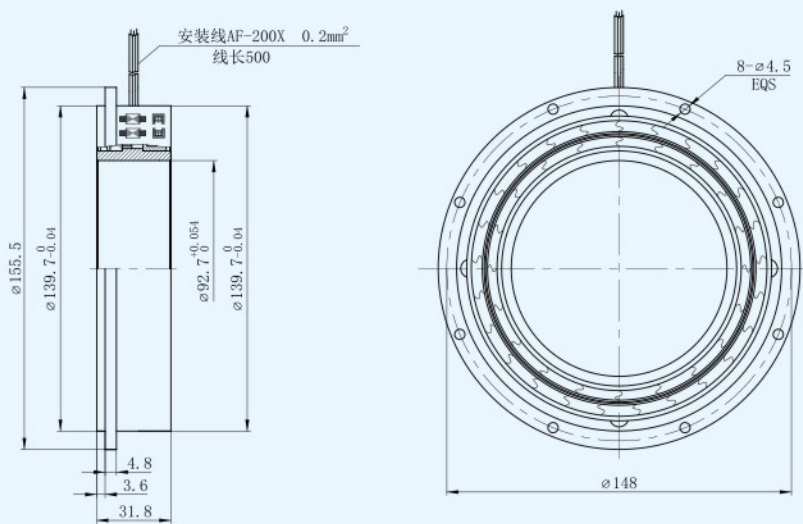
绕线式 | 140系列

Brushless resolver 140 series
140XFW975 >>



主要参数	main parameters
极对数 (Pole pairs)	1
激磁电压 (Input voltage)	AC 7Vrms
激磁频率(Input frequency)	10KHz
变压比 (Transformation ratio)	0.5 ± 10%
电气误差 (Accuracy)	± 10' max
相位移 (Phase shift)	-22° ± 3°
输入阻抗(Input impedance)	(100 ± 15) Ω
输出阻抗(Output impedance)	(580 ± 87) Ω
耐电压(Dielectric strength)	AC 500V 1min
绝缘电阻(Insulation resistance)	250MΩ MIN
允许最大转速(Max operating speed)	20000 rpm
工作温度范围(Operating temperature range)	-55℃ ~ +155℃
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)

外形及安装尺寸图 Outline(dimension:mm)



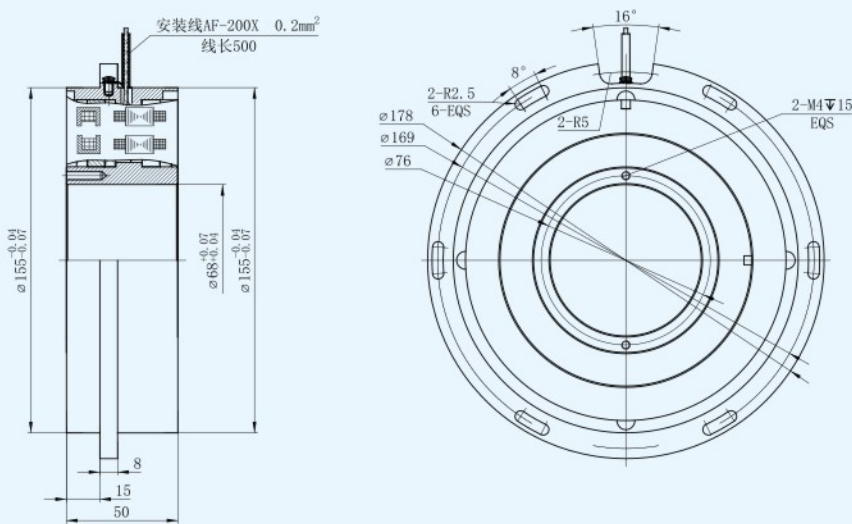
绕线式 | 160系列

Brushless resolver 160 series



主要参数	main parameters	
型号 (Type)	160XZW001	160XFDW9756
极对数 (Pole pairs)	1	6
激磁电压 (Input voltage)	AC 7Vrms	AC 7Vrms
激磁频率(Input frequency)	10KHz	10KHz
变压比 (Transformation ratio)	0.5 ± 10%	0.5 ± 10%
电气误差 (Accuracy)	± 10' max	± 3' max
相位移 (Phase shift)	28.8° ± 3°	0° ± 15°
输入阻抗(Input impedance)	(150 ± 23) Ω	(115 ± 17) Ω
输出阻抗(Output impedance)	(980 ± 147) Ω	(820 ± 123) Ω
耐电压(Dielectric strength)	AC 500V 1min	AC 500V 1min
绝缘电阻(Insulation resistance)	250MΩ MIN	250MΩ MIN
允许最大转速(Max operating speed)	20000 rpm	10000 rpm
工作温度范围(Operating temperature range)	-55℃ ~ +155℃	-55℃ ~ +155℃
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)	

外形及安装尺寸图 Outline(dimension:mm)



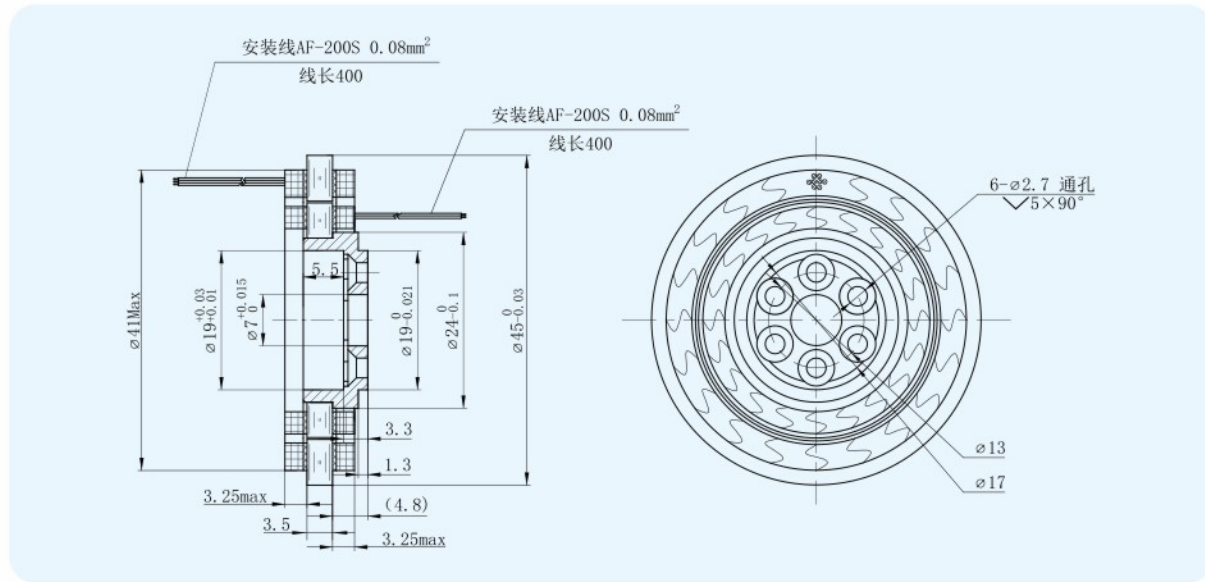
双通道旋变 | 45 系列

Two speed resolver 45 series

J45XFS2458 >>

主要参数			main parameters
极对数 (Pole pairs)			1:8
激磁电压 (Input voltage)			AC 4Vrms
激磁频率(Input frequency)			2KHz
变压比 (Transformation ratio)			0.5 ± 10%
电气误差 (Accuracy)	粗机		± 30' max
	精机		± 2' max
相位移 (Phase shift)	粗机		0° ± 20°
	精机		0° ± 45°
输入阻抗(Input ipedance)	粗机精机并联		(75 ± 15) Ω
耐电压(Dielectric strength)			AC 250V 1min
绝缘电阻(Insulation resistance)			100MΩ MIN
允许最大转速(Max operating speed)			2500 rpm
工作温度范围(Operating temperature range)			-55℃ ~ +155℃
备注(Note)			转子内径可根据用户需求定制 (Rotor ID could be customized.)

外形及安装尺寸图 Outline(dimension:mm)



双通道旋变 | 60 系列

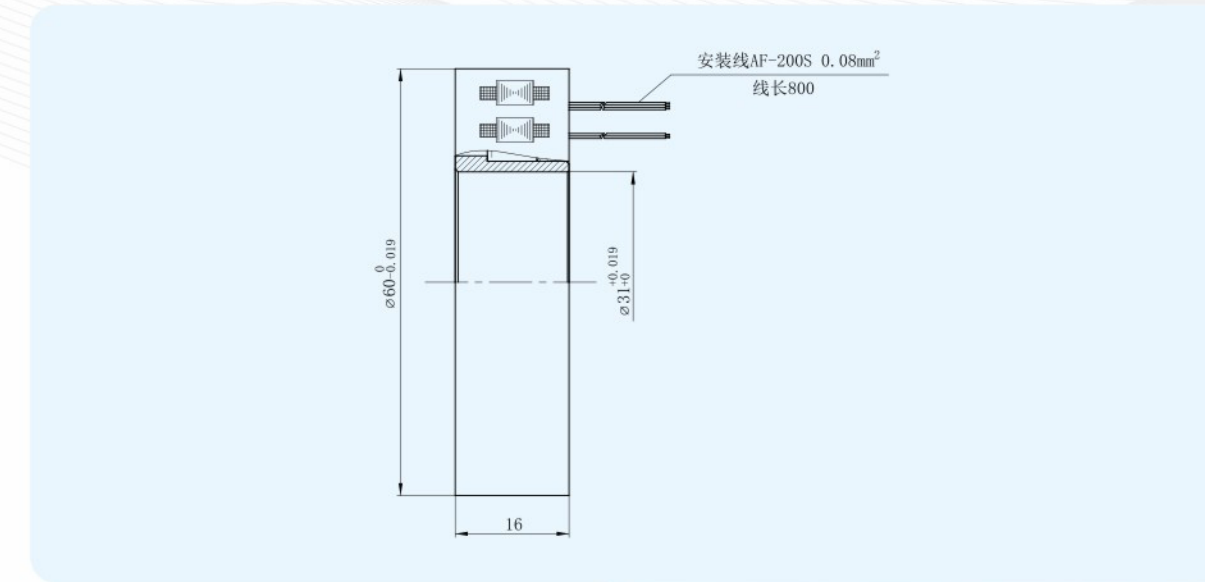
Two speed resolver 60 series

J60XFS002 >>



主要参数			main parameters
极对数 (Pole pairs)			1:16
激磁电压 (Input voltage)			AC 26Vrms
激磁频率(Input frequency)			2400Hz
变压比 (Transformation ratio)			0.454 ± 10%
电气误差 (Accuracy)	粗机		± 30' max
	精机		± 25' max
相位移 (Phase shift)	粗机		0° ± 15°
	精机		0° ± 25°
输入阻抗(Input ipedance)	粗机		(1450 ± 218) Ω
	精机		(450 ± 68) Ω
输出阻抗(Output impedance)	粗机		(525 ± 79) Ω
	精机		(620 ± 93) Ω
耐电压(Dielectric strength)			AC 500V 1min
绝缘电阻(Insulation resistance)			250MΩ MIN
允许最大转速(Max operating speed)			2250 rpm
工作温度范围(Operating temperature range)			-55℃ ~ +155℃
备注(Note)			转子内径可根据用户需求定制 (Rotor ID could be customized.)

外形及安装尺寸图 Outline(dimension:mm)



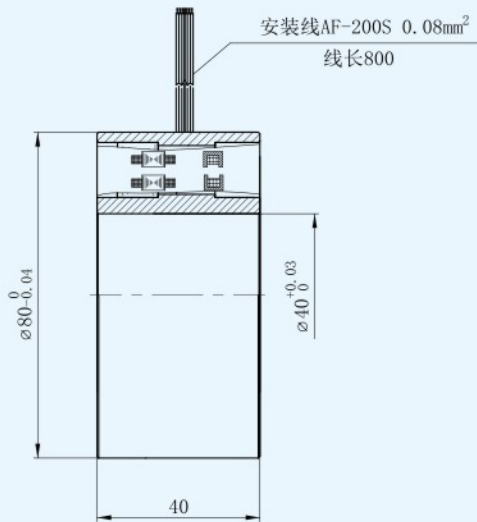
双通道旋变 | 80 系列

Two speed resolver 80 series
J80XFSW54532A >>



主要参数			main parameters
极对数 (Pole pairs)		1:32	
激磁电压 (Input voltage)		AC 4Vrms	
激磁频率(Input frequency)		5KHz	
变压比 (Transformation ratio)		0.5 ± 10%	
电气误差 (Accuracy)	粗机	± 30' max	
	精机	± 30" max	
相位移 (Phase shift)	粗机	7° ± 3°	
	精机	24° ± 3°	
输入阻抗(Input ipedance)	粗机	(63 ± 9) Ω	
	精机	(63 ± 9) Ω	
输出阻抗(Output impedance)	粗机	(510 ± 77) Ω	
	精机	(730 ± 110) Ω	
耐电压(Dielectric strength)		AC 500V 1min	
绝缘电阻(Insulation resistance)		250MΩ MIN	
允许最大转速(Max operating speed)		2250 rpm	
工作温度范围(Operating temperature range)		-55℃ ~ +155℃	
备注(Note)		转子内径可根据用户需求定制 (Rotor ID could be customized.)	

外形及安装尺寸图

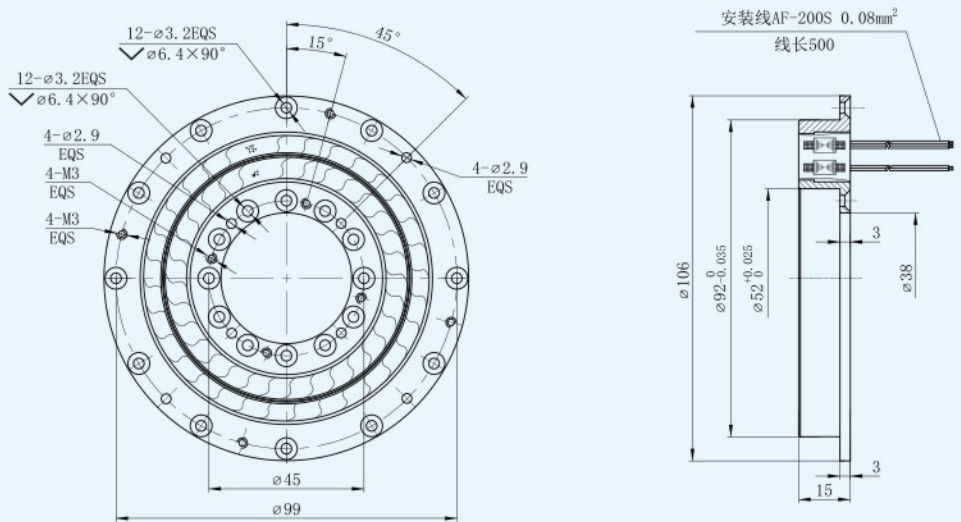


双通道旋变 | 90 系列

Two speed resolver 90 series
J90XFS24532 >>

主要参数			main parameters
极对数 (Pole pairs)		1:32	
激磁电压 (Input voltage)		AC 4Vrms	
激磁频率(Input frequency)		2KHz	
变压比 (Transformation ratio)		0.5 ± 10%	
电气误差 (Accuracy)	粗机	± 25' max	
	精机	± 15" max	
相位移 (Phase shift)	粗机	0° ± 20°	
	精机	0° ± 30°	
输入阻抗(Input ipedance)	粗机	≥ 1500 Ω	
	精机	≥ 150 Ω	
输出阻抗(Output impedance)	粗机	≤ 1500 Ω	
	精机	≤ 1000 Ω	
耐电压(Dielectric strength)		AC 500V 1min	
绝缘电阻(Insulation resistance)		250MΩ MIN	
允许最大转速(Max operating speed)		2000 rpm	
工作温度范围(Operating temperature range)		-55℃ ~ +155℃	
备注(Note)		转子内径可根据用户需求定制 (Rotor ID could be customized.)	

外形及安装尺寸图



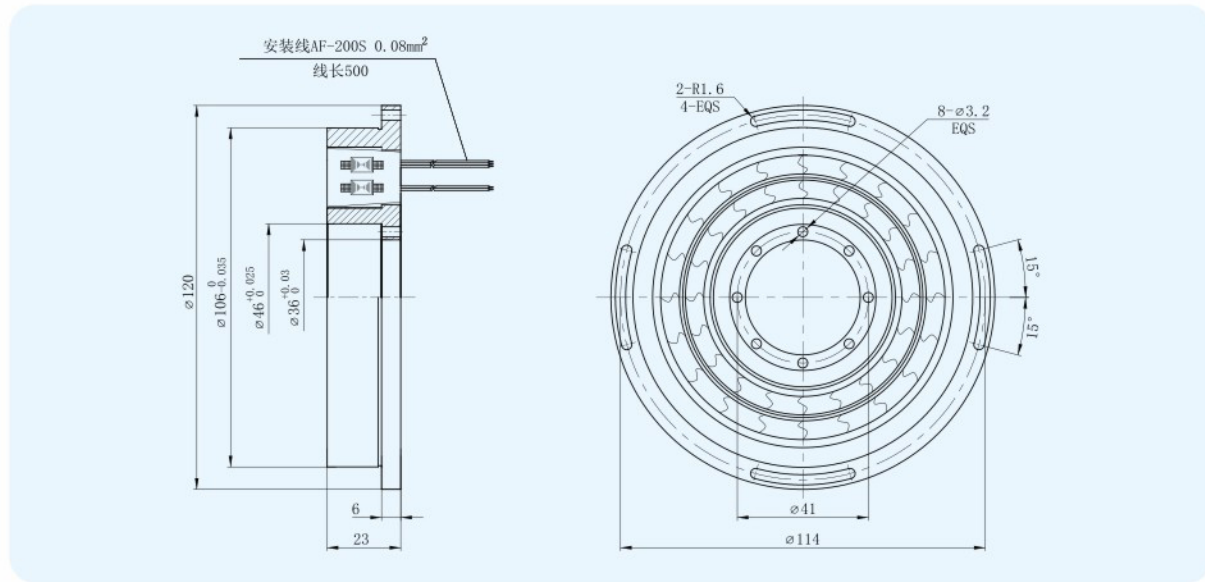
双通道旋变 | 106 系列

Two speed resolver 106 series

J106XFS02658 >>

主要参数		main parameters
极对数 (Pole pairs)		1:8
激磁电压 (Input voltage)		AC 26Vrms
激磁频率(Input frequency)		400Hz
变压比 (Transformation ratio)		0.461 ± 10%
电气误差 (Accuracy)	粗机	± 30' max
	精机	± 1' max
相位移 (Phase shift)	粗机	8° ± 3°
	精机	30° ± 3°
输入阻抗(Input ipedance)	粗机	(3270 ± 491) Ω
	精机	(390 ± 59) Ω
输出阻抗(Output impedance)	粗机	(1100 ± 165) Ω
	精机	(240 ± 36) Ω
耐电压(Dielectric strength)		AC 500V 1min
绝缘电阻(Insulation resistance)		250MΩ MIN
允许最大转速(Max operating speed)		750 rpm
工作温度范围(Operating temperature range)		-55℃ ~ +155℃
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)	

外形及安装尺寸图 Outline(dimension:mm)



双通道旋变 | 128 系列

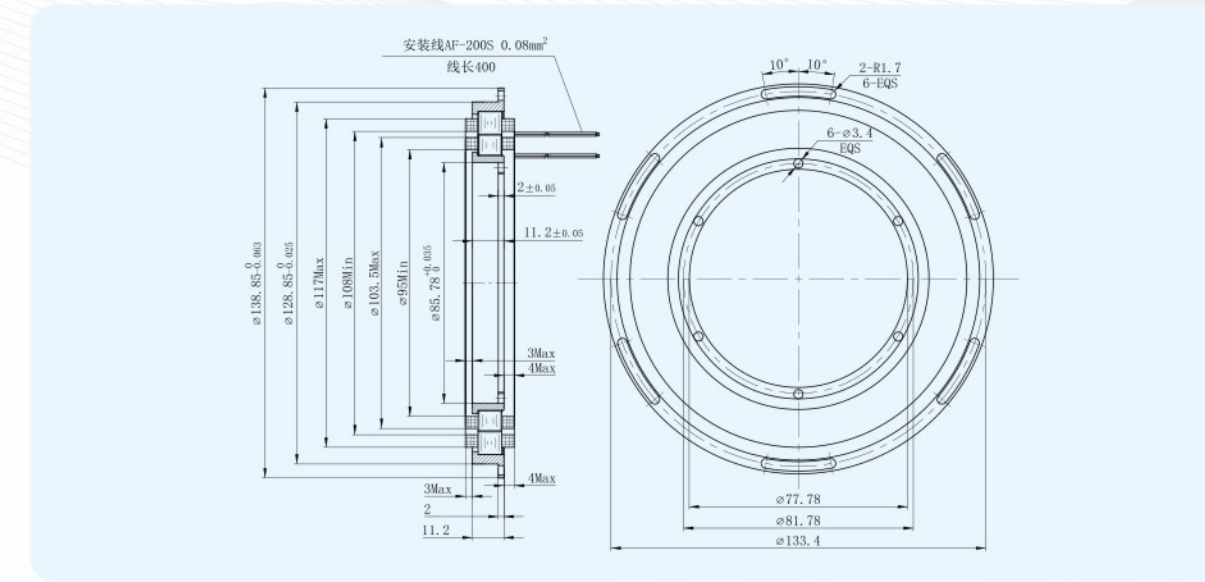
Two speed resolver 128 series

J128XFS001 >>



主要参数		main parameters
极对数 (Pole pairs)		1:16
激磁电压 (Input voltage)		AC 3.8Vrms
激磁频率(Input frequency)		2400Hz
变压比 (Transformation ratio)		0.526 ± 10%
电气误差 (Accuracy)	粗机	± 10' max
	精机	± 15" max
相位移 (Phase shift)	粗机	8° ± 3°
	精机	17° ± 3°
输入阻抗(Input ipedance)	粗机	(1700 ± 255) Ω
	精机	(290 ± 44) Ω
输出阻抗(Output impedance)	粗机	(430 ± 65) Ω
	精机	(190 ± 29) Ω
耐电压(Dielectric strength)		AC 500V 1min
绝缘电阻(Insulation resistance)		250MΩ MIN
允许最大转速(Max operating speed)		2250 rpm
工作温度范围(Operating temperature range)		-55℃ ~ +155℃
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)	

外形及安装尺寸图 Outline(dimension:mm)



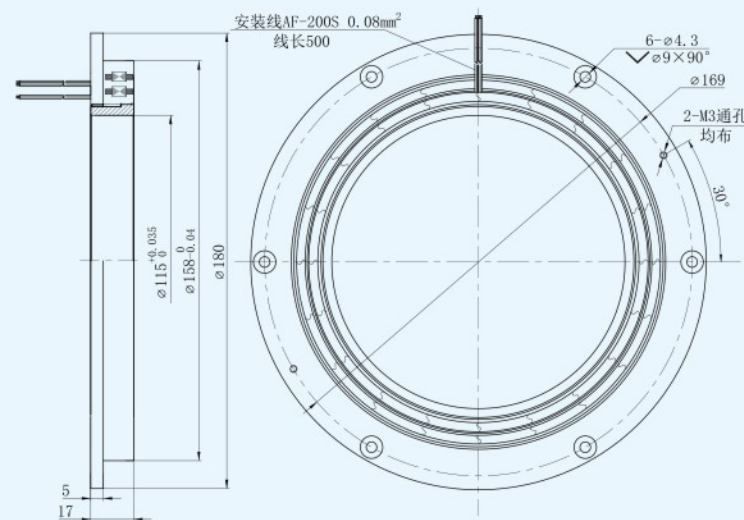
双通道旋变 | 158系列

Two speed resolver 158 series

J158XFS002 >>

主要参数		main parameters
极对数 (Pole pairs)		1:16
激磁电压 (Input voltage)		AC 26Vrms
激磁频率(Input frequency)		400Hz
变压比 (Transformation ratio)		0.461 ± 10%
电气误差 (Accuracy)	粗机	± 20' max
	精机	± 15" max
相位移 (Phase shift)	粗机	17° ± 3°
	精机	43° ± 3°
输入阻抗(Input ipedance)	粗机	(2170 ± 326) Ω
	精机	(220 ± 33) Ω
输出阻抗(Output impedance)	粗机	(1310 ± 197) Ω
	精机	(470 ± 71) Ω
耐电压(Dielectric strength)		AC 500V 1min
绝缘电阻(Insulation resistance)		250MΩ MIN
允许最大转速(Max operating speed)		300 rpm
工作温度范围(Operating temperature range)		-55℃ ~ +155℃
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)	

外形及安装尺寸图 Outline(dimension:mm)



双通道旋变 | 168系列

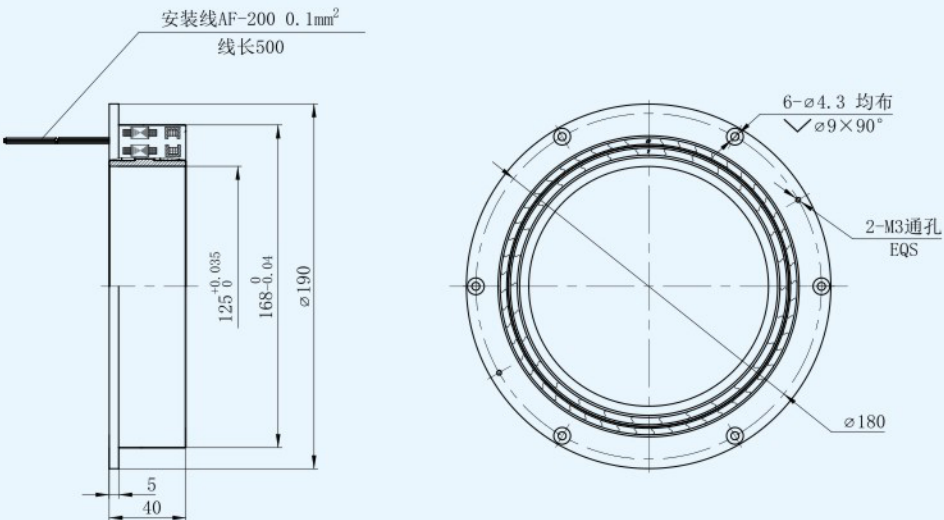
Two speed resolver 168 series

J168XFSW24516 >>



主要参数		main parameters
极对数 (Pole pairs)		1:16
激磁电压 (Input voltage)		AC 3.8Vrms
激磁频率(Input frequency)		2400Hz
变压比 (Transformation ratio)		0.526 ± 10%
电气误差 (Accuracy)	粗机	± 30' max
	精机	± 25" max
相位移 (Phase shift)	粗机	20° ± 3°
	精机	30° ± 3°
输入阻抗(Input ipedance)	粗机	(130 ± 20) Ω
	精机	
输出阻抗(Output impedance)	粗机	(1200 ± 180) Ω
	精机	(750 ± 113) Ω
耐电压(Dielectric strength)		AC 500V 1min
绝缘电阻(Insulation resistance)		250MΩ MIN
允许最大转速(Max operating speed)		1500 rpm
工作温度范围(Operating temperature range)		-55℃ ~ +155℃
备注(Note)	转子内径可根据用户需求定制 (Rotor ID could be customized.)	

外形及安装尺寸图 Outline(dimension:mm)



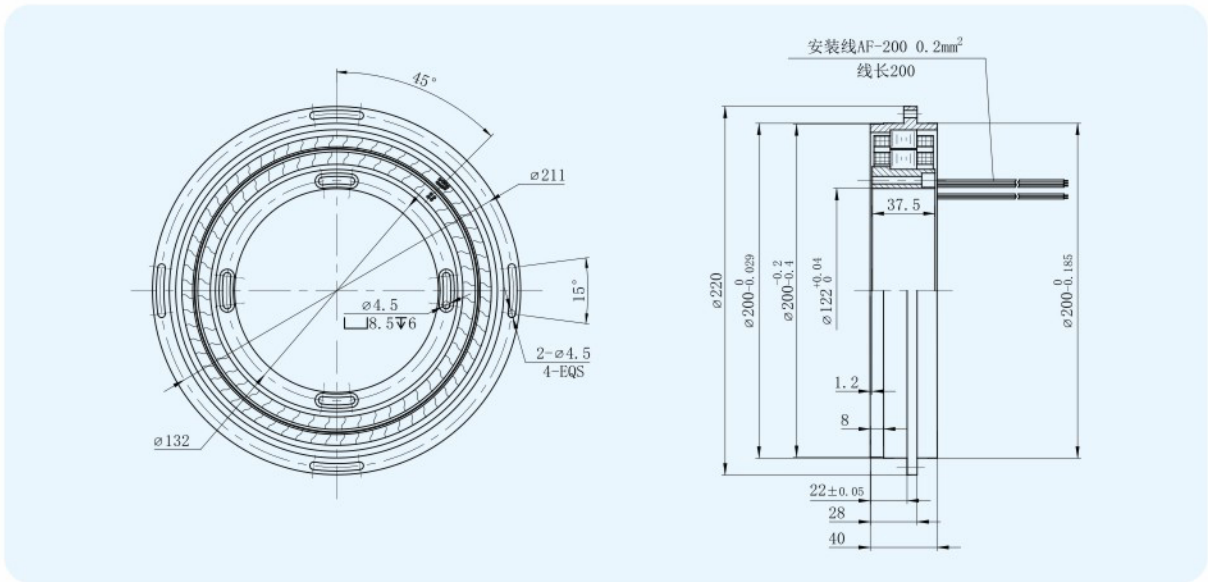
双通道旋变 | 200系列

Two speed resolver 200 series

J200XFS6411M01 >>

主要参数			main parameters
极对数 (Pole pairs)			1:64
激磁电压 (Input voltage)			AC 15Vrms
激磁频率(Input frequency)			1000Hz
变压比 (Transformation ratio)			0.333 ± 10%
电气误差 (Accuracy)	粗机	± 15' max	
	精机	± 10" max(0级) / ± 20" max (1级)	
相位移 (Phase shift)	粗机	0° ± 20°	
	精机	0° ± 40°	
输入阻抗(Input ipedance)	粗机	(6200 ± 930) Ω	
	精机	(200 ± 30) Ω	
输出阻抗(Output impedance)	粗机	(1200 ± 180) Ω	
	精机	(1200 ± 180) Ω	
耐电压(Dielectric strength)			AC 500V 1min
绝缘电阻(Insulation resistance)			250MΩ MIN
允许最大转速(Max operating speed)			200 rpm
工作温度范围(Operating temperature range)			-55℃ ~ +155℃
备注(Note)			转子内径可根据用户需求定制 (Rotor ID could be customized.)

外形及安装尺寸图 Outline(dimension:mm)



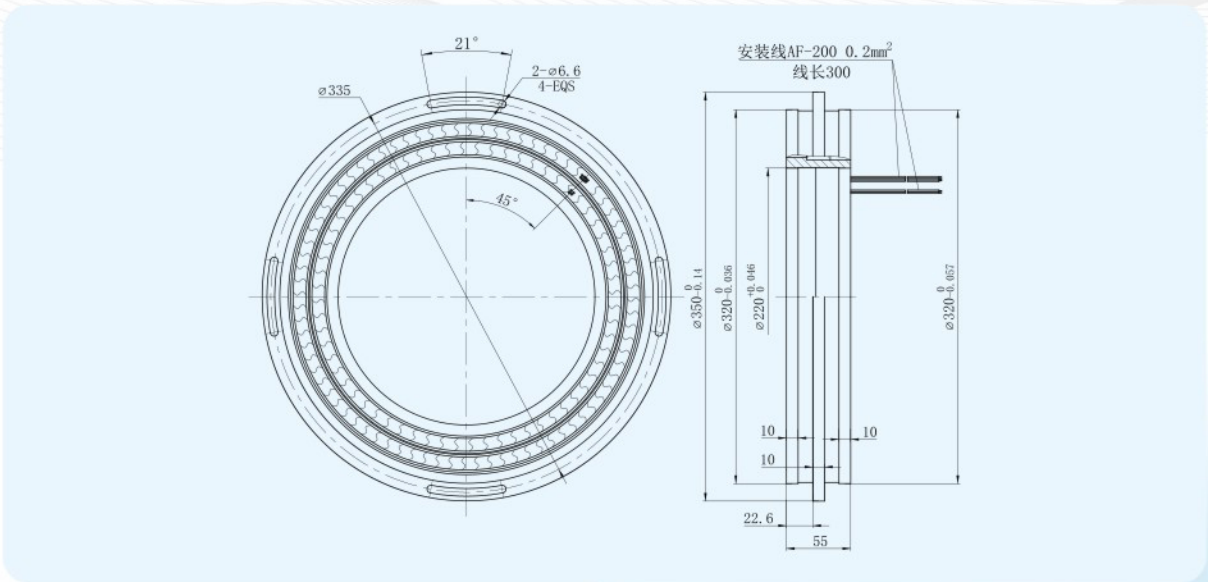
双通道旋变 | 320系列

Two speed resolver 320 series

J320XFS6411M01 >>

主要参数			main parameters
极对数 (Pole pairs)			1:64
激磁电压 (Input voltage)			AC 15Vrms
激磁频率(Input frequency)			1000Hz
变压比 (Transformation ratio)			0.333 ± 10%
电气误差 (Accuracy)	粗机	± 15' max	
	精机	± 5" max (0级) / ± 10" max (1级)	
相位移 (Phase shift)	粗机	0° ± 25°	
	精机	0° ± 35°	
输入阻抗(Input ipedance)	粗机	(7800 ± 1170) Ω	
	精机	(235 ± 35) Ω	
输出阻抗(Output impedance)	粗机	(1500 ± 225) Ω	
	精机	(560 ± 84) Ω	
耐电压(Dielectric strength)			AC 500V 1min
绝缘电阻(Insulation resistance)			250MΩ MIN
允许最大转速(Max operating speed)			200 rpm
工作温度范围(Operating temperature range)			-55℃ ~ +155℃
备注(Note)			转子内径可根据用户需求定制 (Rotor ID could be customized.)

外形及安装尺寸图 Outline(dimension:mm)



一体式 | 20 系列

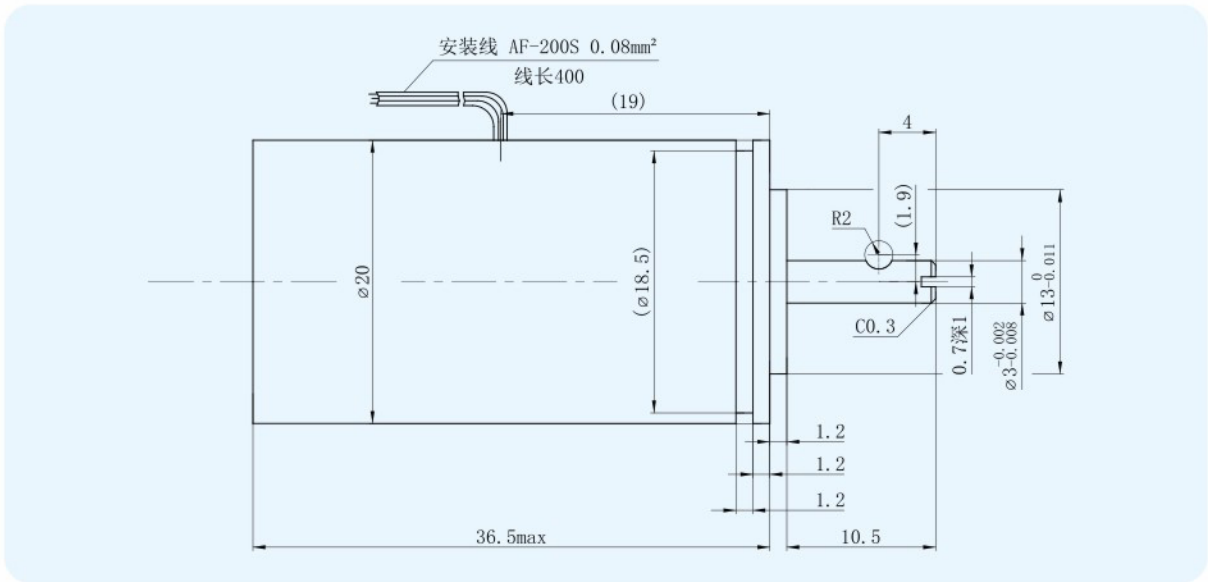
Fabricated resolver 20 series

J20XFW925 >>



主要参数	main parameters
极对数 (Pole pairs)	1
激磁电压 (Input voltage)	AC 2.4Vrms
激磁频率(Input frequency)	10KHz
变压比 (Transformation ratio)	0.5 ± 10%
电气误差 (Accuracy)	± 10' max
相位移 (Phase shift)	6° ± 3°
输入阻抗(Input impedance)	(433 ± 65) Ω
输出阻抗(Output impedance)	(440 ± 65) Ω
耐电压(Dielectric strength)	AC 250Vrms 1min
绝缘电阻(Insulation resistance)	100MΩ MIN
工作温度范围(Operating temperature range)	-55℃ ~ +125℃

外形及安装尺寸图 Outline(dimension:mm)



一体式 | 27 系列

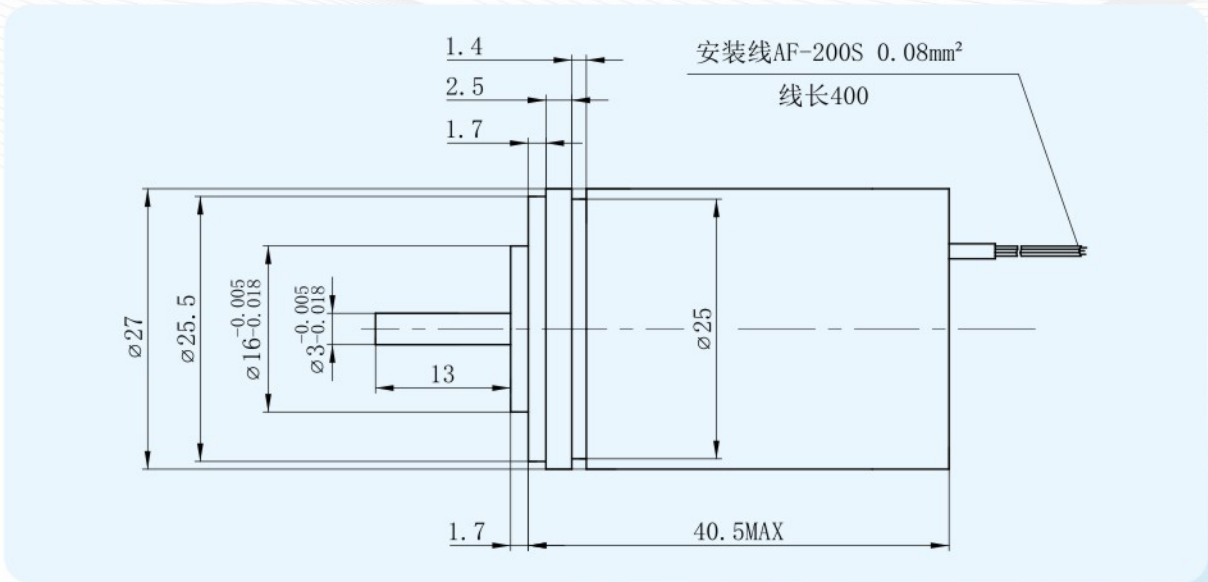
Fabricated resolver 27 series

J27XFW275 >>



主要参数	main parameters
极对数 (Pole pairs)	1
激磁电压 (Input voltage)	AC 7Vrms
激磁频率(Input frequency)	1.8KHz
变压比 (Transformation ratio)	0.5 ± 10%
电气误差 (Accuracy)	± 7' max
相位移 (Phase shift)	34° ± 3°
输入阻抗(Input impedance)	(220 ± 33) Ω
输出阻抗(Output impedance)	(395 ± 60) Ω
耐电压(Dielectric strength)	AC 250Vrms 1min
绝缘电阻(Insulation resistance)	100MΩ MIN
工作温度范围(Operating temperature range)	-40℃ ~ +140℃

外形及安装尺寸图 Outline(dimension:mm)



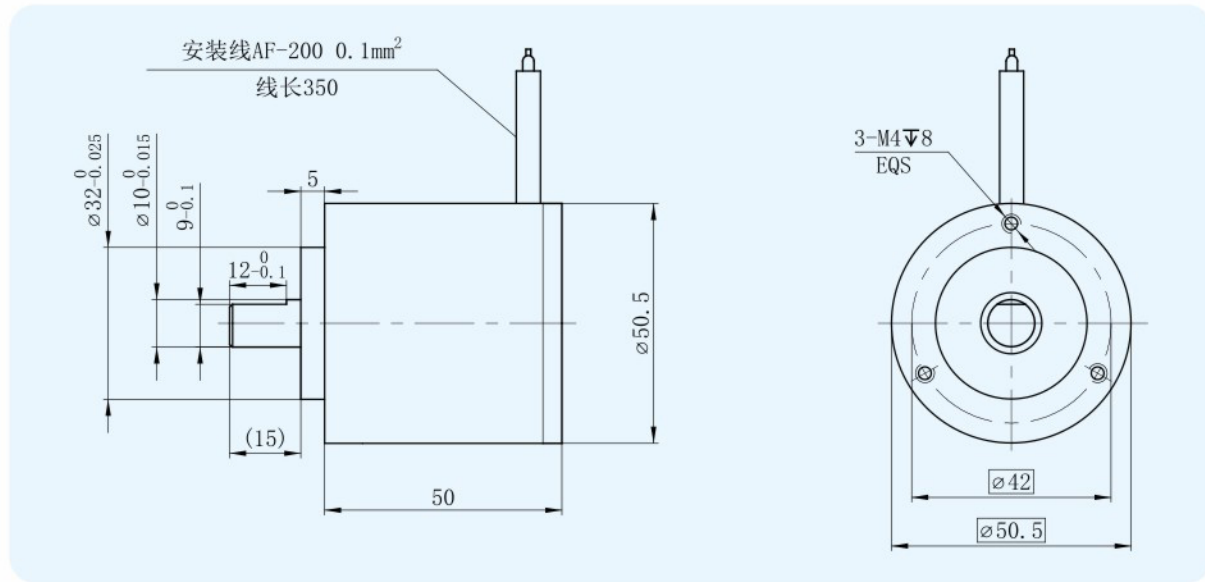
一体式 | 51 系列

Fabricated resolver 51 series



主要参数	main parameters	
型号 (Type)	J51XFW975	J51XFDW9754
极对数 (Pole pairs)	1	4
激磁电压 (Input voltage)	AC 2.4Vrms	AC 2.4Vrms
激磁频率(Input frequency)	10KHz	10KHz
变压比 (Transformation ratio)	$0.5 \pm 10\%$	$0.5 \pm 10\%$
电气误差 (Accuracy)	$\pm 10'$ max	$\pm 5'$ max
相位移 (Phase shift)	$0^\circ \pm 10^\circ$	$0^\circ \pm 5^\circ$
输入阻抗(Input impedance)	$(100 \pm 15) \Omega$	$(160 \pm 32) \Omega$
输出阻抗(Output impedance)	$(370 \pm 56) \Omega$	$(1300 \pm 260) \Omega$
耐电压(Dielectric strength)	AC 500Vrms 1min	AC 500Vrms 1min
绝缘电阻(Insulation resistance)	250M Ω MIN	250M Ω MIN
工作温度范围(Operating temperature range)	$-40^\circ\text{C} \sim +120^\circ\text{C}$	$-40^\circ\text{C} \sim +120^\circ\text{C}$

外形及安装尺寸图 Outline(dimension:mm)



一体式 | 58 系列

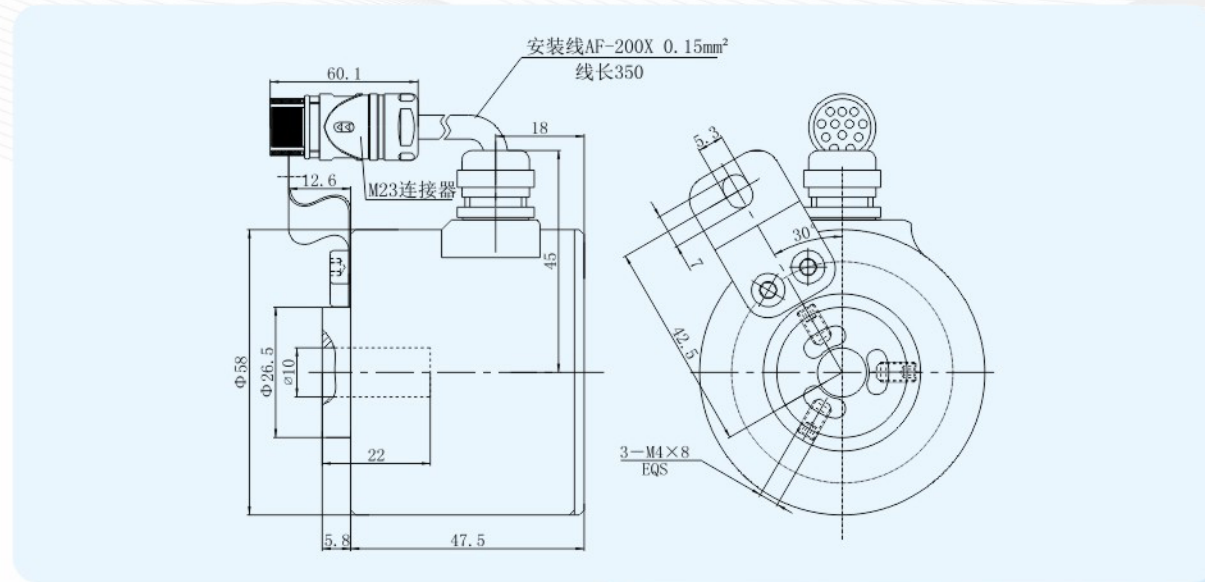
Fabricated resolver 58 series

J58XFW975C >>



主要参数	main parameters	
极对数 (Pole pairs)	1	
激磁电压 (Input voltage)	AC 7Vrms	
激磁频率(Input frequency)	10KHz	
变压比 (Transformation ratio)	$0.5 \pm 10\%$	
电气误差 (Accuracy)	$\pm 12'$ (P-P)	
相位移 (Phase shift)	$-3^\circ \pm 3^\circ$	
输入阻抗(Input impedance)	$(130 \pm 20) \Omega$	
输出阻抗(Output impedance)	$(325 \pm 30) \Omega$	
耐电压(Dielectric strength)	AC 500Vrms 1min	
绝缘电阻(Insulation resistance)	250M Ω MIN	
工作温度范围(Operating temperature range)	$-30^\circ\text{C} \sim +95^\circ\text{C}$	

外形及安装尺寸图 Outline(dimension:mm)





上海赢双电机科技股份有限公司

Shanghai Yingshuang Electric Machinery Technology Co.,Ltd

全球专业旋变供应商
Global Resolver Supplier



上海赢双电机科技股份有限公司

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中国·上海
China. Shanghai



Company PROFILE 公司简介

上海赢双电机科技股份有限公司成立于2005年，公司位于上海市闵行区颛桥镇北吴路1230号，是一家致力于旋转变压器研发、生产和提供系统解决方案的高新技术企业。

公司成立以来，坚持以市场为导向，走产学研发展的道路，已参加和承担多项国家863、上海市科委科研项目。已获取60多项专利。

公司一直坚持以客户为中心、企业价值产生于客户价值的理念。公司于2010年通过ISO9001质量体系认证，2014年通过TS16949汽车质量管理体系认证，并于2018年通过IATF16949:2016/ISO9001:2015体系认证；2012年被授予“上海市高新技术企业”，2015年被授予上海市“专精特新”企业，2016年被授予“小巨人”企业，2022年被国家工信部授予“专精特新小巨人”企业，同时也是“科技小巨人”企业。

公司磁阻式旋转变压器应用于新能源汽车、高铁、轨道交通、矿山机械等诸多电驱动领域；绕线式旋转变压器主要应用于工业伺服系统、机器人、国防军工等领域。

公司本着“同发展、共进步、利益共享、实现双赢”的经营理念，于国内外广大企业携手共进，为实现提升中国电机科技水平的愿望而奋斗。

Founded in 2005, Shanghai Yingshuang Electric Machinery Technology Co., Ltd. is a high-tech enterprise specialized in the resolver research & development and providing system solutions.

Since its establishment, the company adheres to the market-oriented approach and takes the road of Production, Education and Research. It has participated in and undertaken a number of national 863 and Shanghai Science and Technology Commission scientific research projects. More than 60 patents have been obtained.

The company has always adhered to the concept of customer-centered and enterprise value arising from customer value. The company has passed ISO9001 quality system certification since 2010 and TS16949 automotive quality management certification since 2014, and has passed IATF 16949:2016 / ISO9001:2015 system certification in 2018. In 2012, the company was honored as Shanghai High-tech Enterprise. In 2015, it was awarded as Shanghai Newly Exclusive Specialized Professional Enterprise. In 2022, it was awarded as Newly Exclusive Specialized Professional Enterprise by the National Industry and Information Technology Ministry.

The company's reluctance resolver is used in many electric drive fields such as new energy vehicles, high-speed rail, rail transit, mining machinery, etc; Brushless resolver is mainly used in industrial servo systems, robots, national defense and military industries etc.

Based on the business philosophy of Develop & Improve together, Share benefit & Achieve win-win, the company is making progress with enterprises at home and abroad to improve China's electrical technology level.

Catalogue / 目录

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J316 series

产品简介 Product introduction

磁阻式旋变(Variable Reluctance Resolver)是依据电磁感应原理，仅通过转子凸极效应产生具有正弦轨迹的气隙磁导变化，使输出绕组的感生电压随机械转角作相应正弦或余弦变化的角度传感元件。适用于较大的温度与湿度范围和恶劣环境，并且高可靠性。

广泛应用于新能源汽车、轨道交通、矿山机械、纺织机械等诸多电驱动领域。产品具有以下特点:

- 高精度的绝对式检测，适应高转速应用需求;
- 超薄结构、结构紧凑、安装使用方便;
- 可靠性高、寿命长、适用于恶劣工况;
- 耐振动冲击性好：
振动：294m/s²（30g），按10–500Hz，X、Y、Z三个方向各2h；
冲击：981m/s²（100g），按6轴各3次，共18次，每次冲击6ms；
- 较高的性价比;
- 独有专利技术。

VR resolver is an absolute angle sensor component that converts mechanical rotary angle into electric signal through the electromagnetic induction.

It is applicable to wide temperature, humidity range, severe environments and has high reliability. It is widely used in many fields such as new energy vehicles, rail transit, mining machinery, textile machinery and so on. The product has the following characteristics:

High accurate absolute angle detection, adapted to high speed application demand;
Ultra–thin configuration, compact structure, easy installation;
High reliability, long lifespan, applicable for bad working conditions;
Good resistance to vibration and impact:
Vibration: 294m/s (30g), according to 10–500Hz, X/Y/Z direction 2 hours each;
Impact: 981m/s (100g), according to the 6 axis 3 times, total of 18 times, each impact with 6ms.
Highly cost–effective;
Unique patented technology.

电路原理 Circuit Theory

磁阻式旋转变压器是根据定子内圈与转子外圈间隙的磁导率，而产生特定波形的曲线(正弦波)。定子里有1组励磁绕组和2组输出绕组，根据检测转子和定子间的间隙变化，以sin和cos式波形的变化来输出电压。

VR resolver can produce a particular waveform curve (Sine) based on the magnetic permeability between the inner ring of the stator and the outer ring of the rotor. The stator has 1 set of excitation winding and 2 output windings. The output voltage changes as a sine or cosine characteristic according to the change of the air gap between rotor and stator.

具体参照图1、图2。Please refer to diagram 1 and diagram 2 for details.

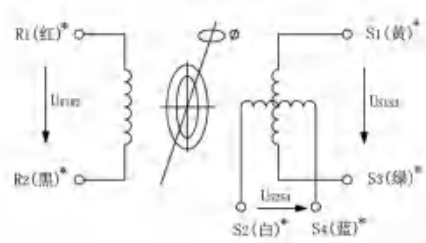


图1接线图
Diagram 1 wiring diagram

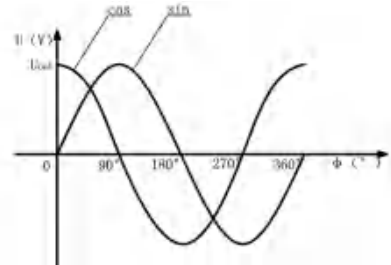


图2输出电压特性
Diagram 2 Output voltage characteristic

电压方程式: Voltage equation

$$U_{S1S3} = K U_{R1R2} \cos(p\phi)$$

$$U_{S2S4} = K U_{R1R2} \sin(p\phi)$$

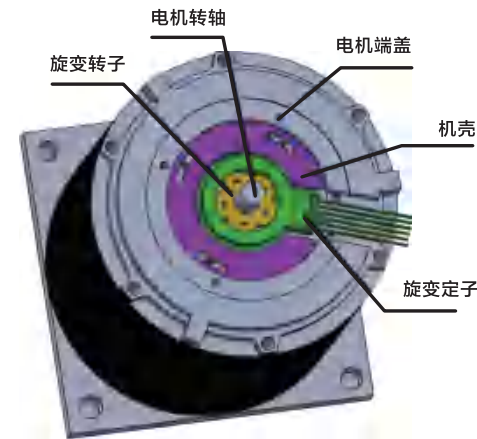
K: 变压比 K: Transformation Ratio

U_{R1R2} : 励磁电压 Excitation voltage

p: 极对数 p: Number of pole—pairs

ϕ : 角度 ϕ : Angle

安装精度说明 Installation guide and assembly sections



安装精度说明: Installation accuracy instruction:

旋变的安装过程需要保证安装精度，安装不当的情况下可能会导致旋变性能不良、损坏、甚至无法使用。

对于旋变同电动机的配合状况，建议采用间隙配合: H7/h6/ and h6/H7

对于旋变定子与转子的同心度偏差，建议不大于0.05mm;

对于旋变定子、转子与电动机轴的垂直度，建议不大于0.05mm;

对于旋变定子、转子轴向偏差，通常不大于0.5mm即可。

The installation process of resolver needs to ensure the setting accuracy. Improper installation may result in poor performance, damage, even unavailability.

For the fitting of the resolver and motor, it is suggested to use clearance fit,;

For the concentricity tolerance of the stator and rotor, it is suggested not more than 0.05mm;

For the perpendicularity tolerance of the stator, rotor and motor shaft, it is suggested not more than 0.05mm;

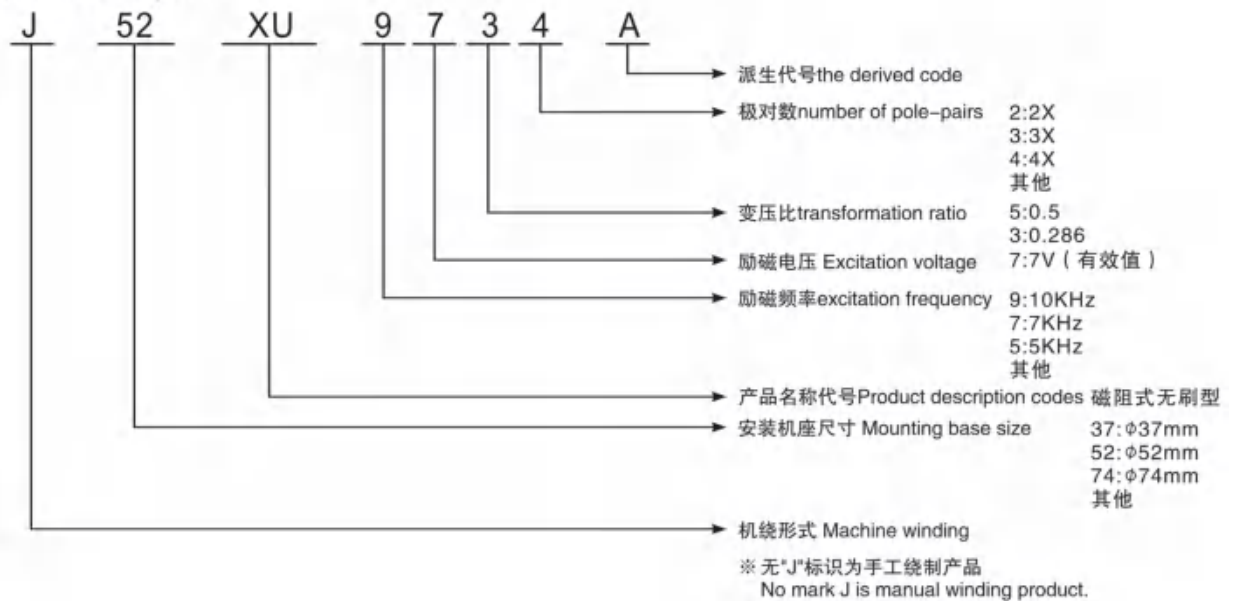
For the axial deviation of the stator and rotor, it is usually suggested not more than 0.5mm.

磁阻式旋变型号命名规则 Naming rules for VR resolver part no.

磁阻式旋转变压器的型号由四部分组成：机座号、产品名称代号、性能参数代号和派生代号组成。

VR resolver part no. includes four parts: Frame No., Product description code, Performance parameter code and the derived code.

示例: For example:



J37 系列

磁阻式
VR RESOLVER



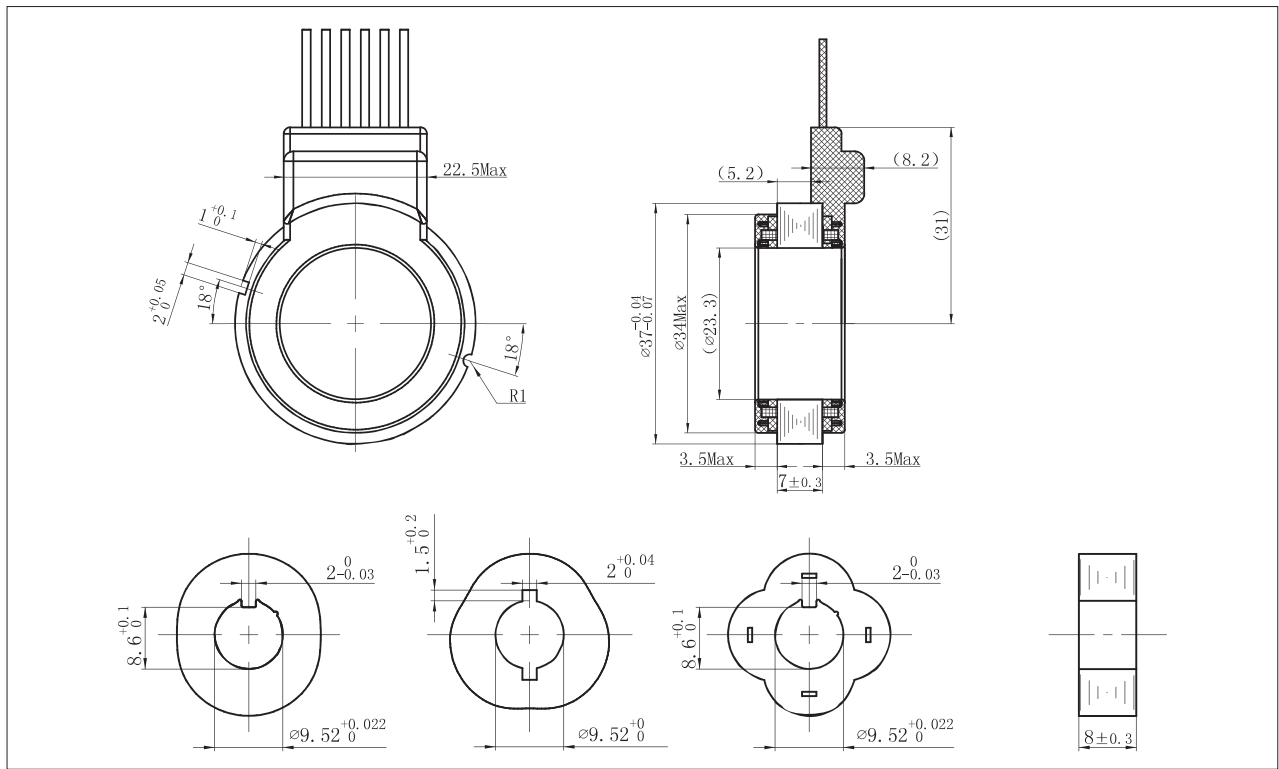
J37 series(OD 37mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	J37XU9732R	J37XU9733R	J37XU9734G-L40
极对数 (Pole pairs)	2	3	4
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率(Input frequency)	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤±50'	≤±30'	≤±25'
相位移 (Phase shift)	≤±10°	≤±10°	≤±10°
耐电压(Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)		
绝缘电阻(Insulation resistance)	250MΩ MIN		
转子孔径 (Rotor ID)	9.52mm	9.52mm	9.52mm
引出线规格 (截面积) Wire spec.(sectional area)	0.35mm ²	0.35mm ²	0.35mm ²
允许最大转速(Max operating speed)	30000 rpm		
工作温度范围(Operating temperature range)	-40℃ ~ +155℃		

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm



J37T 系列

磁阻式
VR RESOLVER



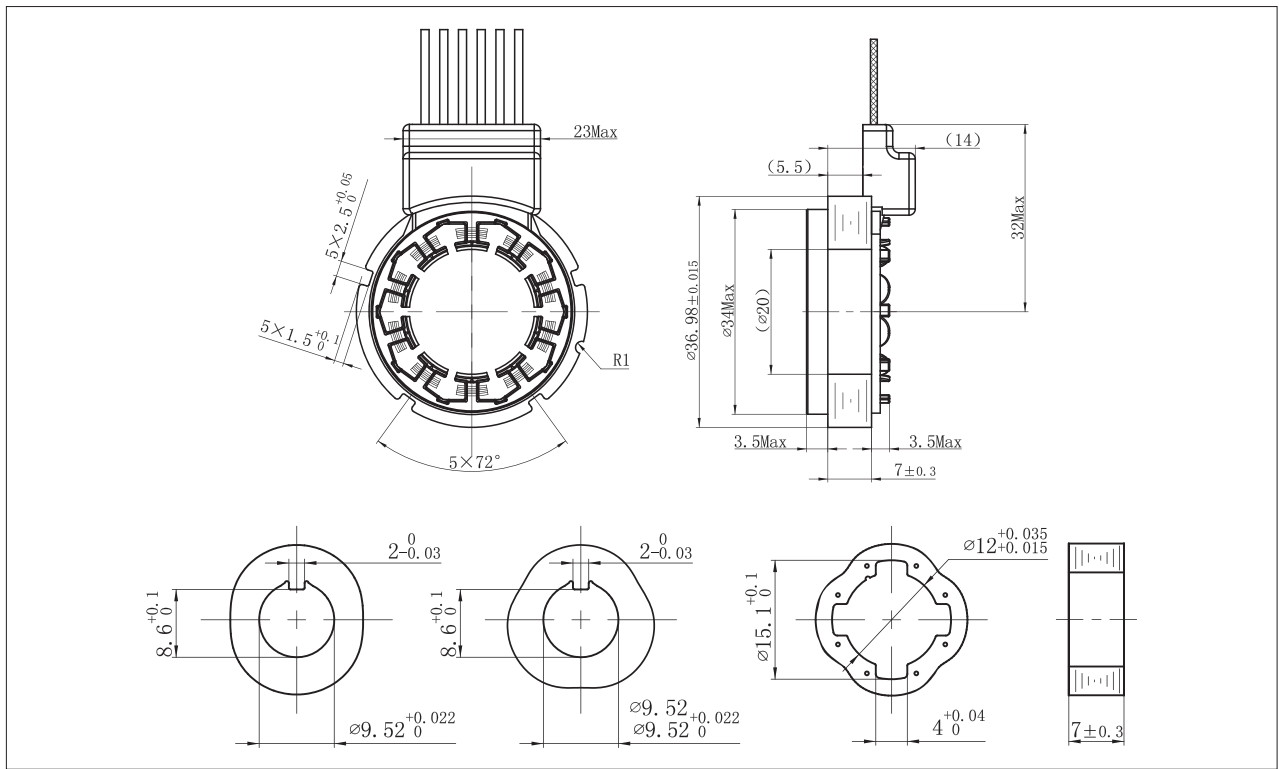
J37T series(OD 37mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	J37XU9732T	J37XU9733T	J37XU9734T
极对数 (Pole pairs)	2	3	4
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率 (Input frequency)	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤±50'	≤±30'	≤±25'
相位移 (Phase shift)	T.B.D	T.B.D	(-14°±5°)
耐电压(Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)		
绝缘电阻(Insulation resistance)	250MΩ MIN		
转子孔径 (Rotor ID)	9.52mm	9.52mm	12mm
引出线规格 (截面积) Wire spec.(sectional area)	0.35mm ²	0.35mm ²	0.35mm ²
允许最大转速(Max operating speed)	30000 rpm		
工作温度范围(Operating temperature range)	-40℃ ~ +155℃		

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm



J52 系列

磁阻式
VR RESOLVER



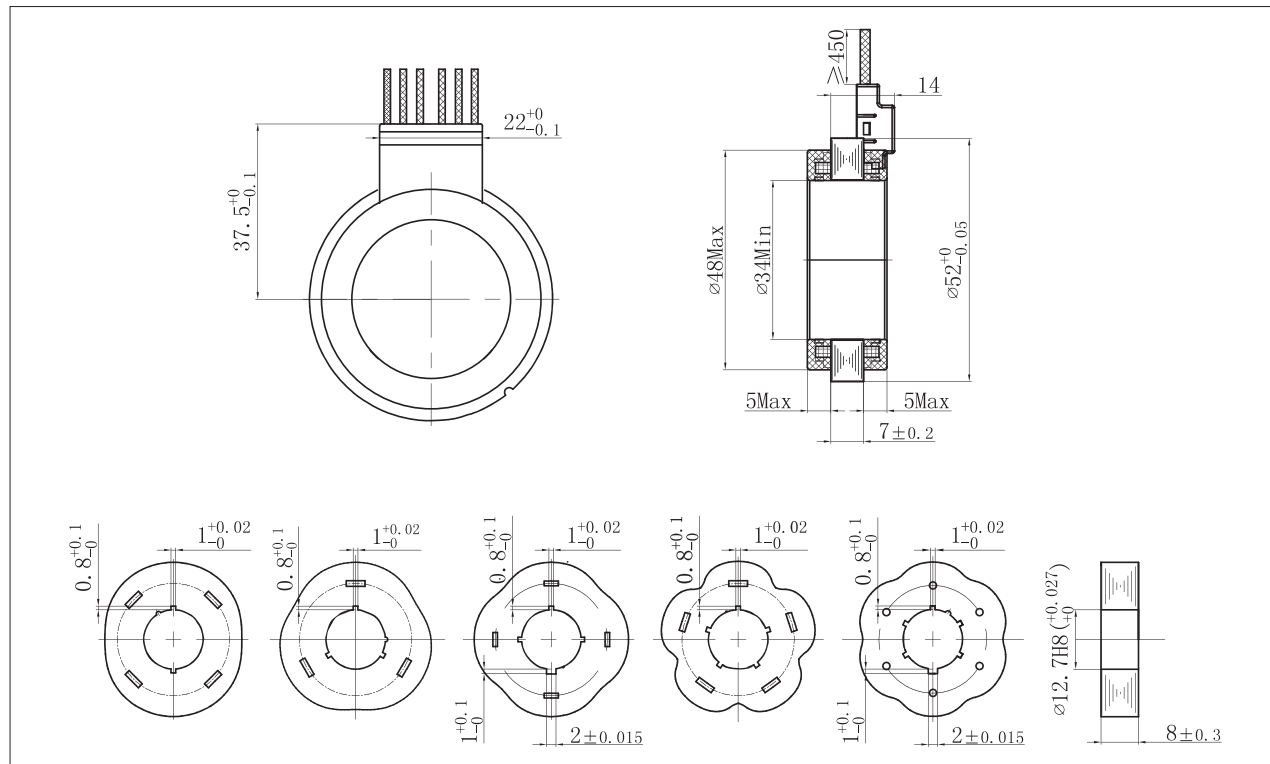
J52 series(OD 52mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	J52XU9732G	J52XU9733Q	J52XU9734R	J52XU9735E	J52XU9736K
极对数 (Pole pairs)	2	3	4	5	6
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率(Input frequency)	10KHz	10KHz	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤ ±50'	≤ ±30'	≤ ±25'	≤ ±20'	≤ ±18'
相位移 (Phase shift)	≤ ±15°	≤ ±15°	≤ ±15°	≤ ±15°	≤ ±15°
耐电压(Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)				
绝缘电阻(Insulation resistance)	250MΩ MIN				
转子孔径 (Rotor ID)	12.7mm	12.7mm	12.7mm	12.7mm	12.7mm
引出线规格 (截面积) Wire spec.(sectional area)	0.35mm²	0.35mm²	0.35mm²	0.35mm²	0.35mm²
允许最大转速(Max operating speed)	30000 rpm				
工作温度范围(Operating temperature range)	-40℃ ~ +155℃				

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm



J52T 系列

磁阻式
VR RESOLVER



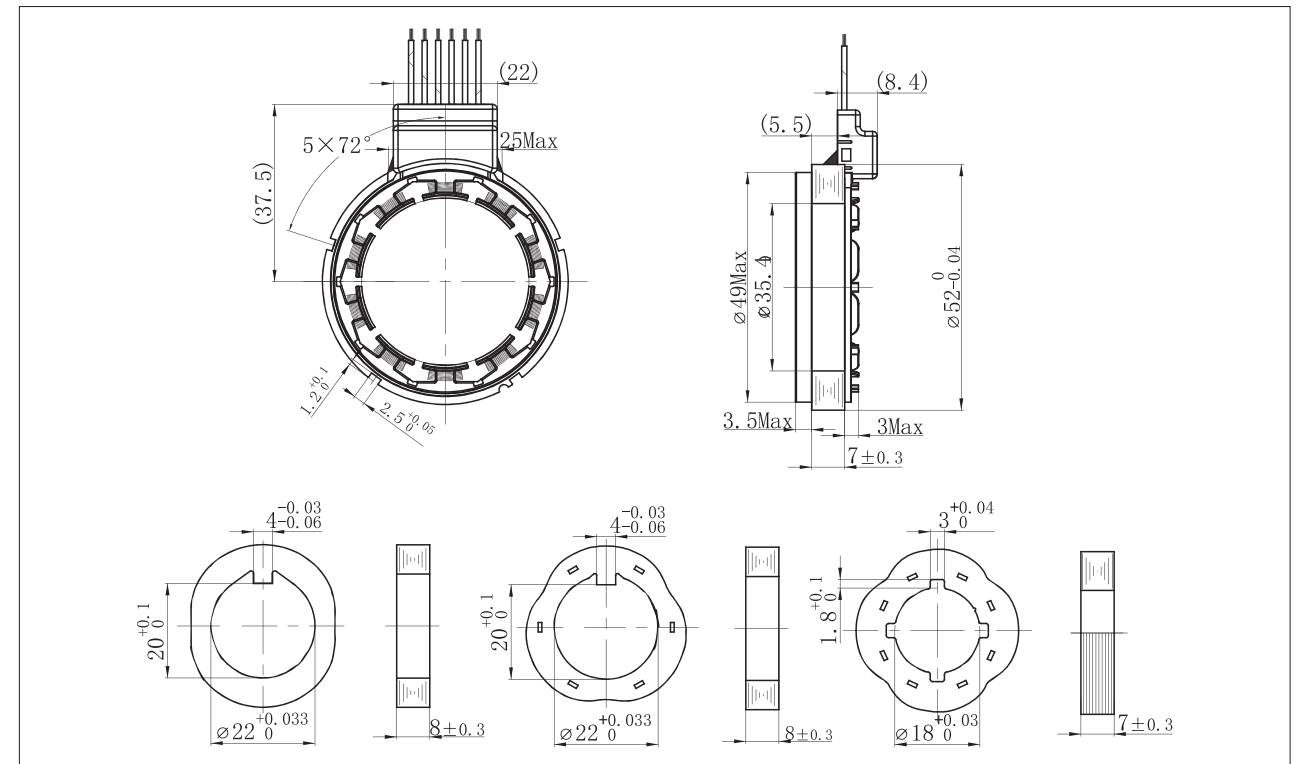
J52T series(OD 52mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	J52XU9732T	J52XU9733TC	J52XU9734T
极对数 (Pole pairs)	2	3	4
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率(Input frequency)	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤±50'	≤±30'	≤±25'
相位移 (Phase shift)	T.B.D	T.B.D	(-13.6°±5°)
耐电压(Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)		
绝缘电阻(Insulation resistance)	250MΩ MIN		
转子孔径 (Rotor ID)	22mm	22mm	18mm
引出线规格 (截面积) Wire spec.(sectional area)	0.35mm ²	0.35mm ²	0.35mm ²
允许最大转速(Max operating speed)	30000 rpm		
工作温度范围(Operating temperature range)	-40℃ ~ +155℃		

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm



J56 系列

磁阻式
VR RESOLVER



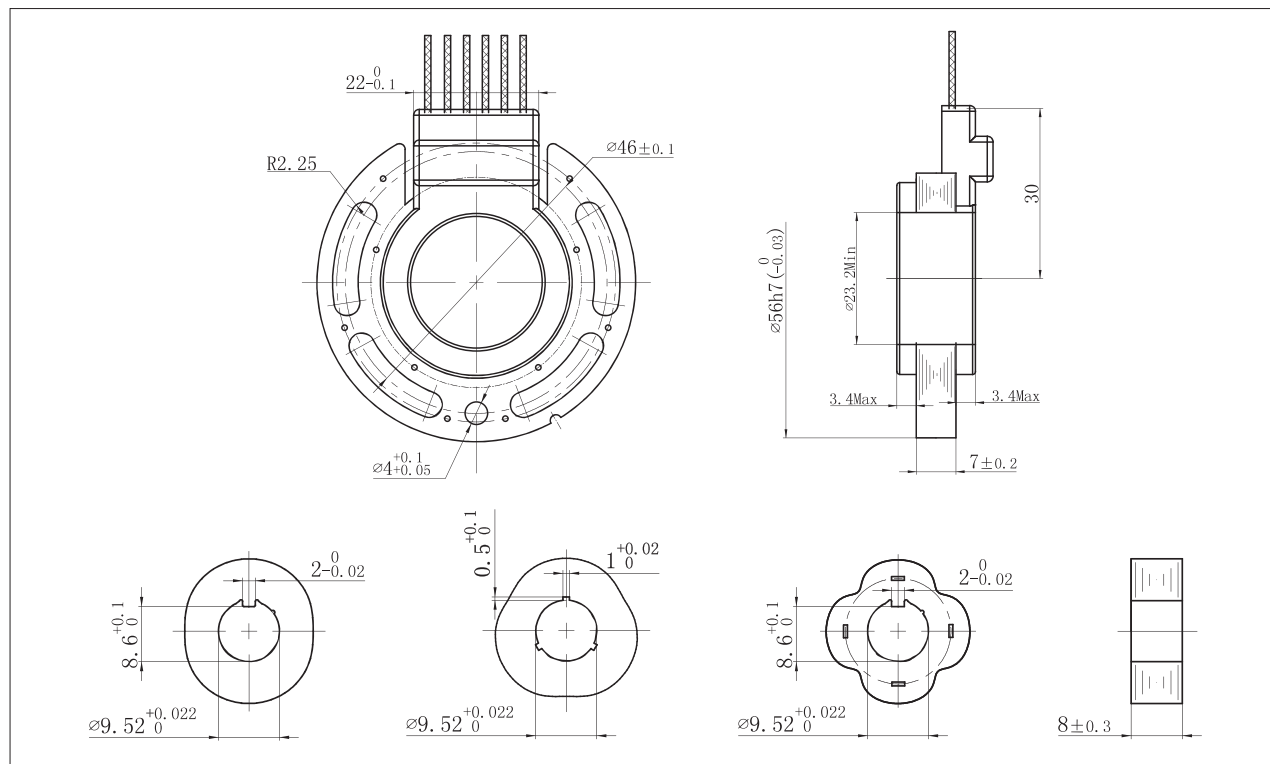
J56 series(OD 56mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	J56XU9732A	J56XU9733A	J56XU9734C
极对数 (Pole pairs)	2	3	4
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率 (Input frequency)	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤±50'	≤±30'	≤±25'
相位移 (Phase shift)	≤±15°	≤±15°	≤±15°
耐电压 (Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)		
绝缘电阻 (Insulation resistance)	250MΩ MIN		
转子孔径 (Rotor ID)	9.52mm	9.52mm	18mm
引出线规格 (截面积) Wire spec.(sectional area)	0.35mm²	0.35mm²	0.35mm²
允许最大转速 (Max operating speed)	30000 rpm		
工作温度范围 (Operating temperature range)	-40℃ ~ +155℃		

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm



J59 系列

磁阻式
VR RESOLVER



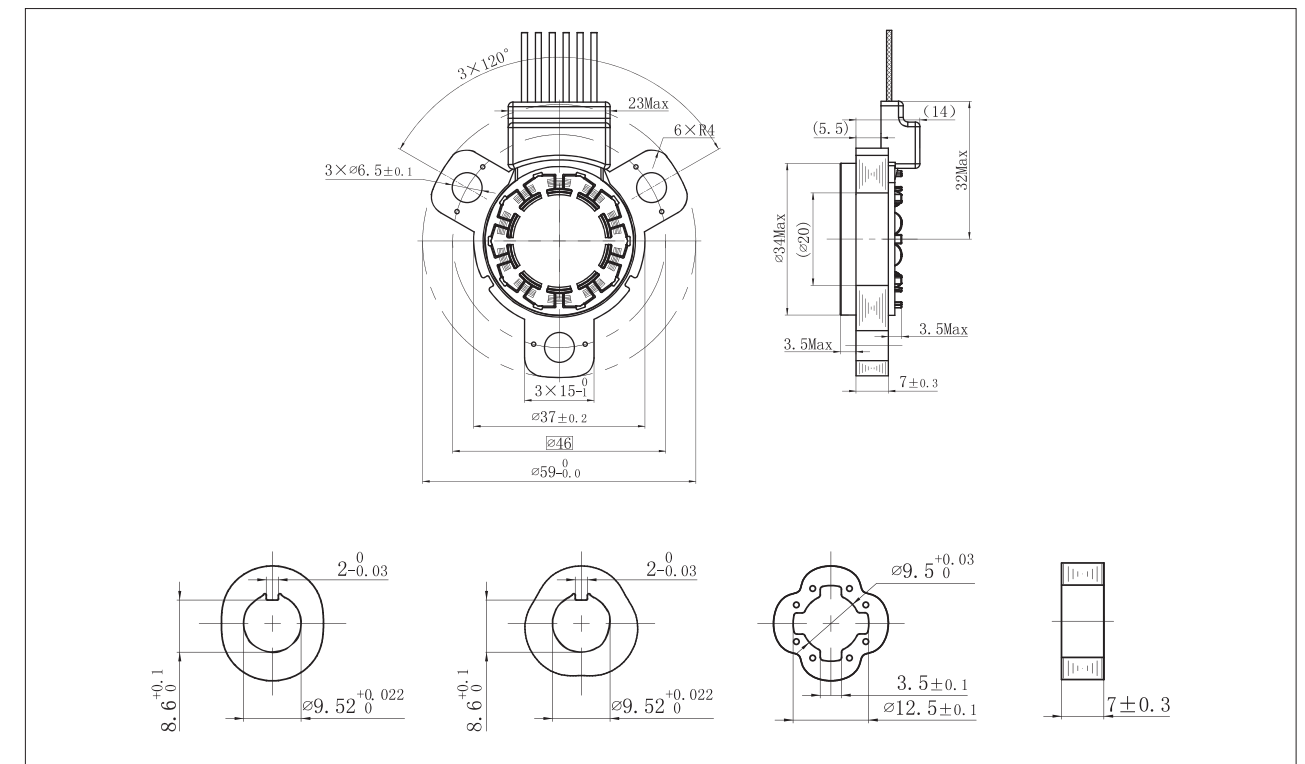
J59 series(OD 59mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	J59XU9732T	J59XU9733T	J59XU9734T
极对数 (Pole pairs)	2	3	4
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率(Input frequency)	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤±50'	≤±30'	≤±25'
相位移 (Phase shift)	T.B.D	T.B.D	(-14°±5°)
耐电压(Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)		
绝缘电阻(Insulation resistance)	250MΩ MIN		
转子孔径 (Rotor ID)	9.52mm	9.52mm	12mm
引出线规格 (截面积) Wire spec.(sectional area)	0.35mm²	0.35mm²	0.35mm²
允许最大转速(Max operating speed)	30000 rpm		
工作温度范围(Operating temperature range)	-40℃ ~ +155℃		

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm



J74 系列

磁阻式
VR RESOLVER



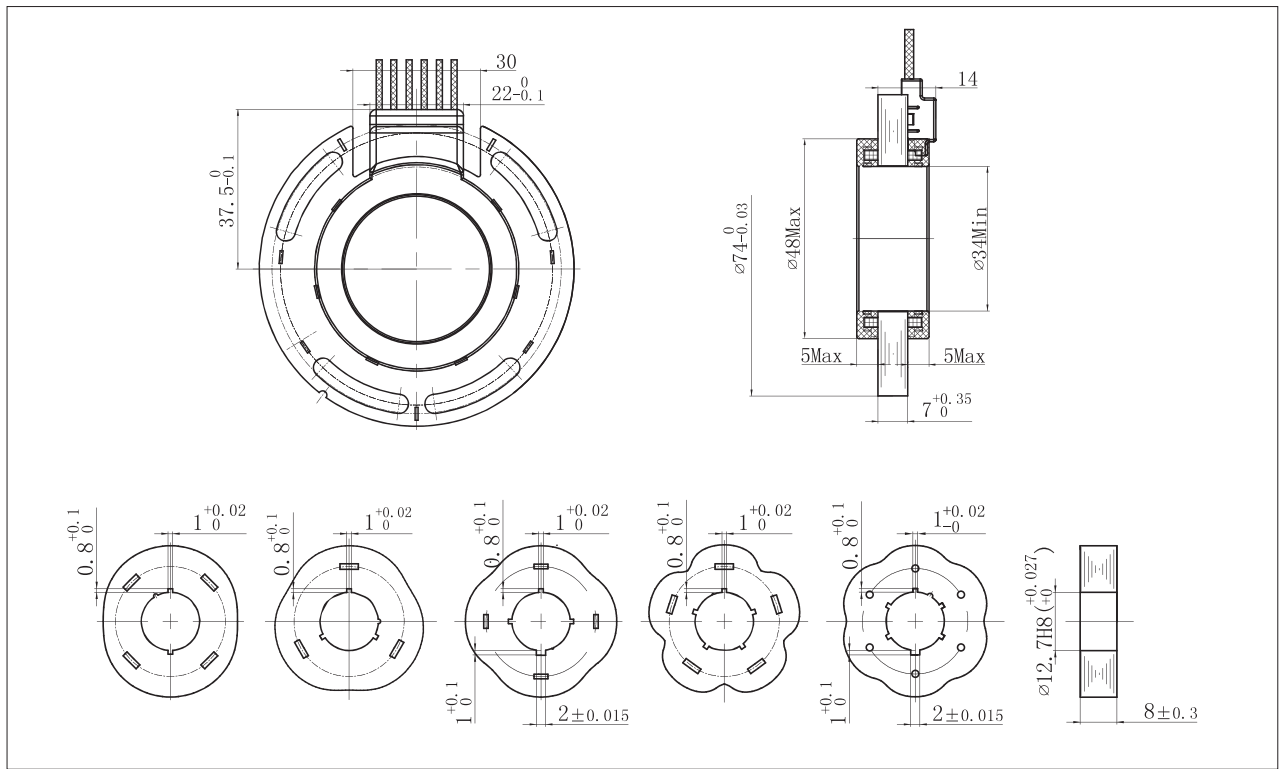
J74 series(OD 74mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	J74XU9732B	J74XU9733	J74XU9734A-L5	J74XU9735C	J74XU9736A
极对数 (Pole pairs)	2	3	4	5	6
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率(Input frequency)	10KHz	10KHz	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤±50'	≤±30'	≤±25'	≤±20'	≤±18'
相位移 (Phase shift)	≤±15°	≤±15°	≤±15°	≤±15°	≤±15°
耐电压(Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)				
绝缘电阻(Insulation resistance)	250MΩ MIN				
转子孔径 (Rotor ID)	12.7mm	12.7mm	12.7mm	18mm	18mm
引出线规格 (截面积) Wire spec.(sectional area)	0.35mm ²	0.35mm ²	0.35mm ²	0.35mm ²	0.35mm ²
允许最大转速(Max operating speed)	30000 rpm				
工作温度范围(Operating temperature range)	-40℃ ~ +155℃				

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm



J76 系列

磁阻式
VR RESOLVER



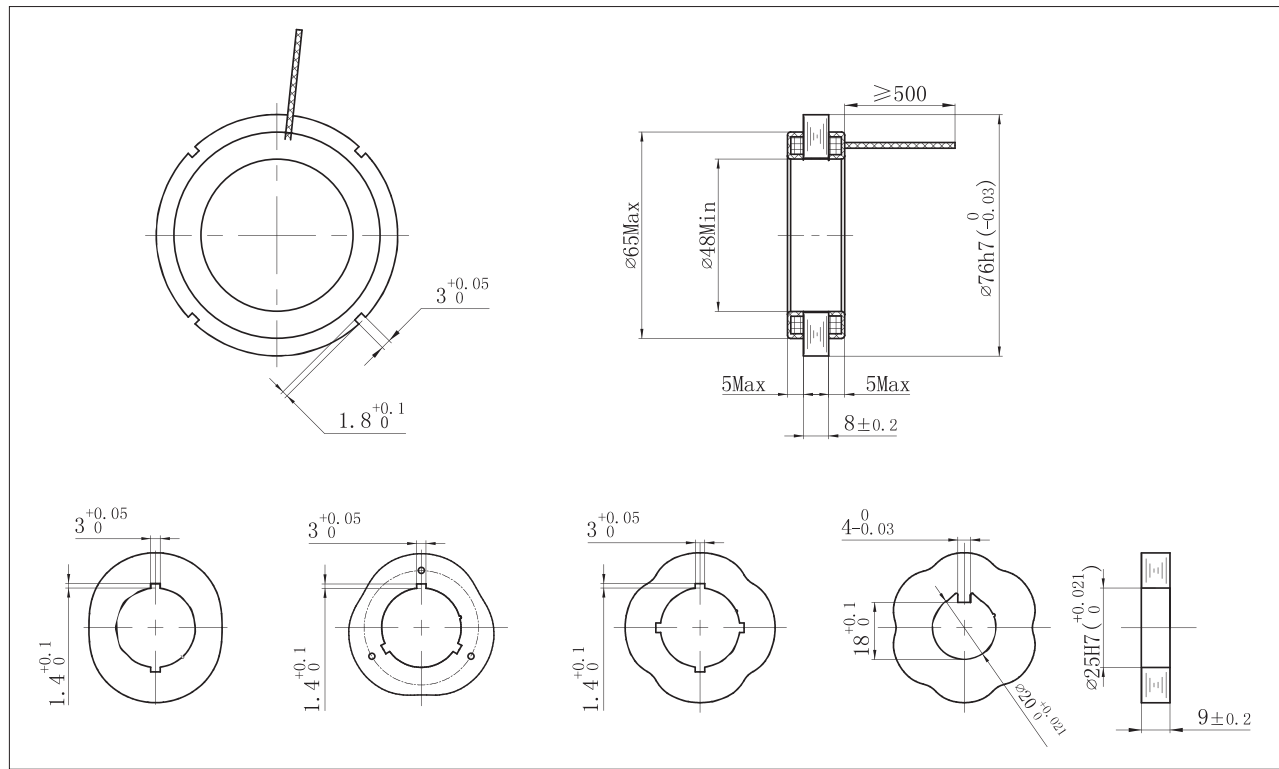
J76 series(OD 76mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	J76XU9732	J76XU9733	J76XU9734	J76XU9736
极对数 (Pole pairs)	2	3	4	6
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率(Input frequency)	10KHz	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤±50'	≤±30'	≤±25'	≤±18'
相位移 (Phase shift)	≤±10°	≤±10°	≤±12°	≤±10°
耐电压(Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)			
绝缘电阻(Insulation resistance)	250MΩ MIN			
转子孔径 (Rotor ID)	25mm	25mm	25mm	20mm
引出线规格 (截面积) Wire spec.(sectional area)	0.15mm ²	0.15mm ²	0.15mm ²	0.15mm ²
允许最大转速(Max operating speed)	30000 rpm			
工作温度范围(Operating temperature range)	-40℃ ~ +155℃			

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm



J89 系列

磁阻式
VR RESOLVER



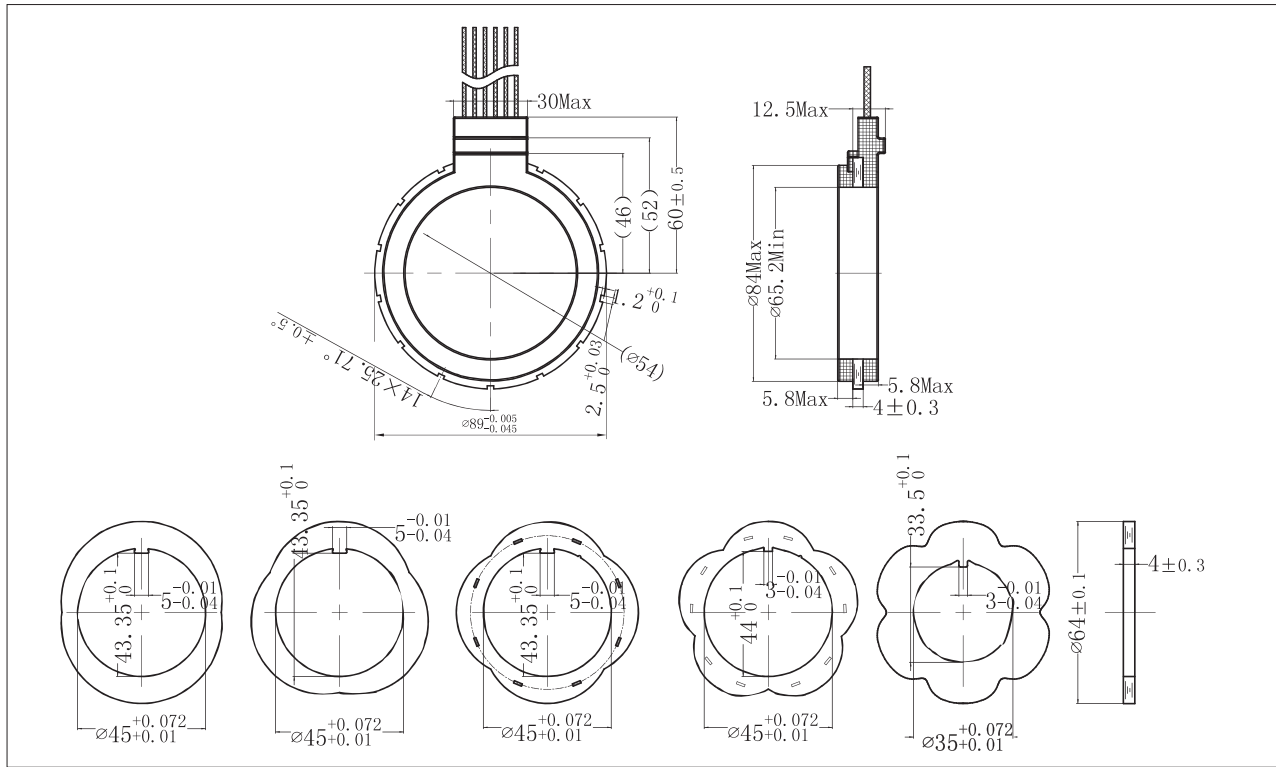
J89 series(OD 89mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	J89XU9732	J89XU9733	J89XU9734	J89XU9735	J89XU9736
极对数 (Pole pairs)	2	3	4	5	6
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率(Input frequency)	10KHz	10KHz	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤±50'	≤±30'	≤±25'	≤±20'	≤±18'
相位移 (Phase shift)	≤±15°	≤±15°	≤±15°	≤±15°	≤±15°
耐电压(Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)				
绝缘电阻(Insulation resistance)	250MΩ MIN				
转子孔径 (Rotor ID)	45mm	45mm	45mm	45mm	35mm
引出线规格 (截面积) Wire spec.(sectional area)	0.35mm ²	0.35mm ²	0.35mm ²	0.35mm ²	0.35mm ²
允许最大转速(Max operating speed)	30000 rpm				
工作温度范围(Operating temperature range)	-40℃ ~ +155℃				

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm



J100 系列

磁阻式
VR RESOLVER



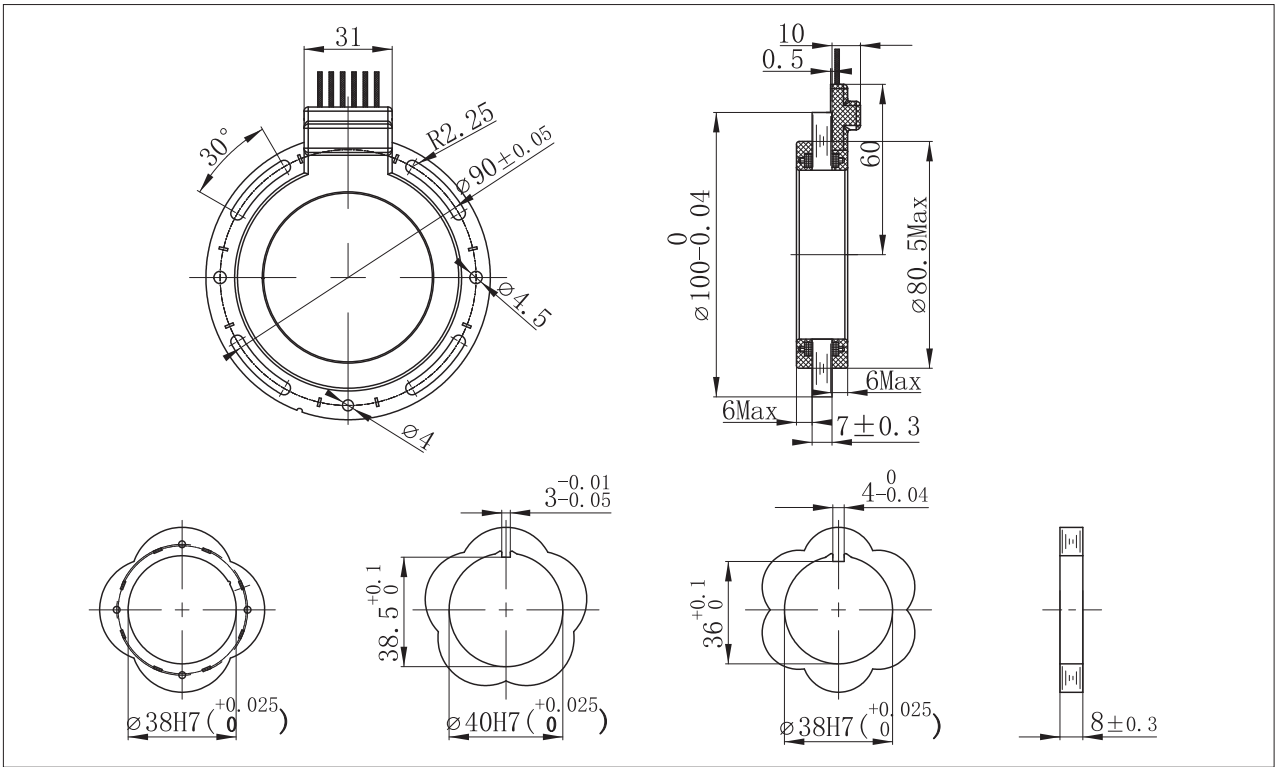
J100 series(OD 100mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	J100XU9734A	J100XU9735	J100XU9736
极对数 (Pole pairs)	4	5	6
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率(Input frequency)	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤±25'	≤±20'	≤±18'
相位移 (Phase shift)	≤±10°	≤±10°	≤±10°
耐电压(Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)		
绝缘电阻(Insulation resistance)	250MΩ MIN		
转子孔径 (Rotor ID)	38mm	40mm	38mm
引出线规格 (截面积) Wire spec.(sectional area)	0.5mm ²	0.5mm ²	0.5mm ²
允许最大转速(Max operating speed)	30000 rpm		
工作温度范围(Operating temperature range)	-40℃ ~ +155℃		

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm



J101 系列

磁阻式
VR RESOLVER



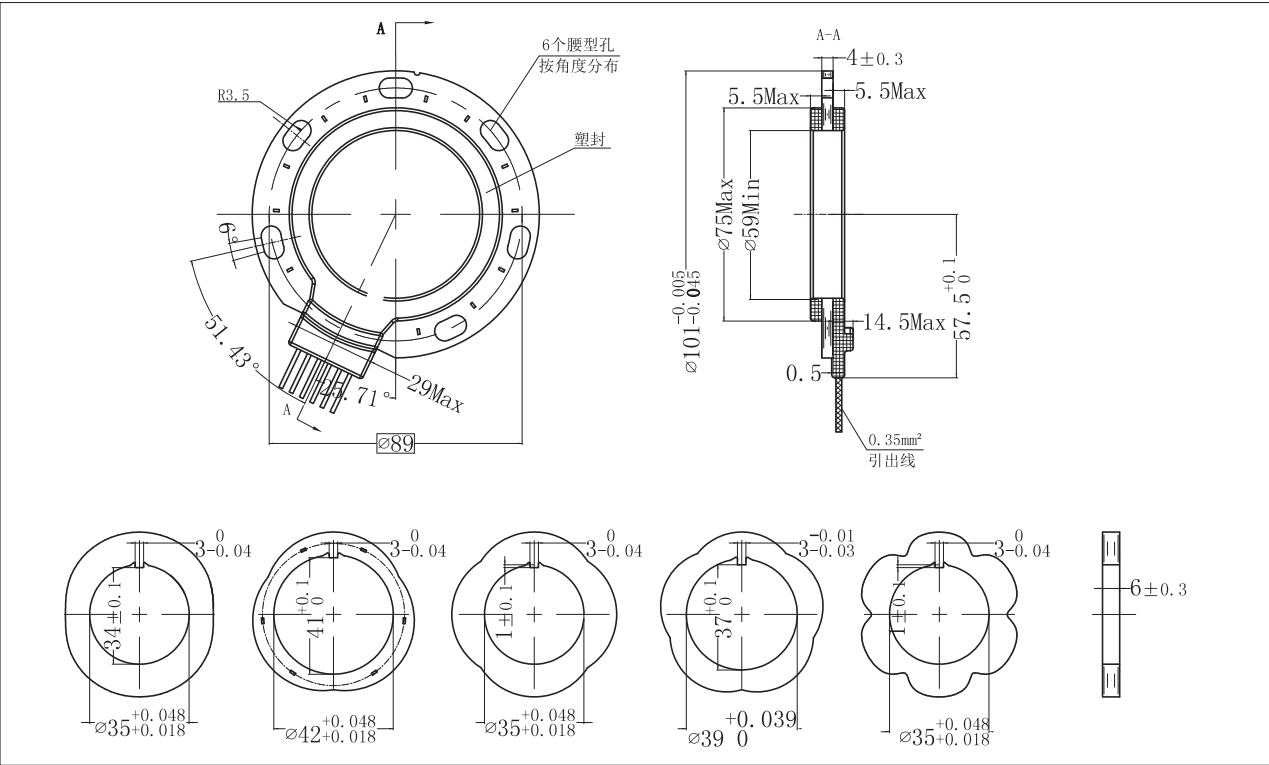
J101 series(OD 101mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	J101XU9732E	J101XU9733A	J101XU9734G	J101XU9735B	J101XU9736A
极对数 (Pole pairs)	2	3	4	5	6
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率(Input frequency)	10KHz	10KHz	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤±50'	≤±30'	≤±25'	≤±20'	≤±18'
相位移 (Phase shift)	≤±15°	≤±15°	≤±15°	≤±15°	≤±15°
耐电压(Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)				
绝缘电阻(Insulation resistance)	250MΩ MIN				
转子孔径 (Rotor ID)	35mm	42mm	35mm	39mm	35mm
引出线规格 (截面积) Wire spec.(sectional area)	0.35mm²	0.35mm²	0.35mm²	0.35mm²	0.35mm²
允许最大转速(Max operating speed)	30000 rpm				
工作温度范围(Operating temperature range)	-40℃ ~ +155℃				

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm



J117 系列

磁阻式
VR RESOLVER



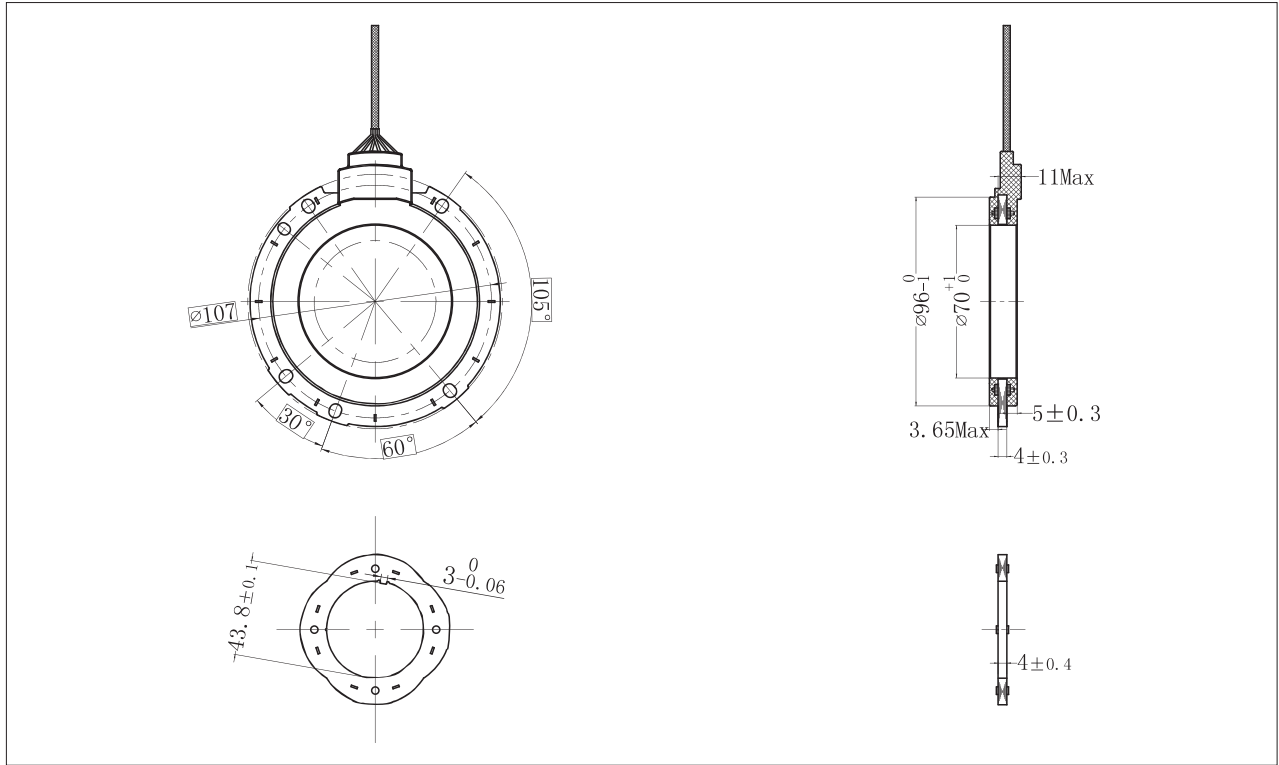
J117 series(OD 117mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	J117XU9732	J117XU9733	J117XU9734	J117XU9735	J117XU9736
极对数 (Pole pairs)	2	3	4	5	6
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率(Input frequency)	10KHz	10KHz	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤±50'	≤±30'	≤±25'	≤±20'	≤±18'
相位移 (Phase shift)	≤±15°	≤±15°	≤±15°	≤±15°	≤±15°
耐电压(Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)				
绝缘电阻(Insulation resistance)	250MΩ MIN				
转子孔径 (Rotor ID)	T.B.D	T.B.D	44.6mm	T.B.D	T.B.D
引出线规格 (截面积) Wire spec.(sectional area)	0.35mm²	0.35mm²	0.35mm²	0.35mm²	0.35mm²
允许最大转速(Max operating speed)	30000 rpm				
工作温度范围(Operating temperature range)	-40℃ ~ +155℃				

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm



J124 系列

磁阻式
VR RESOLVER



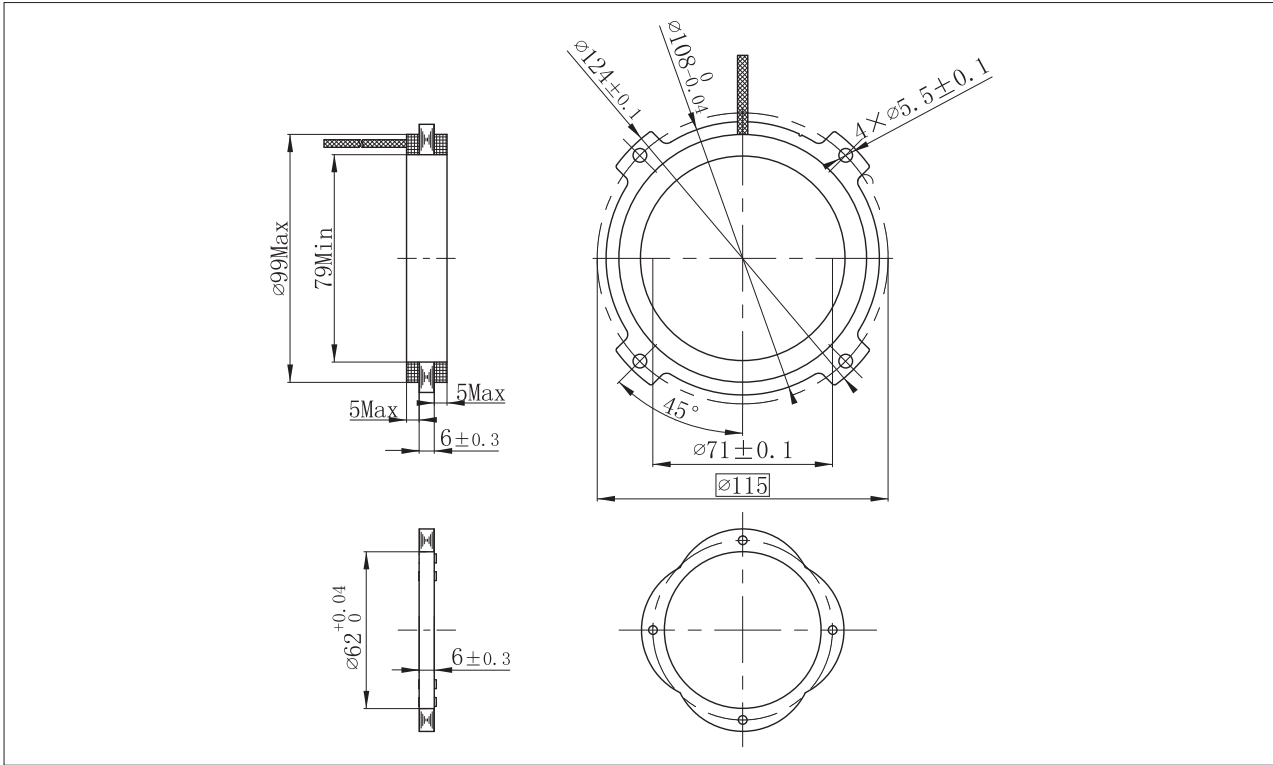
J124 series(OD 124mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	J124XU9732	J124XU9733	J124XU9734	J124XU9736
极对数 (Pole pairs)	2	3	4	6
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率(Input frequency)	10KHz	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤±50′	≤±30′	≤±25′	≤±18′
相位移 (Phase shift)	≤±10°	≤±10°	≤±10°	≤±10°
耐电压(Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)			
绝缘电阻(Insulation resistance)	250MΩ MIN			
转子孔径 (Rotor ID)	T.B.D	T.B.D	62mm	T.B.D
引出线规格 (截面积) Wire spec.(sectional area)	0.35mm ²	0.35mm ²	0.35mm ²	0.35mm ²
允许最大转速(Max operating speed)	30000 rpm			
工作温度范围(Operating temperature range)	-40℃ ~ +155℃			

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm



J132 系列

磁阻式
VR RESOLVER



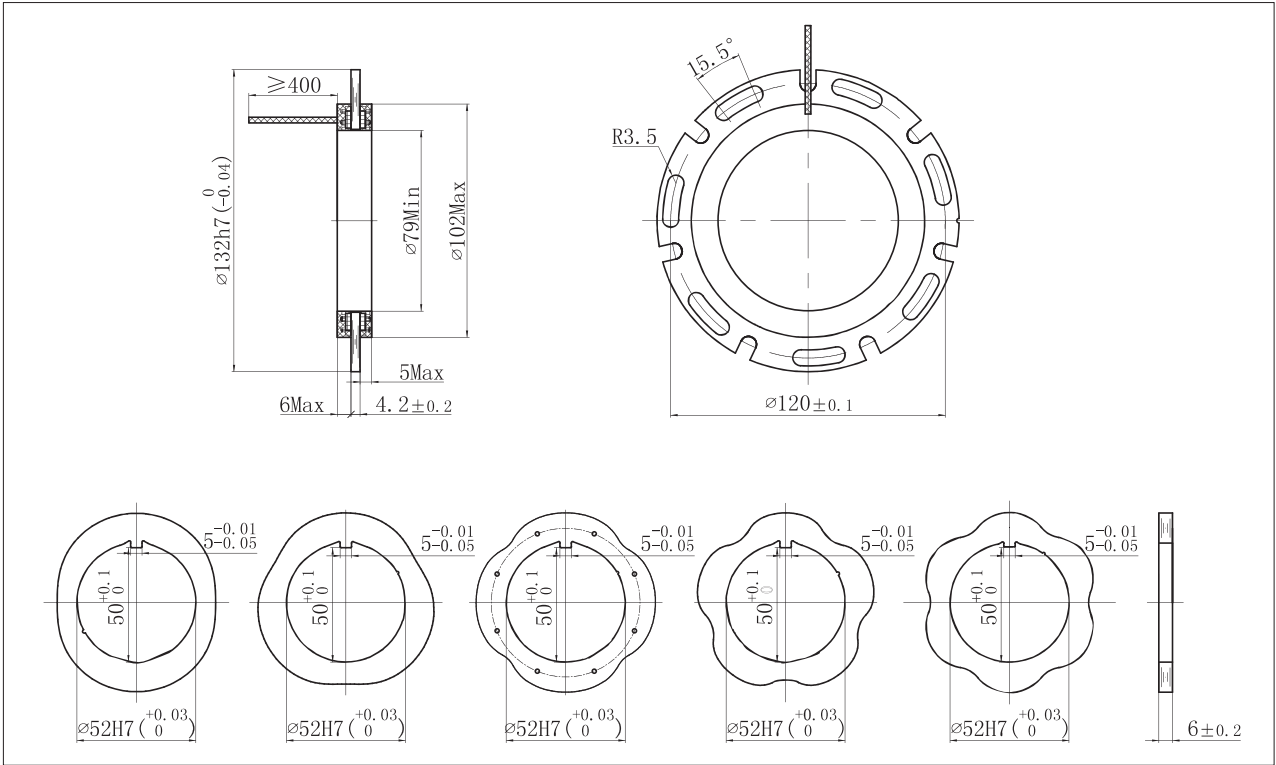
J132 series(OD 132mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	J132XU9732	J132XU9733	J132XU9734	J132XU9735	J132XU9736A
极对数 (Pole pairs)	2	3	4	5	6
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率(Input frequency)	10KHz	10KHz	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤±50′	≤±30′	≤±25′	≤±20′	≤±18′
相位移 (Phase shift)	≤±10°	≤±10°	≤±10°	≤±10°	≤±15°
耐电压(Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)				
绝缘电阻(Insulation resistance)	250MΩ MIN				
转子孔径 (Rotor ID)	52mm	52mm	52mm	52mm	52mm
引出线规格 (截面积) Wire spec.(sectional area)	0.35mm ²	0.35mm ²	0.35mm ²	0.35mm ²	0.35mm ²
允许最大转速(Max operating speed)	30000 rpm				
工作温度范围(Operating temperature range)	-40℃ ~ +155℃				

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm



J160 系列

磁阻式
VR RESOLVER



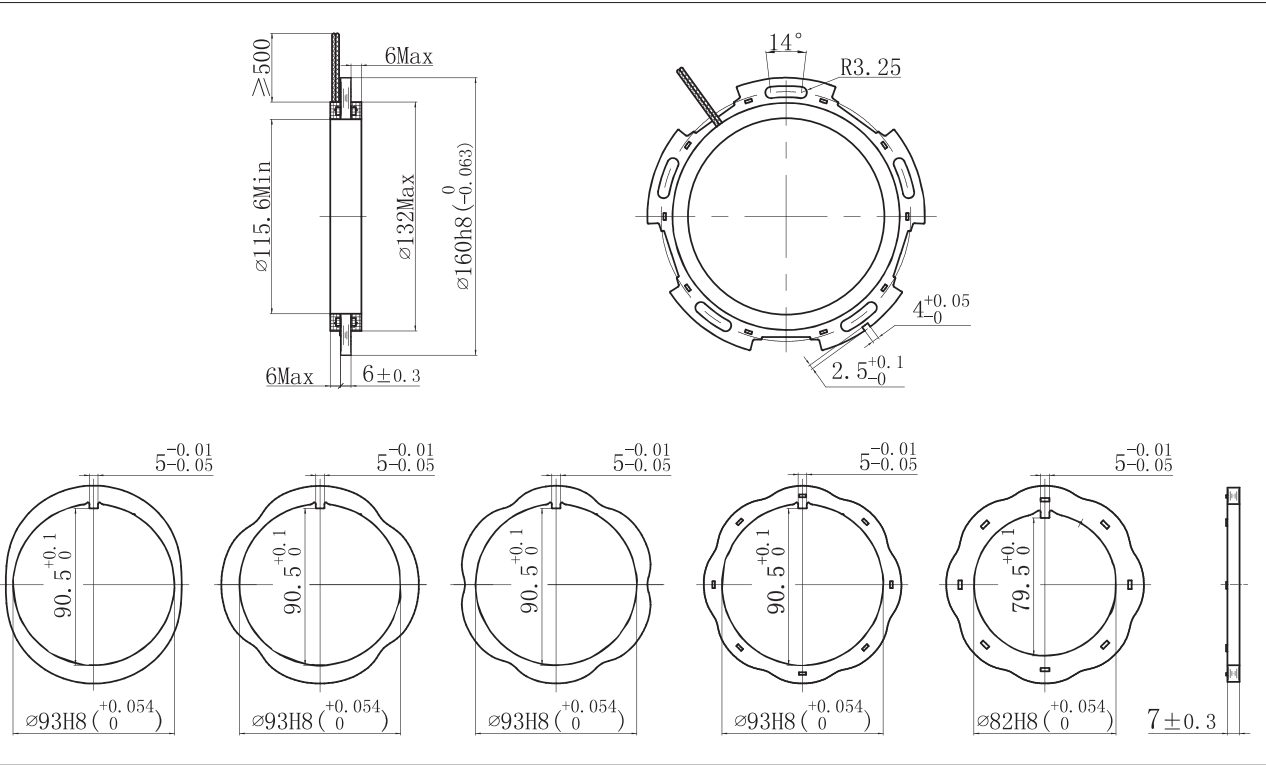
J160 series(OD 160mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	J160XU9732	J160XU9734	J160XU9736	J160XU9738
极对数 (Pole pairs)	2	4	6	8
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率(Input frequency)	10KHz	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤±50'	≤±25'	≤±18'	≤±13'
相位移 (Phase shift)	≤±10°	≤±10°	≤±10°	≤±10°
耐电压(Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)			
绝缘电阻(Insulation resistance)	250MΩ MIN			
转子孔径 (Rotor ID)	93mm	93mm	93mm	93mm/82mm
引出线规格 (截面积) Wire spec.(sectional area)	0.35mm ²	0.35mm ²	0.35mm ²	0.35mm ²
允许最大转速(Max operating speed)	30000 rpm			
工作温度范围(Operating temperature range)	-40℃ ~ +155℃			

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm



J191 系列

磁阻式
VR RESOLVER



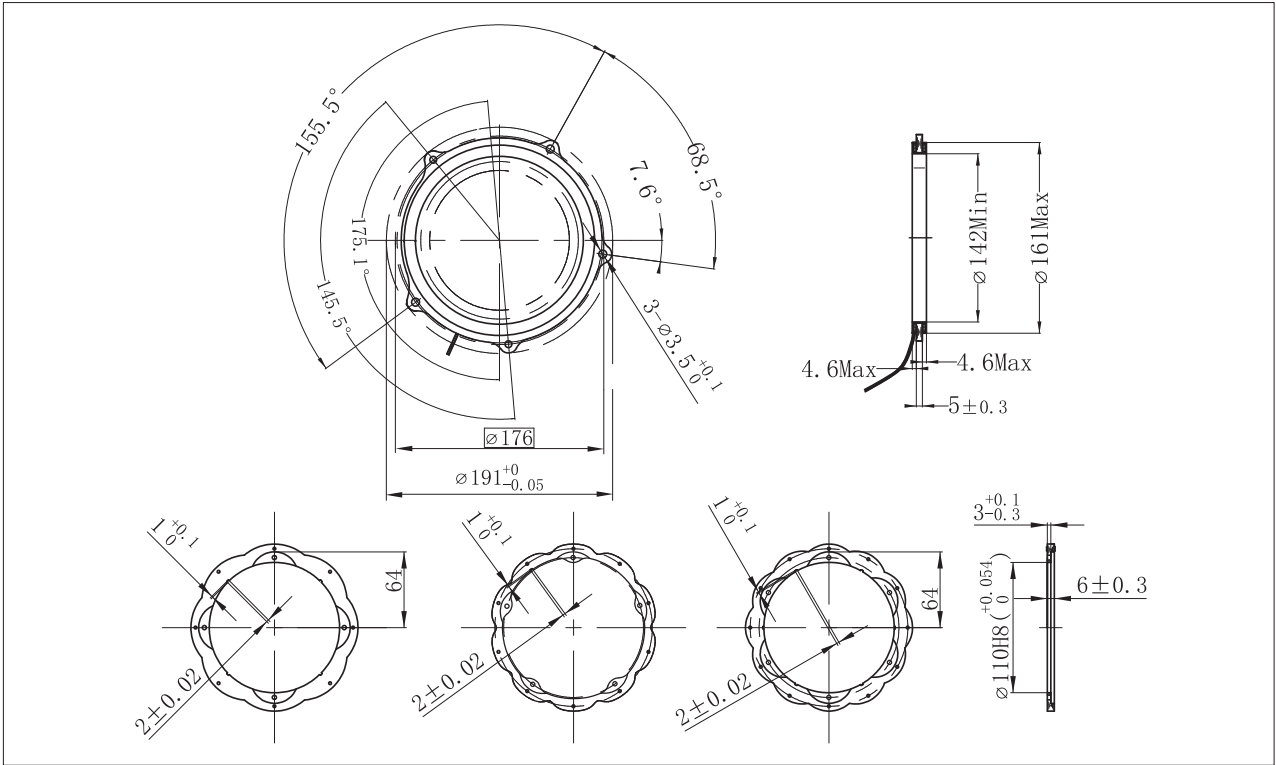
J191 series(OD 191mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	191XU9738	J191XU97310A	191XU97312
极对数 (Pole pairs)	8	10	12
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率(Input frequency)	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤±13'	≤±10'	≤±9'
相位移 (Phase shift)	≤±15°	≤±15°	≤±15°
耐电压(Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)		
绝缘电阻(Insulation resistance)	250MΩ MIN		
转子孔径 (Rotor ID)	110mm	120mm	110mm
引出线规格 (截面积) Wire spec.(sectional area)	0.35mm ²	0.35mm ²	0.35mm ²
允许最大转速(Max operating speed)	30000 rpm		
工作温度范围(Operating temperature range)	-40℃ ~ +155℃		

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm



215 系列

磁阻式
VR RESOLVER



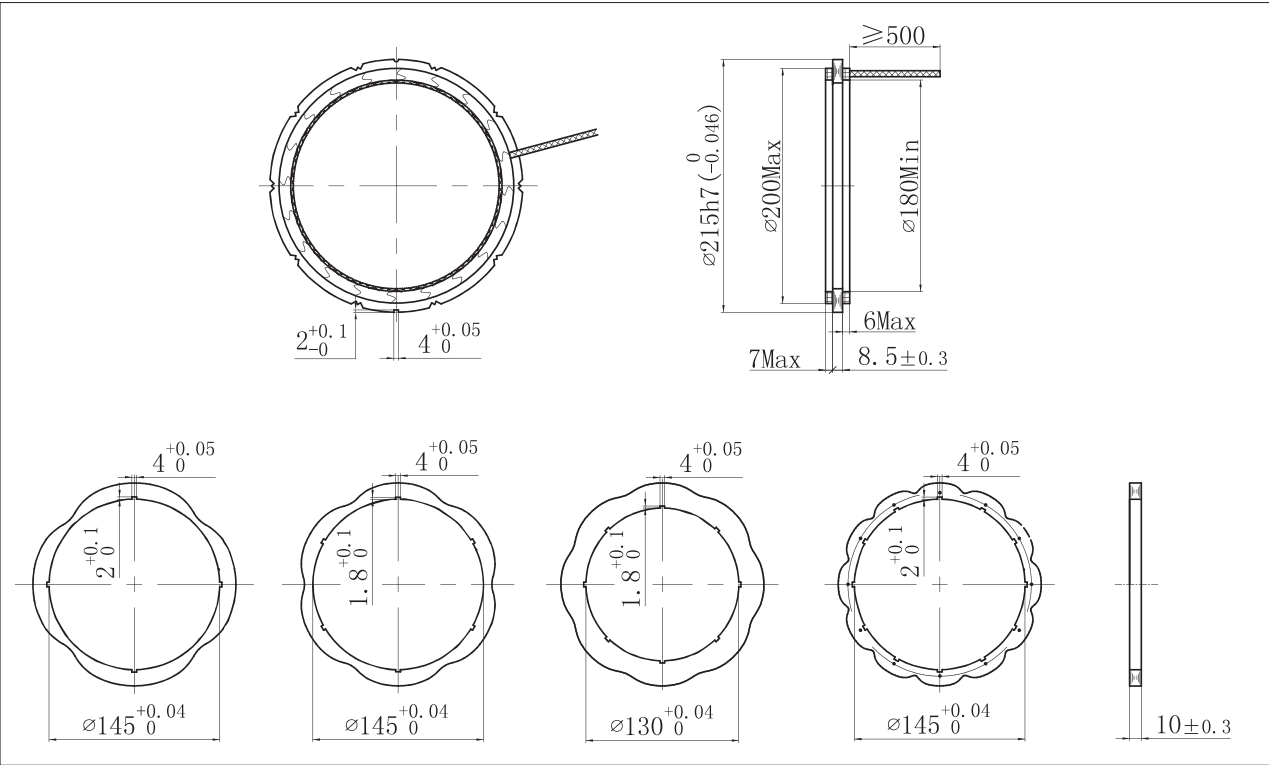
215 series(OD 215mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	215XU9734	215XU9736	215XU9738	215XU97312A
极对数 (Pole pairs)	4	6	8	12
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率(Input frequency)	10KHz	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤±25'	≤±18'	≤±13'	≤±9'
相位移 (Phase shift)	≤±10°	≤±10°	≤±10°	≤±10°
耐电压(Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)			
绝缘电阻(Insulation resistance)	250MΩ MIN			
转子孔径 (Rotor ID)	145mm	145mm	130mm	145mm
引出线规格 (截面积)Wire spec.(sectional area)	0.35mm²	0.35mm²	0.35mm²	0.35mm²
允许最大转速(Max operating speed)	30000 rpm			
工作温度范围(Operating temperature range)	-40℃ ~ +155℃			

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm



316 系列

磁阻式
VR RESOLVER



316 series(OD 316mm series)

性能参数 SPECIFICATIONS

推荐型号 (Recommended part no.)	316XU9733	316XU9736	316XU9738
极对数 (Pole pairs)	3	6	8
激磁电压 (Input voltage)	AC7Vrms	AC7Vrms	AC7Vrms
激磁频率(Input frequency)	10KHz	10KHz	10KHz
变压比 (Transformation ratio)	0.286±10%	0.286±10%	0.286±10%
电气误差 (Accuracy)	≤±30'	≤±18'	≤±13'
相位移 (Phase shift)	≤±10°	≤±10°	≤±10°
耐电压(Dielectric strength)	AC500Vrms 1s (500V AC rms for one second)		
绝缘电阻(Insulation resistance)	250MΩ MIN		
转子孔径 (Rotor ID)	110mm	120mm	110mm
引出线规格 (截面积) Wire spec.(sectional area)	0.35mm²	0.35mm²	0.35mm²
允许最大转速(Max operating speed)	30000 rpm		
工作温度范围(Operating temperature range)	-40℃ ~ +155℃		

备注：产品详情可联系市场部获取相关外形图，引线长度、线束处理、转子内孔孔径等可根据需求咨询定制化生产事宜。

外观尺寸 OUTLINE DIMENSION (单位: mm) Dimension : mm

